Problems in the structure of Romania's economy

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PROBLEMS IN THE STRUCTURE OF ROMANIA'S ECONOMY
Early Stage of Transition: 1990-1992

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Abstract: The study focused on the early stage of Romania's transition to the market economy during 1990-1992, based on statistical data available at that time. Because of the inherited structural distortions, the persistence of strong forces of inertia and the incoherence of economic and monetary policies, the transition to the market economy has been delayed in the early 1990'. In the absence of an adequate outline for de-monopolization and privatization of the economy, the liberalization of prices did not lead to an efficient resources allocation; on the contrary, the structural imbalances between demand and supply have deepened. The fall in industrial output and its poor competitiveness, due to the dominant position of this sector, has pushed the whole economy into a severe recession. A more rigorous management of the reform program, based on realistic assessments of opportunities and resources, with the help of more investments, including by the increase in foreign investments, should foster structural adjustments towards improving industrial performances and implicitly smoothing the way to the market economy.

Key words: economic growth, transitional economies, structural adjustments, industrial restructuring, privatization, foreign investments, informal economy.
JEL classification: E20, E26, E60, L16, L60, O11, P20, P31

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Introduction

The current structure of the Romanian economy is still marked by the distortions inherited from the old system, induced mainly by a forced industrialization in the past. These distortions have been amplified by the deepening of the economic crisis in the first years of transition, which, additionally, raised other imbalances and dysfunctions.

The main macroeconomic indicators in 1990-1992 compared to 1989 shows a severe deterioration as regards the GDP, industrial and agricultural output, investments and foreign trade, mainly exports.

A high inflation rate, a sharp increase in unemployment and a diminishing standard of living have been also recorded. Other adverse effect of a structural nature has been the accumulation of raw materials and final products stocks leading to the occurrence of a huge financial blockage.

Preliminary data for 1993 showed, however, signs of stopping the economic decline. In 1994, a real growth rate of GDP and the beginning of industrial recovery are expected in Romania. The main efforts in continuing the reforms should focus on undertaken more adequate structural adjustment measures, both at macro and microeconomic levels.

In order to curb inflation, attenuate structural imbalances and stimulate positive adjustments, tight control of money supply and budget deficit, as well as the interest rate and exchange rate policies should be calibrated. The changes in industrial structure have to lead to international competitiveness increase as an essential prerequisite of external equilibrium recovery.

In the years to come, the strengthening of the economy and of the domestic investments in Romania, together with an increase in foreign investments is expected to allow the acceleration of the privatization and the creation of a competitive environment.

During the first years of transition to the market economy, Romania, as well as other Eastern European countries, faced sharp difficulties in its attempts to implement economic reforms and restructuring programs.

The purpose of this study is to identify the main structural problems in Romania and proper modalities to foster adequate adjustments towards a market economy. In order to reach this target the study discusses the following main issues: macrosectorial changes; changes in the industrial sector; and macro and microeconomic structural adjustment measures.

The study focused on structural particularities of the Romanian economy at the starting point of transition: the path of macroeconomic indicators and of structural changes in GDP; structural shifts in industrial output and in input factors by sectors; the evolution of price-production relationships in industry; essential economic policy issues for accelerating the reforms and restructuring: financial and monetary adjustments; reorientation of exports; privatization and development of the private sector; recovery of investments.

The study, based on available data at that time, showed that many structural adverse effects occurred during 1990-1992. Thus, a severe contraction of GDP, a sharp decrease in investments and foreign trade, together with high rates of inflation and unemployment were recorded. The most affected sector seemed the industry, which, due to its dominant position, had a negative impact on the whole Romania's economy. The industry delay in adapting to the new economic environment has been caused mainly by its slow rate of privatization and restructuring, of marketization and demonopolization. The huge industrial conglomerates have not adapted their supply to both internal and external demand, but instead have raised excessively the prices. This improper way of surviving fuelled an explosion in the inflation rate and also generated the accumulation of huge stocks of unsold products leading to an extended financial blockage.

In the final sequence of this study the main results focus on macro and microeconomic incentives and instruments which could really contributing to a coherent policy mix for an appropriate management of the transition in Romania.

Background: Romania facing the transition process

The collapse of socialism shock one more time the restless history of Eastern Europe. The changes which have been tried to convert the economic system in these countries have proved to be much more difficult than one would have expected. Confronted with the real problems of the transition, people's enthusiasm in 1989 has grown blurred and the certainty shown by numerous experts has vanished. It has become dramatically obvious that clear theoretical concepts and significant experiences are missing that could foster the transition from an economy of command to a market one as fast as possible.

In these confused circumstances basic questions have been raised: what type of market economy model and structures is desirable and possible to be achieved in former socialist countries? Is it true that within these countries there was not a systematic concern for a consistent theoretical background with the best modalities to manage the transition? The similitude of the concrete challenges that Eastern European countries are facing with, confirms many of the shared main difficulties in the structural and behavioural adaptation to the market economy.

The economy of command and the central administrative allocation of resources in Romania imposed a forced industrialization in seventies and eighties. At the same time, neglecting consumer goods production, agriculture and the tertiary sector created negative effects upon the efficient structuring of the economy. During the industrialization, heavy industry sectors were developed with priority (chemistry, oil processing and metallurgy). Romania became a net importer of energy and raw materials and thus, functionally dependent on the outside world. In 1989, the energy intensity was seven times higher than in the developed European countries, which points out the modest performances of the Romanian economy's technological background. Additionally, the huge effort to repay the external debt in the eighties (about $ 12 billion), mainly by achieving forced trade surpluses, based on import restrictions, at the expense of renewing and modernizing production equipments, have also a negative impact on consumption.

The structure of the industry has been constructed without adequately having in view the international specialization and the selective development criteria, according to Romania's comparative advantages. Many enterprises proved to be not competitive at the international level, their supply being not consistent sometimes even with the demand on the internal market. The arbitrary decisions of the economy's command mechanisms led to the creation of huge conglomerates hard to be managed and with an excess of labour force, mainly in industry, underestimating the potential of small and medium-sized enterprises.

Since 1985 the Romanian economy has been in an involution process. In the annual growth of GDP and labour productivity negative rates have emerged as a result of the structural crisis, as well as of the imbalances became chronic at the micro and macroeconomic levels.

The harmful maladies of the socialist system and the inaccuracy of the diagnosis have made the reaction of the economy to the applied remedies inappropriate. The dilemma of transition seems to have been connected with the possibility, the degree and the speed of substitution of the old mechanisms with those specific to the market economy. Besides, there was a significant rigidity and inertia in changing the economic, social and technological structures, as well as human mentalities. Getting out of this dilemma obviously depends on the compromise between accepting the current difficulties and the welfare expected on the medium and long run.

The inherited structural distortions generated by the former system, for all Central and Eastern European countries were identified and described by Jackson (1993) as follows: the over dimensioning of the industrial share in the economy; higher shares of industrial output in heavy and energy industries and smaller shares in light industry; higher energy and raw material consumption per unit of GDP; more air pollution per unit of GDP; larger average-sized enterprises; lower ratios of foreign trade to GDP; lower share of agricultural

exports in total exports; fewer exports and imports of invisibles in the balance of payments. Also, the trade within the ex-CMEA countries favoured the tendency for excess supply of the so-called 'soft goods' (machinery and production equipments) with a low quality level and therefore very difficult to sell on the world markets for "hard" convertible currencies. At the same time, it gave raise to a tendency for excess demand for the so-called 'hard goods' (petroleum, mineral raw materials, agricultural products) easily marketable for hard currencies.

In the early 1990's Romania embarked on a reform program with the essential goal to transform its economy from a centrally planned to a market one. Further on we will examine the main structural changes that have taken place in 1990-1992, trying to identify the factors with significant impact on the economy during transition an to find the appropriate modalities and steps which are possible to be undertaken for continuing the economic reforms.

Macrosectorial changes

Examining structural changes on macro-sectors of the economy during the first years of transition could represent an important empirical prerequisite to formulate pertinent conclusions concerning current and future possible measures for successfully economic reforms and structural adjustments.

Main economic indicators: recent trends

In 1990-1992, the development of the Romanian economy has been under the impact of various internal and external factors, most of them in an adverse manner. It became obvious that the decision-makers did not have adequate instruments for comparing the possible options in a rational manner. The economic agents and the population had, in most cases, an adverse reaction to the economic liberalization.

Severe imbalances between sectors and economic activities have emerged, as well as acute shortages of financial and material resources, under the circumstances of an unfavourable international environment. The collapse of the CMEA, the Gulf war and the embargo on Yugoslavia deprived many Romanian companies of raw materials and external markets, which caused shocks and created damages to the national economy.

Although through implementing reform measures since December 1989 restructuring steps towards a market economy has been expected, the study of the main indicators showed a sharp deepening of the crisis (Table 1).

In 1992, the GDP of Romania was about 30 percent lower compared to 1989, in real terms. Among the sectors of the national economy, the fall of industry was the most dramatic. As compared to 1989, the industrial output decreased by 54 percent. It is estimated that the dominant share this sector hold

in the economy caused in fact that 85 percent of the total decrease in the GDP was due to the decline in industrial output (Grigorescu and others, 1993).

Table 1

Romania's macroeconomic indicators in 1990-1992

Indicators	Real growth rates (as percentage against previous year)			1992/1989 (1989 = 100)
	1990	**1991**	**1992**	
Gross domestic product	-5.6	-13.0	-13.6	71.1
Industrial output	-23.7	-22.8	-21.9	46.1
Agricultural output	-2.9	+1.0	-13.6	86.7
Exports	-41.5	-4.0	+18.6	66.0
Imports	+15.1	-29.0	+10.0	90.4
Investments	-38.3	-25.8	-1.2	45.2
Employment	-1.0	-0.5	-3.0	95.5

Source: *Romanian Statistical Yearbook*, Bucharest, 1993.

Following the contraction of production that caused a severe decline in the foreign trade, mainly in exports, an increasing imbalance compared to imports occurred in Romania. Because of this imbalance an acute shortage of foreign exchange and strong pressures on the exchange rate surged. Due to the covering of the trade balance deficit by external financial assistance, the foreign debt increased, amounting in September 1993 to about $ 3 billion (National Commission for Prognosis, 1993).

The monetary policy did not succeed in achieving the macroeconomic stabilization. The interest rates remained negative in real terms and the national currency depreciated more than 50 times in only four years.

The foreign trade liberalization did not positively impact on raising competition because of the underdeveloped distribution systems. The absence of real competition has worsened the rift between prices and production in terms of lack of proper regulations sanctioning the monopolist practices.

The price liberalization, instead of contributing to the setting real prices as basic prerequisites in restructuring the economy, freed the way for exacerbation of monopolist forces. The state-owned enterprises, which hold in many cases monopoly positions, have taken the chance of price liberalization for gaining a raise in revenues while their output declined.

Under these circumstances, the inflationary process erupted, without any significant corrective adjustments in the price system. The consumer price rose about nine times in 1992 compared to 1989. At the same time, a significant rise

in unemployment was recorded, the number of unemployed exceeding one million persons in April 1993.

The high inflation rates caused dramatic loss in the purchasing power of the population, having a harmful impact on its living standard. The real wage decreased by 24 percent in 1992.

The structure of family budget expenditures showed that food products held about 60 percent of these expenditures in 1992. A survey of the Romanian Life Quality Research Institute estimated that 37 percent of the population dropped under the poverty line in 1993 (Barbu and Novak, 1993).

The fall in population consumption and in living standard would have been more dramatic without increasing consumer goods imports, which instead has led to the rise in budget deficit and external debt.

Unfortunately, the worst effect of the economic crisis, as well as the general instability of the economic and social background has been the drastic cut in investments, the essential driver in restructuring the economy. The share of investments in GDP dropped from 30 percent in 1989 to 15 percent in 1992, their volume decreasing in real terms during this period by 55 percent.

Despite the increase in the fiscal deficit, respectively from 2 percent of GDP in 1991 to 4.8 percent of GDP in 1992, the national public budget had lesser potential to finance investments projects, even for the finalization of those started before 1989. The share of investments financed from the public budget in the total volume of investments decreased from 60 percent in 1989 to 20 percent in 1992 (Government of Romania, 1993b).

The public budget did not play its allocating role and a vicious circle has been created (high taxation ratio – decrease in revenues from taxes – raise in taxation ratio).

On the one hand, the high level of the fiscal burden (38 percent in 1992) has diminished the investment potential of economic agents, which could have foster their development and therefore raising further the budget revenues.

On the other hand, not even the investment programs of national interest could have been promoted through the public budget because the economic and social crisis was pushing the allocation of budget expenditures to subsidies and to sustain unproductive sectors.

Other causes which could explain the weak performances of the Romanian economy and the lack of significant positive results of structural adjustments are related to difficulties faced at the microeconomic level revealed by the slow restructuring and privatization of state-owned enterprises.

Well known foreign experts pointed out that, in Romania, the decline in production was due to the fall of investments, the reduction in the average number of working hours per week (from 44.2 hours in 1989 to 37.4 hours in 1990 and to 35.9 hours in 1991), the dislocations caused by the reorganization of large enterprises and the weak management experience (Ben-Ner and Montias, 1991).

The adverse effects which occurred during the transition are not specific only to Romania. These could be observed, in forms more or less dramatic, in all ex-communist countries.

Now, the economic science faces new challenges, having to explain the new developments in this part of the world and to identify appropriate measures for accelerating the transition to the market economy, minimizing the social costs and disturbances.

It has become obvious that the economic situation in these countries represents a new type of crisis, whose typical feature is the conjunction between the consequences of the structural crisis of the old system with those generated by the transition crisis itself (Postolache, 1991).

What is particular in Romania is the larger magnitude of these two crises and of their combination. It should be mentioned that the most optimistic long run scenario shows that the level of GDP recorded in 1989 could not be reached before 2005 (Raducanu, 1993).

According to preliminary data for 1993, the economic decline should end. Despite the persistence of particular negative effects (consumer price index of 300 percent, depreciation of the national currency more than three times, rise in unemployment to more than 10 percent, persistence of the financial blockage) the National Commission for Prognosis estimated that, in 1993, the GDP would be at the same level as in 1992.

A real positive growth rate of GDP is expected to be achieved in 1994, when it foresees an increase by 1.5 percent and a beginning of economic recovery, mainly in the industry (NCP, 1993).

The main points of the reform which are expected to have beneficial effects on the economic recovery are the privatization of more state-owned companies, the rebound of exports and investments, the mitigation of inflation, the introduction of financial discipline, the appropriate functioning of the market forces and, among these, of the foreign exchange market.

Structural changes in GDP

As previously mentioned, the GDP recorded a sharp decline during the first years of transition, primarily due to the severe drop in the industrial output.

Observing the contribution of sectors to the GDP creation in 1992 compared to 1989, both in current and constant prices, certain changes could be noticed (Table 2). These changes in the supply side of GDP are mainly due to the differences between price indexes within the economic sectors.

The largest difference between constant and current prices has been recorded in the commerce sector. This can be explained by the highest price increase that witnessed this sector, due to the general price distortions, the sharp imbalance between supply and demand and the speculating opportunities for vendors created by the price liberalization.

Table 2

The GDP structure in 1992 compared to 1989

- percent -

	1992/1989 (1989 = 100)			Structure of GDP (%)		
	GDP Index		**Deflator**	**1989**	1992	
	current prices	constant prices			prices 1989	prices 1992
GDP	747.7	71.1	1051.7	100.0	100.0	100.0
Industry (including households)	617.2	61.9	997.1	54.1	47.2	44.7
Construction	594.5	72.0	825.7	5.5	5.6	4.4
Agriculture and forestry	997.5	92.7	1076.1	14.1	18.4	18.9
Transport and communications	630.1	54.0	1166.9	7.5	5.7	6.4
Commerce	1542.9	68.7	2245.9	6.4	6.2	13.2
Services	728.4	104.8	695.0	9.1	13.4	8.8
Banking financial services	1866.4	159.4	1170.9	2.1	4.7	5.2
Public administration	966.3	108.9	887.3	2.5	3.8	3.3
Adjustment for inputted output of bank services (IOBS)	2496.5	-	-	-1.4	-	-4.8

Source: Own calculations based on *Romanian Statistical Yearbook*, Bucharest, 1993.

The configuration on macro-sectors of the Romanian economy and the changes recorded since 1989 are far from representing a certain progress according to the historical trends of the developed world.

The fact that, for instance, the services sector' share in GDP stood at 37 percent in 1992 does not reflect a progress in the economic development advance as a consequence of a real intra and inter-sectorial restructuring **[1].** This change is, to a great extent, only apparent and could be explained more obviously by the different rates in the decline of sectors, mainly in industry.

The National Commission for Prognosis estimated a relative decrease in the share of the tertiary sector beginning with 1994, according to the expected recovery of agricultural and industrial output (Table 3).

Table 3

The GDP structure by main sectors of the economy

- percent -

	1992	**1993** preliminary	**1994** forecast
GDP of which:	100.0	100.0	100.0
Primary sector	18.9	21.0	21.8
Secondary sector of which:	49.1	49.0	49.1
industry	44.7	44.9	45.6
construction	4.4	4.1	3.5
Tertiary sector of which:	36.9	34.7	33.8
Transport and communications	6.4	5.9	5.3
Trade	13.2	12.4	12.6
Other sectors	17.3	16.4	15.9
Adjustment for inputted output of bank services (IOBS)	-4.9	-4.7	-4.7

Source: National Commission for Prognosis, 1993.

In terms of the changes in output, gross value added and intermediate consumption, as it could be observed from the data presented in Table 4, our calculations in constant and current prices allow drawing some relevant conclusions.

First, the higher growth rate of gross value added during the period 1989-1991 than the raise in the output and intermediate consumption, in comparable conditions of prices, both in the main sectors (industry and agriculture) and especially at the national economy level.

Second, the price rises were more significant in intermediate consumption, due mainly to the greater extent of the monopolist positions in resource and material-intensive sectors which led to a faster rate in industry and agriculture. Because of the value added growth rate in the tertiary sector, this pace did not have the same impact at the national level.

These two conclusions should be assessed in the context of considering the higher proportion of intermediate consumption in industrial output (73.5 percent in 1991) and of the value added in the services output (54.1 percent in 1991) [2].

Table 4

Indexes of output, gross value added and intermediate consumption (*%*)

	1991/1989 (1989 = 100)		
	Output	**Gross Value Added**	**Intermediate consumption**
National economy			
in current prices	265.3	287.8	253.2
in constant prices	74.1	82.7	69.4
deflator	358.0	348.0	364.8
Industry			
in current prices	240.8	227.0	246.2
in constant prices	66.2	66.5	65.9
deflator	363.7	341.3	373.6
Agriculture			
in current prices	370.4	367.0	373.9
in constant prices	106.1	128.8	81.1
deflator	349.1	284.9	461.0

Source: Own calculations based on *Romanian Statistical Yearbook*, Bucharest, 1993.

The GDP structure by category of utilizations (Table 5) shows the growing share of the final consumption, both private and public. As mentioned before this increase does not reflect any positive change in the utilization of GDP. In fact, the main cause resides in the GDP decline and in the sharp decrease in gross fixed capital formation. The demand side of GDP shows also structural distortions i.e. the magnitude of stocks change (16.2 percent in 1992) and the high negative contribution of net exports (-7.7 percent in 1992).

Table 5

GDP by category of uses (*%*)

	1989	1990	1991	1992
Gross domestic product, of which:	100.0	100.0	100.0	100.0
Final consumption, of which:	70.5	79.2	75.1	76.6
final consumption of households	57.9	65.0	59.3	61.1
final consumption of general government	11.7	13.3	15.1	15.0
final consumption of private non-profit institutions serving households	0.9	0.9	0.7	0.5
Gross fixed capital formation	29.9	19.8	14.3	14.9
Change in stocks	-3.1	10.5	14.8	16.2
Net exports	2.7	-9.5	-4.2	-7.7

Source: Own calculations based on *Romanian Statistical Yearbook,* Bucharest, 1993.

Taking into account the effects of prices (deflators) on the GDP final use (Table 6) one can observe its higher levels in the case of households' consumption. Clearly, that means that the population has been most affected by the economic crisis and structural imbalances.

Table 6

Indexes of GDP by category of uses (1989 = 100)

	1990	**1991**	**1992**
Gross domestic product			
index	94.4	82.2	71.1
deflator	113.6	334.4	1051.7
Final consumption			
index	108.9	96.3	89.2
deflator	110.7	304.2	911.3
Final consumption of households			
index	108.0	91.1	82.1
deflator	111.4	309.1	961.5
Final consumption of general government			
index	114.0	125.4	129.1
deflator	107.7	284.2	744.7
Gross fixed capital formation			
index	64.5	47.7	47.2
deflator	110.2	275.5	788.0

Source*:* Own calculations based on *Romanian Statistical Yearbook*, Bucharest, 1993.

It is worth mentioning that the transition to a market economy implies essential changes both in statistical data and in accounting data systems. On the other hand, there are large debates concerning the dimension and the implications of the hidden economy **[3].** There are also strong concerns regarding the external costs of economic development in terms of the evaluation of real impact of environmental damages **[4].**

Changes in the structure of the industry

The weak performances of the Romanian economy, the current crisis and imbalances that make more difficult to overcome this situation, are due, to a great extent, to the forced industrialization in the past. The over-dimensioning of the industrial sector and also its inefficient structures in relation with the domestic raw materials and energy resources, as well as with the national particularities, are found at the basis of the imbalances and has to be taken into account by the restructuring policy.

The industrial sector in Romania, compared to other countries, showed one of the highest shares in the national economy. But, it should be mentioned that the Romanian industry has grown artificially, being over-dimensioned to the detriment of the services sector. In terms of labour productivity, efficiency and competitiveness, the Romanian industry holds one of the lowest positions in Europe.

Despite the general trend of decline after 1989, the industry's share in the national economy continued to stand at high levels (Table 7).

Table 7

The share of industry in the national economy (%)

Indicators	1989	1990	1991	1992	1993	1994[a]
Gross domestic product	54.2	50.7	43.3	44.7	44.9	45.6
Output[b]	63.3	59.5	57.4	-	-	-
Intermediate consumption[b]	69.7	68.9	67.6	-	-	-
Gross value added[b]	51.2	44.1	40.4	-	-	-
Fixed assets	47.5	50.5	50.4	62.0	-	-
Investments	43.4	46.3	54.5	56.6	-	-
Employment (end of year)	38.1	37.9	35.3	31.6	30.3	29.6
Employees	47.5	47.7	49.0	48.8	-	-
Total energy consumption	77.1	73.2	66.7	63.0	63.1	62.0
Electric power consumption	70.3	65.6	61.7	57.0	68.5	67.0
Exports (FOB)	99.3	98.9	94.5	94.3	-	-
Imports (CIF)	98.2	31.9	92.1	90.6	-	-

a Forecast of NCP,1993.
b from National Accounts
Source: Own calculations based on *Romanian Statistical Yearbook,* Bucharest, 1990, 1991, 1992, 1993; and NCP, 1993.

The output and prices in industry

Among the sectors of the national economy, industry was the most affected by the crisis. Compared to 1989 the industrial production decreased by 54 percent in 1992.

At the same time, the rise in industrial prices was extremely severe and most unemployed workers were dismissed from industrial sub-sectors. Because of its high share, the industrial crisis has had major impact on the entire economy.

The response of industrial sector to the new circumstances of transition mainly appeared as a fast rise in prices. So, in value terms, it was possible that the fall in the industrial output be compensated, to a large extent, by the raise in the price levels, which is reflected by the deflators (Table 8).

This type of response in the industrial sector was favoured by the slow rate of privatization, marketization, and demonopolization in Romania. As a consequence, a decrease in the industry's share together with its restructuring represents basic conditions to shorten the transition duration [5].

Table 8

Indexes of GDP, output, intermediate consumption and gross value added and deflators at the national economy level and in the industrial sector

(% against previous year)

	Indexes current prices	Indexes constant prices	Deflator
GDP			
National economy			
1990	107.2	94.4	113.6
1991	256.3	87.1	294.3
1992	272.1	86.4	314.9
1993[a]	349.7	1007	347.3
1994	235.7	101.5	232.2
Industry			
1990	100.4	86.5	116.1
1991	218.9	85.3	256.6
1992	280.7	84.0	334.2
1993[a]	351.1	100.6	349.0
19934[b]	239.7	101.1	237.1
Output[c]			
National economy			
1990	100.8	85.2	118.3
1991	263.2	87.0	302.5
Industry			
1990	94.9	79.2	119.8
1991	253.9	83.6	303.7
Extraction industry			
1990	92.2	65.7	140.3
1991	270.8	84.3	321.2
Manufacturing industry			
1990	93.1	78.0	119.4
1991	243.4	83.1	292.9
Electric and thermal energy, gas and water			
1990	118.4	102.7	115.3
1991	346.6	87.7	395.2

Intermediate consumption[c]			
National economy			
1990	96.3	78.6	122.5
1991	263.1	88.3	298.0
Industry			
1990	95.1	77.6	122.6
1991	258.8	85.0	304.5
Extraction industry			
1990	96.2	82.8	116.2
1991	300.4	92.4	325.1
Manufacturing industry			
1990	91.9	74.4	123.5
1991	251.4	84.7	296.8
Electric and thermal energy, gas and water			
1990	127.5	106.8	119.4
1991	299.5	85.3	351.1
Gross value added[c]			
National economy			
1990	109.3	97.6	112.0
1991	263.3	84.8	310.5
Industry			
1990	94.1	83.3	113.0
1991	241.2	79.9	301.9
Extraction industry			
1990	88.0	47.7	184.5
1991	236.6	75.1	315.0
Manufacturing industry			
1990	96.3	87.1	110.6
1991	224.1	79.4	282.2
Electric and thermal energy, gas and water			
1990	46.0	69.5	66.2
1991	1394.5	141.2	987.6

a preliminary
b projections of CNP
c from National Accounts

Source: Own calculations based on *Romanian Statistical Yearbook,* Bucharest, 1990, 1991, 1992, 1993; CNP, 1993.

The available data showed that since 1989, despite the rise in output prices in industry, mainly because of producers' monopoly position, and a

decrease in the average number of employees, the share of gross value added recorded a decline, alike other efficiency indicators (Table 9).

The downward trend of the industrial output between 1989-1992, together with falling labour productivity and production capacity utilization, caused the decrease of raw materials and energy imports, the underutilization of the working time and the amplification of turbulences in financial relationships between economic agents. At the same time, the prices recorded an upward trend because of:

1. the rise in prices of material inputs and in the cost of contracted credits;
2. the increase in labour costs;
3. the fall of investments, discouraging the improvements in labour productivity on the basis of equipments and technology renewal;
4. the social pressures, limiting the remove of the workforce in excess.

Table 9

Main economic indicators of industrial activities

(% against the previous year)

	1990	1991	1992
Total output	-23.7	-22.8	-21.9
manufacturing industry	-23.1	-23.8	-24.0
extraction industry	-27.4	-18.3	-0.9
electric and thermal energy	-30.6	-9.4	-7.2
Employment	-3.7	-7.5	-13.2
Labour productivity per employee	-25.1	-15.0	-13.4
Energy efficiency (production/energy consumption)	-6.1	+2.9	-7.7
Investments	-37.3	-9.0	+6.4
Share of value added[a] (percentage in industrial production)	28.1	26.5	39.8[b]
Degree of production capacity use (% in total)	69.0	57.0	47.8

a from National Accounts
b ratio between the value added in industry and the industrial output

Source: Own calculations based on *Romanian Statistical Yearbook,* Bucharest, 1990, 1991, 1992, 1993.

These circumstances have lead to the rise of inflation, creating payment difficulties for buyers and, finally, to an artificial shift in the relationships between sectors affecting their contribution in industrial output. Moreover, at the end of March 1993, the stocks of unsold products stood at around lei 600 billion, which showed a structural disequilibrium between supply and demand

in industry. The main share in total stocks was held by machinery and equipments (20.4 per cent), textiles (11.7 per cent), chemistry (15.5 per cent) and metallurgical products (14.2 per cent).

The discrepancy between the output decrease in industry on the one hand and the prices increase, on the other hand, represented the main source of amplifying the inflationary pressures in the Romanian economy. In this regard it is worth examining the prices-output relationship in various industrial sectors, based on available data.

The study of the output indexes and respectively the sale price indexes in the cases of industrial sectors has revealed a certain inverse correlation between these two variables (Table 10) **[6].**

Table 10

Indexes of output and sale price indexes in industrial sectors

	Output indexes (Dec. 1992 % against 1989 monthly average)	**Rank**	**Sale price indexes**[a] (Dec. 1992 % against Oct. 1990[b])	**Rank**
Total industry	40.0	-	1,786.4	-
Extraction and preparation	49.4	6	2,141.0	7
Oil and natural gas extraction	72.9	2	1,511.5	15
Metal ores extraction and preparation	45.0	8	1,045.4	22
Other extraction activities	35.3	18	2,105.2	8
Food and drinks	43.5	9	1,435.5	17
Tobacco products	67.7	3	743.4	25
Textile and textile products	38.9	12	1,139.4	19
Fabrics, furs and leather goods	33.5	19	784.8	24
Footwear	38.8	13	1,292.8	18
Wood Processing	32.3	20	1,894.8	11
Pulp, paper and cardboard	28.4	24	2,025.6	9
Oil processing, coking and nuclear fuel treatment	51.3	4	2,760.4	1
Chemistry and synthetic and artificial fibres	39.5	11	2,282.1	4
Rubber and plastics processing	32.0	21	2,396.3	2
Other non-metallic mineral products	31.5	22	2,248.8	5
Metallurgy	30.9	23	2,340.4	3

Metallic constructions and metal products	26.0	25	1,829.8	14
Machinery and equipments	36.5	17	1,484.0	16
Computers and office equipments	39.7	10	135.1	26
Electric machinery and appliances	36.6	16	1,875.6	12
Radio, TV sets and communication equipments	37.2	14	926.8	23
Medical, precision, optical instruments and equipments and watches	27.7	25	1,062.7	21
Road transportation means	36.8	15	1,925.9	10
Other means of transport	45.6	7	1,852.3	13
Furniture and other non-classified activities	50.8	5	1,120.9	20
Electric and thermal energy, gas and hot water production, transport and distribution	73.0	1	2,173.5	6

a for supplies to the domestic market
b October 1990 is the month of the first liberation of prices in Romania; before this month, practically, the level of prices was constant.

Source: Own calculations based on *Romanian Statistical Yearbook,* Bucharest, 1993; *Quarterly Statistical Bulletin,* no. 1, Bucharest, 1993.

From the viewpoint of the above mentioned discrepancy, expressed by the ratio between the price index and the decrease in real terms of the output, the following industrial sectors stand out: electric and thermal energy, gas and hot water production, transport and distribution (15.9 times), oil processing, coking and nuclear fuel treatment (14.2 times); oil and natural gas extraction (11.0 times); coal extraction and preparation (10.6 times); chemistry and synthetic and artificial fibres (9.0 times); rubber and plastics processing (7.7 times); and metallurgy (7.2 times).

In fact, just these are the sectors where the degree of production monopolization and concentration is higher, the privatization is practically absent, the imports of raw materials and energy resources represent high shares in the production costs, 'traditionally' contributing (but in terms of doubtful efficiency) to the Romanian exports.

After 1989, it was the share of these sectors which increased in industry, mainly due to the abuse of monopoly positions from the part of state-owned enterprises and, consequently, to the massive price increases without real coverage in production **[7].**

Structural changes in industrial sectors

Further, the main trends of a structural nature within industry and its sectors in 1990-1992 are presented.

The extractive industry, which at the beginning of the transition witnessed a severe output decline, is the only sector which appears to recover in 1992. This was due exclusively to the lignite extraction (production increased by 20 percent compared to 1991 and by 1 percent compared to 1990) its share exceeding the oil contribution to the total internal resources of primary energy (see Note [2]).

The increase in coal imports in 1992 (+80.6 percent compared to 1991) at the same time with oil and natural gas output reduction (-23.9 percent, respectively -35.6 percent compared to 1991) also as an effect of the abolition of former CMEA trading system, made it possible for coal to become the main source for the production of energy.

A sharp output decline has been recorded in the field of metallic ores extraction, with adverse effects upon the raw materials supply for the metallurgic industry, which holds about 15 percent of the country's exports.

The electric and thermal energy industry witnessed a moderate decline starting with 1990. In 1992, the share of electric power production in the thermal energy raised to 78.4 percent compared to 75.0 percent in 1991 and also a structural change occurred in the consumption of fuels (43.2 percent coal and 45.8 percent natural gas, compared to 32.0 percent, respectively 51.9 percent in 1991) (CNS, 1993).

Table 11

Electric power balance (% against the previous year)

	1990	**1991**	**1992**
Resources	-11.8	-11.3	-8.4
Output	-15.2	-11.5	-4.8
thermo electrical	-15.6	-20.0	-0.4
hydro electrical	-13.1	+29.8	-17.9
Imports	+21.3	-25.6	-37.2
Consumption	-14.1	-14.4	-9.0
in economy	-16.4	-17.8	-11.8
household uses	+24.6	+26.0	+12.6

Source: National Commission for Statistics, 1993.

The sharp decrease in imports and domestic output after 1989 brought about the reduction of the electric power resources and consumption (Table 11), mainly in industry (36,284 million kwh in 1992, compared to 44,533 million kwh in 1990 and 55,574 million kwh in 1989). In 1992, the electric

power imports represented 7.5 percent of the total resources compared to 11.0 percent in 1991, 12.8 percent in 1990 and 9.3 percent in 1989.

The manufacturing industry concentrated the whole spectrum of the impact resulted from the failures of other industrial sectors and of the ones of the national economy, from the problems related to the transition and also to the unfavourable developments in the international environment.

Therefore, ever since 1989 the production decline in the processing industry sectors has been the most severe, leading to the perpetuating and even deepening of the past imbalances, as well as to the surge of a high rate of unemployment.

The food industry carried on its activity under the impact of the raw materials shortage, due to the adverse natural conditions of agricultural production. Under these circumstances, the food industry output decreased by 18 percent in 1992 compared to the previous year and halved compared to 1989. The fall of the domestic agricultural resources was counter-balanced only partially by the import of agro-food products, whose share increased starting with 1991.

The sectors producing intermediate goods and for investments, dimensioned according to the energy-intensive structures derived from the old standards of specialized activities within CMEA and of industrialization policy, have been confronted, more acutely, with problems related to the loss of raw materials and energy supply sources and of the external markets of former socialist countries. At the same time, the compression of the economic agents' liquidities and the uncertain business climate during the transition has led to the decrease in the domestic demand for capital goods.

In 1992, the production decreased by around one fourth compared to 1991 (and by more than 50 percent compared to 1989) in the chemistry, machinery and equipments industries and by around 30 percent (two thirds as compared with 1989) in metallurgy, metal constructions, rubber and plastics processing. This situation led also to a sharp underutilization of the human and technical potential, compared to other industries. The degree of production capacity utilization stood at only 10-30 percent for OLTICIT type cars, electric engines, synthetic rubber, wagons and of 40-60 percent for tractors, oil processing, and finished hot-rolled steel (CNS, 1993).

Contrary to the continuous decline in the production, these sectors' share in the total value of the industrial output increased, on account of the accelerated rise in prices, their level being pushed by high energy intensiveness and by raw materials supplies from imports. Although the functioning of these industrial sectors entails significant foreign currency amount, they continue to represent, at the same time, the main providers for external markets, machinery and equipments industries holding more than half of Romania's exports.

The industries manufacturing non-food products for consumption have been affected mainly by the weakening of internal market absorption power

and by the competition of similar imported products. The fall in the population's real incomes led to the allocation of more expenses of the family budgets towards food products, to the disadvantage of non-food goods, mainly of durable goods. Under these circumstances, most of light industry sectors witnessed output drawbacks of around 30 percent in 1992 compared to 1991.

Table 12

The structure of industry by main sectors in 1990, 1991, 1992 (%)

	Manufacturing industry	Extraction industry	Electric and thermal energy
Total industrial production			
1990	86.9	8.2	4.9
1991	84.8	8.3	6.9
1992	81.6	7.5	10.9
Employment			
1990	90.5	6.3	3.2
1991	99.7	7.3	4.0
1992	86.8	8.2	5.0
Average number of employees			
1991	88.1	7.7	4.2
1992	86.4	8.5	5.1
Consumption of energy			
1991	84.2	8.4	7.4
1992	83.7	8.2	8.1
Consumption of electric power			
1991	68.1	12.3	19.6
1992	64.5	12.3	23.2
Consumption of thermal power			
1991	83.5	5.5	11.0
1992	78.7	6.9	14.4
Fixed assets			
1990	64.6	12.8	22.6
1991	65.1	12.7	22.2
1992	59.1	11.9	29.0
Investments			
1990	45.3	27.2	27.5
1991	45.1	25.7	29.2
1992	44.1	22.0	33.9

Source: Own calculations based on *Romanian Statistical Yearbook,* Bucharest, 1993.

The distorted development of industrial activities led to certain structural changes in industry by the main sectors (Table 12) related to the reflection in

costs, on the one hand, of price changes in raw materials and domestic energy and from imports, under the conditions of internal prices comparable with international ones and of the national currency depreciation, and on the other hand, of the wage increase impact.

The obsolete technological profile of Romania, caused by the high degree of physical depreciation of the productive equipments, made the industrial enterprises as main source of pollutant emissions, affecting severely the environment.

The study find that, in Romania, the energy prices were typically set at a fraction of their world market levels, mainly for domestic resources such as coal and electricity, but also for imported resources such as oil and natural gas. The composition of industrial output is, therefore, biased towards energy-intensive activities including chemistry, metallurgy, building materials (Table 13), while the effective pressure for increasing the fuel utilization effectiveness in all industries has been minimal **[8].**

Table 13

Intensity of energy consumption in some industrial sectors in 1992 (%)

Industry	100
Extraction industry	109
Oil and natural gas extraction	113
Manufacturing industry	103
Pulp, paper and cardboard	151
Crude petroleum processing, coal coking and nuclear fuel treatment	179
Chemistry and synthetic and artificial fibres	267
Other non-metallic minerals production	161
Metallurgy	164
Electric and thermal energy, gas and water	74

Source: Own calculations based on *Romanian Statistical Yearbook,* Bucharest, 1993.

Only since 1993 the energy prices have tended to be closer to the level of world market prices. But industrial enterprises transferred these new high prices of energy into the prices of their products, which represent one of the main causes of inflation rise.

Dimensional structure changes

One of the main structural changes in industry during the transition is represented by the increasing share of small and medium-sized enterprises, whose capabilities of adapting to the new conditions has already been proved.

Taking into account the dimensional structure, the defining trait of the Romanian industry is gigantism, the average number of employees per

enterprise being more than 1,000 persons in 1992 **[9].** Though the industrial structure has a visible tendency to shift towards smaller type of companies, almost one third of the employees in industry are still working in huge enterprises, with more than 5,000 employees (Table 14). Just these enterprises, favoured in the past by the centralized planning system, represent one of the most serious obstacles in the transition to the market economy.

Table 14

Classification of industrial enterprises by number of employees

Number of employees	Number of enterprises		Structure (%)		Total number of employees		Structure (%)	
	1989	1992	1989	1992	1989	1992	1989	1992
Total	2,102	2,920	100.0	100.0	3,690,211	3,032,816	100.0	100.0
Up to 100	141[a]	619	6.7[a]	21.2	18,385[a]	38,240	0.5[a]	1.3
101-200		409		14.0		59,202		2.0
201-300	395[b]	285	18.8[b]	9.8	133,082[b]	70,912	3.6[b]	2.3
301-400		204		7.0		71,070		2.3
401-500		164		5.6		74,283		2.5
501-1,000	491	500	23.4	17.1	341,450	358,422	9.3	11.8
1,001-2,000	471	392	22.4	13.4	627,856	557,405	17.0	18.4
2,001-3,000	263	170	12.5	5.8	615,909	412,790	16.7	13.6
3,001-5,000	197	107	9.4	3.7	739,914	410,643	20.0	13.5
Over 5,000	144	70	6.8	2.4	1,213,615	979,849	32.9	32.3

a up to 200
b 201-500

Source: *Romanian Statistical Yearbook,* Bucharest, 1990, 1993.

The material and energy inputs being supplied by the state companies at favourable price conditions (including those from imports), these huge industrial conglomerates, commonly concentrated on industrial platforms, stood out for their high levels of energy and material intensiveness and their noxious effects on the environment. Having monopoly positions on the internal market, they set high selling prices for their products. Though much attenuated currently, these characteristics are still persistent. Additionally, their reluctance towards privatization, marketization and demonopolization was supported by social pressures, among which those of the trade unions played an important role.

The average number of persons employed by an enterprise in 1992, compared to industry as a whole (1,039), was much larger in extraction industry (8,335), in electric and thermal energy, gas and water, transport and distribution (8,286) (Grigorescu and others, 1993).

At the level of manufacturing industry, the average number of persons employed by an enterprise in 1992 was 935, the highest figures in this sector being registered in the following sectors: tobacco (7,905); crude petroleum processing, coal coking and nuclear fuel treatment (3,006); metallurgy (2,503); road transport means (2,450) and other means of transport (2,499); radio, TV sets and communication equipments (1.597); chemistry and synthetic and artificial fibres (1,584); medical, precision, optical instruments and equipments and watches (1,259); and the lowest ones in the following sectors: publishing houses, printing houses and recording on supports (292); food and drinks (396); computers and office equipments (428); metallic construction and metal products (485); fabrics, furs and leather goods (486); furniture production and other non-classified activities (677); footwear (812); textiles and textile products (849); rubber and plastics processing (870).

Macro and microeconomic structural adjustments

The transition to the market economy started in Romania in much more unfavourable circumstances than in other Eastern and Central European countries. Changing the old system in Romania generated more adverse effects than in cases where the reform programs had been previously prepared in order to achieve the targeted changes. It is worth mentioning that in Romania the starting point in the transition race was marked by a considerable gap from the viewpoint of the economic development level and of the technological background.

After a period when the self-adjustment forces of the economy were relied on too much, it has become obvious that structural adjustments should be done in a coordinated way, as far as creating an environment of competition and of market forces functioning.

The controversies of whether the therapy should be shock or gradual proved to be superfluous since many changes have taken place spontaneously. As a consequence, achieving a market economy's functional background should be accompanied by coherent policies aimed at developments in the real economy.

The setting of priorities, in terms of limited resources, undoubtedly represents the most delicate aspect of reforms. One should certainly find a system to facilitate the insertion of new mechanisms. At the same time, the system should be able to maintain a correction and change control procedure. It should be very important that these changes correspond to the market virtues and stimulate the economy. The objectives of continuing the reforms mean mainly ensuring macroeconomic stabilization, restoring economic and financial equilibrium, restructuring the productive capabilities and the technological renewal.

According to recent developments observed not only in Romania, but also in all other ex-communist European countries, it has become obvious that, during the transition to a market economy, macroeconomic reform measures will be difficult to be achieved since adequate micro-adjustments are missing. The intellectual debate focuses more and more upon the importance of finding an appropriate mix of macro and micro structural adjustment measures in order to accelerate the transition.

Overview of financial and monetary adjustments

The high inflation and the foreign currency shortage represented the main imbalances over the first years of transition, which have, as mentioned before, a structural nature. The macroeconomic stabilization through cautious fiscal, monetary, credit and income policies focused on managing inflation and restoring external balances are essential prerequisites in continuing reforms.

Although a basic component of the stabilization policy should be demand-side elimination or absorption of excess in liquidity, its long run success depends on an adequate supply-side response. The basic trade-off of this policy is the supply response provided by a stable monetary unit, real prices and an increased efficiency of resources allocation, based on market principles. The macroeconomic stabilization could be therefore favoured by the creation of circumstances under which microeconomic preconditions are established (Mundell, 1991).

The attempt to tackle the effects rather than the causes of inflation encounters additional pressures and raises the costs of measures aimed to curb inflation. Undoubtedly, real economic reforms could not be initiated under the previous price system. Therefore, prices liberalization has proved necessary as a corrective measure. However, because of the mismanagement at the macroeconomic level, the corrective inflation is being converted into structural inflation.

The main causes of this type of inflation in Romania are related to the following circumstances:
1. the gradual approach of prices liberalization in order to limit the social consequences did not succeed in adjusting demand and supply and in bringing prices close to their real level;
2. the behaviour of economic agents towards excessively rise in their prices was initially caused by the monetary overhang and subsequently maintained by the quasi-liquidity resulting from the payment arrears;
3. the delay in restructuring and privatization as well as in implementing other measures aimed at achieving the coherence of the reform efforts, gave rise to the lack of competition and therefore to the intensification of inflationary pressures;

4. the lack of correlation between the indexation system and the real situation in production and labour productivity led in many cases to unjustified increases in wages and implicitly in prices;
5. the arrears in inter-enterprise payments and the tendency to overstock added strong pressures to the inflationary process;
6. the effects of national currency depreciation were not significant in stimulating exports, but induced supplementary pressures on internal prices through imports.

Considering these causes, the policies aimed to curb inflation should envisage a set of correlated measures to continue the liberalization of prices on the real basis. That means to begin with the energy and raw material prices, both internal and imports ones, focusing on the equilibrium exchange rate and on the creation of a competitive environment in the economy. This new basis of price liberalization, including severe cuts in subsidies, should reveal the proper direction of structural adjustments needed according to the real comparative advantages of the Romanian economy (see also Note [**4**]).

A valid approach of restrictive monetary policy creates favourable prerequisites both to reduce inflationary pressures and to stimulate positive adjustments. The rigorous control of money supply corresponds to the combined goals of reducing the inflation rate, of satisfying normal liquidity requirements of the economy and of reaching an adequate money velocity.

The interest rate policy represents an important tool in addressing the allocation of resources and the balance of demand and supply. Under the circumstances of structural changes in the economy, this policy should aim bringing the interest rate to its positive level, in real terms. It is worth mentioning that while the inflation rate exceeded 190 percent in 1991 and 220 percent in 1992, the average interest rates of commercial banks fluctuated between 10-33 percent in 1991 and 15-96 percent in 1992 (Government of Romania, 1993a).

In the absence of a real restructuring - that should have been supported by adequate monetary measures in order to address the macroeconomic imbalances - the gradual accumulation of inter-enterprise arrears turned into a severe financial blockage. The outstanding payments (current and investments) at the end of 1991 stood at around lei 1.653 billion, representing 80 percent of GNP. The global compensation of payments arrears tried at the end of 1991 caused the inflation rate to remain at high levels and, as a result of missing measures to encourage the financial discipline, the problems created by these arrears have continued. More than that, this situation has been worsened by economic agents that have accumulated large foreign exchange deposits from exports, most of them kept in foreign banks, while failing to pay their debts in lei to the domestic suppliers, increasing at the same time pressures on the exchange rate and inflation.

It is worth pointing out that the financial blockage mostly resulted from inadequate structural economic environment: the state-owned enterprises continued to produce without adjusting their supply to the real demand, which in turn led to stocks of unsold goods. The ratio of stocks in GNP stood at 23.4 percent in 1991 and at 34 percent in 1992. In other words, around one third of the national product was neither consumed nor invested, but instead depreciated, under the form of stocks. Moreover, some economic agents accumulated deliberately products in stocks with speculative purposes, in order to sell or re-sell them at higher prices, obtaining unreasonable profits and contributing to the intensification of inflationary pressures (National Bank of Romania, 1992). The financial blockage represents the price paid by the Romanian society for the structural reluctance to adapt to the new economic environment.

As a consequence, the fight against arrears requires that one give up the option of global or selective compensations and adopting measures in order to impose a severe financial discipline. Among them, initiating restructuring actions at sector and enterprise levels seems to be more important, requiring also the drastic intervention of the banking system for the liquidation of insolvent economic agents. These steps have at the same time relatively high social costs. Obviously, the financial discipline represents one of the main challenges facing macroeconomic adjustment and the achievement of economic restructuring.

Recovery and reorientation of exports

Since 1989, the inadequate structure of the Romanian economy and its weak international competitiveness were reflected in a severe reduction of exports and in the worsening of the foreign trade balance. With exports per capita in 1992 of around $ 200, Romania stood at the lowest position in Europe (excluding Albania). Due to the faster decrease in exports than imports during the first years of transition, Romania recorded growing deficits in the foreign trade balance. In the period 1990-1992, this imbalance between exports and imports amounted to about $ 6 billion. It should be mentioned that this trend is particular to Romania. Other East European countries (as Hungary) succeeded in maintaining external trade balance or even recorded substantial surpluses (Poland, for instance recorded a trade surplus amounting to almost $ 7 billion in the period 1990-1992) (IMF, 1993).

However, the year 1992 witnessed a positive trend: exports increased by 18.6 percent compared to the rise in imports by 10 percent. This reversal trend is expected to continue also in 1993. A rise in exports by 6 percent is estimated for 1993, while imports should remain at the same level as the previous year. Therefore, a slight improvement in the foreign trade balance is expected. The share of exports in GDP, after a drastic decrease from 20 percent in 1989 to about 15 percent in 1990 and 1991, recovered to 23 percent in 1992.

By geographical regions, it should be mentioned that around two thirds of total exports had as destination the European countries, among them EU and EFTA countries holding more than half of these exports (Table 15). Based on recent agreements with the EU and EFTA countries, an increase in foreign trade with this region of Europe is expected in the coming years.

Table 15

Structure of Romanian exports by geographical regions (%)

	1989	**1992**	**1993**[*]
Europe, of which:	69.2	63.2	64.5
- EU	30.6	32.6	38.4
- EFTA	3.3	5.6	4.8
Asia and Africa	21.8	32.5	31.3
America and Oceania	9.0	4.3	4.2

* preliminary
Source: Own calculations based on *Romanian Statistical Yearbook,* Bucharest, 1993; NCP, 1993.

In the structure of exports by product categories, the main share is held by machinery and equipments, transport, basic metals, textiles and textile articles (Table 16). The fall in industrial output during 1990-1993 mainly due to the collapse of the CMEA market is reflected in exports by the sharp decrease in the share of machinery and electric equipments and transport means, respectively from 30 percent to 17 percent. In 1990-1993, exports witnessed a favourable trend of structural changes shown by the decrease of mineral products' share (including fuels) from 20 percent to 13 percent.

Table 16

Exports and imports structure by product categories (%)

	Exports (FOB)			**Imports (CIF)**		
	1990	**1992**	**1993**[*]	**1990**	**1992**	**1993**[*]
Total, of which:	100.0	100.0	100.0	100.0	100.0	100.0
Mineral products (including fuels)	19.3	13.3	13.1	42.4	32.1	34.1
Basic metals and articles	16.2	17.1	21.9	5.7	4.5	-
Chemical and connected products	5.1	9.7	7.5	7.2	7.0	-
Machinery and electric equipments, transport means	29.2	21.4	17.2	21.5	18.2	20.0
Textiles and textile articles	9.8	10.6	15.8	2.9	9.5	-
Food products, beverages, tobacco	0.4	1.1	-	4.3	7.4	6.0

* preliminary

Source: Own calculations based on *Romanian Statistical Yearbook,* Bucharest, 1993; CNP, 1993.

However, the composition of exports showed higher proportions of raw materials, energy-intensive products, and also products with a large content of natural resources. It is worth mentioning that, according to the industrial classification by industrial sectors, around three quarters of the total exports were provided by chemistry and oil refining industries, machinery and equipments, metallurgy and wood processing.

Obviously, the inappropriate industrial structure, the weak performances of the Romanian enterprises, the significant distortions in the price system and the lack of stability of the foreign exchange market all affected in a negative manner the extent and the competitiveness of exports.

Within the structure of imports prevails the mineral products, mainly raw materials, whose share however decreased from 43 percent in 1990 to 34 percent in 1993. A relevant structural change in imports' composition consist in the increase of consumption goods' share (textiles, food products, etc.) from 7 percent in 1990 to 17 percent in 1992. The internal market shortage of those products, mainly due to agricultural and industrial output decrease and to the deepening of structural imbalances in these sectors was covered by imports.

The adverse reciprocal effects of the foreign trade and the exchange rate should be mentioned. Under the circumstances of economic structural imbalances, of the fall in industrial output and exports and of the depletion of foreign currency reserves, strong pressures on the exchange rate surged. Obviously, maintaining an over-appreciated national currency, as before 1990, not only proved to be ineffective in slowing the prices rise, but also entailed decreasing exports and increasing imports, which led to the deterioration of the trade balance and to finance its deficit by raising external borrowings.

Despite repeated depreciations of the national currency under the monitoring of the central bank, the positive effects did not emerge. Thus, on the one hand, the demand of foreign currency for imports could not be covered due to the decrease in foreign currency supply and, on the other hand many earnings from exports did not enter the official foreign exchange market [10].

The desirable alternative for increasing exports and the related foreign currency earnings is to improve their competitiveness by reducing the unit costs, technological renewal and more efficient use of resources. A more detailed examination of Romania's external competitiveness would require analytical data on exports and imports of different sectors and products and also comparable conditions of prices or, at least, a real level of the exchange rate. Even for estimating basic indicators of the export-import prices relationships (*terms of trade* for instance) the required information is missing [11].

An essential task of the decision-makers consist in identifying those sectors which could bring the highest contribution to the national income, assessed at competitive i.e. world market prices, referring to the inputs of domestic resources such as the capital and labour that they require. This means

that, in the future, macroeconomic management decisions should be based on an assessment of the value-added and profitability of each sector considering the world market prices. The standard methods for calculating the value-added by each industry at world prices and thus the domestic resources cost (DRC) of production are well known and conceptually simple. The key requirements are for information regarding the composition of inputs and the ratio between world and domestic prices for both inputs and outputs. Data on the composition of inputs into production could be provided by a disaggregated input-output table (Hare and Huges, 1991).

It became obvious that the structural adjustments of the Romanian economy have not been supported by the foreign trade. In order to reverse this situation, it is worth designing a well articulated framework based on viable incentives to exporters: the extension of a 'drawback' system; adequate instruments for exports financing and also for insurance and guarantees for export credits according to international rules; reduction in the profit tax due for exported goods and services; improvements in the conditions of access to external markets supported by governmental agreements; providing information concerning the international environment and business opportunities; trade facilities and reference prices on different external markets; readjustments to the level of nominal tariff protection; and gradual reduction of tariff levels according to the needs of the economy and exports recovery and for increasing competition on the domestic market. The immediate purpose of exports promoting measures consists in the reduction in pressures on the exchange rate and of supporting viable sectors, able to successfully compete on external markets.

The structural adjustments of the national economy, based on appropriate measures in developing foreign trade, are undoubtedly related to the principle of international specialization. This requires viable convertors which should transmit real signals in order to address the allocation of resources in the economy by the economic agents.

Macroeconomic instruments and adjustments such as a realistic exchange rate, the mitigation of price instability and the elimination of distortions from their structure are fundamental preconditions of a coherent restructuring.

Privatization process and development of the private sector

Obviously, one of the basic changes in order to make operational the market forces should be the reform of property rights **[12].** This could also change the behaviour of economic agents and population, which represents a psychological impact.

In Romania, this issue involves two aspects. On the one hand, is it the privatization of industrial state-owned enterprises, among these, some being very large, with ten of thousands of workers. On the other hand, is it the private sector, emerging almost solely by its own forces. These two aspects are

not particular to Romania, but in Romania the critical situation of the economy brings supplementary difficulties which slowed the privatization rate. Based on certain assumptions (about $ 300 million foreign capital and prevalent internal investments) the privatization of Romanian companies is estimated as possible during a period of 17 years (Zaman, 1993). Up to mid 1993, two years after issuing the Privatization Law, out of 6,300 companies only 150 were sold.

However, some progress has been made in developing the private sector, its contribution to the GDP creation increasing from 16 percent in 1990 to 21 percent in 1991 and to 26 percent in 1992, mainly due to agriculture - by the abolition of the cooperative sector - and to commercial services and retail sales (Table 17). The poorest results, from this viewpoint, have been recorded in industry, where the private sector held only 1.1 percent of total industrial production in 1992 (compared to agriculture, for example, where this sector represented 70.8 percent of total production).

Table 17

Share of the private sector in Romanian economy (%)

	1990	1991	1992	1993[a]	1994[b]
GDP	16.0	21.0	26.0	30.0	34.0
Industrial production	-	1.1	1.1	-	-
Agricultural production	56.1	79.3	70.8	-	-
Vegetal production	56.0	81.6	67.2	-	-
Animal production	56.3	74.8	75.2	-	-
Commercial services	3.3	25.1	40.2	43	-
Retail sales	0.8	21.3	44.4	50	60
Exports	0.3	19.8	28.0	-	-
Imports	0.7	17.5	34.6	-	-
Investments (including population's own investments)	4.3	8.1	15.6	20	-

a preliminary
b forecast

Source: National Commission for Prognosis, 1993.

The foreign capital share in the Romanian economy has increased, even to a lesser extent than expectations. According to data provided by the Romanian Agency for Development, at the end of 1992 the number of companies with foreign capital increased more than three times as compared to the previous year (21,056 against 6,493 in December 1991), while the capital in foreign currency doubled ($ 543.6 million against $ 267 million). The concentration degree of the companies with foreign capital is nevertheless very high: about 0.3 percent out of total number of these companies covered 68

percent of the capital invested, while 96 percent of the total number held only 13 percent of the capital (National Commission for Statistics, 1993).

Positive effects of the growing private sector upon creating new jobs, accumulating capital, increasing the income sources for the state budget, contributing also to the recovery of economic activities could already be observed. Preliminary data for 1993 show a contribution of about 30 percent of the private sector to the creation of GDP, 43 percent in commercial services to population, 50 percent in retail sales, 20 percent in investments. The estimations of the National Commission for Prognosis for 1994 foresee a private sector's share of 34 percent in GDP and 60 percent in retail sales, without considering the effects of 'large privatization' process (NCP, 1993).

It is expected that, in a short period of time, the employment structure on sectors will be subject to sensible changes. Among the factors which could drive the new structural configuration of employment an important role will be played by the rate and the concrete forms of privatization [13]. The changes in the nature of property are expected to have a major impact on the functioning of the labour market. By changing the ownership, significant shifts in the qualification profile and structure of employment are expected also to occur.

The state sector's share in total employment decreased from 66.9 percent in 1991 to 56.2 percent in 1993 and expected to 52.3 percent in 1994, while the share of the private sector increased from 2.5 percent of total employment in 1991 to 6.4 percent in 1993 and expected to 9.7 percent in 1994 (Table 18).

Table 18

Employment structure (end of year) *(%)*

	1991	**1992**	**1993**[a]	**1994**[b]
Total employment, of which:	100.0	100.0	100.0	100.0
Total employees	69.4	63.4	62.6	62.0
State sector	66.9	59.0	56.2	52.3
Private sector	2.5	4.4	6.4	9.7
Other categories of employment, of which:	30.6	36.6	37.4	38.0
Owners and partners	3.8	36.6	37.4	38.0
Workers on their own account	22.3	25.3	25.4	25.7
Unpaid family workers	4.5	5.6	6.1	6.2

a preliminary
b estimation

Source: National Commission for Prognosis, 1993.

In terms of the improvements in capital and economic profitability, the private sector proved to be more efficient than the state one. Much more adaptive to the new market circumstances, the private sector in the Romanian

economy had good economic and financial performance, though they had a modest capital (Table 19).

Table 19

Profitability by ownership[a] (%)

	1992	**1993[b]**	**1993[c]**	**1994[d]**
National economy	5.4	4.6	5.1	5.5
State property	2.7	2.4	2.9	3.3
Private property	11.3	11.1	12.7	13.0

a calculated as ratio between profits and production costs
b six months
c preliminary
d forecast

Source: National Commission for Prognosis, 1993.

If at the beginning of the transition, private activities initiated more in retail sales and commercial services, starting with 1993 they were also significant in productive sectors (industry, agriculture, construction) beginning to bring a substantial contribution to the state budget revenues. In this regard, the acceleration of privatization will undoubtedly foster the stabilization and recovery of the national economy.

The privatization of about 6,300 state-owned companies in a period of seven years requires a complex macroeconomic and financial strategy, carried out by a coordinated activity of government institutions. As a first estimation, the state should offer yearly for sale shares of around lei 530 billion. However, the domestic private capital available in the same period is estimated to lei 200 billion yearly (Government of Romania, 1993a; Croitoru, 1993). The difference between the capital committed to sale and the available one for acquisitions could harm the ownership reform rate, in the absence of an adequate managerial program, especially if the external financial sources (credits, direct or portfolio investments) would be maintained at low levels.

Consequently, a long-term financial strategy should focus on the attraction of large investors (private or institutional, internal or external) and, at the same time, of small savings, as essential premises for the development of institutions and financial market and fostering privatization. Therefore, the institutions entitled to state-owned companies' privatization will have to assess the potential investors' behaviour and to channel the investment demand towards above mentioned aims. At the same time, the annual privatization program, both in structure and volume, and through optimal forms of property transfer, have to be elaborated as properly as possible from an economic viewpoint.

As regards the state-owned companies which are to be privatized according to the Privatization Law (Government of Romania, 1993a; *Tribuna*

Economica, 1991) should be mentioned the high shares in main indicators (such as social capital, the number of employees, total sales) of the industry and of the big companies (except for trade and food industry) (Table 20).

Table 20

State-owned companies to be privatized (End 1992) (%)

Companies by sector and size	Number of companies	Social capital	Number of employees	Total sales	Total sales/social capital	Profit/social capital	Profit/ total sales
Total	100.0	100.0	100.0	100.0	62.5	2.9	4.6
Large	11.3	77.2	44.3	39.7			
Medium	39.1	20.1	43.4	46.7			
Small	49.6	2.7	12.3	13.6			
Industry*	27.4	51.5	49.6	39.7	48.2	3.6	7.4
Large	3.6	42.1	18.6	27.2			
Medium	18.1	9.0	29.2	11.6			
Small	5.7	0.4	1.8	0.9			
Agriculture	27.8	29.0	12.4	9.8	21.1	0.2	1.0
Large	6.0	26.3	3.9	2.0			
Medium	1.8	2.0	2.3	6.3			
Small	20.0	0.7	6.2	1.5			
Food industry	6.4	4.5	7.2	8.5	118.3	5.7	4.8
Large	0.4	1.1	1.0	0.8			
Medium	2.6	3.2	4.6	7.3			
Small	3.4	0.2	1.6	0.4			
Transport	6.3	5.9	3.0	2.5	26.1	0.3	1.2
Large	0.3	4.7	0.8	1.3			
Medium	2.4	0.9	1.4	0.7			
Small	3.6	0.3	0.8	0.5			
Construction	7.6	3.0	7.9	5.6	114.8	6.1	5.3
Large	0.5	1.7	2.5	2.0			
Medium	4.0	1.2	4.5	3.0			
Small	3.1	0.1	0.9	0.6			
Trade	10.3	2.2	13.9	19.7	563.6	12.9	2.3
Large	0.1	0.8	0.9	1.5			
Medium	5.2	1.0	8.9	10.1			
Small	5.0	0.4	4.1	8.1			
Tourism	2.1	1.4	0.8	0.7	33.2	3.5	10.5
Large	0.2	0.7	0.2	0.2			
Medium	1.2	0.6	0.5	0.4			
Small	0.7	0.1	0.1	0.1			

* excluding food industry

Source: Own calculations based on State Property Fund data and Croitoru (1993).

Among the privatization criteria should be considered: the dimension of enterprise profitability; the essential sector changes in the transition process;

regional criterion; degree of monopolization, etc. Out of these, of a particular importance stands the dimensional criteria, according to which the acceleration of 'large privatization' which is supposed to break the monopolies of the big state-owned enterprises and to increase the market forces presence in the economy and the adaptability of the labour force, as well as management performances, will be decisive for the success of transition in Romania.

Investment challenges

Under the circumstances of difficulties entailed by the transition to the market economy - economic instability and crisis - since 1990 there has been a drastic cut of financial resources for investments in the whole Romanian economy, together with a redefinition of the state targets, in relation to those of the economic agents. Due to this natural development, investments started and remained unfinished before 1989 have turned into a problem with major economic and social implications.

The initial imbalance between needs and resources has been deteriorated in the last three years because of the lack of a clear strategic concept and of a coherent criteria for setting investment priorities, by sector allocation of resources, independently of the restructuring course and economy modernization and by an excessive dispersion of investment on a wide front of objectives with uncertain economic returns and having long implementation deadlines.

One of the main crisis impacts, affecting the general stability of the economic and social background is the drastic cut in investments at the level of national economy. Contributing to this, alongside a lower propensity of economic agents towards saving and investing, have been:

1. Dysfunctions in the economic system (low level of clearing off, financing production without demand, financial blockage, faulty operations in the banking system, etc.):
2. Lower potentialities of the state budget for financing unfinished investment objectives and for starting new projects;
3. Scarcity of foreign exchange, in the context of the predominant channelling of foreign financial assistance for covering some needs of intermediary and final consumption and the relatively slow rate in the increase in foreign direct investments.

Consequently, boosting investments and improving their effectiveness is an essential reference point in the restructuring, together with emergency measures for clearing the economy of obsolete enterprises. Moreover, increasing investments could help the unemployment slow down by balancing the redundancy-new jobs ratio.

The structural adjustments investment policy should start from the distinction between the sectors where the only efficient regulating force is the market and those to which the state should maintain a direct intervention.

Considering their role in the vital functions of the economy during transition, governmental interventions should prove necessary in reorganizing and modernizing certain sectors as: the power sector, including the production of primary energy sources and power distribution; transportation and communications infrastructure; land improvement, water management and environment protection; development of public infrastructure; scientific research, education and health care, culture and arts, social assistance.

In the coming years specific actions to foster the investment potential of economic agents and, as a consequence, the restructuring process, would be essential. The strengthening and mobilization of the investment capabilities of the companies could be achieved by the expected impact of economic stabilization on the increase in investments and the recovery of medium and long term credits, by the adoption of an up-to-date and flexible fixed capital depreciation system and also by the creation of a legal and institutional framework adequate to encourage the fast development of the capital market.

The stimulation of direct foreign investments in priority areas oriented towards exports and competitive on foreign markets, in the financial-banking sector (by setting up financial institutions specialized in investments and leasing) as well as in sectors of public interest (transportation, communications, communal services, etc.) represent an essential prerequisite for economic restructuring on a new technological basis. To this end, measures are taken into consideration in order to increase the confidence of potential investors (attenuation of macroeconomic instability, implementation of clear and complete regulation on property, updating the economic/trade agreements), to a better knowledge of the Romanian economic potential in foreign business environment, including the direct promotion of priority investment projects and also to support the Romanian investors in cooperation agreements and contracting credits and/or other forms of foreign financial assistance.

An important change in investment flows orientation is induced by the European integration, with a view to catch the significant gap and to improve the general framework of economic and social activities in Romania. The actions to be undertaken are aimed to stimulate and support, with priority, those investments which bring the infrastructures closer to the European standards, improve the quality of the services offered in these fields, and help maintaining the ecological balance.

Another main component of the investments policy consists in the decentralization and strengthening the capability of intervention of local governments for the improvement of urban facilities, by setting an appropriate framework for collecting and engagement of financial resources. In this respect the Romanian Parliament should adopt the adequate regulations for the further increase in the local budgets autonomy and encourage the participation of economic agents and population in financing public works of local interest.

The Romanian Government investment policy focuses on achieving objectives of public interest, mainly those directly supporting the economic and social reforms, contributing decisively to the rise in the mobility of labour, capital and information, involving an increased volume of private investments and strengthening the private sector, mainly in activities with high competitive potential on foreign markets, demonopolizing economic sectors and activities, reducing the area of state monopolies, turning the state-owned companies into private ones and ensuring a real social protection for the population (Government of Romania, 1993b).

Conclusions

The main conclusions of this study could be summarized as follows:

1. Under unfavourable circumstances of external and internal adverse effects on the Romanian economy in the first years of transition, inherited structural distortions have been worsened and new ones have emerged.
2. The discrepancy between the rate of implementing reforms and the strong forces of inertia hindered the positive structural adjustments to a real market economy.
3. The incoherence of measures taken towards the implementation of market mechanisms has diminished the expected positive effects on the Romanian economy's structural changes. In the absence of an adequate outline for demonopolization and privatization, the price liberalization did not succeed in sending real signals for an efficient reallocation of resources and, as consequence, structural imbalances between demand and supply have deepened.
4. The fall in industrial activity and its poor restructuring, due to the dominant position of this sector, has pushed the whole economy into a severe crisis. Significant changes proved not possible under structural rigidities favoured by the monopolistic positions of large enterprises, mainly in heavy industry and by the social pressures of the strong trade unions. As a consequence, the real incentives to foster structural adjustments towards improving energy and material consumption efficiency were missing.
5. The sharpening of financial and monetary imbalances (hyperinflation, negative real interest rates, sharp depreciation of the national currency, foreign trade and budget deficits, financial blockages and arrears) expressed the weak reaction of the real economy to the macroeconomic policy stimulus, which proved to be inadequate in relation to Romania's structure specific issues.

Obviously, managing transition requires more rigorous attention to the correlation in time between the steps of reform measures. As we tried to show, the success of the transition to the market economy in Romania depends decisively on the accuracy of structural adjustments and on the adequacy of the reforms program support, including financial one, both from domestic and external sources.

Notes

1. Nevertheless, the analysis of data shows some positive trends. The share of tertiary sector in GDP partially depends on the real development of different services, among these banking and financial services being of a particular importance. It is worth mentioning that in the last decades these services registered the fastest growth in the developed world. Even if in the case of Romania banking and finance services are not yet really developed, their expansion is however significant. In 1992, these services contribution to the GDP stood at 5 percent, holding around 15 percent of the tertiary sector.

2. Own calculations based on *Romanian Statistical Yearbook,* Bucharest, 1993.

3. There are important reasons why politicians and the general public should be concerned about the rise and the size of the hidden economy in the former communist countries:

   a. The out-of-control development of the hidden (informal) economy, in a latent form existing even in the former regime, occurred after the general liberalization of economic activities. This was favoured by the legislation vacuum, ambiguous regulations and the wrong way of translating them into practice and also by the quasi-generalized state-owned sector.

   b. Under a growing hidden economy, economic policy is based on unreal 'official' indicators (like unemployment, official labour force, income, consumption), which, to say the least, could be wrong in magnitude. In such a situation a prospering hidden economy may cause severe difficulties to decision makers, because it 'provides' unreliable official indicators, the accuracy of intended policy measures being therefore doubtful.

   c. A continuous increase in the size of the hidden economy, caused many times by a rise in the overall burden of taxes and regulations, could lead to an erosion of the tax base (the Laffer curve principle), a decrease in tax revenues and, consequently, to further increases in the budget deficit.

These growing concerns (among which the last two are encountered also in the Western countries) have led many economists to challenging tasks of measuring the size and growth rate of the hidden economy, to trace back its main causes and to analyze the interactions between the official and unofficial economies. There are many methods in the literature to estimate indirectly the size and growth of the hidden economy. Among these we have utilized a developed model of the Laffer curve for estimating the size and the growth rate of unregistered (by official statistical data) economy in Romania (Albu, 1993). The analysis of the available data for 1990-1992 based on this model resulted in the following two complementary econometrical functions for estimation:

$$Yn = at^4 + bt^3 + ct^2$$

$$Yr = Y - (at^4 + bt^3 + ct^2)$$

with the bundle-relationship $Y = Yn + Yr$ = constant (1433.8 billion lei, constant prices 1990), where:

Y   - total GDP;
Yn   - unregistered GDP (created in the hidden economy);
Yr   - registered GDP ('official' GDP)
t   - tax ratio (percentage of GDP);
a, b, c - parameters
(a = + 0.0575274/100; b = -5.7278647/100; c = +180.81292/100)

Our calculations show a rise in the share of unregistered GDP in the total GDP from 41.1 percent in 1990 to 56.7 percent in 1992, corresponding to the increase in the tax ratio (in real terms) from 32.8 percent to 45.5 percent. This model could perhaps provide a better explanation of the severe fall in the official registered GDP than the strict economic interpretations. We consider that the current migration of economic activities from the visible zone to the invisible zone in Romania has been caused by the inappropriate budgetary policy, based mainly on the rise in the taxation ratio level, under the circumstances of a weak government bonds market and a high inflation. This subject was largely debated in recent literature by authors as Mundell (1990) and McCallum (1990).

4. Any attempt to analyze the economic development faces, as a particular unknown, the real impact on the environment. The extent of this impact is assumed to be significant. In the case of Germany, for instance, in terms of conventionally measured GDP, the damages on the environment were estimated to have been reach 6 percent of GDP in 1985 (OECD, 1992). For Poland, this impact was assessed at 10 percent of GDP annually (Wilczynski, 1990). At the same time, the costs of reducing pollution are huge. Researches have shown that the introduction of carbon taxes in order to limit carbon emissions could lead to losses up to 5 percent of the world GDP (World Energy Council, 1993). Some countries made methodological efforts to evaluate the "green GDP", respectively the level of GDP "cleaned off" of the negative impact on environment. France and Norway, for example, have a certain advantage in this respect, achieving already remarkable results (OECD, 1992).

   The essential issue consists in the inadequate reflection in the goods prices of the real costs of environmental protection, of the damages induced by various pollutants and of the scarcity of natural resources. In the case of Romania, the price distortions from this viewpoint have a specific magnitude. For instance, the price of timber delivered to the wood industry is about twelve times lower than the average price in Europe (World Bank, 1992). The initial distortions of energy and raw materials prices are amplified in further phases of processing activities. On the one hand, for this reason, at different levels of production, an artificially comparative advantage of Romanian exports could appear. On the other hand, the undervaluation of natural resources discourages the development of energy-saving technologies, the conservation of environment and the improvements in resources utilization effectiveness.

5. According to some estimation, the expected falls in industrial output and GDP in Romania during the transition would be 20 – 34 percent and respectively 10 – 17 percent (Linotte, 1992). By now, statistical data show higher falls than these figures. In another study (Albu, 1991), utilizing a long-run model for structural changes, we find an asymptotic value of industry's share of around 20 percent of the total employment. According to Winieki (1991), the output fall in the transition economies was predictable because: 1) it corresponds to the loss of nonexistent output; 2) it reflects the imposition of hard budget constraints; 3) suppliers are obliged to search for customers. Other authors show that, during transition, the economy performances follow a J curve, as an effect of exogenous factors (among the most important being the CMEA collapse) (Brada and King, 1991).

6. The value of Spearman's ranks correlation coefficient calculated by us stood at R = -0.1459829, showing a certain inverse correlation (but having a relative weak intensity). Also, to the linear function estimated based on the least-squares method (Y = -3.9457905x + 1799.5856, where Y represents the index of prices and x the index of production) corresponds a variation coefficient v = 37.8 percent. Essential for our study is the evidence of a negative correlation between the index of prices and the index of production.

7. Demonopolization and prices deregulation represent two important issues in the industrial restructuring. Analyzing the economic agents behaviour during the transition period, Jackson showed that the expected response to price-quantity decontrol is not only the result of how much distortion there was in the previous system and the disequilibrium related to the transition, but also by the responses of economic agents. So, there are many differences between the reaction of private agents to price-quantity decontrol and that of the state-owned enterprises. Moreover, decontrol was not restricted to prices and quantities, but also to the right to engaging in businesses, which, except for a few specifically excluded areas, was extended to all categories of agents, existing SOEs (and old style "cooperatives") and private agents, both domestic and foreign (Jackson, 1993). The factors that should govern the responses of private agents could be rather easily identified, but dealing with the responses of the extending SOEs raises other considerations.

8. Compared to the national economy level, the intensity of output energy consumption in industry was higher as follows: 1.22 times in 1989; 1.23 times in 1990; 1.16 times in 1991. Also, the intensiveness of energy consumption of GVA in industry was higher: 1.42 times in 1989; 1.44 times in 1990; 1.54 times in 1991; 1.41 times in 1992 (Source: Own calculations based on *Romanian Statistical Yearbook,* Bucharest, 1990, 1991, 1992, 1993).

9. Referring to the structural distortions in Eastern European economies, Jackson wrote: "According to comparisons of enterprises in Yugoslavia, Hungary, the USSR, and Czechoslovakia with those in the U.K. and Italy at 3-digit branch level, the average employment in the former was 10 times greater than in the latter. This reflected very much the absence of small – and medium-sized enterprises in the former economies. Another important comparison is the extent of concentration. Comparisons show Polish and Czechoslovak manufacturing to be much more concentrated than in the West. Moreover, in the 1970s and 1980s concentration in Central and Eastern Europe was steadily increasing" (Jackson, 1993). The empirical evidence shows the presence of these features also in the

case of the Romania. Another issue is the difference between Eastern and Western Europe concerning the available data: common data for the former regards the enterprises, which can have more than one subordinate establishment, whereas for the latter data are commonly reported by establishment. Because the size of enterprises commonly varies according to the industry branch, it is important to compare the intra-industrial sectors. That is why we attempted a deeper analysis of the industry structure in this study.

10. According to the central bank regulations concerning the foreign exchange flows, starting with June 1992 exporters were allowed to keep all export earnings in convertible currency. At the same time, for each export, a compulsory statement specifying the date of external payment has been set, by which the exporter committed to bring his foreign exchange earnings into Romanian bank accounts. But the behaviour of exporters was somehow else than expected. In fact, they did not respect their commitment, keeping their export earnings in foreign banks. It should be pointed out, however, that this behaviour was fuelled by the fear that foreign currency regulations would be changed and also by the volatility of the foreign exchange market. The total amount of export earnings held by Romanian economic agents in foreign banks was unofficially estimated to about 800 million US $ by the end of 1993. This had an adverse effect also on the foreign exchange market conducted by the National Bank of Romania, whose share in the total foreign exchange transactions was estimated at only 20 percent. The highest share is held by the inter-enterprise transactions i.e., the "grey market". The exchange rate level on this market was estimated between 1300-1400 lei per US $ before the end of 1993, while the official rate stood at around 1100 lei per US $. It should be also mentioned the impact of the parallel black foreign currency market where, at the same time, the exchange rate level stood at around 1700 lei per US $. Otherwise, these distortions of the foreign exchange market added supplementary pressures on internal prices.

11. The most recent input-output table for the Romanian economy referred to the year 1990.

12. An analytical study concerning the progress of reforms in Central and East-European countries (including Romania) was presented by Wouter Biesbrouchk and Marvin Jackson within the PHARE-ACE project on Analytical Challenges in Restructuring Post-Communist Economies (Biesbrouck and Jackson, 1995).

13. Another important structural aspect for the developing private sector in Romania is the ratio between the private economic agents resulted by the conversion of the state-owned enterprises (including old

"cooperatives") and those newly emerged. The large number of state-owned enterprises or their establishments (that made losses or failed to maximize profits) could be an important barrier to the emergence of new private companies, even if they do not drain potential investment funds through state subsidies. This is the result of the competition between profit-maximizers and non-profit-maximizers that show the latter can remain in the economy for a long time, even without external assistance.

The development of a newly emerged private sector in Romania should prove extremely important, being a lot of empty "economic space" for small and medium sized enterprises, unlikely to be filled by the state-owned enterprises or their establishments. Therefore, in Romania, as in the other Eastern Europe countries, restructuring depend much more on setting new companies than is the typical case in developed countries (Jackson, 1993). So, for instance, while the data for Western Europe and the US show little change as a result of a net increase in the number of companies, the gross entry and exit are both very important (Geroski, 1992). Since 1989, there has been a fast setting up of new companies in Romania: the net increase in the number of private companies stood at 127,995 in 1991 and at 168,753 in 1992. At the same time, the net increase in the number of state enterprises was 1,545 in 1991 and 455 in 1992, and respectively, in the number of cooperatives 1,289 in 1991 and 3,538 in 1992 (Government of Romania, 1993a).

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