ECONOMIC LIBERALIZATION IN I R A N

Dissertation submitted to the Jawaharlal Nehru University in partial fulfilment of the requirements for the award of the Degree of

MASTER OF PHILOSOPHY

Sayyed Ali Akbar RAZMI

CENTRE FOR STUDIES IN DIPLOMACY INTERNATIONAL LAW & ECONOMICS SCHOOL OF INTERNATIONAL STUDIES JAWAHARLAL NEHRU UNIVERSITY NEW DELHI - 110 067 1 9 9 6



Centre for Studies in Diplomacy

International Law & Economics

JAWAHARLAL NEHRU UNIVERSITY

SCHOOL OF INTERNATIONAL STUDIES

Telegram: JAYENU
Telex: 031-73167 JNU IN

Telephones: 667676/ 667557/ 418,408

Fax: 91-11-686-5886

New Delhi-110067

Dated: 16 January 1996

CERTIFICATE

Certified that the Dissertation entitled ECONOMIC LIBERALIZATION IN IRAN submitted by Sayyed Ali Akbar RAZMI in partial fulfilment for the award of the Degree of Master of Philosophy, has not been previously submitted for any other Degree of this or any other University. To the best of our knowledge this is a bonafide work.

We recommend that this Dissertation be placed before the examiner for evaluation.

Prof. S.K. DAS

CHAIRPERSON & SUPERVISOR

In the Name of

AllAH

I thank GOD who has guided me all the time, every where and who has allowed me to think, to see and to write and I hope that he helps me to use my knowledge and my ability in the best way which he wants.

I thank all per sons who helped me to write this dissertation, specially **Professor S.K. Das** for his supervision, my old friend Mr. M.Salimifar and Ms. S.H. Shilpee Mehrotra for their correction and my wife for her helps in every step of writing this thesis.

S.A.A. Razmi New Delhi 15 January 1996 (S.H. 1374, 10, 25)

Contents

Int	roduct	cion	vii			
1.	Econ	nomic Liberalization Policies	1			
	1.1	Marketization				
		1.1.1 The Reasons of Marketization	3			
		1.1.1.1 Optimizing of Economic Activities A) Non Economic Production B) Non Economic Consumption	4 5 9			
		1.1.1.2 High Level Costs of Direct Price Control A) Cheap Foreign Exchange B) Direct Costs of Price Control System	10 10			
		1.1.1.3 The Defeat of Efforts for Direct Price Control	14			
		1.1.2 Mechanism and Effects of Marketization	15			
	1.2	Foreign Exchange Policy	18			
	1.3	Privatization	21			
	:	1.3.1 Privatization Process and Volume	23			
	i. :	1.3.2 Performance of the Government on Privatization	3,0			
		1.3.2.1 Non Economic Group A) Non Existence of	33			
		Investmet Security B) Instability in Economic	33			
		Policies C) Non Existence of a Complete	.34			
		Legal Framework	36			

		•	
	D) The Absence of a Good	•	
-	Information System		38
	E) The Absence of a Respon	nsible	
	Organisation for Privat	tization	40
	1 2 2 2 Egonomia Croun		
	1.3.2.2 Economic Group A) The Absence of a Strong	יר	
	Financial Urgency for	5	
	Privatization		41
	B) The absence of Necessar	ry	
	Liquidity		42
	C) Control of stock Exchar by the competitors	nge	43
	D) Distortions in Investme	ent.	40
	Decisions	- - .	44
	E) Inaccuracy of the first	t five	
	year plan		45
	1.3.3 Conclusion		46
	1.3.3 Conclusion	•	40
2.	Industrial Production and Investment After Liberalization		48
,			
	2.1 Construction		49
	2.2 Industry and Mine	f	55
		:	
	2.2.1 Industrial Investment		57
	2.2.1.1 Government Investment		57
	2.2.1.1 Government investment	:	57
	2.2.1.2 Private Investment	1	60
		•	
	2.2.2 Industrial and Mining Production		66
3.	Agricultural Production and Efficiency	:	75
	3.1 Agricultural Production		78
	3.2 Efficiency in the Agricultural Sector		85
		•	
	V		

			;
		and the control of t The control of the control of	
4.	Fore	ign Trade Sector	90
٠.	4.1	Reasons of Excess Demand for Foreign	•
1.		Exchange (FE) and its impact on FE Rate (FER)	92
•			
		4.1.1 Reasons of Increase in FE Demand	92
		4.1.2 Reasons of Dcline in Supply of FE	94
		4.1.2 Reasons of Define in Supply of th	74
		4.1.3 The Impact of FE Excess Demand on FER	96
	4.2	Reasons of Devaluation	97
•		4.2.1 The Impact on Non Oil Exports	98
		1.1.1 Inc impact on non our imposes	
		4.2.2 The Impact on Government Budget	102
		4.0.3 7	105
	•	4.2.3 Increasing of Imports	105
		4.2.4 Impact on Social Justice	106
		4.2.5 Economic Concentration	109
,		4.2.6 Non Economic Decision Making	111
		/ Note Decipion Making	***
		4.2.7 Impact on Inflation As a	
		Reason Against Devaluation	112
Gener	al C	onclusion and Summary	116
Appen	a :		104
Appen	UIX		124
	ć		
Bibli	ograj	phy	128
	•		
	٠		
		vi	
		vi	

Introduction

Iran had a relatively liberal economy in the pre-Islamic Revolution (IR) period. After IR there were some essential changes in the Iranian economic policies due to some reasons. Firstly, there were some important objections about economic policies before IR which led to these changes. The existence of some large capitalists whose financial assets were drastically growing against a great number of relatively poor people with little growth in income and welfare and also a notable growth in national consumption which was noticeably greater than national production (non oil products) due to a huge oil income which meant more and more dependency on imported consumer goods, were two main objections leading to an economic reform. Secondly, some problems like the war between Iran and Iraq and economic embargo against Iran (which happened in the first year after IR) owing to some political problems brought the Iranain economy under a pressure thus forcing the then governors to make a new economic policy. In the year 1981, 3 years after IR, Engineer Moosavi who had a strong tendency towards economic conservatism came to power prime minister and the left party relatively won as the the parliamentary election at the same time. Although some

actions like nationalization of banks and insurance institutions had already been done, under the government of new governors these steps were strengthened and the economy went towards a systematic governmental situation.

eight years. As a result of implementation of those economic policies together with some problems and distorsions, the most important economic indices were moving in the wrong directions. The amount of GDP with an average 1.7 percent annual reduction from 11183.8 bn RLS in 1356 (77) fell to 923.7 bn RLs in 67 (88), accompanied by a 2 percent rise in the share of services sector (from 42 to 44) against productive sectors' share. The ratio of investment to GDP decreased from 27.9 percent to 13.3 percent at the same time too and unemployment rate rose from 12.3 percent in 1361(82) to 14.4 percent in 1367 also. Furthermore, the budget deficit amounting more than 50 per cent out of total budget was another big problem in 1367 causing a high inflation rate around 29 percent.

^{1.} After four years, Ministry of Islamic Ershad (Islamic Guidance) of Iran, 1372(93), p.4.

^{2.} Ibid., p.4.

^{3.} Ecnomic Report and Balance Sheet (ERBS), Central Bank of Iran, Year 67, p.67,

In the last years of the said period specially with ending the war, many of experts and policy makers came to the conclusion that a new economic reform was needed to save economy of Iran. The results of discussions investigations led to a movement towards less governmental situation and a relatively liberalized policy was ordered by engineers Mousaui (PM) including privatization, reduction in subsidies and changing in price determination system, utilization of foreign resources in special projects etc. officially offered in the prepared These policies were first five year plan also.4

In the year 1368, Mr. Hashemi Rafsangani came to power as the president of Iran through a general election who used to protect liberal policies. The new government (after a small review) approved the prepared economic plan aiming to achieve the growth of production, of productive employment, reduction in economic dependency on foreign nations through production of essential products and control of inflation.

The main offered ways to achieve the said goals are as follows:

- "Reduction of government's intervention in economic

^{4.} After four years, p.50.

affairs and expansion of people's participation in economy.

- Encouraging of private investment and granting of liquidity to productive activities.
- Expansion of non oil exports and increase in people's participation in foreign trade.
- Privatization and limitation of government's activities to general and essential affairs.
- Utilization of productive capacities and increase in infrastructural projects.
- Forex rate adjustment and protection of production and exports through review in price determination system.
- Utilization of foreign loans in essential and infrastructural investments.
- Review in prices of governmental goods and services to adjust government's costs and incomes." 5

There was a great improvement in economy during the first 5 year plan in which the new policies have been implemented. These results will be mentioned in the concluding part of this research.

^{5.} After four years, p.47.

The liberalization process was mainly based on three policies i.e, privatization, marketization and new foreign exchange policy which form the main framework of present dissertation. In the first chapter, these three policies will be elaborated and in the next three chapters the impacts of liberalization policies on three major sectors of Iran economy i.e., industry and mine, agriculture, and foreign trade will be explored. This research will come to an end with a conclusion.

Economic Liberalization Policies

Economic liberalization process in Iran has been executed through the use of three main economic policies which are marketization, foreign exchange policy and privatization. Iran has moved away from a regulated low level foreign exchange rate policy, towards bringing the official exchange rate close to the free or black market rate, so we can look at it as a part of marketization but due to the importance of this matter we categorize and survey it as a separate topic.

In this chapter we wil discuss these three policies, finding the rationate for each, their effects on the economy of Iran and the extent of sucess of every policy. Therefor the three main topics in this chapter are respectively Marketization, foreign Exchange policy and privatization.

1.1 Marketization

Among the three main economic policies which have formed the core of liberalization in Iran, marketization has created special situation. This situation is due to the

fact that people, particularly journalists, theologists and other persons who lead or affect the public opinion, believe that there is a strong relationship between marketization and inflation rate. So in case of soring high inflation rate they attack marketization. We use the word marketization to describe the transition of economy toward a situation in which there is no direct price control by the government and the prices are determined by the market forces.

Before IR most of the prices were determined in the market in the economy of Iran. After IR and after engineer Mousavi who strongly protected economic conservative policy came to power, most of prices were determined by the government. These governmental prices were notably lower than black market rates so, there was an extra demand for each commodity and therefore the government used some restrictions like coupon or quota on a large scale and in both commodity and some parts of factors markets. There were a few organizations which had been established for the execution of these controls. Their duty was affairs like issuing coupons, quota orders, distributing and collecting of them, prices determination etc. Many employees were working in these organisations. In the city of Mashhad, for instance, which has about 2 million population, there was an

organization for distribution of Iron and profile which had about 120 employees. In addition to iron and profile, there were so many items which had to be distributed and it is clear that a large number of so many employees were working in this sector.

In this part of the first chapter we will first discuss the reasons of marketization. In the next stage the manner of execution of this matter and total effects of it will be explored.

1.1.1. The Reasons of Marketization

There were really two main reasons that led to marketization: optimizing of economic activities and high level costs of direct price control. There is a book with name of After Four Years which is an official document and published by the government. New policies and governmental activities in first four years of first 5 year plan are briefly explained in this book. We translate a paragraph of it which is related to our discussion.

"The dual price system and Sometimes multi price system was a factor which used to encourage the opportunism in the commodity market. Therefore the Official Prices were gradually led toward

^{1.} After Four Years, p.58.

market equilibrium process. It is necessary to say that in a dual price system, the consumers like to get commodities with cheaper Prices they hostilely compete to take cheap and scarce goods.

Keeping the non real and low level prices was impossible except the government spent a large amount budget on it. so the prices gradually went towards market prices. The other activity of the government was leading the market to such prices in which there is a reasonable profit for producers and no unjustice for consumers."

In addition to the above reasons, the unsuccessfulness of the government efforts for price control induced the new governor to marketization. Therefore in this part we will have three topics as follows:-

- 1. Optimizing of Economic Activities
- 2. High level Costs of Prices Control
- 3. The Defeat of Efforts for Prices-control

1.1.1.1. Optimizing of Economic Activities

In the direct price control period, 1360 (81) to 1368(89), many economic activities were not optimum or even near optimum.

These could be explored in two divisions, production and consumption. We will continue our discussion in these two topic.

A) Non Economic Production

Before any discussion about the main subject of this topic we should explain the commodity evaluation and price control mechanism in the conservative era. In this period, the government used to use the Cost Value Theory of David Ricardo. We know that according to this manner the price of every good is equal to its direct costs plus a reasonable profit for producer or distributor and there is no place for market demand to affect the price in this theory. addition, there was a fixed foreign exchange regime in which the government used to provide necessary exchange imported requirements at a low level rate. This process led to a low level cost of production directly in case of domestic goods and a lower cost price in case of imported commodities. As a result of these two reasons (cost-value price determination and cheap exchange) the governmental prices were very much lower than market prices. On the other hand it is clear that there was a large extra demand for these cheap goods, so the government had to decide to whom these commodities should be allocated, otherwise they were sold in the black market at a higher rate. Therefore a great governmental organization for distribution of intermediate and consumer goods was established which had the duty of

making the quota policies and executon of it in many commodities including imported and domestic goods.

Now we explain how this price system drives production sector away from optimum situation. There is an old problem in the economy of Iran specially in the time period in which a direct price control was executed. This problem is that the profit rate in the services market, specially in foreign exchange and gold market, was noticeably higher than the production sector. This difference had been strengthened under the direct price control system because the profit of production was more restricted when the producers had to sell their commodities at a notably lower price than the black market rate.

In such a situation, the investors and capital owners would prefer not to invest in the productive project and keep their money in the more profitable markets. Table No 1.1 shows the new industrial investments during 1361[82] to 1367[88] in which the direct price control had been in force. We can see in this table that despite a high inflation rate, there has not been a notable increase in the value of investments and there is a noticeable decrease in the number of new industrial projects in 1366 and 1367. It is necessary to say that many of these permits have not been

productively used because their applications were only a way for taking foreign exchange at official rate. Their appliers used to sell these exchanges in the black market or spend them for importing of more profitable imported goods through a contraband way and the permitted projects did not continue so the real investment was much less than amounts shown in the table.

Table No. 1.1 Industrial Investment Based on Establishment Permits and number of these Establishments Issued for the Newly Established and Expanded Manufacturing Units

Year	1361(82)	62	63	64	65	66	67 (88)
New investments (million IRLs)	49171	58740	55640	48505	51276	73145	71649
Number of New Projects	1678	2065	1943	1351	1082	871	716

Source : Central Bank of I.R. Iran, Economic Report and Balance Sheet (ERBS) Yeas of 65 & 67.

This story is valid for productive units also. Every producer had a foreign exchange quota for importing his primary or intermediate goods which were required for his production. Because of the low level profit in the productive activities, these producers used to transfer their exchanges to the black market as far as possible.

They didn't also deliver a part of their products for governmental distribution at official rates despite their obligations. They used to sell these products in the black market for more profit.

It is clear that under such price conditions the production specially in private sector strongly comes down. In these years, many of productive units worked below their normal capacity owing to low profit which was caused by the governmental price and distribution. It is said in some reports that many of these units used to produce only about 40% of their normal capacity. Therefore, a notable amount of country's foreign exchange and domestic resources went to the black market and changed in to swindled imported goods whereas the government was committed to restrict these activities which were the worst and most harmful economic activities [Just the opposite of the optimum activities].

If we even suppose that the producers never used to illegally act against rules, the problem of non optimum production will still remain unchanged. We already mentioned that every producer had a foreign exchange quota for

^{2.} Some persons believe that the scarcity of foreign exchange caused this problem. But this Belief is unacceptable because in some years like 62 and 63 there was a huge amount of foreign exchange.

importing necessary raw materials and intermediate goods. The amount of each quota was based on many things like exports of oil, governmental requirements specially war requirements and the demand of producer was only one factor and normally a producer didn't completely deliver of his demand for his product.

This process didn't allow to market demand to have a role in deciding the amount of quotas and consequently the amount of production. Under these conditions, many producers whose products weren't important received an exchange quota like those who produced more necessary goods.

It was a drastic belief among the new economic policy makers that marketization is the best way for leading economic activities towards an optimum situation. They knew and forecasted some economic difficulties like rise in inflation rate but selected this policy owing to its greater usefulnesses.

B) Non Economic Consumption

Under the direct price control system, many consumer goods used to be consumed in a non economic way. A large number of people used to buy some commodities due to their cheapness though they didn't normally purchase those goods.

For instance, in these conditions a numerous freezers were allocated to some families who didn't have enough things to keep in them, and actually went to places in which they weren't useful. This caused distortions in consumption decision and a lot of wastage.

1.1.1.2. High Level Costs of Direct Price Control

The second important reason for marketization and abandoing of direct price control system was the high level costs of this system for government. There were two types of costs which had to be finance by the government, cheap foreign exchange and direct costs.

A) Cheap Foreign Exchange

The governmental prices were dependent on the existence of cheap foreign exchange which had been given to the producers by the government. It is interesting to note that the official rate of us \$ was almost equal to 70 RLs whereas this rate was between 200 to 1400 RLs in the black market. Therefore, in absence of a cheap foreign exchange, the cost of production had to naturally rise and consequently those low level governmental prices went up near to the black market prices.

Just owing to the above matter, marketization wasn't avoidable after taking liberalization policies. previously said that the new policy of central bank under the liberalization was unit and flexible exchange rate. We will discuss this matter in the fourth chapter in details but it is necessary to say here that due to some reasons the Central Bank of Iran devalued Iranian Rial from 70 RIs per us \$to 2300 RLs per us \$ in a few steps. 3 It was natural for the central bank of think that there would be no need for the direct price control system because with an expensive foreign exchange and consequently expensive commodities, the demand would be limited so there would be no reason for increasing prices.

Besides, the central Bank of Iran had no ability to give cheap exchanges because the foreign exchange revenues of the country had come down after 1363(84) due to tankers war and falling world price of oil which limited the ability of government for the above purpose. It is useful to say that the current receipt of the central bank was more than 20 billion us \$ in years of 1360, 61 and 62 whereas it was about 10 billion (7billion in 1365) us \$ in years of 66 and

^{3.} ERBS, 72 (93)

67.4 In these conditions, although the last governors didn't officially change their price control policy, they unofficially allowed to producers to sell their goods at a higher rate or in the black market.

B) Direct Costs of Price Control System

Iran is a relatively big country with 1,648,000 square km area, about 60 millions population, 229 big cities and 520 small towns. 5 It is clear that in such a country, direct commodity distribution or price control needs a large amount of cost.

It is necessary to say that in the years of economic conservatism there were three groups of goods in Iran. The first group includes most important consumer or intermediate commodities. These commodities were under the direct state price determination and were distributed through coupons, quota sheets etc. The number of these commodities was about 80 in year of 1363(84)including food, oil, rice, refrigerator, etc. 6 The second group of commodities were

^{4.} ERBS, 65 and 67(88)

^{5.} A Statistical Reflection of the I.R. of Iran, no.12.

^{6.} Iran Statistical Year Book, Iran Statistics Centre, 1363, p.664.

those which had only been under state price determination and were distributed by the private sector. The number of goods in this group was more than the first group. The other commodities like luxury goods and those whose price control was impossible like houses and buildings had been located in the third group. The prices of these commodities used to be determined by the market forces which have been strengthened in that period because a notable amount of market liquidity had shifted to this market due to higher profit rate, security and a good possibility for capital outflow in case of necessity.

There were two governmental organizations which had the responsibility and duty of the above mentioned distribution of goods, price determination and control. The ministry of Business was the first one. the number of this ministery's personnel had rosen from 10733⁷ to 21461⁸ during only two years (1361-1363) owing to new duties. The second one was a newly established organization (Just for the above mentioned purposes) named Economic Mobilization Staff. This new establishment had been organized in the prime ministry

^{7.} Ibid, 1361(82), p 69

^{8.} Ibid, 1363 (84), p 90

organization so there was no direct information about its personnel or budget but the personnel of the prime ministry organization rose from 26713⁹ to 39299¹⁰ during the above mentioned two years. In addition to these two organizations, many other governmental organizations and establishments like Banking system, Ministry of fiance and even non economic ministries were indirectly working in this direction and a part of their personnel was busy in these activities.

It was very difficult for government to tolerate such large costs whereas it had a great budget deficit and other important budget problems. Therefore, we can say that the ignoring of these large costs was the second reason for marketization. It is interesting to know that the number of Business Minister's Personnel has come down to 14938¹¹ (about 35%) in the liberalization time (1370) including Economic mobilization staff.

1.1.1.3. The Defeat of Efforts For Direct Price Control

In the economic conservatism period, because the

^{9.} Ibid, 1361(82), p69

^{10.} Ibid, 1363(84), p.90.

^{11.} A Statistical Reflection of I.R. of Iran, No.12.

determined prices were very low, there was a great tendency to over charge among the sellers, shopkeepers, distributors and even the producers and companies. This matter used sometimes to create some great economic or even social crises. In such situations, the government used to do some extraordinary activities against overcharging. There are some bad experiences in the area of efforts to control overcharging because none of these efforts was successful, so the attempt to stop overcharging was discontinued after a short time like one or two months. These failures have strengthened the belief that it was impossible to have permanently low governmental prices and market forces finally would win in this duel.

This drastic belief had created a strong tendency to marketization among the decision makers who came on power after 1368(89)

1.1.2. Mechanism and Effects of Marketization

In this part we first discuss the mechanism of marketization. We already mentioned that there were three categories of commdities before new policies of which the prices of only one were determined by the market forces. The prices of other two groups of goods were determined at a

low level owing to two factors which were cheap foreign exchange and state price determination.

It is clear that the government needed to change these two factors for marketization. Without an adjustment in the foreign exchange rate, it was impossible to marketize the prices due to relative profit rates. It means that if the government marketize the prices with a cheap exchange rate, the costs of production in those manufactures which use more imported primary or intermediate goods will grow rapidly than those which use less of these imported goods like agricultural sector or some industries like glass manufactures. It goes without saying that in such situation the profit rate of manufacturers using more imported goods will notably be more than the others. Undoubtedly, this situation is very dangerous because it would cause large-scale structural shifts of labour and capital and the economy of Iran does not have the resilience to withstand the impact of a large number of changes in its industtrial structure.

The government did both of these necessary activities to marketize the prices. It adjusted the foreign exchange rate in a few steps. It raised the US \$ price from 70 RLs to 800 then 1750 etc so that the official rate and free market

rate were very close. On the other hand, the state price determination and control became less and less and the Economic Movement's Staff was shifted and reorganized in Business Ministry, together with a reduction of the staff and disorganization of most of its subestablishments. In addition, the government gradually cut the quotas and allowed the producers, distributers or consumers to negotiate directly about every thing including prices.

This process lasted about two years and after that there were no governmental prices and distribution except in some basic goods like bread, food oil, Sugar etc.

From the first year of the first 5-year economic plan (liberalization period) the government, specially the president, had announced that marketization would be continued till the time in which there would be an equilibrium in the market. This process continued on a large scale up to 1373(94). Since 1374(95) owing to a high inflation rate, marketization and foreign exchange policy were relatively changed. According to the first estimations the inflation rate was more than 30 percent in 1373 and there were some worring about social or economic crisis in these conditions. A few months ago the government has started direct Price determination for many goods and has

fixed the official foreign exchange rate. There difference determined between new prices from last governmental rates. The difference is that the determined prices are very close to the market prices and the price determiners have paid attention to the market demand.

In spite of the above mentioned difference and despite the fact that the government had already announced that in an equilibrium situation price control policy would be reintroduced, some observers strongly believe that new economic policy changes are only related to high inflation rate.

1.2. Foreign Exchange Policy

Since 1972, when the world price of petroleum notably rose, and the exchange revenues of the Iran government found a drastic increase, there were some important changes in economy of Iran. After the above mentioned increase, the economic development of Iran has been planned on imported capital and intermediate commdities and imported consumer goods had also a noticeable share in the total consumer commodities, so both factors and commodity markets were

strongly linked to abroad. On the other hand, the government supplied the most of exchanges (some times about 90%) at the official rate so the official foreign exchange rate found an important role in the economy of Iran. This official rate affects the production costs of productive units and consequently the price of domestic goods, the price of imported consumer goods and therefore the demand for these goods etc. Therefore, the policy of official exchange rate determination is very important and any change in it, causes large scale changes in the economy.

Since we will discuss this topic in detail in the fourth chapter, we briefly explain new and old foreign exchange policies here.

In the economic conservatism period, the government had fixed the foreign exchange rate at 70 RLS per US \$. In addition the foreign transactions had to be through banking system at official rate. This fixed exchange rate regime caused so many problems in the economy of Iran. The most important problems were the absence of growth in non oil exports due to low level income for exporters, increase in imports owing to their cheap price and consequently damaging domestic production, the growth of services sector for distribution of imported goods, a large budget deficit,

compulsory direct price determination and some other problems which will be discussed in the fourth chapter.

From 1364(85) the last government allowed the non oil commodities exporters to withhold a part of their exchange revenues. They were not required to deliver it to the banking system at official rate because the government wanted to raise their profit rate for encouraging these exports.

After 1368(89) the government with the purpose of above mentioned problems made a new policy in this sector which was changing the exchange rate under a fixed regime to close to the free market rate and allowance of free exchange market. In the last six years, the official exchange rate has risen step by step. At the starting step it rose from 70 RLs per US \$ to 800 RLS, then 1400, and after some times 1750 and 2350. Almost every increase in the official rate caused a notable rise in the inflation rate whereas due to the new policy most of the other economic objectives have been fulfilled. For example, non oil exports have risen substantially budget deficit is about zero right now. From the last 1373 (First months of 1995), with an increase in official exchange rate, the prices went up so much that a social crisis was probable. In this situation the government

has announced the free exchange rate as illegal and every foreign transaction has to be done through banking system. In addition the Central Bank brought down the official rate at 3000 RLs per US \$. This rate is close to the black market rate and seems reasonable so there is a hope that under it the success of liberalization will continue without its problems like a high inflation rate.

1.3. Privatization

The economy of Iran has every time had some problems due to existence of governmental economic units in the 20th Century. Because of the easily available oil Revenues, not only that governments have never had a serious tendency to optimize the management of these institutions, but also they had never evaluated their efficiency and management system.

Before Islamic Revolution in Iran, these governmental economic units included some infrastructural industries, manufactures and corporations like Telecommunications, metalurgy, railways, airlines, some sensitive manufactures like army manufactures and Tabacco department. In that regime, however, there were a few large private factories and economic units like Iran National Automobile factory (which had about thirty thousands employees and used to

DISS 320.510955 R2194 Ec TH5547



TH-5547

produce about 100,000 cars, minibuses and buses), big banks like Exports Bank of Iran, big industrial farms in some agricultural states and areas. The main purposes of that regime for governmental management of these units were national security, economic control, power and some other social reasons.

After I.R. (Islamic Revolution), 1979, the circle of governmental economic units was notably expanded specially due to economic justice. In the first years of this period, every large unit or elastic economic units such as the banks, automobile factories, industrial firms etc were expropriated and managed by the government. According to some statistics, the total number of these corporations were 2221. The ministry of Heavy Industries used to manage 110 factories like automobiles and machineries and National Industries Organization of Iran covered the others which had 170,000 employees in 1982.

In addition there were many economic units which the government took over due to their owner problems. Some of these owners were related with last regime and some of them had left the country because they didn't like or didn't know

^{12.} Majles Va pajouhesh, No.7, p.40.

the new social and economic conditions.¹³ Their fear used to be strengthened by a large propaganda against I.R. of Iran in the radios and televisions of western countries due to some political problems between the governments.

From 1981, Mr Moosavi came to power as the prime minister who used to seriously protect economic concentration. This policy was continued till 1989. In this chapter, at first we will discuss the process and volume of privatization, secondly performance of the government of Iran in this resput will be explained and surveyed and finally we will end this part by a conclusion.

1.3.1. Privatization process and Volume

There were three ways for transferring governmental economic units to private sector. These are selling through stock market, direct negotiation and public auction in order of their importance. Since there is not separate date

^{13.} In 1989, The revolution committee which used to act as parliament approved a law by which the companies and corporations which had to be governmental was spesified. In this law these units were divided into four groups as follows:

A. In addition to industries like oil, gas copper etc, which were already governmental, all of the essential & Heavy industries.

B. All the industries whose owners had escaped out of the country.

C. Debtor companies to banking system which their owners did not pay back their debt.

D. Other economic units which have remained in the private sector.

about the public auction, we will discuss it in connection with direct negotiation.

In November 1989, Iran Stock Exchange organization began its activities again as an instrument for privatization. This organization which had been established before IR had no activity during the war and economic conservatism period.

The process of selling an economicomic unit through this organization has three steps. In the first step, when an economicomic unit applies for supplying its share through this organization, the stock exchange organization evaluates its financial situation. If the applier unit has a good condition like acceptable profit rate, acceptable accounting system etc, it is accepted by the organization. In the seconomicd step, the stock exchange and economic unit's managers agree on the worth of the company and the rate of each share and finally in the third step the shares of company are supplied in the stock exchange.

In the direct negotiation the company managers directly talk to the buyers. In most cases the buyers are employees of the company. In this way anything like price, payment duration etc, value of each portion are defined by negotiation.

According to the Table No-1.2, in the years of first plan 75.5% of total sold share have been sold through Iran stock exchange. We can see in the figure No-1.1 that the value of sold shares has fallen in the last years of first plan. In addition, the share selling through direct negotiation has risen in these last years relative to stock exchange share. The Table No-1.2 shows the value of the shares which have been sold through stock exchange and direct negotiation by four the most important governmental organizations which have managed the most of governmental companies. According to this table all of these four organizations gradually preferred direct negotiation to the stock exchange in the period under survey.

Table No. 1.2: Value of Sold Shares of Governmental corporations in 68-72

Year	S.E	· · · · · · · · · · · · · · · · · · ·	Direct N	Total		
1001	Amount percent	Share	Amount percent	Share percent	Amount	Share
68	4606.5	99	48.8	1.0	4655.3	100
69	33443.6	93	2464.14	7.0	35907.6	100
70	358539.0	92.9	27397.11	7.1	385236.11	100
71	139998.8	41.4	198319.65	58.6	338318.45	100
72 (93)	291418.1	88.9	36219.05	10.1	327637.15	100
Total	824569.9	75.5	264448.75	24.5	109245.75	100

Source: Majles Va pajouhesh, No.7, p.30.

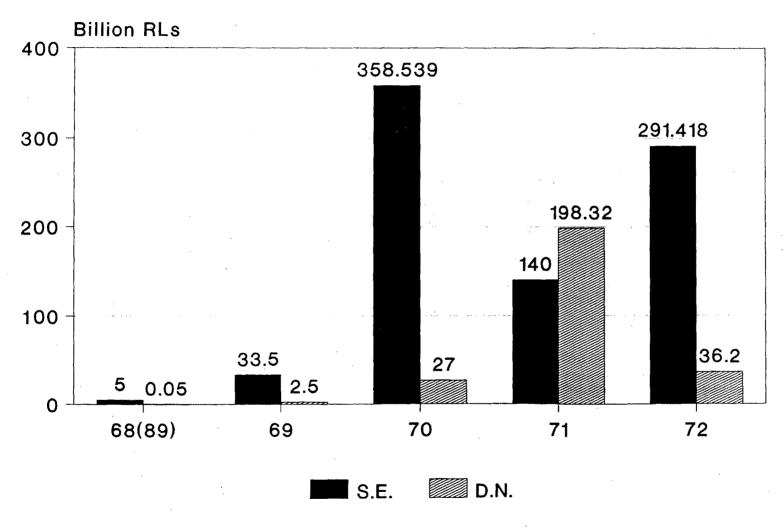


Fig. 1.1

Table No. 1.3: The value of sold Shares by the Most Important Governmental Organizations

	68 (89)		69		70		71		72 (93)			
	SE	DN	SE	DN	SE	DN	SE	DN	SE	DN	SE	DN
Iran National												
Indu orga	· -	-	10490	- .	201063	22324	78849	45199	91340	4926	379753	724.45
Industry and												
Mines Bank	2887	49	21624	2168	84896	-	585	54923	108805	10868	218798	68008
Expansion and building of	•											
Iran Industries												
organization			394	-	29619	1982	42469	33690	80610	9000	153092	44672
Fundation of												
Mostazafan	1024	· - .	184	296	4667	3091	1535	62190	3266	922	9755	66499

Source : ibid, p.35.

The composition of the buyers of the governmental companies' shares is another main subject that we have to explain in this part and explore in the next part. According to the report of the ministry of Industry during the years 68 to 72, 33.4 percent of total sold shares has been sold to the small private buyers, 25.8 percent has been bought by the large private capital owners, 24.1 percent has been sold to the public sector which are under governmental management and finally 9.5 percent of these shares have been bought by system. 14 the banking The Table No-1.4 shows this composition in the different years of the first economic plan and the Figure no.1.2 shows the share of private sector in the same years. We can easily see in this table and this figure that the public sector and banking system began to buy these shares in the last years of the first plan so the share of private sector has come down in spite of the notable growth in the value of their purchasing.

^{14.} Ibid, p.35.

The share of Private Sector in buying the Governmental Corporations

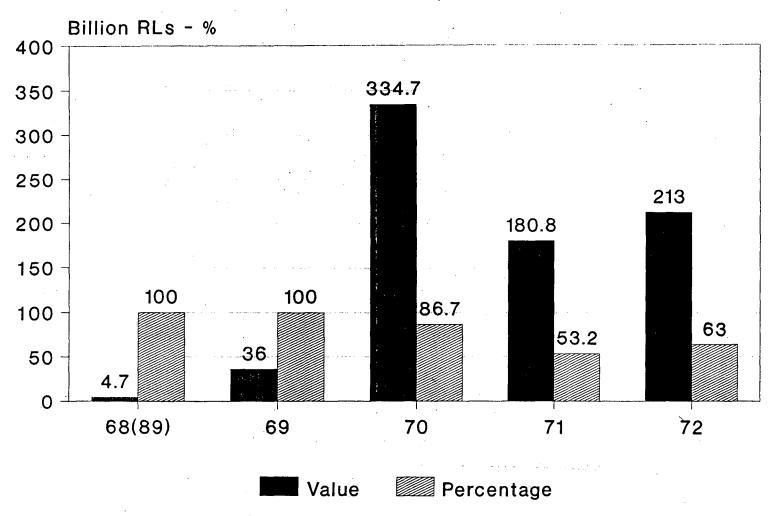


Fig. 1.2

Table No. 1.4: The Composition of the buyers of shares from 68 to 72.

Sector	68 (89)		69		70		71		72 (93)	
	value	%	value	%	value	%	value	%	value	%
Private Sector	4.7	100	36	100	334.7	86.7	180.8	53.2	213	63
Public Sector	-	-	-	-	36.3	9.4	70.3	20.8	55.6	17
Banking System	<u>.</u>	-	-	_	15	3.9	87.9	26	59	18
Total	4.7	100	36	100	386	100	338	100	328	100

Source: Ibid, p.37.

1.3.2. Performance of the Government on Privatization

Today the Iranian economists and economic decision makers strongly believe that privatization process hasn't succeeded in the first economic plan of Islamic Republic of Iran.

According to the Table No.1.2, the total value of sold shares in every year is very low and it is amply clear that the purposes of first plan in this area haven't been achieved. It has been announced by the government that 391 governmental corporation would be sold in the first 5-year economic plan. It is not possible to determine how many of

these corporations have been completely sold in these years because so many of them could sell only a percentage of their shares 15 but we can easily say that the value of sold shares is very less than pre-planned values. As an example of this failure we can say that the parliament of Iran determined a minimum value of shares which had to be sold in 1372 (the last year of first plan) because it wanted to initiate this process. In spite of this (1050 16 billion RLs) the value of sold shares was only 327.6 billion RLS according to the table No-1.2.

In addition the values which have been shown in the Table No.1.2 show that the total value of sold share has fallen in the years after 1370(91). If we add the inflation rate (about 20% per year) and count the real value of these amounts the problem will be larger. It is clear that for a country like Iran which has a big Governmental sector and low level value of the sold shares, it is necessary that the rate of growth in selling of shares should be positive and high.

^{15.} According to the latest information the total number of corporations which transferred shares is 300 till mid 1374 (Sep 95).

The Budget law of I.R. in 1972 (1993).

have to pay attention to two points in this connection. The first point is that in the last years of the above period, the value of the sold shares is notably higher than first years like 1368 with about five billion RLs sold shares. the second point is that a notable amount of the sold shares has been sold to non private sector like trade corporations which are actually banks and insurance governmental. For example the share of these organizations are 12.7, 46.8 and 35 percent in 1370,1371 and 1372 fact states that respectively. This real amount privitized corporations and companies is notably less than what the values in the Table No.1.2 seem to suggest. We have shown in the last part that the share of the Iran stock Exchange has gradually come down during the years of first plan and the share of selling through direct negotiation has risen at the same time. We can say that the reason of this change is that some managers of the governmental companies prefer the direct negotiation because in this they have more authority. They can choose the buyer and change whereas in the stock exchange they authority over this organization.

Now, we will take up the question as to why privatization process has been done so weakly. Many reasons

can be considered. We can divide these reasons in two main groups, non economic and economic reasons.

1.3.2.1. Non Economic Group

There are five reasons for unsuccessful privatization in this group: Non-existence of investment security, Instability in economic policies, non-existence of a clear legal framework, non-existence of a good information system, non-existence of a responsible organization and authority of companies and corporations for selling themselves.

A. Non-existence of Investment security

When we look at the conditions of the first years of the privatization process, we can say that every investor was right to be worried about his investments namely buying governmental economic units, because a strong economic conservatism had newly been left behind and inspite of power of a new political party who protected privatization, the opposite party was relatively strong and was able to affect new policies. Besides this, it was expected that this party could come to power in the next election. In addition, there were many articles and essays in the newspapers, magazines, speeches etc about social and economic justice, which was

the main word for the protection of economic conservatism in the last period and with this may be added the fact that companies, corporations and capitals nationalized in that period. In spite of the above signs for worrying of investors the government hasn't strongly acted for protecting investors. For example there hasn't been approved a law for this purpose in parliament of Iran yet although I don't think that the security problem could be solved through activities like approving a law. It will actually be solved when the power of present governor and his party rises needs a longer time to establish confidence among private companies.

B. Instability in Economic policies

We know the stability of economic policy in general principles and details is very important for an investor. Every investor likes to have confidence about this matter because his decision about an investment like buying shares depends on economic policies and conditions and certainly a good investment will have good results if these policies and conditions don't basically change. Because of a few reasons, stable economic policies and conditions in both general and details were absent. For example nobody could tell whether

under the general policies liberalization like privatization, marketization and foreign exchange rate will be unchanged. Besides, there were some changes in the above policies like foreign exchange rate and marketization during the first five year economic plan which strengthened this lack of confidence among businessmen, producers and and investors in this period. For instance the Central Bank of Iran couldn't control the foreign exchange rate as he had already announced and changed the rate a few times. addition, the gap between official rate of foreign exchange and black market rate every day was becoming more and more and this gap created some scepticism about stability of the foreign exchange rate policy. There were problems about marketization policies too. There were some speeches in the parliament, Friday's Namaz (a prayer), and many articles in newspapers, magazines which advised price control by the government because of high inflation rate. These strong advertisements against marketization caused a fear among economic agents that the government would marketization policy sooner or later. In addition, government was at the beginning of new economic regime and specially economic experts, knew naturally needed some time to have stable economic policies.

The above matters were about general policies of liberalization. There were also some problems about details. For example it was not properly clear which economic sector like industrial and agricultural sectors will be protected by the government. This ambiguity led to decision problem among a part of investors who couldn't find the optimum investment pootfolio. Therefore many capital owners preferred not to Invest in such conditions.

C. Non-Existence of a Complete legal framework

As we already said, liberalization and privatization had just began in the first five year cultural, social and economic plan of Islamic Republic of Iran. governors of Iran had no experience in this new economic environment and after IR there wasn't such an experience. it Therefore is natural that there were some problems, mistakes and weaknesses this relation. in An important one of these weaknesses was the absence of a thorough legal framework for this matter. There was only a remark in the first five year plan in which transferring of governmental economic units to private sector had been mentioned without any details. This remark had been approved by the council of government and the parliament.

The cabinet had been authorized for defining and approving of other details. Because the cabinet and all of the ministries had also many other works to do, they couldn't prepare a proper law for privatization in complete details and the approved law had some weaknesses and many ambiguities.

The above mentioned ambiguities and problems caused many problems in the execution of privatization law. Many of ministries main decision makers in governmental and organizations preferred to keep the economic units under the management of their organization due to these ambiguities and problems because it was natural that they had some fears of possible accusations. It was probable that they would be suspected for something like selling the companies cheaper than real price, selling to family persons, friends and etc. In addition, the managers who executed the privatization law faced many problems. There was no rule or law for the manner of selling like selling through stock exchange, or direct negotiation just as there wasn't any rule for determination, buyers etc and the manager had to decide in any stage according to his distinction and assessment. It is natural that privatization in such a manner will take a long time and will falter at every step.

D. The Absence of a Good Information system

Another main problem which has resulted in the slowness of privatization movement is that buying of the share of companies is an unknown thing in economy of Iran. We can say that about 90% Iranian don't know this way of economic activity or at least they don't know its advantages. It is natural that we strongly need an information system in such a situation. In an ordinary situation, the responsibility of an information system is to make people become aware of something like profit of the share, different industries and sectors etc. But, at the present situation of Iran economy in which most of people don't know the share and it's instruments like stock exchange, the responsibilities of such information system is doubled or even more because in addition to the above duties, it has to educate the people about preferences in purchasing of companies' shares as a way which leads to an extra income.

I am sorry to say that in spite of this strong necessity, the privatization process wasn't interlinked with a good information system. There were only some news about foundation of the Iran stock Exchange and value of sold shares in radio, TV and Iranian newspapers and magazines without any discription or advertisement about this new

economic way. It is very useful to show the importance of propaganda in this regard. There was a good propaganda about selling of an industrial agricultural corporation in the Khorsan state. Due to this propagation a large number of people entered into this purchasing partnership and bought a large number of shares of the above corporation.

E. The Absence of a responsible organization for privatization

The last of the non economic reasons for weakness of privatization is the absence of a special organization to manage this process and be responsible about it. It is very marvelous to say that in the privatization process of Iran, every ministry had the duty of selling the companies and corporations which are under its control and management. In addition the managers of every governmental company and corporation had the main role in selling their economic unit to private sector. In such conditions the probability of selling an economic unit was very low if its managers to sell. It was natural that most of these managers who didn't want to risk, used to avoid transferring the companies to the private sector due to some political problems which have

already been mentioned. Today, it is clear that without a special responsible organization for managing of privatization process, this movement will not gather speed and this managerial problem has been mentioned in many articles and surveys and I hope that this problem will be solved in the second 5 year economic plan which has started from April 95 after which it was postponed for one year.

1.3.2.2. Economic Group

In this part we survey the economic reasons for weakness of privatization in Iran. There are six matters that we can explore as economic reasons of the slow progress of privatization. These are as following:

- A) The absence of a strong financial urgency for privatization.
- B) The absence of necessary liquidity
- C) Control of stock exchange by competitors
- D) Distortions in investment decisions
- E) Inaccuracy of the first five year plan targets

A) The Absence of a Strong Financial Urgency for Privatization

spite of the claim of many governments transferring of governmental corporations has no financial reasons, the truth is that this process will be quicker, the more acute government's financial problem is in a situation in which the government cannot obtain necessary expenses from the other sources. There is a strong belief among the Iranian economists that the oil revenue of Iran is the main source for most of problems in the Economy of Iran including privatization. Since the government of Iran has every time been able to prepare its annual budgets in the years of first five economic plan (like any other time in these 20 years) it didn't insist on selling the governmental corporations. It is important to say that the government of Iran had a better situation in its annual budgets in these years under survey due to some changes in economic policies and structure of budget. important of the changes are the raising of the official rate of foreign exchange and increases in tax receipts. Due to the former change, the government used to sell its oil exchange revenues at a notably higher rate and his income in

terms of Iranian Rial went up sharply. For example the extra revenue due to selling foreign exchange at a higher rate rose from 717.3 billion RLs in 68 (89) to 4072.9 In 71(92) billion RLs. 17 Increase in the tax receipts caused notable increases in the revenues of government. This revenue was about 986.5 in 67(88) and 3775.5 in 71(92) 18. It is enough to substantiate our claim about revenues of government to say that the budget deficit was about zero in 72(93) 19 whereas it was about 50% of total budget in 67(88).

The existence of a high level income from another sources means that there was no a financial urgency for Iran's government to insist on selling governmental companies and corporations and to speed up privatization process.

B) The Absence of Necessary Liquidity

The next main economic reason for the weakness of privatization was liquidity. It was a problem for privatization that this process had been accompanied by a tight monetary policy. In the war time years, the high level

^{17.} ERBS, 71, P 223-229

^{18.} Ibid

^{19.} Ibid.72

liquidity was a large problem for economy of Iran and caused notable difficulties specially a high inflation rate. Therefore, one of the first economic targets of government was to control the volume of money and liquidity and so the government introduced a tight monetary policy in the first five year economic plan and began to collect the money through many ways. Changes like increase in foreign exchange rate, rise in tax receipts, changes in banking system loans etc led to a liquidity shortage in the private sector which could not absorb the shares of governmental corporations. For example after the devaluation a large number of companies and corporations in both private and governmental sectors faced too much of a financial crunch to even think about new investment or the purchase of shares.

C) Control of Stock Exchange by the Competitors

According to the table number 1.2 and figure number 1.2 the stock exchange has been the main way of privatization and more than 75% of sold shares have been sold through this organization. There is a strong belief among Iranian economic experts that the managers group of stock exchanges was a main problem of this organization. According to this belief, the managers of the greater banks of Iran like Bank-

e-Melli (National Bank), Bank-e-Saderat (Export Bank) of Iran etc are also the members of the managers group of stock exchange. Since the target of both organizations, stock exchange and banking system is relatively same and both want to make profits so they are competitors, the bank managers don't allow to stock exchange to sell a large number of shares and collect too much money. They used to define some hard conditions for accepting companies in the stock exchange and created similar difficulties.

D) Distortions in Investment Decisions

There has always been an old wound on the body of the economy of Iran in the last three decades which has moved capitals and investment towards business sector. This large wound was the existence of a notably higher rate of profit in the business activities than productive ones. Problem became more serious after the IR particularly in the war period due to the war dangers for factories and low level of production of them. After war and in the first 5 year economic plan the economy faced this problem due to some reasons. We already mentioned that after devaluation many companies and producers had difficulty to gather necessary money for purchasing their foreign exchange requirements.

This inability led to a decline in their production so their profit naturally came down whereas the profit rate in business activities specially in the gold and foreign exchange markets was very high. Despite the existence of many companies with a high profit rate, the low profit rate in other industries created a situation among the capital owners in which they were induced to invest less in the production sector and more in the business sector.

E) Inaccuracy of the First Five Year Plan Target

As a last reason for the weakness of privatization we can say that the target of the first five year plan in this relation was inaccurate. There wasn't any notable research and exploration about the number of governmental companies which had to be privalized. We can really say that the definition of 391 governmental corporations was an administrative decision. For more explanation, we can guess that in the period of decision making about this affair every ministry announced the number of corporations under his management which it wanted to transfer to private sector and total of these announced number was 391. Nevertheless, it is clear that they didn't see economic matters like liquidity, profit rate etc which are connected with this

decision because they were in a hurry and the most important thing was to begin this process as soon as possible.

1.3.3. Conclusion

In view of previous discussions, we can say that privatization was not successful in so far as the transfer governmental corporations to private sector concerned. But. this process is only one part of privatization. There are some other aspects of the process. Transferring of governmental services like foreign trade which had no assets for selling was also an important part of privatization. In the economic conservatism time, most of foreign transactions used to be done by governmental organizations specially the Ministry of Business. They had established 17 governmental centres which had the duty of providing imported requirements. During the first plan, these centers have been dissolved and private sector has been very active in foreign trade. Besides, together with new policies, the government has prevented the expansion of governmental corporation circle and share of private sector has gone up in the economic activities. This matter will lead to adjustment of the structure of economy gradually. We can finally say that although the transferring of governmental corporations hasn't been properly done, the privatization process as a new experience was relatively successful and we hope that its problems will be solved in future.

Industrial Production and Investment After Liberalization

After an explanation of the main policies under liberalization in the first chapter, we shall talk about three large sectors of the economy of Iran after the liberalization process in the next three chapters. In this chapter, industrial production and investment will be discussed in the period under survey.

We can categorize Iran's manufacturing sector into. petroleum and Gas; Electricity and water; Construction, mining; and those sectors which are officially called "industry". Among these different manufactures, we can only discuss the construction, mining and industry in relation to liberalization. The petroleum, gas; electricity and water industries have not been seriously affected bv liberalization activities. industries These notably been privatized and market forces are not allowed to determine their prices although the government has slightly raised their rates. In addition, the exchange rate that was applicable to these sector was almost the low level rate of

pre-liberalization period. So we can avoid the discussion of the impact of liberalization on these industries.

Besides in many cases, the statistics about mining and manufacturing are mixed and separate information is not available so, we mix these two sectors. Therefore, our argument will be produced in two parts, construction and industry (including mining).

2.1. Construction

The construction sector has always had special role in the economy of Iran. The activities of this sector have hardly ever been done by the government and we can surely take it into account as a part of the private sector activities. This is true for the economic concentration period also because in this period, the construction activities had been remained in the private sector. Furthermore, there was no state selling price for building in that period and the prices were determined in the free market. The only effect of economic concentration policies was the existence of some cheap construction materials particularly Iron beams and cement which had a high share in the construction costs owing to cheap foreign exchange and state prices. The Minister of Business used to provide a

percentage of these items for construction of each building. the direct effect of new policies was cutting of these quotas, although the real amount of quota had already been less and less due to series of restrictions of exchange revenue. Therefore the constructors had to buy their required construction materials from free market. Therefore, the construction costs increased. The table number 2.1 shows the most important indices of construction.

Table No. 2.1.

The Most Important Indices of construction costs in 1367 to 1371

(1361=100)Indices 1367 (88) 1368 1369 1370 1371992) Total price index of construction 260 308.5 427.5 490.4 636.85 Construction Services Price 263.4 311.1 340.2 391.4 468.5 Wholesale Price of construction materials 256.5 306 805.2 514.9 589.5 Metellic 291.8 369.1 671.2 709.9 970.2 Non Metallic 211.4 231.8 315 435.5 594.2

Source : ERBS, 71, p.219.

We see that the price of construction materials has strongly increased between 1368 to 1369 (1990) along with

the reduction in quotas of these materials. On the other hand the table no.2.2 shows the price indices of housing from 1363 (mid of economic conservatism period) to 1371(92).

Table No. 2.2

The price Index of Housing from 1363(84) to 1371(92)

1361=100

70 Year 63 64 65 66 67 68 69 71 (84)(94)258.7 Index 126.8 137 163.8 201.9 304.4 327.7 393.8 480.9 Annual Percentage

28.1

17.7

7.6

23.3

19.6

Sources: ERBS, (88) and 72 (93).

Change

According to the table, there is no relationship between liberalization and price of the housing because the pattern of price rise has remained the same before and after liberalization (1368). This is certainly owing to the fact that the housing price has always been determined in the free market. In addition, the table no. 2.3 indicates that the profitability of construction activities has decreased because the costs have grown in a higher rate than revenues (150 percent growth in costs against 100 percent growth in revenues (price of housing)).

A comparison of these two tables indicates that the liberalization directly affected only the cost side of this sector through devaluation of national currency.

Table No. 2.3

New Investment By the Governments and Private Sector In all Urban Areas

Million RLs Totals Governmental Private Sector Year Current Sector Price Current Constant Price Price 61=100 63 (84) 71 (92)

SOURCES: ERBS 67 (88) and 71 (92).

We explore the investment and production (same meaning in the construction sector) in this sector now. Table No. 2.3 shows new investments in this sector.

We can clearly observe the effect of liberalization particularly of the foreign exchange policy in the governmental sector column of this table. This amount is decreasing till 69 due to budget problems. From 1369 (90) as a result of the new foreign exchange rate and rise in tax receipts the government investment in this sector has been drastically increased from 48944 million RLs in the year 68 to 170709 mm RLs in the next year.

The Investment of private sector in this area is very interesting. The relative column shows that the private investment at constant price was decreasing before the year 68 although they were unchanged in current price. This decline is confirmed by the table no 2.4 showing the real product in the construction sector too. We can interpret this matter as on extension of decrease in G.D.P in those years as a result of many problems in the war time.

After the year 1368, there was a notable increase in construction activities of the private sector, according to the tables no.2.3 and 2.4. this increase is not normally interpreted because we previously saw that the profit rate of those activities had fallen after the liberalization policies. But, there is an important thing to notice here. In those years (economic conservatism period) every person who

wanted to build a new house or construction had to wait for a long time (more than two years in some cities) to take his quote of construction materials at state prices. That is the time lost in the construction period led to a decline in the actual profit rate before liberalization. For example a profit of 1 million RLs which is normal over a period of one year was divided into 3 years (hence it was 1/3rd million RLs per year) due to delay caused.

Therefore, we can draw the result that the annual profit rate in this sector has risen after liberalization. This explains rise in these activities shown in table 2.3 and 2.4.

Table No. 2.4

New Structures in Urban Areas by the private Sector

thousand square meters

63 (84) 64 65 66 67 68 69	30745 27543
65 66 67 68	27543
66 67 68	
68	23824
68	18603
- -	15848
60	17493
07	29321
70	31122
71 (92)	

SOURCES: ERBS 67(89) and 71 (92).

2.2 Industry and Mine

The promotion of industry has been a major economic target for Islamic Government of Iran. These revolutionary governors every time insisted on this sector because they used to look at it as a main chain of economic dependency to foreign nations particularly to the enemy countries like USA. They have always emphasized that not only is Iran dependent on them for capital and intermediate goods, but also for consumer industry based goods.

After Islamic Revolution there was not any important improvement in this area due to some problems like war, economic embargo, instability of foreign exchange revenues etc. After war these problems relatively decreased and economic planners and decision makers, paid great attention to this sector.

The first step of these new activities was supporting these industrial and mining units to use their maximum nominal capacity and increase their production. The growth of industry (including mine) through new investments was the second main aim of the new plan. Structural transformation of this sectors towards less dependency to foreign nations was another industrial target. The latter aim means that though we would not follow complete self sufficiency, we

should set up the basic industrial units inside the country. Furthermore this target includes changing the composition of production such as increasing the shares of capital and intermediate products which had a very small share earlier (particularly capital products).

In this division of chapter 2, the aim to study the process of industrial (including mining) investments and production after the implementation of the liberalization policies. Thus argument will include the performance of the mining sector also.

It is useful to point out that there were three separate ministries which were responsible for leading the industrial sectors at the beginning of the first five year plan namely the Ministry of Heavy Industries, the Ministry of Industries and the Ministry of Mines and metals. During the first plan, because of unique policy making and harmonization of industrial activities, the two former ministries were merged so there are only two ministries at present, the ministry of Industry; and the Ministry of mines and Metals.

2.2.1 - Industrial Investment

As we previously mentioned, the privitization doesn't include large and basic infrastructural industries like iron industries, petrochemical etc. Therefore, the industrial investment is divisable into two divisions, government and private investments. Since each of these two types of investments has separate effects and specifications, we will survey them here separately.

2.2.1.1 - Government Investment

The governmental investment was relatively constant at current prices according to the table no.2.6 and figure no.2.1 during the last years before liberalisation owing to the worsening of the war, the diminishing government revenues, etc. After the execution of new economic policies, the government found the ability to increase its industrial investments, specially for bringing an end to some big incomplete projects like Raazi petrochemical Industries.

As a result of new foreign exchange policy and the sale of foreign exchange at a higher rate, the revenues of government in terms of national currency rose by a large amount. In addition, the growth of domestic production made the government capable to get much more tax.

Table No.2.5

Government's Revenues Creating via selling of Exchanging and Taxes

Billion RLs

Year	63	64	65	66	67	68	69	70	71	72
Sale of Forex	1373	1189	417	766	668	1488	3369	3544	5141	14683
Taxes	899	1034	1025	1030	987	1188	1695	2765	3776	4062
Others		443	444	266	375	431	499	568	624	9681506
Total	2715	2666	1707	2122	2086	3175	5633	6934	9885	20251

Sources: ERBS, 67(89) and 72(93).

Table no. 2.5 demonstrates this. According to this table, the revenue coming from foreign exchange drastically rose after 68 from 668 billion up to 14683 billion RLs. Besides, the tax revenue rose from 987 to 4062 billion RLs in this period so these revenue totally amounted to 20251 billion RLs at the end of the period showing ten times increase compared to 2086 billion before 68.

We can interpret these changes as direct result of new policies. The new foreign exchange policy resulted in a higher revenue in terms of RLs and the liberalisation policies generally led to a growth in domestic production so that the people found the ability to pay more taxes. These

revenues provided the government with more scope for investment.

Table no.2.6 shows these investments in different subsectors. The last column makes it clear that the total amount of investments of government were fixed whereas their share in total budjet were decreasing before 68 but after this year there was a noticeable increase in both the amount and the share. In the industry subsector this table shows an increase in the first years of period (68-70) and a decrease in the last 2 years at current prices. This story is almost the same for the mining subsector also. Although the amount of investment was rising in all years of the period but the share in total budjet came down in the last two years. It is not difficult to interpret the above mentioned movement. There were a few large uncompleted projects like Raazi Petrochemical Industries allocating most of investments to themselves. These projects were completed in 71 and 72(93), therefore the governmental investment on them decreased. However the figures in constant prices show an increase at the first year of the new period (89) and a decrease in the years there after, aiming to a higher, iflation rate.

Table No. 2.6

The Amount and Share of Government Annual Investment in Industry, Mine and All Sectors

Billion RLs

Sector	Indus	try	Mini	.ng	Т	Total		
	A=Current	Cons	B=Current	Const	C=Curren	t Const	in all	
	prices	Prices	Prices	Prices	Prices	Prices	sectors	
*	(A/TB)%	61=100	(B/TB)%	61=100	(C/TB) %	61=100	(D/TB)%	
63 (84)	106.102	91.467	21.481	18.518	127.83	109.985	8.78	
	(3)		(0.6)		(4)		(26)	
64	89.660	72.016	14.313	11.496	103.973	83.512	765.1	
	(3)		(0.4)		(3)		(23)	
65	94.669	31.880	14.756	9.467	109.425	70.234	746.5	
	(3)		(0.5)	,	(3)		(24)	
66	121.682	60.209	12.021	5.948	133.703	66.156	729.2	
	(3)		(0.3)		(4)		(20)	
67	984.77	39.950	20.311	8.240	118.758	48.177	816.4	
	(2)		(0.5)		(3)		(19)	
68	137.029	46.944	27.037	9.262	164.066	73.671	931.5	
	(3)		(0.6)		(4)		(22)	
69	214.610	59.334	51.859	14.338	266.469	73.671	1766.3	
	(4)		(0.8)		(4)		(29)	
70	216.226	46.651	94.334	20.353	310.560	67.003	2527.0	
	(3)		(1)		(4)		(36)	
71	215.416	35.559	100.138	16.530	315.554	52.089	3192.1	
	(2)		(0.9)		(3)		(29)	
72 (93)	151.924	19.841	178.417	23.301	330.340	43.142	7018.0	
	(0.7)		(0.8)		(2)		(34)	

Sources: ERBS, 67(88), 71 and 72(93).

TB : Total Budget

2.2.1.2 - Private Investment

There were a few things that every private investor used to pay attention to in the period under survey in

Total government investment in industry and mine sector at current and constant prices

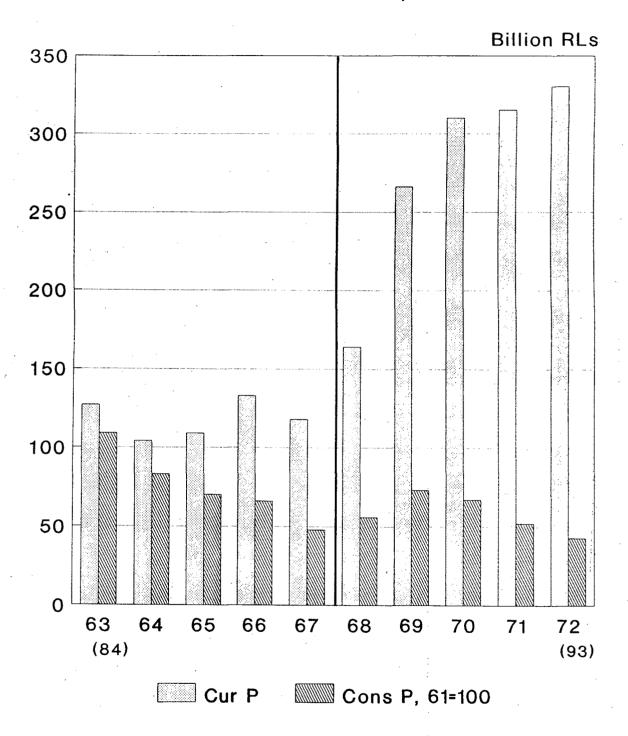


Figure No. 2.1

eçonomy of Iran. The first one is the stability of new policies. The country had just passed an eight year period 9f concentrated economic activities. So, naturally every private investor specially the owners of large capitals, were afraid of the instability of the new policies even if the opposite political party came to power or if the present ruling party reviewed its policies under the pressure of the Leftists. The social conditions and press propaganda used to further strengthen this fear.

The second important thing considered by the investor was the stability of economic conditions, like inflation rate, exchange rate etc. For instance, the Central Bank three times changed the forex rate only in the second half of the year1368 (89). It is clear that every exchange rate change consequently changes the cost benefit conditions of industries so new investors naturally prefer to wait for stable conditions.

The above mentioned Points mean we should not expect very large change in the private investments in the period under consideration. We investigate this matter in two different ways: i) the share of private investments in total investments and ii) the changes in the amount of private investment after liberalization.

It is noteworthy that among the liberalization policies, marketization and foreign exchange rate directly affect the cost of investment and profitability of productive units. Therefore, most of changes in this area should be interpreted as a direct or indirect result of these two policies (marketisation and exchange policies). An example for a direct result is chang in investmet due to profitability changes and for an indirect result is more investment owing to less state control which was a result of those two above mentioned policies.

We can observe the amount of private investment in the manufacturing and mining sector in the table No.2.7 and figure no.2.2. In the years before 68 this amount is approximately constant at current prices and certainly falling at constant prices. Since the new policies started (69), there has been a drastic increase in the private investment particularly after 70 at current prices. This investment amounts to 913101 million RLs at the end of 72(93) which is ten times more than the corresponding amount in 68(89) which is 93188 million RLs. In terms of constant prices too, the situation is almost the same. According to the last column of the table, before the year 68(89), the amount of private investment at 61 constant prices was

coming down but after this year, it went up, such as in the year 72(93) it was near four times more than 68. This notable movement of the private investments indicates the effectiveness of new economic policies.

Table No. 2.7

The Amount of Private Industrial Investments and Share of them in Total Investments

Billion RLs

Year	Private Indu Inves = A Current pric	Indus	A/B Percent	Private Indus Inve at cons price 61=100
63	55.650	183.223	30.3	47.965
64	48.505	152.478	31.8	38.960
65	51.276	160.701	31.9	32.911
66	73.145	206.848	35.3	36.192
67	71.649	190.407	37.6	29.066
68	93.188	257.254	36.2	31.925
69	217.475	483.944	44.9	60.125
70	214.184	524.744	40.8	46.210
71	416.039	731.593	56.8	68.676
72 (93)	913.101	1243.441	73.4	49.250

Sources: 1) ERBS 67 and 72(93)

From the point of view of share too, there is a marked improvement. In the years before 68(89), the share of private investment in total industrial investments had risen

²⁾ Iran Statistical year book, 72(93)

Private investment in industry and mine sector at current and constant prices

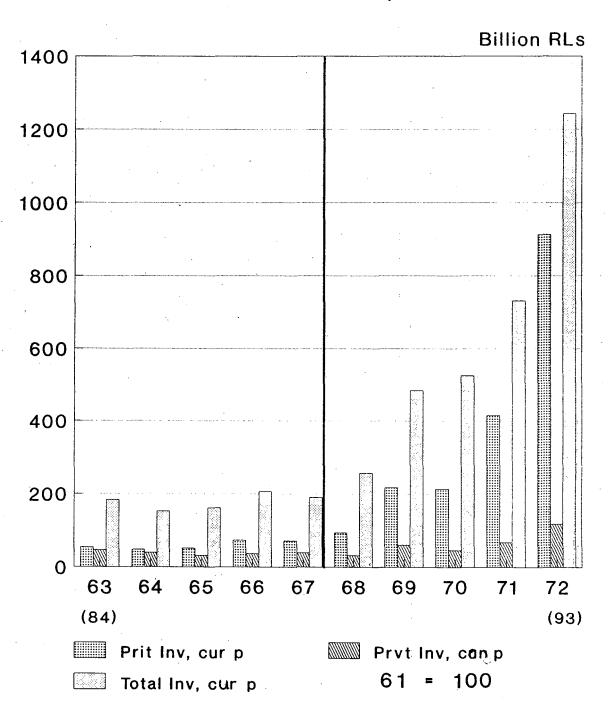


Figure No. 2.2

from 30.3 up to 37.6 in the year 67 but this is mainly owing to non growth of governmental investment resulting from problems like war and decreasing petroleum price. After the year 68(89) this share rose from 36.2 to a maximum 73.4 in 1372(93) in spite of two times increase in governments investments at the same period.

We can surely come to the conclusion that the government of Iran has been successful in boosting the private investments in the manufacturing and mining sectors through its liberalisation policies.

2.2.2 - Industrial and Mining Production

Industrial production was a major problem in the economy of Iran in the economic concentration period. Many industrial productive units had been closed or were producing much below their nominal capacity because their owners had shifted their capital to other markets like exchange, gold and to transactions on imported goods all which gave a very high level of profit.

After the execution of the new economic policies, industrial production was expected to rise. Before this new period, many producers had got accustomed to get foreign exchanges at the government rate and to sell all or a part of it in the black market with a high level of profit. They

couldn't achieve this profit after devaluation because they had to buy 1750 RLs per US\$ whereas it could be sold at about 1800 RLs (the market rate during a long period). Therefore, they had to increase production to get a profit. We emphasize on this factor for the growth of production after the year 68 because there has not been an effective change in profitability of industrial production as we will show in the next paragraph.

Contrary to price of the constructions which has not been directly affected by marketization, we can find some important influences from both marketization and new forex policy on the manufacturing and mining sector. The new higher prices of domestic industrial commodities resulting from marketization led to a higher revenue for their producers and the new foreign exchange rate led to a noticeably higher price for exported goods in terms of RLs, and consequently to a higher revenue for their producers. On the other hand both of these policies caused a drastic rise in the input prices and consequently rise in cost of production.

Table no. 2.8 shows the total costs and the total value of industrial production and profit rate of the sector. We can observe in this table that though the costs and value of

production have drastically changed during the period under survey, the profit rate has remained more or less unchanged because the former changes are in almost same proportion.

Table No. 2.8

Total costs, value of praduction and Profit Rate in the Manufacturing and Mining Sector

				Mill:	ion RLs
Year	67 (88)	68	69	70	71 (92)
Paid Wage	888779	963850	1343563	1571246	2216560
Primary and inte goods	2925069	4007804	5414163	4932504	6916784
Energy and water	101306	86081	129150	154940	216779
Total Costs	3915154	5057735	6886876	6658690	9350123
Value of Production	5524137	7041108	9937099	9478278	12934383
Profit	1608983	1983373	3050223	2819588	3584260
Profit Rate (percent)	41	39.2	44`	42	38.3

Sources: Iran Statistical yearbook, Iran Statistics Centre, Year 1372(1993).

Turning to the production survey, we look at the table no. 2.9. Before saying anything else, it is necessary to say that this table is based on the information of Economic statistics centre of Central Bank of Iran contrary to table

no.2.8 which was based on information of Iran Statistics Centre, so their figures have some differences under the same topic due to different definitions. According to the table no. 2.9 the amount of production shows a drastic increase in both industry and mine during the first 5 years plan (beginning from 68) at current prices. Because the constant prices are more important, we discuss shall them. In the first 3 years of the period under survey there is a marked increase in industrial production from 1417 to 1940 billion RLs and approximately stopping thereafter. The mine productions had a continuous growth in this period.

Table No. 2.9

Production of manufacturing and mining Sector

Billion RLs

Year	Manufac	turing	Mini	ng	Tota	u	Pe	re
	cur pri	cons P	Cur P	cons P	cur pri	con pri	cur	cons
		61=100		61=100		61=100		
63	1374.6	1328.4	98.7	79.9	1473.3	1408.3	_	-
64	1365.2	1292.0	104.7	77.9	1469.9	1369.9	-0.2	-2.7
65	1393.1	1199.8	102.6	62.3	1495.7	1262.1	1.75	-7.9
66	1542.2	1083.4	108.4	62.8	1650.6	1146.2	19.4	-9.2
67	2288.1	1301.8	109.5	56.6	2397.6	1358.4	45.2	18.5
68	290.4	1417.9	130.6	58.6	3037.0	1476.5	26.7	8.7
69	4413.9	1643.8	173.2	63.1	4587.1	1706.9	51.0	15.6
70	6833.2	1940.3	261.5	68.4	7094.7	2008.7	54.7	17.7
71	9218.0	2002.4	349.7	72.2	9567.7	2074.6	34.9	3.3
72	12872.3	2022.4	495.0	76.8	13370.3	2099.2	39.7	1.2

Sources: ERBS, 65(86), 67, 70, 72(93).

The Value of Manufacturing and Mining Products at courrent and constant prices

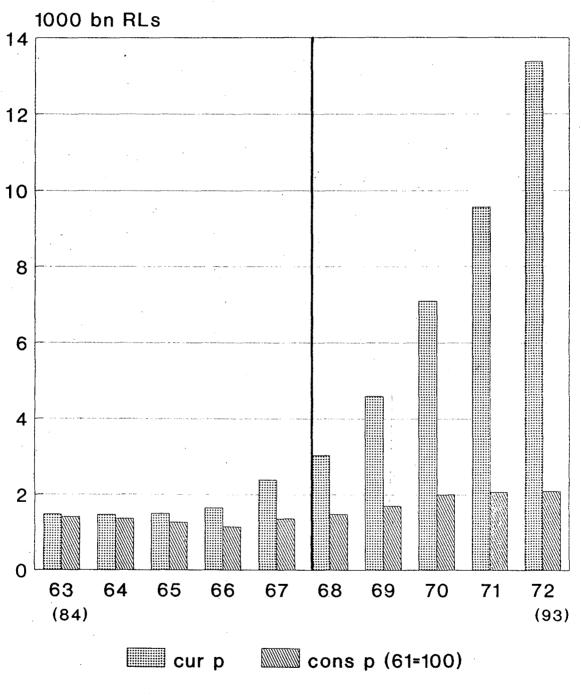


Figure No. 2.3

Iranian experts connect this difference liquidity problem. They say that in the first three years, the new exchange rate wasn't too high. Therefore liquidity problem wasn't so serious, for industrial units. Furthermore, the banking system used to help the producers through some credits. After the year 1370 from one side forex became very expensive and industrial factories did not have enough money to buy their required forex and on the other side the government had made a rigid monetary policy (because of high inflation rate) and so it prevented issue of new loans to control the volume of money supply. Finally, problem brought the growth rate of industrial production down to 3.3 per cent in 71 and 1.2 per cent in 1372(1993). The mine subsector did not face the same problem so it continuously rose during the period at an average rate of 8 percent. This sector is less dependent on imported primary and intermediate materials than the industrial sector so it is less affected by the exchange rate changes. In addition, most of the mines are under state management Yet. They met their liquidity requirement in a better way than the manufacturing units.

Furthermore, there is a strong belief among the Iranian economists saying that the high growth rate of industrial

production is connected to the unemployed capacity of the manufacturing subsector in the first sears of new period. We have already seen that during the war, many industrial units used to produce much bellow their nominal capacity. After the war with the solving of the exchange restriction problem, they began to produce more and more up to their maximum capacity. This process lasted a few years till the year 1370. Thereafter the growth rate of their production came drastically down.

The production index of large manufacturing establishments which is a main index in this area too, draws the same result. Table no. 2.10 shows this index. According to this table there is large increase in the index and consequently in the industrial production from the year 68 to 70 and thereafter the growth approximately stopped. This confirms our result already survyed.

Table No. 2.10

Production Index of Large Manufacturing Establishments

1361=100

Year 63	64	65	66	67	68	69	70	71
Index 131.3	126.6	100.6	94.2	86.7	91.8	118.7	141.3	143.2

Sources: ERBS 67(88) and 71 (92)

The Central Bank of Iran traditionally publishes the production of some products. We show figures of a part of manufacturing commodities in table no 2.11. The complete table is attached at the end of this thesis. In this table we also observe a noticeable increase till 1370 and no growth thereafter which is not a different result from what we have already observed.

We can finally say that the liberalization policies boosted the industrial production during the first years but their effects weakened in the next few years due to some new problems like liquidity crunch. Although it is too soon to reach a final judgment in this area but we can conclude that they were not as successful as expected.

Table No. 2.11

Production of Selected Goods in Large manufacturing
Establishments

<u> </u>						
Commodity	Unit	1367	1368	1369	1370	1371
Fabrics	Million meter	483	460	454	497	503
Machin carpet	1000 sq meter	4408	4867	7198	10374	10438
Vehicle tires	1000 rings	2433	4814	6012	6255	6170
Iron and met beams	1000 tons	774	923	1074	1665	1329
Refregerators and freezers	1000 Units	326	351	649	829	883
Black and White TV	п	264	368	502	515	420
Colour TV	11	39	39	96	221	263
Cars	Unit	13280	6829	13950	42632	27086
Buses		768 ,	691	1657	3442	2271
Mini buses	11 .	1840	2176	2700	5927	6154
Motor cycles	11	64336	23469	38193	81307	82546

Source: ERBS, 1371(1992).

Agricultural Production and Efficiency

Agricultural sector is a very sensitive part of the economy of each country particularly of a country like Iran which is faced with dangers like economic embargo owing to its special political situation. Today, many countries including traditionally follow economic those who liberalization (like some European countries) use a type of protectionism in this sector. A type of protectionist policy has been made in Iran even during the liberalism period also. In fact the main policies of this sector not only have not been changed after liberalization but also have been strengthened in some aspects. To prevent the loss agricultural producers, conservative governors had announced guaranteed prices for essential products like wheat, rice, barley etc. This policy has been strengthened through determination of higher prices by liberal governors encouraging these products. Furthermore, there has been a subsidy policy from production's and consumers in both pre and post liberalization period. The reason behind having this policy from the production's side is a strong desire to be self-sufficient in the essential commodities, like wheat and rice. This protectionism, reduces the effects of liberalization policies in this sector. However as we will later show, the effects of marketization and particularly foreign exchange rate are noticeable.

The agricultural sector of Iran has traditionally suffered from some problems since early times inviting a great deal of attention and investment on it. The Chief factors limiting the rise of agricultural production are: "inadequate communication, which limits access to markets; poor seeds, implements and techniques of cultivation; scarcity of water and under capitalization chiefly the result of the low incomes of peasant households." In addition, some problems like the ownership of agricultural lands still disturbs this sector.

There are four subsectors under the agricultural sector which are Farming, Animal Husbandry and Paultry, fishery and forest and pastures. Both, the ministry of Agriculture and the ministry of Construction Jihad have the responsibility to manage some parts of this sector. In this chapter we will

^{1.} U.N. the Middle East and South Africa. 1994,p.402.

Estimated Production of Major Farming Crops

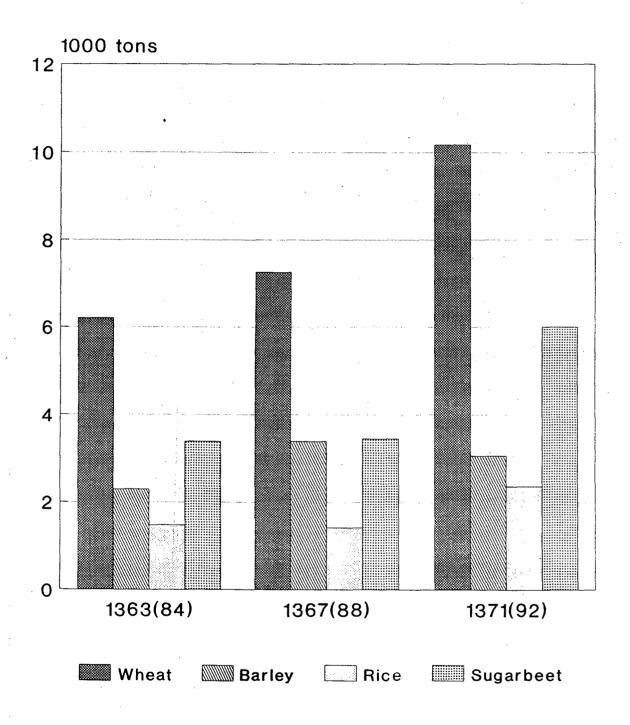


Figure No. 3.1

survey the changes in production and efficiency of agricultural sector after liberalization policies. We begin the discussion with production here.

3.1 Agricultural Production

Based on available data, the production of agricultural sector has risen in all subsectores during the period under survey. The amount produced by the subsector (shown in table no. 3.1) indicates a remarkable growth in this subsector.

Table No. 3.1

Estimated Production of Major Farming Crops

1000 tons

	63 (84)	67 (88)	71 (92)
Wheat	6207	7265	10179
Barley	2293	3394	3065
Rice (Paddy)	1479	1419	2362
Cotton (Raw)	351	380	330
Sugar Beet	3392	3454	6005
Sugar Cane	2126	1299	1855
Tea (green)	194	193	245
Oil Seeds	118	298	267
Tobacco	22	21	22
Pulses	303	299	674
Potato	1784	1443	2708
Onion	844	612	1305
Pistachio	94	126	202

Sources: ERBS, 67(88) and 71(92).

Livestock Products of the Country

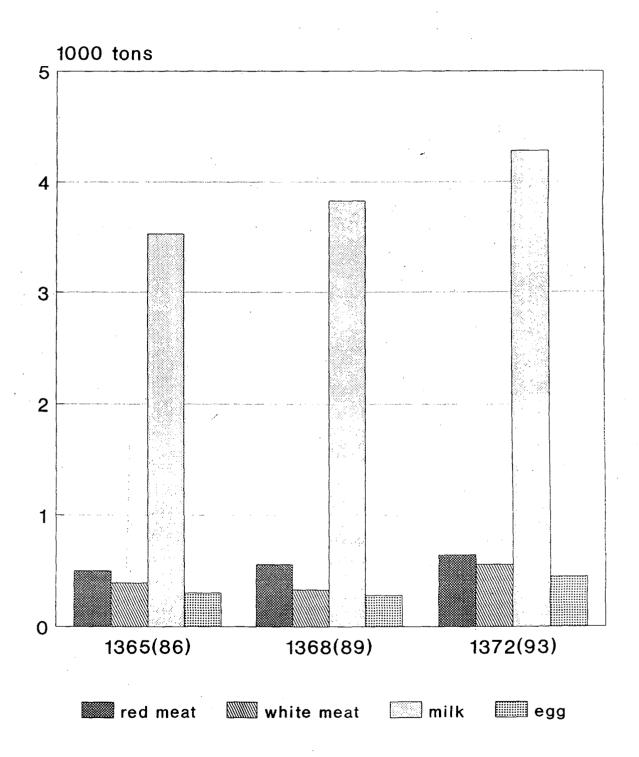


Figure No. 3.2

Contrary to the first period (63-67) in which the production of most items did not change much. In the second period these amounts have increased remarkably. Among these products, potato and onion production increased by about 100%, sugar cane by 90%, rice by 60% and wheat by 45% which had the highest growth, whereas there were some reductions in output of some crops among which the barley is the most important one. This story is true for other subsectors as well. According to table no.3.2 showing the livestock products, although, all the major items in this subsectors

Table No. 3.2

Livestock Products of the Country

1000 tons

	Red Meat	White Meat	Egg	Milk
1365 (86)	500	390	300	3530
1368 (89)	560	330	280	3827
1372 (93)	643	560	450	4281

Source: Iran Statistical Yearbook, 1372.

have risen but the white meat and egg had higher growth during the period under survey (68-72) whereas in the pre-

liberalization period they were more or less unchanged. The fishery subsector is an exception in this area because the rate of growth after liberalization is less than that in the previous period although it has had a positive growth. The total production of this subsector rose from 144088 thousand in 65(86) 300683 in 68 (100%), and to liberalization, with only 20% increase, amounted to 368888 thousands tons in 72(93). The foresty subsector has had the greatest increase among the agricultural subsectors in the period under discussion. While the area of new jungles rose from 18435 square hectares in 65(86) to only 24899 (30%) in 68(89), this area increased drastically to 84926 in 72 which is an increase of about 250%. Turning to the relationship liberalization policies between and growth agricultural products, we can say the following :

- 1) There is no privatization effect in this area because the share of privatized agricultural (including the four sectors) units is not much.
- 2) The effect of the change in foreign exchange rate in comparison with industry is very low too. Table no. 3.3 shows exchange costs of this sector in which we can see that

^{2.} Iran Statistics Centre, Iran Statistical Yearbook, 1372(93).

Table No. 3.3

Value and Share of Agricultural Imports

Million US \$

				<u> </u>
	67 (88)	68	69	70 (91)
Primary and Inter Goods	317	453	333	304
Capital Goods	76	119	299	608
Total	393	572	632	912
Share in Total Imports	4.8%	4.47%	3.4%	3.0%
Share in total Agricultural product	0.52%	0.6% 0.52	% 0.56	%

Source: ERBS, 1371(92).

the share of agricultural primary intermediate and capital imports in the value-added of this sector is less than one percent in all the years. These low shares mean that the changes in foreign exchange rate has no direct effect on expenditures of this sector. This effect would be further weakened by the fact that the government has tried to bring effect of the foreign exchange rate by giving subsidies. For example the subsidies particularly on imported fertilizers increased from RLs 39.1 billion in 69 to 78.6 in 70 which neutralized the changes in the price of

this good owing to the new exchange rate. However increase in exchange rate directly promoted the production of the exported agricultural commodities and the creation of new forests. The amount of annual agricultural exported goods rose from \$ 361 millions in 67 (88) to \$ 1132 million in 72(93)³ (excluding the carpet) which certainly was due to a higher foreign exchange rate. Furthermore, because the jungles are directly under state management and because the government had more money to invest in their area due to the selling of exchanges at a higher rate, the area under new yearly cultivated jungles rose from 24800 hectares in 68 to 81926 hectares in 72(93). In addition, the indirect effect of foreign exchange rate working through increase in the prices of other commodities also existed.

3) Marketization policy had a remarkable effect on the agricultural products. In the pre liberalization period most products of this sector like rice, potatoes, onions, wheat and red meat etc, were under state price control. This is true for factors of productions like fertilizers also, but as we previously mentioned the government used to try to cover this by subsidies. Table no. 3.4 which shows the

^{3.} ERBS, 72 and 67.

Table No. 3.4

Amount and Growth Rate of Intermediate Costs and
Value of Production in the Most Important Products of
Agricultural Sector

Billion RLs

2 9010	11179	15121	19467	-
			n n 0.	20 250
	24%	35%	29%	28.75%
				- 21 . 75%
4	2340 24%			

Source: Iran Statistical Yearbook, 1372(93).

values of production and cost of production particularly their growth rate in the most important agricultural products, indicates that the new policies led to more growth in incomes than in the costs which results a higher profit rate for producers. We have to take note that the guaranteed prices strengthened the marketization process because they greatly increased after liberalization while the producers had the option to either sell in the market at market prices or to the government at guaranteed prices.

As a result, we can say that although the liberalization policies were implemented together with some other policies like guaranteed prices and subsidy, undoubtedly these policies have played an effective role in boosting the agricultural production.

3.2 Efficiency in the Agricultural Sector

An investigation into the efficiency in the agricultural area needs definition of some indices and measurements which help us to judge this matters. Some ratio like:

Total Product, TP, (Kg) Average product of fertilizer = -Total Used Fertilizer, TUF, (kg) Value added (RLs) Productivity of fertilizers = -Total used fertilizers (kg) Total Product (kg) Average Product of land = -Cultivated land in hectare Value added (RLs) Productivity of per hectare = ---Cultivated land in hectare Productivity of per RL Value of Products (RLs) variable cost Variable costs (RLs) Total Product (kg) Average product per worker = -Number of workers Value added (RLs) Productivity of per worker Number of workers

may be used for this purpose as well as the measurements like the number of new agricultural machines in the sector, technical knowledge of the farmers, investment

on irrigation networks and drainage, area under irrigated cultivation etc. Undoubtedly, there are some better indices and measurements for this purpose but our data limitation forces us to select the above mentioned ones excepts technical knowledge of farmers which too can not be used due to insufficient data. Looking to the amount of used

Table 3.5

Total Used Fertilizer (TUF) Area Under Cultivation (AUC)
Total Agricultural Product (TP) Value Added of Agricultural
Sector (VA) and their Ratios

			· · - · - · · · ·			
	67 (88)	68	69	70	71	72 (93)
TUF 1000 Tons	1674	1460	2114	2609	1681	
AUC (irrigated,	16055	-	-	18216	-	-
(Irr)), 1000 hectares	6661			7520		
Irr/AUC	(41%)		·	(41%)		
TP 1000 tons	16418	19601	23825	25869	29221	27907
VA (61=100) bn RLs	2648	2746	2967.5	3120.2	3351.6	3535.7
TP/TUF kg per kg		11	16	13	11.2	16.7
VA/TUF RLs per kg		1667	2032	· 1475	1284	2104
TP/AUC Tons per hec.	1.02			1.42		
VA/AUC 1000 Rls per hec.	165			171		

Sources:

¹⁾ Iran statistical Yearbook, 1372(93).

²⁾ ERBS, 1371(92) and 1372(93)

fertilizers in the table No. 3.5 we can draw a conclusion that efficiency has remained unchanged specially when we know the area of land under cultivation has risen from 9984 hectares in 67 to 11518 in 71(92) (about 20 percent increase). The index of TP/TUF in this table indicates that the average product of fertilizers has not changed much except in 72(93) and 69 when there were better situations. This result is valied for productivity of per kg fertilizer (VA/TUF) also because this index has slightly improved in average. Finally, regarding fertilizers we can say that the efficiency has grown slightly. The area under cultivation (AUC) has risen from 16055 in 67 to 18216 in 1370. Although the share of irrigated lands is unchanged but the area of these lands also has risen from 6601 to 7520 hectares in this time period which all show an important growth. Furthermore, the average product of per hectare of land shows a 40 percent

Table No. 3.6

Income Achieved Per Unit Intermediate Cost

	68 (89)	69	70	71 (92)
TI (RLs)/TIC (RLs)	3.8	4	3.8	4.8

TI : Total Income

TIC : Total Intermediate Cost

Source: ERBS, 1371(92).

growth from 1.02 ton to 1.42 ton in the same period and the index of productivity of per hectare (VA/AUC) has only 5% increase from 88 to 91 which confirms a little improvement in efficiency. The index of productivity per worker in this sector has risen from 67(88) which was RLs 499439 to RLs 577280 showing about 8% increase which indicates same result. Turning to profitability, it is obvious from table no. 3.6 that income achieved from per unit cost (TI/TIC) has risen more than 20 percent during the period under 3.7 shows the number consideration. Table no. of agricultural machines used in the sector and governmental investment on irrigation network and drainage which is the main part of total investment in this area. According to this table there is a large growth in machines utilized in sector which may be interpreted as a noteworthy improvement.

Table No.3.7

Number of Machines (NM) and Governmental Investment on Irrigation Network and Drainage (GIIND)

	68 (89)	69	70	71 (92)
NM (unit) GIIND (bn RLs) 61=100	3524	10226	12920	9539
	8.2	16.3	20.3	21.8

Source: ERBS, 1371(92).

It should be mentioned that the number of machines shown in this table is the total number of tractors and combines which have been domestically produced in the years mentioned. These figures are acceptable because there has not been an important exports or imports of these two items in these years. The same result can be drawn in the area of government investment on new irrigation network and drainage, because this amount has increased from 8.2 billion RLs in 68 to 21.8 billions in 71 (at 61 constant prices) which means 2.6 times growth.

Since all applied indices for measuring the agricultural efficiency show more or less an improvement in efficiency, as a final result we can say that agricultural efficiency has improved after liberalization.

4

Foreign Trade Sector

There are two main goals for I.R. Iran in this sector. We know that the economy of Iran is mostly based on oil export revenues and this is taken into account as a main weakness for this economy. Therefore, promotion of non oil exports (NOE) to reduce this problem was a strategic goal of new polices in the economic liberalism period. Protection of domestic production against imported commodities was the second important goal of new policies. Before the period, imported goods were very cheap and consequently had been preferred to domestic goals due to a very low official foreign exchange rate (OFER). Among the three main polices of liberalization, new foreign exchange rate policy had the main role to achieve the above mentioned goals because, as we will later explain, the OFER used to notably decrease the profit rate of NOE and consequently decrease these exports and on the other hand used to encourage more and more imports. Therefore, in this chapter our discussion will be concentrated on foreign exchange (FE) policy because privatization and marketization had no direct and special

effect in this area. In addition, since a main problem of government i.e. budget deficit was directly related with policy, we will discuss this effect inthis chapter too.

After Islamic revolution of Iran (IR) the equilibrium in foreign exchange market was disturbed and consequently an excess demand in foreign exchange (FE) market occurred due to increase in demand for FE and decline in supply of it. This excess demand gradually increased market foreign exchange rate (MFER) whereas the official rate (OFER) had been fixed by the Central Bank of Iran. Therefore, multiprice system of FE has been gradually founded in which there were two important prices, OFER and MFER. Together with gradual increase in MFER due to continuation of excess demand for FE, the difference between this rate and OFER became more and more and caused some important problems in Iran's economy. So, the government of Iran finally devalued Iranian Rial to solve these problems. We explain the reasons of the above excess demand for FE in the First part of this chapter. In the second part, more important problems due to multiprice system of Fe will be explained and the results of devaluation are discussed in every case. This chapter will finally finish with a conclusion about devaluation results.

4.1. Reasons of Excess Demand for FE and Its impact on FER

Two main subjects of this part are the reasons of excess demand for FE and its impact on foreign exchange rate (FER). We can explain the first one (the reason's of excess demand for FE) in two sections i.e. the reasons of increase in FE demand and reasons of decline of FE supply. Therefore, our discussion has the following divisions in this part.

- 4.1.1 Reasons of increase in FE demand
- 4.1.2. Reasons of decline in FE supply
- 4.1.3 The impact of FE excess demand on FER

4.1.1 Reasons of increase in FE demand

4.1.1.1 During and after the Islamic revolution (IR, 1979), most of the last regime's men (Shah regime) and Iranian capitalists who were very close to that regime left the country and carried their assets in the shape of gold and foreign exchange.

Then the demand for FE rose. This process became stronger during the war time (after 1980) due to its special dangers.

- 4.1.1.2 During 1980 and subsequently, the war between Iran and Iraq led to rise in military requirements of Iran. Most of these requirements were of imported goods which led to increase in demand for foreign exchanges.
- 4.1.1.3. The third factor of more demand for Fe was the continuous decline in US \$ purchasing power in international market, specially in comparison with Japan's Yen and Dutch Mark. Because the price of main exports of Iran, oil, had been defined in terms of US\$, our real FE revenues came down and we had to pay more and more \$ for a constant amount of imports which led to greater demand for FE.
- 4.1.1.4 For some different reasons, after Islamic revolution import requirements went up. The following are the reasons in brief.
 - i) Military requirements in the war time
 - ii) Reduction in domestic production because of the war
 - iii) Fixing of FER by the government, as we will later explain.

4.1.2 Reasons of Decline in supply of FE

- After IR, the government of Iran because of some 4.1.2.1 political and social reasons decreased the exports of oil. Before Revolution, oil exports of Iran were about 6 million barrels per day whereas after IR this amount declined to 2 million barrels. On the other hand the price of per barrel oil of Iran rose from 11 US dollars to about 27 which led to nominal decline in Foreign exchange income of Iran in the first years of IR. But after a short time this price decreased to about 20 US\$ per barrel and after 1985 when the oil some installations were damaged and Tankers war began, the value of oil exports decreased again and finally the oil revenue notably fell. In Table No.4.1 we have shown the foreign exchange revenues which have been due to exports of oil in the last three years before IR and eleven years after that (1976 to 1991).
- 4.1.2.2 Some non oil goods exporters did not return their foreign exchange revenues because they had to sell

^{1.} ERBS, 58(79)-61(82).

them at official rate (70 RLs per US\$) to the Central Bank of Iran.

Table - 4.1

Iran Oil Export Revenue (OER) from 1976 to 1991

Year		OER
1355	(1976)	20670
1356	(1977)	20904
1357	(1978)	18115
1358	(1979)	19315
1359	(1980)	11607
1360	(1981)	12455
1361	(1982)	20050
1362	(1983)	20457
1363	(1984)	16663
1364	(1985)	13968
1365	(1986)	5982
1366	(1987)	9189
1367	(1988)	7599
1368	(1989)	11993
1369	(1990)	16614
1370	(1991)	13828

Sources: ERBS, Years, 1357(78), 62, 65, 67, 70, 71(92).

4.1.3 The Impact of FE Excess Demand on FER

As a result of these changes, the foreign exchange rate in free market (black market) began to rise whereas the government had fixed the official rate of it (OFER) at 70 RLs. The difference between these two exchange rates became more and more during 1979 to 1989. To be more precise, in 1979 the free market rate was about 80 Iranian RLs per US\$ but at the end of the period this rate rose to 1400 RLs per \$, whereas the official rate had been remained fixed at 70 RLs per US \$.2

This large difference between official and free market rate caused some important problems in Iran economy. There was a great dispute between economists and economic decision makers about the ways of solving these problems who had two different ideas about foreign exchange rate. According to the first one, the government had to devalue the national currency so that the difference between OFER and MFER would decrease. The second idea was offering a change in foreign exchange regime from fixed rate to flexible rate regime. In 1985, when the above difference was large enough and the

There is no official or unofficial sources for MFERs and I personally collected them specially during 1985-1987 when I was writing my MA thesis.

economists were sure that MFER will not decrease, the government gradually and indirectly³ devalued Iran's currency, but in 1989, the new government officially changed the FER by a large devaluation together with a liberalization process. Initially, the price of US\$ was increased to 800 RLs and within two years it increased to 1750 RLs.⁴

In the next part we explain the more important problems of Iran economy due to existence of difference between these two rates as the reasons of the above devaluation and statistically explore the impact of changing of FER in every possible case.

4.2. Reasons of Devaluation

We have already mentioned that the existence of two FERs which are notably different created some big and important problems in Iran economy between 1980 to 1989. We also added that Iran government largely devalued Iranian Rial to avoid these problems. So, these problems were the main reasons of devaluation. The impact of difference

^{3.} This devaluation was done by defining exporting rate which will later be explained.

^{4.} Ibid., 1368 (1989), p.71.

between two FERs on non oil exports, on government budget, on increasing of imports, on Social Justice, on economic concentration and on economic decision makings were the most important of these reasons which will be discussed hereafter. It is necessary to say that most of Iranian economists believe that the MFER is closer to real FER.

One of the most important reasons or even the only reason of old Government for fixing the FER was the impact of this action on inflation. We will explore this factor in continuation also.

It is necessary to say that we suppose

OFER = 70 RLs

and MFER = 400 RLs

in all future discussions. These rates are close to actual rates in those years.

4.2.1 The Impact on Non Oil Exports

After 1971, when the world price of crude oil rose by a large amount and share of oil incomes in Iran's GNP noticeably incresed, 5 numerous economists and economic decision makers believed that the eaning from oil revenues

U.N, Economic Survey of Asia and the Far East 1971, p.117.

was a weakness of Iran economy and non oil exports had to rise as soon as possible. After IR because of some political reasons like the war between Iran and Iraq and political disputes with superpowers specially America, the above belief became stronger.

According to rules of the Central Bank of Iran in the conservatism period all exporters and importers had to make FE transactions at the official rate (OR) through banking system. This process used to reduce the revenue of exporters in terms of Iranian Rials. For example, suppose commodity A has been exported and sold at 1 US \$ and suppose it's domestic price is 200 RLs. If the exporter could sell his foreign exchange in free market his revenue in terms of RLs would be

1 US
$$$ x 400 = 400 RLs$$

but because he had to act on OR, this revenue will be

1 US \$
$$x 70 = 70 RLs$$

and therefore he will loose 330 RLs per exported commodity unit of A. Avoiding this loss, he would prefer selling this commodity in domestic market at 200 RLs and get at least 130 RLs more than the exporting case. Therefore he supplied his commodity in domestic market instead of foreign market. The

final result of this process is stagnant exports, or even a decline of them.

According to the statistics, because of the existence of that low level OFER, there was no effective rise in the amount of NOE before 1985 in spite of the fact that the government was very much interested in encouraging them and some actions like rewards for exporters. As we see in table No.4. 2, from 1985 (1364) when the rate of US \$ in the black market had become about 600 RLS, the exporters were allowed to sell their foreign exchanges directly to the importers at a higher rate which had been known as exporting rate. In this new situation supply and demand of FE were under government's control and the rate was less than the black market rate. 6 After this permission, the non oil exports notably rose. The increasing of NOE has continued correspondingly with increase in FER (Refer to table No 4.2). We have calculated the correlation coefficient between export rate (ER) and NOE as

$$R^2 = 93\%$$

which shows the direct relation between the value of NOE and FER.

^{6.} ERBS, (364(85), p.72.

Table - 4.2

Official and exporting rates (ER) of US \$
and Non Oil Exports of I.R. Iran

Year	OR RLS	ER RLs	NOE Million US \$
1355 (1976)	70	70	471.7
1356 (1977)	70	70	529.8
1357 (1978)	70	` 70	417.1
1358(1979)	70	70	811.8
1359(1980)	70	70	645.2
1360(1981)	70	. 70	338.5
1361(1982)	70	70	283.7
1362 (1983)	70	70	356.6
1363 (1984)	70	70	361.1
1364 (1985)	70+140	350	465
1365 (1986)	70+140	450	915.5
1366(1987)	70+140	600	1160.8
1367(1988)	70+140	800	1035.8
1368(1989)	800	800	1044
1369(1990)	1400	1400	1327
1370(1991)	1750	1750	2648.7
1371 (1992)	1750	1750	2987.7
1372 (1993)	1750	1750	3746.8

Sources : ERBS, 1358(79) to 1372 (93).

According to official announcement, the value of NOE in 1373 (94-95) was about 4.5 million us dollars⁷ and the share for NOE revenues in total amount of foreign exchange revenues went up to about 30 percent, whereas in 1984 with rate of 70 RLS per US \$, this share was only 1 percent and in 1988, before the official devaluation, this share was about 8 percent. This growth in share of NOE shows that the income structure of economy is improving.

4.2.2 The Impact on Government Budget, Through oil Export Revenues

This Impact on Iran economy was very important and substantial. It is necessary to make it clear that in Iran, the oil resources are fully under control of government and only the government produces, and exports the crude oil and oil products. Therefore, selling of FER due to oil export revenues is one of the main resources of government budget.

The government of Iran used to sell its foreign exchanges on official rate (70 RLs, per US \$), before 1985.

Therefore, its revenues (in terms of Iranian Rials) were at

^{7.} It has been anounced by Iran Radio in March 95.

a low level whereas its expenditures were permanently increasing. This process used to cause a big deficit in the government budget despite the fact that its income in terms of foreign exchange was relatively high during these years.

This process had created some another important problems. Because of this notable budget deficit the government had to borrow from the Banking system to finance its expenditures in all of these years. These debts increased the liquidity and money supply and consequently pushed up the inflation rate. On the other hand, the government was deprived of a large amount of public income because of selling foreign exchange at OR. The result was economic injustice which we will discuss later.

In the Table No.4.3 we have shown the statistics about above problem. In the first column, government's foreign exchange income has been shown during 1980 to 1985. This column shows that the foreign exchange incomes in these years were relatively higher because after this period these revenues came down to about 10 billion US \$. The second column shows the amount of sold FEs to the private sector in this period which is a main source of goveeeernments revenue. The reason for not calculating the sold FEs to the

public sector is that is has no real effect on government's budget. As we see in each year, a large amount of FE has been sold to this sector at OR (70 RLs per US \$).

The next two columns are very important. In the third column, we have shown the extra revenue of the government in terms of RLs if the amounts of second column has been sold at market FE rate. We have already assumed that the average of real FE rate (market rate) during these years is 400 RLs per US \$. Therefore the government could get 330 extra RLs per US \$ by selling at market rate. The fourth column shows the amount and peercentage of budget deficit to total budget. Comparing these tow last columns shows that these budgets not only could have had no deficit but also the government could have notably incurred more expenditure because of a large amount extra revenue and consequently, the inflation rate would be at a lower level. In the last column, the amounts of total budget have been shown.

If we compare this column with the third column, we can understand that the missed income is more than that of the total amount of budget in some years.

After the main devaluation in 1989 these figures have become better. OR and free market rate of FE were very close in 1989 to 1992 and at the end of the first 5 year economic

plan, 1993, the difference between these two rates had almost become zero. In 1993 a new notable difference between OR and free market rate was found.

Table - 4.3

Figure of FE Income revenues, sold

FE to private sector, gvt's real income,

Budget deficit and Total Budget during years of 1980-1985

Year	F.E. Revenue (Million US \$)	Private Sector on Real F.E. (Million US \$) Rate (Iranian Billion RLs)		lion Private Sector on Real F.B. (Iranian Billio (Million US \$) Rate (Iranian RLs)		Budget Deficit (Iranian Billion RLs)	Total Budget (Iranian Billion RLs)
1359	14862	12689	4187	972 (42%)	2299		
1360 ,	15411	9775	3226	937 (35%)	2707		
1361 82	21765	6092	2010	772 (23 %)	3274		
1362 83	24787	10175	3358	954 (25%)	3728		
1363 84	19339	6480	2138	639 (19%)	3354		
136 4 85	15237	4717	1556	647 (19%)	3313		

Sources: 1) BRBS, 1362(83) and 1365 (86) 2) statistical year book, 1361(82) and 1365(84)

4.2.3 Increasing of Imports

Another important effect of that non real OR of FE is biased in favour of imported materials and goods over domestic goods. Suppose B is an Imported good and B' is the

same domestic good and the prices of these two goods are 1 US \$ and 200 RLs respectively. the wholesale price of imported good in terms of RLs will be as follows.

at OFER 1x70 = 70 RLs

at MFER 1x400 = 400 RLs

It can be seen that at OR, the imported goods are much cheaper than the domestic good whereas at MFER, the domestic good will be cheaper. Therefore, at OR the tendency to consume imported goods is very high but at MFER this tendency is high for domestic goods. The final impact of using an OR will dampen domestic production.

The statistics in this case show increasing imports before and after devaluation and we can not show the above effect in a statistical way. This is because the amount of imports also depends on other factor such as G.D.P., trade policy, tarrifs etc.

4.2.4. Impact on Social Justice

Social justice is one of the most important aims of Islam and Islamic Revolution. The Revolutionary government of Iran always has insisted on this ojbjective as a main target of its social and economic Plans. But, this objective was disturbed by the low level of OFER. We can make clear

the above problem with an example. Suppose again a businessman exports good A and sells it on one US \$ and imports good B at the same price. If we assume no profit for this businessman, the producer of A get only 70 Rls for good of A at OR and has a loss equal to 330 RLs as explained below:

His revenue at OFER will be

1US \$ x 70 = 70 RLs

whereas his revenue at MFER

and his loss due to using OFER per unit of A

400-70= 330 RLs

On the other hand, with this 1Us \$, because of exporting A, the businessman imports good B and sells it to the domestic consumer at 70 RLs in spite of its real price which is

1 US \$ x 400 = 400 RLs

this consumer has 330 RLs profit because he purchases the good B at a cheaper rate than its real price.

We see that a notable income which belongs to producer of A goes to the pocket of consumer of B. The process is against the goal of achieving social justice. In addition, economic protection of producers had been objective of Iran government and existence of this OFER put Us on the opposite course.

For a statistical survey, we have shown the amounts of losses of export goods producers in table No.4.4

Table - 4.4

Values of Non Oil Export Producer's losses (NOEPL)
in the years of 79-88

		•
Year	Value of NOE Million US \$	Value of NOEPL Billion RLs
1358-1979	811.8	2,68
1359-1980	465.2	154
1360-1981	339.5	112
1361-1982	283.7	94
1362-1983	356.6	118
1363-1984	361.1	119
1364-1985	465	153
1365-1986	915.5	302
1366-1987	1161	383
1367-1988	1036	342

Sources: ERBS, 1979 to 88.

It is important to say that a part of these losses has been compensated by government assistance. For instance, the

producers received some of their primary goods at official prices which were notably less than the free market prices in these years. Secondly, the government used to charge some consumer commodities at low level rate for all consumers including producers although the amount of these favours gradually decreased, because the government's income decreased.

On the other hand, because of this offer as we saw on table No.4.3, the government lost notable amount of its income in terms of RLs and, therefore, there was no increase in salary of its employees in spite of notable inflation in this period. The amount of consumer price index rose from 68.27 in 1980 to 275.7 in 1988.8

4.2.5 Economic Concentration

The next impact of OFER, is that this rate pushed the economy toward more government concentration. As we have already said, the government used to give a part of producer's requirements, specially in the case of primary goods, at official rates to bring down the cost of production. In addition, it used to give FEs to importers at OR therefore the purchasing price of these goods was very

^{8.} Ibid., 1362(1983),1365(1986), 1367(1988).

low in terms of RLs, (both consumer and primary goods).

If the producers and importers were allowed to sell their goods at free market rate, they had an unacceptable large profit and the consumer prices would have increased The government had to directly control Further. distribution of commodities to prevent sale of them in free market. For more explanation, as we will later see, the main reason of the government for fixing foreign exchange rate was preventing of high inflation and this purpose were disturbed if commodities had been sold in free market. On side of producers, it is obvious that the share of imported primary goods, is not the same for different manufactures and sectors. Without a price control (selling goods in free market) those sectors and manufactures which used more imported primary and secondary materials and goods, would have more profit. This process increase our economic dependency to abroad and disturbe domestic production.

In the years under survey, the government had established some offices to control the prices and had employed a notable number of people in these offices. The necessity of these controls became more and more during this time period because the different between OFER and MFER gradually increased.

4.2.6 Economic Decision makings

One of the most important impacts of OFER was wrong economic decision makings to a wide extent. If we count 70 RLs per US \$ most of uneconomic investments will seem economic. For example, suppose Iran National Gas Corporation explores a project of pipe gas for a city. The cost and expected income of this project are supposed as follows.

Total cost of project:

10 mill US \$ +500 Mill RLs

Useful age: 7 years

and

present value of expected income: 2 bn RLs at OFER this project has about 800 million RLs profit because its costs at this rate are as follows:

 $C = (10 \text{ mil US } \$ \times 70 \text{ RLs}) + (500 \text{ Mill RLs}) = 1.2 \text{ bn RLs}$ Profit = 2-1.2 = 0.8 bn RLs

But at MFER this project has a big loss as follows, C = (10 mil US \$ x 400 RLs) + (500 mil RLs) = 4.5 bn RLsProfit = 4.5-2 = -2.5 bn RLs.

It is clear that the above corporation will do these uneconomic project because of using OFER. We invested on many projects same as the above example. We obviously did not use these in case of using MFER.

4.2.7 Impact on Inflation as a Reason Against Devaluation

that everyone asks why the natural Government despite the above mentioned problems fixed the foreign exchange rate. There was one main economic reason and some other explanations about this action. At first, during this period (79-85) we had a war with our neighbor country, Iraq, which was our main national problem and naturally, the government was cautious about thing like a high inflation rate which probably would have adverse impacts on general conditions of country. Secondly, foreign exchange revenue seriously decreased because of the tankers war after 1984. This revenue fell from 15237 in 85 to 8189 million US \$ in 1986. With such a low level foreign exchange revenue, the government couldn't actually sell a notable amount of FE to productive sectors because the most of this revenue was used to buy military equipments and basic food like wheat, rice, etc. Therefore the FER did not an important impact on economy. In addition, government used to think about rise of FER as a temporary event in the first few years, of the war.

^{9.} Ibid, 1370(1991), p.192.

But the government had also an economic reason for fixing the FER. This reason was the prevention of rise in the inflation rate. The economic decision makers of government used to say that "If we have a devaluation, production costs of productive sectors specially in manufactures will rise so the prices of consumer commodities will consequently increase."

This reason wasn't acceptable to a great number of economists. They used to say that there was no foreign exchange rate illusion in the commodity market and producers did not define prices of their commodities on basis of official Foreign exchange rate and most of them, supplied their goods in black market at higher rates.

In a statistical survey, we can see that the rate of inflation hasn't effectively changed after devaluation. We have shown in Table no.4.5 the amount of OR and inflation rates, from 1980 to 1993-94. It is necessary to say that there is a strong belief that inflation rates during the of 1980 to 1988 are downward biased calculations. years, In these the main goods had governmental prices which were much lower than the free market prices. Although the share of these goods in consumer basket wasn't high enough but in calculation of inflation rates, these governmental prices have been used.

As we see in table no. 4.5, the level of inflation rates has no important difference before and after devaluation. The average amount of these rates before devaluation (1980-1987) is about 18% whearas this average after devaluation (1988 to 1993) is 20.5 percent.

Table - 4.5
Inflation Rates in Different FERs

	•					
Year	OR (RLs)	Inflation Rate (%)				
1980	70	23.5				
1981	70	22.8				
1982	70	19.2				
1983	70	17.7				
1984	70	10.5				
1985	210	4.1				
1986	210	20.8				
1987 .	210	28				
1988	800	29				
1989	1400	17				
1990	1750	9				
1991	1750	20.7				
1992	1750	24.4				
1993	1750	22.9				

CONCLUSION

Because the devaluation has been accompanied by a liberalization process, we can not separately judge its total results. It is clear that Irans economy has notably improved in these few last years. The statistics show that most of the economic indices like GNP, GDP, industrial and agricultural products etc, have had large growth. In connection with devaluation, we can make it clear that some important problems like the level of non oil exports and budget deficit have been solved but there are some important difficulties yet. The government wanted to create a unique FER system by devaluation but we have three different FERs in our economy now. The inflation rate has not been controlled and may disturb the economic programs. important economic problem is instability specially in money and FER market. There have been important changes in FER per few months in these two recent years. These changes had an impact on other sectors like production, trade etc.

We can finally say that although the results of devaluation have been positive, we need some more time for better results.

General Conclusion and Summary

Although the implementation of liberalization policies approximately coincided with the end of the war between Iran and Iraq, we can say that these policies have helped the blossoming of the economy and undoubtedly played a major role in the economic transformation of Iran in the recent years. Almost, all of the main macroeconomic indices like investment, budget deficit, tax receipts non oil exports etc show a positive movement contrary to the last period. Table C shows the growth rate of total GDP and of the main sectors of Iran economy. According to this table, the GDP figures indicate a positive annual growth during the year 89 to 93 (liberalism period) a well as the sectoral growth which all are positive contrary to the last period in which most of them had negatively moved. The average growth rate GDP is 7.3 while this rate is 8.6 in industrial sector, both showing important and notable improvement in the economy of Iran. Furthermore, the share of national investment out of GDP rose from 13.6% in 1367 (1988) to 22% in 1372 (1993) which shows a 13.3% annual growth on the

Table C

Growth Rate of GDP and of Main Sectors of Iran Economy at 1361 (1982) Constant Prices

									Percent
1364	1365	1366	1367	1368	1369	1370	1371		1367-72
1985	1986	1987	1988	1989	1990	1991	1992	1993	1988-93 Average
8	4.3	1.8	-12.9	3.7	8.1	5.1	7.4	5.5	6
1.1	-14.6	13.9	7.3	7.7	19.9	11.1	1.5	3.6	8.6
-1.6	-6.2	-9.1	-4.3	8.7	15.6	17.7	3.3	1.2	9.1
16.6	9.6	12.7	1.7	11	19.4	15.5	8.5	9.7	12.7
-7.1	-11.4	-14.7	-8.7	-1.7	2.9	16	7.9	2.4	5.3
6	-10.9	-5.3	-6.9	1.8	9.7	9.9	8	7.5	7.3
4.2	-8.1	-1.9	-5.7	3	12.1	10.9	5.5	. 5	7.3
	8 1.1 -1.6 16.6 -7.1	1985 1986 8 4.3 1.1 -14.6 -1.6 -6.2 16.6 9.6 -7.1 -11.4 6 -10.9	1985 1986 1987 8 4.3 1.8 1.1 -14.6 13.9 -1.6 -6.2 -9.1 16.6 9.6 12.7 -7.1 -11.4 -14.7 6 -10.9 -5.3	1985 1986 1987 1988 8 4.3 1.8 -12.9 1.1 -14.6 13.9 7.3 -1.6 -6.2 -9.1 -4.3 16.6 9.6 12.7 1.7 -7.1 -11.4 -14.7 -8.7 6 -10.9 -5.3 -6.9	1985 1986 1987 1988 1989 8 4.3 1.8 -12.9 3.7 1.1 -14.6 13.9 7.3 7.7 -1.6 -6.2 -9.1 -4.3 8.7 16.6 9.6 12.7 1.7 11 -7.1 -11.4 -14.7 -8.7 -1.7 6 -10.9 -5.3 -6.9 1.8	1985 1986 1987 1988 1989 1990 8 4.3 1.8 -12.9 3.7 8.1 1.1 -14.6 13.9 7.3 7.7 19.9 -1.6 -6.2 -9.1 -4.3 8.7 15.6 16.6 9.6 12.7 1.7 11 19.4 -7.1 -11.4 -14.7 -8.7 -1.7 2.9 6 -10.9 -5.3 -6.9 1.8 9.7	1985 1986 1987 1988 1989 1990 1991 8 4.3 1.8 -12.9 3.7 8.1 5.1 1.1 -14.6 13.9 7.3 7.7 19.9 11.1 -1.6 -6.2 -9.1 -4.3 8.7 15.6 17.7 16.6 9.6 12.7 1.7 11 19.4 15.5 -7.1 -11.4 -14.7 -8.7 -1.7 2.9 16 6 -10.9 -5.3 -6.9 1.8 9.7 9.9	1985 1986 1987 1988 1989 1990 1991 1992 8 4.3 1.8 -12.9 3.7 8.1 5.1 7.4 1.1 -14.6 13.9 7.3 7.7 19.9 11.1 1.5 -1.6 -6.2 -9.1 -4.3 8.7 15.6 17.7 3.3 16.6 9.6 12.7 1.7 11 19.4 15.5 8.5 -7.1 -11.4 -14.7 -8.7 -1.7 2.9 16 7.9 6 -10.9 -5.3 -6.9 1.8 9.7 9.9 8	1985 1986 1987 1988 1989 1990 1991 1992 1993 8 4.3 1.8 -12.9 3.7 8.1 5.1 7.4 5.5 1.1 -14.6 13.9 7.3 7.7 19.9 11.1 1.5 3.6 -1.6 -6.2 -9.1 -4.3 8.7 15.6 17.7 3.3 1.2 16.6 9.6 12.7 1.7 11 19.4 15.5 8.5 9.7 -7.1 -11.4 -14.7 -8.7 -1.7 2.9 16 7.9 2.4 6 -10.9 -5.3 -6.9 1.8 9.7 9.9 8 7.5

Sources: 1. ERBS, 1365(86), 1367(88)

2. Central Bank of Iran, Annual Review, 1372(93)

average. This rate had come down in the last period i.e. from 17.9 in 1363 (1988) to 13.3 in 1367 (88). The amount of taxes, as a main source of revenue for the government, which was approximately fixed (about RLs 1000 bn) in the last period (1984-89) showed a notable rise amounting RLs 9775 bn in 1372 (93) with about 350% growth in 5 years due to increase in national production and consequently tax capacities. We talked about budget deficit and non oil exports in the fourth chapter and saw that owing to new foreign exchange rate the budget deficit became equal to zero in two recent years and non oil exports had a high growth rate too.

On the other hand, there were two main problems in the liberalization period which were a high inflation rate and a great deficit in balance of payment. The inflation rate which was expected to comd down after liberalization through an increase in national production due to new policies at least remained unchanged and in the recent years has remarkably increased specially in 1373 (1994) which was about 35% and caused a review in marketization and foreign

^{1.} Central Bank of Iran, Annual review, 1372(93).

^{2.} ERBS, 1365(1986) and 1367(1988).

^{3.} Central Bank of Iran, Annual Review, 73(94).

exchange policy. After Islamic revolution in many years the balance of payment had a deficit but in the first year of new period this deficit was very big specially in 1371 (1992) which was about \$ 7 billion. All of these deficits were compensated by foreign debts as a result of which the amount of these debts increased from \$12 bn in 67(88) to about \$33 bn in 72 (93) according to some sources.

Turning to the first chapter of this dissertation, we saw that there was wide marketization in the economic liberalism period(after 1989) to optimize production and consumption and avoiding of high level costs of direct price control. Marketization was implemented through foreign exchange rate which paved the way of marketization, because with the old low level FER the producer had an extraordinary profit if they were allowed to sell their products at free market rate and 2) decreasing the direct price controls and starting to allow the sale in free market. This subsidization, ended double subsidization of imported inputs through an over-valued exchange rate and subsidization of product sold in the free market where the price was higher than to controlled price.

^{4.} ERBS, 1371(92).

The process of liberalisation has been reviewed in 1995 due to a high inflation rate but new determined prices are very close to the equilibrium ones.

New foreign exchange rate policy is actually the main subject of the fourth chapter. This policy has been made to achieve some economic goals like paving the way for marketization and optimization of production and consumption, boosting the non oil exports, limitation of imports etc which will be explained later in the summary of the fourth chapter.

The third main economic policy under liberalization process was privatization, which was made to boost the national production. The sale of governmental economic units was done through Iran Stock Exchange, direct negotiation between the manager of units and buyers and public auction. The share of stock exchange in total transactions was about 75% during the years 1989 to 93. From another aspect, 25.8% of total share have been bought by large private capital owners whereas the small private buyers have bought 33.4% of them. Due to a variety of reasons i.e. non existence of investment security, of a complete legal framework, of a good information system, of a responsible organization for privatization, of a strong financial urgency, of necessary

liquidity, of a stability in economic policies and also due to control of stock exchange by competing groups and distortions in investment decisions, the implementation of privatization policy was not as successful as it was expected.

The second chapter surveyed the industrial production and investment after liberalization including construction, industry and mine sectors. Other industrial sector were not directly affected by liberalization policies. In the construction sector we saw that both governmental and private activities were increased due to new economic policies.

The amount of government investment in industrial (including mining) projects was drastically increased due to liberalization policies (from RLs 2085 bn in 88 to RLs 20251 bn in 93) whereas the private investment rose from RLs 72 bn in 88 to RLs 913 bn in 93 which is a notable increase. In the industrial and mining production area, new economic policies caused a notable increase during the period i.e. from RLs 2397 bn in 1988 to RLs 13370 in 93 at current prices but at constant prices this increase is not so much. Economic experts believe that in the first year of the period due to existence of unemployed capacities in the

industrial units, the growth rate was very high but after full employment of them this rate came down such as this growth rate in 1993 was only 1.2% against 25% in 1990. Therefore, the growth rate of industrial production will not be so high in the years to come.

In the third chapter, our discussion was concentrated on production and efficiency in the agricultural sector. According to our surveys, agricultural production notably risen in all four subsectors i.e. farming, animal husbandry and poultry, fishery and forest and pastures. In the farming sector the most important increases were in wheat by 45%, in sugar cane by 90% and in rice by 60 % during the liberalization period. The most rise in the livestock products was in white meat and egg which were about 70% during the period under consideration. The fishery subsector has had also a growth in new period although it had a higher growth in the conservatism period which is an exception. On the other hand, the area of new jungles is another exception which had the highest growth rate (around 250%) among all of these subsectors. We showed that due to new economic policies, on one side, the profit rate of agricultural production rose so private sector produced more and on the other side, the government found more money to

invest in this sector.

Turning to efficiency, all the measures and indices showed a higher efficiency in the new period. Some of these indices showed the productivity per kg of used fertilizers or per hectare of cultivated land while the others measured something like number of used machines and irrigated networks.

Foreign trade sector was the main subject of the fourth chapter which is more connected with foreign exchange policy than marketization and privatization. In this firstly we explained why a large difference between official forex rate and market rate was found and then we showed how this difference had distorted the economy, producing low level non oil exports, more imports, high level budget deficit, economic injustice, governmental distribution system and wrong economic decisions. We indicated that due to new forex rate policy non oil exports grew about 350 % (from RLs 1 bn to RLs 4.5 bn) during the period and budget deficit became equal to zero whereas the amount of imports had more growth in the first years but in the recent years (including 1995) it drastically came down and the country found a huge BOP surplus which was \$ 6.3 bn in the year 73. (9.4).

Appendix

PRODUCTION OF SELCTED GOODS IN LARGE MANUFACTURING ESTABLISHMENTS OF IRAN

TRODUCTION OF BELCIED GOODS IN DARGE MANUFACTURING ESTABLISHMENTS OF TRAN										
	Unit	1363	1364	1365	1366	1367	1368	1369	1370	1371
Red meat	1000 tons	200	208	142	136	175	238	224	203	195
Bologna and sausage	1000 tons	16	1.6	10	14	15	15	13	12	10
Pasteurized milk	milion liters	263	275	285	275	241	315	396	421	432
Pasteurized buttermilk	1000 liters	815	2099	2418	837	666	1001	1308	861	732
Pasteurized yogurt	million liters	80	77	66	61	53	55	65	48	39
Pasteurized Butter (1)	1000 tons	23	15	10	11	12	6	6	3	3
Pasteurized ice-cream	tons	8312	7290	4707	4374	3714	5308	11026	13223	11669
Compotes	tons	27207	, 30993	14546	7128	6730	3418	10341	14507	7740
Jams	tons	7912	7792	5631	4592	7079	4901	8491	7624	5640
Pickles	tons	6060	10298	4663	1987	1888	3350	1796	6177	3813
Pastes and sauces	tons	34667	39796	38558	27825	27494	44533	43317	36589	59631
Canned food	tons	27809	22066	14146	8324	12552	10934	12753	16953	12479
Canned fish and sardines	tons	2672	3045	2245	2634	3387	3390	2929	3243	1632
Fishes	tons	29114	19126	16995	18236	25306	10929	14306	19115	12890
Caviar	tons	250	253	283	254	281	310	233	277	319
Shrimp	tons	1029	946	1260	1197	3829	2542	4256	1820	1155
Vegetable shortening	1000 tons	452	491	432	481	369	496	559	620	639
Oil seed cakes & seed shells	1000 tons	80	142	97	109	113	148	161	128	157
Sugar	1000 tons	483	518	453	467	418	339	385	487	604
Lump and cube sugar	1000 tons	155	193	239	222	200	196	187	259	262
Livestock and birds feed	1000 tons	287	232	213	185	173	168	207	224	- 240
Non-alcoholic beer & malt(2)	mn bottles	25	41	46	38	36	41	37	40	31
Beverages	mn bottles	2369	2678	1964	1089	1443	1526	2029	2043	2139
Cigar and cigarette	mn strings	16154	17017	15339	15068	13790	9923	12319	11563	10171
Tobacco	tons	4776	4622	4944	5002	4499	4943	4846	4703	1822
Fabrics	mn meters	623	619	554	530	482	460	454	497	503
				<u> </u>			<u></u>			

		•								·
	Unit	1363	1364	1365	1366	1367	1368	1369	1370	1371
Cheese cloth &					,					
unfinished fabrics	mn meters	25	28	39	37	25	19	16	17	15
Blankets	1000 pieces	6582	6617	5164	3663	2935	2439	3081	3921	4232
Machine-made carpets	1000 sq. mts	9307	10342	7204	5659	4408	4867	7198	10374	10438
Moquettes	1000 sq. mts	24546	26174	14798	10412	8994	7745	12670	14286	11865
Socks and hoses	1000 dozens	3535	3169	2695	2975	4101	2793	2757	2273	1006
Leather for uppers	mn feet	59	58	47	37	35	36	44	33	30
Cured skins	1000 skins	4709	4624	4391	4237	3820	3422	2407	2230	2139
Leather shoes	1000 pairs	11577	10455	8954	9689	9387	8916	10915	10211	8504
Sneakers	1000 pairs	15194	13727	12175	12257	11618	12943	12464	10733	7725
Plastic shoes	1000 pairs	21501	18566	12786	15784	10691	13001	18725	14213	11025
Rubber shoes	1000 pairs	4504	4165	2357	2841	2363	2126	3318	2540	1599
Paper and cardboard	1000 tons	119	108	70	85	97	119	167	173	151
Paper diapers &	ori			·						
feminine napkins	tons	9494	7996	2956	2788	4047	5273	6123	4361	3972
Paper napkins & tissues	tons	8304	5065	3181	2312	1687	1503	4098	3118	3526
Wall papers(3)	1000 rolls	4673	3828	2944	839	420	1229	2267	2887	3096
Sodium hydroxide	tons	3578	5101	5008	6622	5098	4511	4871	5183	5406
Chemical Fertilizers	tons	29520	49207	168628	246918	258541	762	851	1220	1429
Paints and dyes	1000 tons	64	50	26	23	24	31	54	58	58
Scouring powders	1000 tons	187	191	124	169	149	169	212	192	170
Matches	mn boxes	2025	2043	1786	1994	1630	1612	1722	1523	1873
Vehicles inner tubes	1000 rings	2566	2483	2146	2750	4638	2084	3423	3592	2506
Vehicles tries	1000 rings	5153	4935	4291	4587	2433	4814	6012	6255	6170
Plate glass	1000 tons	169	165	141	192	181	182	209	205	-247
Bottles	mn bottles	229	256	253	229	278	203	22.1	274	263
Machine-made brickes	mn bricks	2815	2675	2397	2371	2405	2456	2418	2514	2459
Terrazzo tiles & ceramic tiles	1000 sq. m	18693	19393	19781	19880	18826	21056	23834	24205	26904
Fire-bricks	tons	15737	16800	16582	23394	27478	23956	21510	20826	20417
Cement	1000 tons	11888	12290	12148	12852	11926	12587	14429	13996	14906

Contd..../-

							<u></u>			
	Unit	1363	1364	1365	1366	1367	1368	1369	1370	1371
Plaster	1000 tons	3204	3545	2829	2418	2564	2541	2717	2884	2661
Iron rods and armatures	1000 tons	405	357	337	464	397	543	666	783	786
Iron and metallic beams	1000 tons	498	604	694	726	774	923	1074	1665	1329
Pipes	1000 tons	443	448	346	194	295	284	441	574	528
Iron shapes and angles	1000 tons	711	623	345	144	145	170	456	663	724
Iron sheets	1000 tons	135	114	98	64	61 ⁻	101	155	195	115
Joints	tons	3152	1677	1586	3311	2424	2082	5040	4367	4916
Moulding parts	tons	4211	7035	8180	6586	6102	4123	4798	6075	6666
Aluminium shapes	tons	41413	49226	11928	11748	14848	11223	24786	20809	23157
Aluminium sheets and foils	tons	15671	18531	13571	4204	7279	7219	17581	18500	16736
Water heaters	1000 units	242	213	163	116	71	67	85	154	182
Space heaters	1000 units	956	9.75	712	718	234	401	630	691	707
Gas stoves (4)	1000 units	506	476	324	183	131	87	140	196	169
Rfregerators and freezers	1000 units	744	767	435	354	326	351	649	829	883
Coolers	1000 units	521	475	220	164	116	119	211	271	242
Aluminium & steel radiators	1000 units	1816	1357	1504	952	303	300	1099	1384	1156
Washing machines	1000 units	- 13	35	25	18	1	11	19	43	63
Mini-washes	1000 units	78	48	24	44	7	30	. 17	11	6
Vacuum Cleanners	1000 units	65	100	12	26	43	14	64	26	63
Eletric fans	1000 units	601	622	339	210	210	222	390	416	397
Meat grinders	1000 units	167	147	28	77	98	122	208	176	- 93
Rice steamers	1000 units	268	238	76	99	94	120	133	231	222
Juicers	1000 units	159	66	96	26	68	25	120	165	107
Electricity and water meters	1000 units	1148	1011	774	700	394	469	860	1159	1006
Lift-trucks	units	1815	1444	368	284	223	127	604	534	437
Tractors	units	14897	16232	11947	1470		3173	9561	12,361	8993
Combines	units	656	512	181	80		351	665	559	546

	Unit	1363	1364	1365	1366	1367	1368	1369	1370	1371
Lathes, cutting dishes &										
grinders	units	1,181	1574	1028	366	918	1052	1835	2527	1816
Rollers	units	2341	327	64	52	138	234	42	436	351
Bulldozers, loaders, graders						:				
& mechanical shovels	units	489	996	425	248	170	252	189	1183	965
High-voltage transormers	units	11064	7373	5206	5169	6786	5824	7934	10087	9598
Electromotors	1000 units	586	521	347	257	340	274	465	448	315
Spark-plugs	1000 units	10835	12454	11518	9392	5581	2881	7324	8885	2489
Low-voltage transformers	units	47298	15513	5383	6222	4261	8109	11546	15989	16656
Black & white televisions	1000 units	441	410	335	348	264	368	502	515	420
Color televisions	1000 units	83	80	77	52	39	39	96	221	263
Radios and recorders	1000 units	204	269	168	254	344	217	232	102	75
Telephone sets	1000 units	329	331	245	317	351	216	189	495	495
Light bulbs	mn bulbs	55	53	35	32	34	38	50	48	48
Batteries	1000 units	1860	1743	2039	2014	1854	1856	2049	2345	1862
Dry cells	mn cells	191	179	8.1	78	73	66	74	88	86
Wires and cables	mn meters	269	197	233	192	142	144	260	298	271
Wires and cables	1000 tons	31	26	16	11	12	14	- 26	36	29
Cars	units	57790	29644	22102	15327	13280	6829	13950	42632	26086
Jeeps, stationwagons &	·	·						:		
ambulances	units	12029	7160	3353	7364	9745	7062	10045	10679	11681
Trucks and light trucks	units	14773	14883	6212	4054	2411	2757	6010	8321	9377
Buses	units	2459	2314	146	328	768	∠691	1057	3442	2271
Mini-buses	units	8057	6970	1332	1641	1840	2176	2700	5927	6154
Vans	units	68354	49932	23209	12690	3066	5329	16188	24351	25170
Motorcycles	units	200148	190302	110338	16669	64,336	23469	38193	81307	82546

⁽¹⁾ Includes margarine.

Sources: ERBS, 1367(88) and 1371(92)

⁽²⁾ Each bottle and can has a volume of 330 cc. equals 10 ounces.

⁽³⁾ Each rool equals 5 square meters.

⁽⁴⁾ Excludes picnic gas stove

BIBLIOGRAPHY

A) English Sources

- 1. Central Bank of I.R. Iran, Economic Report and Balance Sheet, 1984 to 1993, Tehran, Iran.
- 2. Central Bank of I.R. Iran, Annual Review, 1993.
- 3. Iran Statistics Centre, Statistical yearbook, 1983 to 1993.
- 4. Iran Statistics Centre, A Statistical Reflection, No.11, 1995, Tehran, Iran.
- 5. IMF, World Economic Outlook (year book), 1995.
- 6. U.N., Economic Survey of Asia and the Far Eat, 1994.
- 7. U.N., International Trade Statistics, Yearbook, 1993, 1994.
- 8. U.N., International Statistics Yearbook, 1994.
- 9. The World Bank, World Debt. Tables, 1993.
- 10. The World Bank, World Development Report (Yearbook), 1993.
- 11. The World Bank, Annual Recort, 1994.

b) Sources in Farsi

- 1. The Parliament of Iran, Majles va Pasuhesh, No.1 to 15, Tehran, Iran.
- 2. Farhandi, Foreign Exchange Policy of Iran, University of Tehran, 1988, Tehran, Iran.
- 3. S.A.A. Razmi, Foreign Exchange Rate in Iran, M.A. Thesis, Tarbiat Modarres University, 1987, Tehran, Iran.
- 4. Central Bank of Iran, Ravand, No.1 to 3, Tehran, Iran.
- 5. Central Bank of Iran, Tazehhaye Eghtesad, No.1 to 20, Tehran, Iran.
- 6. Ministry of Economic and Finance of I.R. Iran, Economic Report (Gozaresh Eghtesadi), Tehran, Iran.
- 7. Ettelaat Institution, Ettelaate Siasi va Eghtesadi, Tehran, Iran.
- 8. University of Tehran, Tahghighat Eghtesadi, Tehran, Iran.
- 9. Ministry of Business, barrasi haie Eghtesadi, Tehran, Iran.
- 10. Ebrahim Razzaghi, Economy of Iran, Nashr-e-Ney, 1987, Tehran, Iran.
- 11. Ministry of Islamic Ershad (Guidance), After Four Years, 1372 (1993), Tehran, Iran.
- 12. Iran Statistics Center, Iran in the Statistics Mirror, No.12, 1373 (1994), Tehran, Iran.