Introduction

The Russian economy is experiencing a period of profound structural transformations related to the formation of a principally new economic model. Undoubtedly, the successful continuation of reforms is linked with profound qualitative changes in the sectoral and technological structures of production initiating adequate transformations in the investment and labor potential of the Russian society. The analysis of the dynamics of general economic indicators in Russia and individual regions over the last decade was the starting point of this study. Basing on the generalization of statistical data and the results of reviewing literature on the question structural shifts in GDP, industrial production, and investment in fixed assets were studied. The dynamics and structure of social and economic indicators was studied across sectors of the economy and Russia's regions. An evaluation of structural shifts over the period of transition shall be addressed very carefully, since this process is characterized by volatile changes in relative prices and their significant differentiation across regions. The analysis of changes in the macroeconomic proportions of the Russia's economy permitted to reveal a number of key factors significantly affecting the nature and dynamics of transformational shifts at all levels of the hierarchical structure of the economy. The study of general trends of development of the Russia's economy contributed to deeper understanding of the role played by individual territories and subjects of the Russian Federation, and their contribution to gross regional product (GRP), and allowed to define more clearly the specifics of investment policies.

It should be noted that long cycles (over 5 years) that clearly manifested themselves in Eastern European countries and in China were less visible in the USSR. Nonetheless, they did exist. As concerns the cycles related to the length of periods of planning, five- and three-year fluctuations were merely notable.

Economists often attribute the planning of capital investment to pluses of the socialist system, while more experienced experts are aware that this is one of the most difficult and inefficient areas of planning. The reason for that is a considerable difference between plan and reality which arises inevitably due to differences between planned and actual costs and timing, as well as because of existence of investment cycles, delays with decision making, arising of non-planned investment projects.

It was Soviet economist Feldman, whose model had been published yet in 1928[1] who was the first economist who paid his attention to the fact that a rapid economic growth needs a certain correlation between industry branches that produce consumer goods and those producing production means. Feldman's two major outputs concern, first, correlation between the capital stock in the noted two sectors of an economy, and, second,- correlation between investment in them.

The first conclusion proceeded from the model was that to secure a maximal economic growth one needs the share of investment in the production of production means to be higher than the share of investment in the sector producing consumer goods. The other conclusion is that to ensure development of the two-sectoral economy along a stable path one needs to invest in these sectors in the same proportion as the one related to capital stock in them. So, the planning agencies face a challenge of regulation of correlation between capital and output and between capital stocks in industry branches.

The difference between investment in the two sector of the economy is that capital investment in the production of production means allow increase in the output of capital goods for the sector producing consumer goods. This creates possibility for growth in the economy on the whole, while investing just in the latter sector would allow just an expansion of output of consumer goods. It should be noted, however, that this theory is correct only providing implementation of prerequisites implying the same length of implementation of investment projects in the both sectors, equipment can be used indefinitely and the correlation between output and capital is always the same. Should these prerequisites be broken, the conclusions of the theory can change for opposite ones.

Naturally, the division of an economy into two sectors is a very rough picture of the reality. Macroeconomics analysis was further developed in this respect by Leontieff who introduced multi-sectoral models (inter-sectoral balance models). An important output from these models became setting correlations between growth in an economy on the whole and growth in relative output in single sectors.

Numerous papers dealt with the discussion of what could have served as an explanation to this particular phenomenon (Olivera 1960, Lange 1961, Goldmann 1964, Goldmann and Flek 1967, Eckstein 1958, Bajt 1971, Soos 1976)[2].

[1] Ellman (1979)

[2] Mathematical models of such cycles can also be found in Simonomits (1992)

It appears sound that it is something like political trade cycle (analogue to the classical theory of fluctuation of employment and output in capitalist economy (Kalecki, 1943) that implies reaction of political authorities to economic situation in a country) that constitutes the main reason for long investment cycles in socialist economy.

In the event of a favorable economic situation (huge harvest, overfulfillment of plan, positive trade balance, the use of earlier utilized materials) economic growth accelerates. This causes optimism in the bodies responsible for political decision making. They begin to demand for increase in planned growth indicators and in the share of investment in the national income. Numerous giant investment projects are launched, and the economy's structure changes, however, all this happens until the moment when the current economic policy begins to bring about negative effects. Increase in investment in the sectors producing capital goods leads to growth both in their output and employment, thus diminishing employment in the sectors producing consumer goods and food stuffs. The output of the latter sectors becomes insufficient. The simultaneous start of a big number of investment projects results in shortages of materials and qualified personnel needed for their successful completion. As a result, long-lasting construction objects arise, while the overall efficiency of capital investment is falling.

Decline in the economy starts with a fall in labor productivity affected by drop in consumption and overall production disorganization, when production cannot reach the objectives planned during the period of rise. Naturally, the authorities respond with changing their economic policy, which implies decrease in the share of investment, while the resources that used for investment purposes are forwarded to the projects whose completion become possible within a reasonable timing. Planned growth indicators fall too and become easy to achieve, which becomes the source for the beginning of the next cycle.

The USSR was less susceptible to the influence of exogenous factors (state of affairs in the foreign trade area, agricultural output) than other socialist countries, which may serve as a possible explanation as to why in the USSR the note cycles did not manifest themselves so distinctively.

The basic goal of our project is to analyze development of investment processes in the Russian economy cross-regionally and, in particular, to study a specific investment behavior of Russian regions and reveal the major factors characterizing a type of a region in terms of the investment behavior, as well as research the institutional factors and restraints on the investment activities of the Russian companies.

The research methodology is built around a qualitative analysis of the character and dynamics of investments in the Russian economy as a whole and regionally, of differences at a regional level and theoretically substantiate the hypotheses that account for differences in the investments processes across regions on the basis of micro- and macroeconomic approaches. The empirical part of the project consists in an econometric test of the hypotheses through the use of both the intermedium and panel methods of evaluation.

The paper is made up of four chapters and one appendix. analyzes the dynamics of investments in the Russian economy in 1992-2000, formulates periods of the investment process and their characteristics in terms of development of the Russian economy and interaction of the real and financial sectors, the economic policy and external factors. As a special entry, we study a regional structure of investments and try to establish interrelation between the structure of the regional economy, economic policy of regional authorities and a character of the investment processes across the regions (investments in the fixed assets, allocation of the investments across the types of sources and foreign investments).

Chapter 2 is devoted to a qualitative test of hypotheses concerning the reasons and factors influencing the interregional differences in the character and dynamics of the investments. It also gives a methodological description of investment statistics as applied to the economy of Russia.

Chapter 3 investigates an impact of the institutional factors on the investment activities of companies and investment attractiveness of the regions in general, development of regional bank systems, given the use of various instruments of the regional economic policy.

Chapter 4 deals with the character of investment behavior of various Canadian regions and summarizes the empirical and applied papers devoted to the study of investment policy across Canada. In particular, special emphasis is made on the impact of geographical and economic-political factors and the role of the national policy in stimulating investments at a federal and provincial level.

The appendix lists the data characterizing the development of the bank sector across the Russian regional entities.

Chapter 1. Investment Processes in the Russian Economy and Regions in 1992–2001

The analysis of the dynamics of general economic indicators in Russia and individual regions over the last decade was the starting point of this study. The analysis of changes in the macroeconomic proportions of the Russia's economy permitted to reveal a number of key factors significantly affecting the nature and dynamics of transformational shifts at all levels of the hierarchical structure of the economy. The study of general trends of development of the Russia's economy contributed to deeper understanding of the role played by individual territories and subjects of the Russian Federation, and their contribution to gross regional product (GRP), and allowed to define more clearly the specifics of investment policies.

1.1 Current Situation of the Investment Sphere

A. General Characterisitc of Dynamics and Structure of Investment

The gradual deceleration of economic growth rates in the former USSR, including Russia, associated with a steady decline of efficiency of the utilization of the key factors of production, started in the second half of the 1970s. That period brought into a particularly sharp focus the discrepancy between the production machinery and technologies and the investment policy proportions observed in the basic sectors of the national economy. The persistent trend toward falling capital productivity was enhanced by unjustified redistribution of resources in favor of the investment component. Imbalances piled up in production, consumption, and financing, and the producers' enthusiasm for innovations subsided. Annual GDP growth rates in 1986 through 1990 were at 1.9 per cent as compared with 3.1 per cent in 1981 through 1985. In 1990, for the first time in almost 50 years there was registered a 3.0 per cent downfall of GDP, while industrial production stabilized. In 1991, the effect of negative factors increased and there appeared a pronounced trend towards economic slump. GDP amount fell by 9.8 per cent in comparison with 1990 figures, while industrial production decreased by 8.0 per cent.

The situation was aggravated by deteriorating indicators of investing activities. A traditional administratively managed economy is characterized by outpacing rates of investment in fixed assets as compared to GDP production dynamics. A key principle of planned economy is the determination of limits of capital in-

vestment. At the background of low efficiency of fixed capital utilization, the tight regulation of amounts and structure of investment in the real sector of economy was a factor constraining economic growth. After the start of "perestroika" of the Russia's economy in 1986 through 1990, when restrictions on economic activities were partially lifted, there was registered a surge of investing activity, and the rate of growth of investment in fixed assets increased to 6.6 per cent as compared with 3.5 per cent in 1981 through 1985. However, the excessive growth in investment at that time not supported by an adequate expansion of domestic demand negatively affected the standing of the monetary and budgetary systems. In 1991, there was registered a 15.5 downfall in investment as compared to the figures observed in the preceding year.

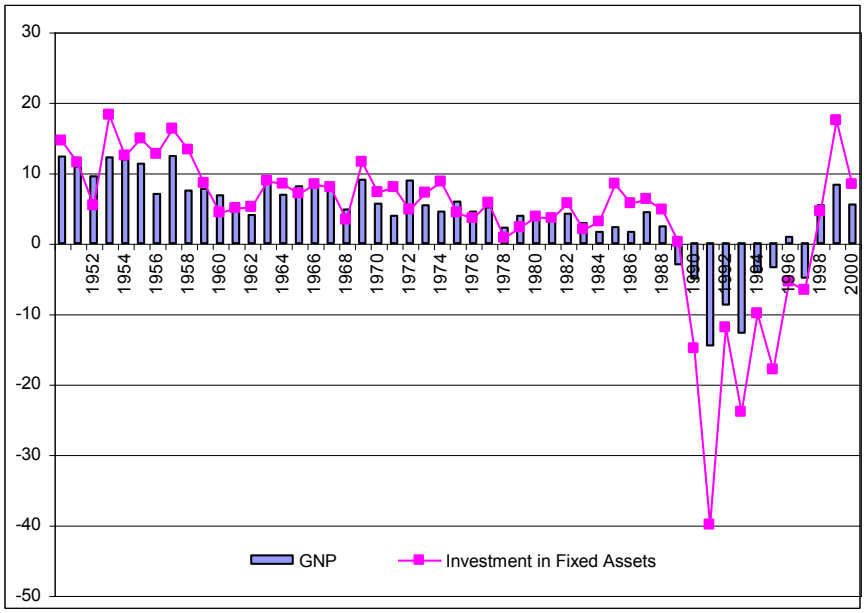

Figure 1.1. Changes in the dynamics of gdp and investment in fixed assets in 1951 through 2001, in % of the preceding year

The investment situation at the first stage of reform was shaped by two groups of factors. The first group included the factors rooted in the structural deformity and technological backwardness of the Russian economy, targeted on an extensive utilization of resources and preservation of a heavy extra-economic

burden. The second group of factors took shape in the course of the radical reform aimed to liberalize the economy and the implementation of a system of program measures aimed to restructure the Russia's economy.

Table 1.1

Dynamics of Key Indicators of Investing Activities, in % of the preceding year

	1992	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**
GDP	85,5	91,3	87,3	95,9	96,6	100,9	95,1	105,4	108,3	105,0
Total investment in fixed assets	**60,0**	**88,0**	**76,0**	**90,0**	**82,0**	**94,5**	**93,3**	**104,5**	**117,4**	**108,7**
Including:										
Sector of goods	56	77	64	83	82	97	82	109	116	107
Sector of services	66	102	89	93	84	93	92	103	118	109
Commissioning of fixed assets	59	86	73	95	94	95	96	106	121	110,9
Amount of construction works	64	92	76	94	84	94	95	105	111	109,9

Source: RF Goskomstat

The most acute stage of the investment crisis experienced by the Russia's economy was observed in 1992 through 1994. The most important factors affecting the general economic situation over this period were high inflation rates, non-balanced monetary policy, soft budgetary constraints, and practically total lack of market economy institutions.

Aggregate supply shrank as domestic effective demand was falling due to diminishing real household incomes resulted from liberalization of prices taken place in 1992 and a slow adaptation of producers to new price proportions and economic environment.

In the uncertain market situation the outpacing growth in prices of construction materials, machinery, and equipment contributed to the trend towards a decrease in demand for investment goods and construction-related services. In 1992 through 1993, price indices in mechanical engineering rose 285 times, and in construction materials industry 357 times, while the general rise in producer prices made 338 times in industry and 187 times in construction. Exactly this period accounted for the most pronounced downfall of investment and construction works.

A factor behind the aggravating crisis in the investment sphere was inadequate behavior of producers in the changing economic environment. In the econ-

omy, there was registered a collapse of investment in fixed assets. Investment fell by almost 60 per cent over three years of reform.

The process of gradual adaptation of the economy to the changing economic environment took place at the background of slowing down rates of downfall in production and investment. As illusory hopes for persistence of traditional production proportions vanished, there started the process of formation of a new structure of supply adequate to the amount and structure of effective demand. The economy formed necessary prerequisites both for stabilization and future economic recovery, and formation of an efficient structure of production.

Among key factors affecting the character of investment policy, there shall be singled out the transformation of ownership forms. Changes in the institutional structure occurred rather intensively. The reform was started when all production in the Russian economy was in the state ownership. As a result of privatization and formation of joint-stock companies, the nonpublic sector rapidly captured dominating positions and went on to reinforce its influence in all business areas, stimulating structural changes at both the macro and micro levels.

Nonpublic forms of ownership started to play the decisive role in the investment process. The share of nonpublic sector of the economy in GDP production was at almost 75 per cent as compared to 52 per cent in 1993. The number of those employed by the nonpublic sector made over 60 per cent of the total number of employees in the national economy in year 2000, while the number of employees at state-owned enterprises fell by almost 31 percentage points in 1992 through 2000. Fixed assets in nonpublic ownership made 58 per cent in 2000, as compared to 9 per cent on the eve of reforms. The specific weight of nonpublic ownership in the investment sphere increased from 49.8 per cent in 1993 to 76.9 per cent in 2000.

The formation of a principally new institutional structure was a major result of the first stage of transformation of traditional planned and administrative management system into an open market economy. At the same time, it shall be stressed that the transformation of ownership forms took place at the background of falling rates of investment in the real sector of economy. The forming institute of private investors could not yet compensate for the sudden withdrawal of the state from the capital market.

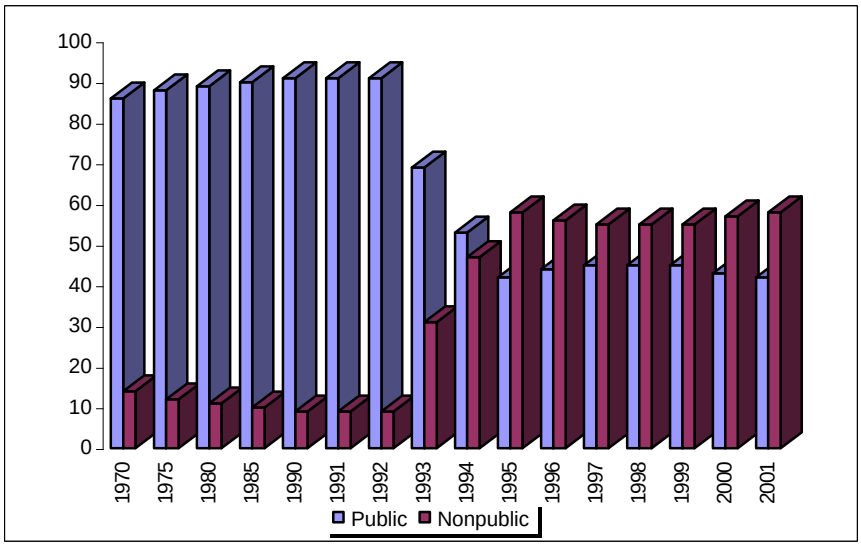

Figure 1.2. Fixed Assets as Broken Down by Ownership Form in 1970 through 2000, in % of the total

Table 1.2.

Investment in Fixed Assets, Employment, and GDP Production as Broken Down by Forms of Ownership, in % of the total

	Investment in Fixed Assets			Employment			GDP		
	1993	**1995**	**2000**	**1993**	**1995**	**2000**	**1993**	**1995**	**2000**
Economy, total	100	100	100	100	100	100	100	100	100
Including (by ownership form)									
State and municipal	63,2	37,6	27,6	53,0	42,1	37,9	48,0	30,0	25,4
Private	12,1	13,4	31,2	28,1	35,6	46,1	17,5	24,7	27,3
Mixed (without foreign participation)	22,1	46,2	29,6	17,6	22,2	12,5	33,0	43,5	45,3
Foreign and joint Russian and foreign	2,5	2,7	11,4	0,4	0,6	2,7	0,6	0,8	1,2

Source: RF Goskomstat.

The financial crisis of October of 1994 stressed the necessity to adjust financial and economic policies. The transition to and consistent implementation of moderately tight monetary policy predetermined major specifics of investment processes in 1995 through 1998. The dynamics and structure of the economy were positively affected by the increasing share of Russian currency in the aggregate money supply, a steady slowdown in the rate of decline in industry, a stronger ruble against the dollar. The economic situation was further favorably affected by intensively growing of foreign trade turnover and persisting active trade balance. At the same time, there increased the negative effect of such factors as budget deficit, high rates of domestic state borrowing, deteriorating financial standing of the real sector, loose tax discipline at all levels of the economy. The measures to rein back inflation by limiting the money supply, without adequate control over payments in the economy, encouraged negative developments. Various "surrogate money" (bills of exchange, tax exemptions, commodity credits) and barter between enterprises had reached alarming proportions in the circulation structure, reducing still further the taxable base and thinning out the real flow of revenues into the budget.

The economic situation in 1995 through 1998 may be characterized as a stage related to the shaping of an entirely new reproduction model. In 1997, for the first time over the period of reform, there were registered positive dynamics of GDP and manufacturing. The analysis of development of the economy over this period reveals that exactly low investment activity and lack of significant shifts in the structure of production capacities were in fact responsible for the reproduction of existing proportions and restrained diversification of production. Besides, domestic producers were lacking competitive advantages on the domestic market due to the ratio between Russian and foreign currency. The structure of commodity resources of consumer market, and material and technical market had demonstrated a stable trend towards an increasing share of imports since 1992. In 1995 through 1998 imports made almost 50 per cent of the total amount of commodity resources in retail trade.

The trend towards lesser utilization of even competitive production capacities and extremely reserved investment policy pursued by the Russian business corresponded to the conditions of the transformation of the structure of demand. Investing activities of enterprises was mainly limited to functions aimed to maintain production mechanism. Yet another factor behind the outflow of potential investment funds from the real sector was the processes of intensive development of the financial sector of economy and growing effectiveness of operation on monetary and forex markets.

In spite of lower business activity in the real sector, changes in the structure of investment in fixed assets developed rather rapidly. In the course of market reforms much hope was placed with the development of residential housing construction and related complex of social services. Indeed, according to the analysis, redistribution of investment in this sector of economy was a factor determining moderate rates of downfall in business activity in the sector of services. In 1992 through 1995, the share of investment in the residential housing construction demonstrated a persistent trend to growth. While in 1970 through 1990, housing construction accounted for 16 per cent of the total investment, in 1992 through 1994 this share increased to 30 per cent, what made more than 60 per cent of total investment outlays in the sector of market services. The change in proportions between industrial and residential construction determined major trends of transformational shifts in the investment sector of the economy. Shrinking demand for construction materials in industrial construction was counteracted by processes of diversification of production and growing output of products for housing construction. These processes were initiated by an intensive development of individual housing construction and growth of private business in this sector of economy. In the industry of construction materials there was observed an increase in the number of enterprises and jobs at enterprises oriented towards the introduction of innovative technologies and development of import substituting production. The most noticeable growth of enterprises was registered in production of wall and roofing materials, construction ceramics, and products from polymeric raw materials.

The progress of positive trends developing in 1995 through 1997 was first checked and later completely neutralized by changes in the business situation on world financial and commodity markets. Over the years of reform, the Russia's economy has to some extent integrated in the global economy, and, naturally, the situation on financial and commodity markets influenced the dynamics of economic development. Since October of 1997, the Russian economy had begun to demonstrate first signs of a slump in production. While at the first stages the situation could be controlled, since early 1998 there were observed a constant development of negative trends both in the real and financial sectors of the economy. In August of 1998, the financial crisis became all too apparent. In 1998, GDP fell by almost 4.9 per cent and investment in fixed assets by 12 per cent in comparison with 1997 figures. Accelerating rates of downfall resulted in investment to fixed assets in 1998 making only about ¼ of the pre-reform figures registered in 1991.

However, the pessimistic prognosis about production prospects made at that time proved wrong. The accumulated potential of the Russia's business and the Ruble devaluation created incentives for a growth in production at the expense of price advantages of domestic products over similar imports. Domestic producers successfully used the changes in the competitive environment, what permitted the industry to set on the growth trajectory. As a result of the Ruble devaluation and changes in the structure of effective demand in the economy, the trends towards the development of import substituting and export oriented production had intensified.

In 1991 through 2001, the Russia's economy was characterized by exceptionally high rates of growth (highest ever over the last decade). A specific feature of the recovery of the Russia's economy was outpacing rates of investment in fixed assets as compared with the dynamics of key social and economic indicators. In 2001, the increase in investment in fixed assets made 33.3 per cent as compared with 1998 figures, while GDP grew by 20.6 per cent and gross industrial output increased by 24.4 per cent. The economic recovery took place at the background of favorable foreign trade situation and internal social and economic stability. Accelerating rates of economic growth were registered across practically all macroeconomic parameters. The growth in production of goods was supported by the infrastructure of the sector of services, which had developed over the years of reform. Commercial freight turnover increased by 14.7 per cent as compared with figures registered in 1998, while wholesale trade increased by 25.5 per cent, communication services – by 73.3 per cent. In 2001, the index of growth in retail trade turnover made 107.4 per cent to the pre-crisis level observed in 1997.

Actual rates of growth in the real sector of the economy in 2000 and 2001 were significantly above the objectives, set by budgets of respective. Although the outcome of economic operations in year 2000 was, certainly, successful, the look across key indicators of social and economic development reveals that the Russia's economy has not overcome the consequences of the downfall in production caused by the crisis taking place in October 1997 through August of 1998 yet. In spite of active social policy, key living standard parameters remained considerably below indicators registered in 1997. In 2001, the real household incomes made 84.0 per cent of 1997 levels. The clearly pronounced asymmetric growth in production, household incomes, and final demand taking place at the background of the economic surge does not allow to appreciate the economic situation unambiguously.

Investment Expenditures: Dynamics and Structure

The analysis of retrospective trends reveals that the crisis in the Russia's economy took place at the background of unprecedented downfall in investment demand.

Over the last decade, the investment in fixed assets had fallen almost four times, while the share of gross accumulation in GDP decreased by 20 percentage points. A more even decrease in end consumption of households and the government resulted from the redistribution of accumulation resources in favor of these components of GDP.

Table 1.3

GDP Utilization Structure in 1992 through 2001, in % of the total

	1992	**I993**	**1994**	**1995**	**1996**	**I997**	**1998**	**1999**	**2000**	**2001**
Utilized GDP	100	100	100	100	100	100	100	100	100	100
Including:										
Expenditure for final consumption	49,4	64,2	69,6	71,2	71,4	74,8	76,6	68,2	62,5	66,5
Including:										
Households	33,7	40,9	44,1	49,3	48,8	50,0	54,6	51,6	46,1	49,3
Government	14,3	17,9	22,5	19,5	20,2	21,3	18,7	14,4	14,4	14,5
Gross accumulation	35,7	27,8	25,8	25,3	24,5	22,3	16,2	15,0	17,1	20,1
Including:										
Gross Capital accumulation	24,7	21,0	22,0	21,2	21,1	19,0	17,7	15,8	17,8	19,5
Net exports	14,4	8,0	4,8	3,5	4,1	2,9	7,2	16,8	20,4	13,3

Source: RF Goskomstat

Since investment expenditures are more volatile than consumption, the understanding of changes in their dynamics and structure are of paramount importance for the understanding of regularities of business activity. The nature of gross accumulation, or investment expenditures in GDP are not homogeneous. Generally, the aggregate investment demand may be presented as changes in goods and material inventories, business investment in fixed assets per se, and investment in housing construction. The ratio of these components is rather vola-

tile and determines the specifics of formation of investment in fixed capital over the period of reform.

Accumulation of stocks of goods and materials (raw materials, uncompleted construction, goods) depends on the aggregate impact of the factors related to business situation. In the course of the assessment of this component of investment demand, it shall be taken into account that it rather significantly fluctuates in the structure of GDP. At the initial stage of structural transformations the incentives for the intensive accumulation of raw materials and products included high investment expectations on the part of producers. A characteristic feature of 1992 and 1993 was the use of resources of gross fixed capital accumulation for the hoarding of goods and materials. Later, the dynamics of hoarding became negative at the background of shrinking domestic effective demand and gradual deceleration of inflation rates. The share of goods and material resources decreased from 10.7 per cent of GDP in 1992 to 3.3 per cent in 1997. In the situation of economic growth (1999 through 2000), as the ratio between inventories and amount of sales improved and markets became more predictable, there was observed further decrease in expenditures for formation of inventories. Growing domestic demand and falling goods and material resources facilitated the improvement of inter-enterprise payment system and decrease in interest costs related to the formation of such capital resources.

Another decisive point for the analysis of investment is the determination of relationship between gross and net investment in fixed assets. Net investment does not include depreciation, i.e. decrease in fixed assets caused by wear and tear of fixed capital. Therefore, net investment measure increase in fixed assets over a given period. In the situation of unprecedented drop in investment and transition to simple reproduction of fixed capital observed in the Russia's economy over almost a decade, the major source of investment is depreciation. The process of diminishing scope of net accumulation of fixed assets in the Russia's economy has a long prehistory.

A significant impact on dynamics and structure of gross accumulation of fixed assets in GDP had the specifics of accounting for fixed capital. The permanent revaluation of fixed assets in 1993 through 1996, which followed the liberalization of prices, was aimed to adjust the price imbalances of production factors. This procedure involved only calculation and did not concern the problems of technical and economic conditions of fixed assets. As a result, the share of depreciation in GDP increased almost twofold in comparison with pre-reform 1991 and totally determined the level of gross accumulation in fixed assets. Gross accumulation in fixed assets in GDP made 21 per cent, while the share of depre-

ciation in the structure of expenditures was about 11 per cent in 1993 through 1996. The growing gap between gross accumulation and investment in GDP was an evidence that depreciation was mainly used for other purposes. In spite of measures taken to extend tax privileges, investment activity remained at a low level. The prolonged effect of this trend aggravated negative developments in the reproduction of fixed capital. There was registered a certain deceleration of the rates of decrease in investment in industrial construction. In 1997, investment in fixed assets made less than 15 per cent of GDP and was a factor restricting economic growth over this period.

In 1998, the cumulative impact of external and internal factors facilitated the trend towards a downfall in investment activity. Forced measures aimed to strengthen the exchange rate of the national currency and stabilization of the situation resulted in higher CBR rates, interest on collateral loans, and mandatory reserve requirements. Deteriorating investment rankings, growing risks, and a sharp deterioration of investment climate facilitated the increase in outflow of non-residential funds from the Russia's stock market, what further destabilized the situation both in the financial and real sectors of the economy. After Ruble devaluation and default on the domestic debt business and investment activity plunged. In 1998, gross accumulation decreased by 31.3 per cent as compared with figures registered in the preceding year, while the share of investment in fixed assets in GDP was at 14.1 per cent of GDP (the minimal value registered over the years of reform).

It shall be noted that practically all forecasts of economic development made immediately after the financial crisis of 1998 underestimated the capacity of the Russia's economy to react to the devaluation with a sharp increase in production. It seemed more probable that many niches on the domestic market previously filled with imported goods would remain empty. However, a large number of imported products was successfully substituted by Russian similar goods. This result was achieved both due to changes in the structure of domestic consumption, and the potential of growth in domestic industry accumulated over the years of reform. The Russia's industry, the level of employed technologies, and the quality of labor resources proved to be able to produce a broad range of goods, the demand for which was earlier met at the expense of imports.

The industrial growth in the Russia's economy had a number of important signs permitting to view it as the beginning of recovery from a grave crisis related to the transition from planned to market economy. Sectors of the economy oriented towards the domestic market demonstrated the fastest rates of growth. In 1999, for the first time over the years of reform, there was registered an increase

in output of light and food industries. In the investment complex, there was observed growing demand for capital goods as financial standing of enterprises improved and accumulation increased since the second half of 1999.

The dynamics of development across individual sectors of the economy in 1999 were determined by a broad range of specific factors and conditions. Favorable changes in the business situation on world markets of fuel and mineral resources was a powerful factor behind the accelerating rates of growth in export oriented sectors of the economy. The recovery of positive dynamics in the manufacturing sector was related to a growing demand for domestically produced goods on the domestic market and intensive development of import substituting processes. There is no doubt that real depreciation of the Ruble had the most significant effect on the character of economic development at that time. Positive effects of devaluation are well known. They include import substituting growth in the real sector of the economy and increasing profitability of export orienting industries. Devaluation of the national currency and accompanying rise of domestic prices decrease the real wealth of economic agents denominated in the national currency. In this situation there is registered a decrease in current consumption coupled with accumulation of savings, what provides the economy with additional funds for expansion of investing activities.

Table 1.4

Changes in Key Indicators of Investing Activity in 1995 through 2000 (in % of preceding year figures)

	1995	1996	1997	1998	1999	2000
Gross accumulation, total	**89,2**	**79,4**	**96,4**	**71,3**	**108,5**	**117,3**
Including:						
Fixed capital	92,5	82,8	91,9	90,6	105,1	115,5
Changes in tangible floating assets*	69,6	72,7	108,9	-	-	-
Net acquisition of values*		-	-	68,4	74,5	117,0
Commissioning of fixed assets	94,6	93,7	95,0	96,0	106,4	115,8

*) In cases where values of physical volume of an indicator in two comparable periods have different signs, or are negative, the index of physical volume is an irrational value and is not reflected in the table.
Source: RF Goskomstat

The favorable business situation in 1999 through 2001 facilitated the incentives for development and expansion of production. In year 2000, the share of savings in GDP made 33.6 per cent as compared with 26.9 per cent observed in 1999, and 19.0 per cent registered in 1998. Growing revenues guaranteed the compliance with obligations related to the prompt financing of budget expenditures and servicing of the public debt without unplanned borrowing on the domestic and external financial markets. A specific feature of changes in the structure of GDP utilization in 1999 through 2001 was an intensive growth in gross accumulation of fixed capital.

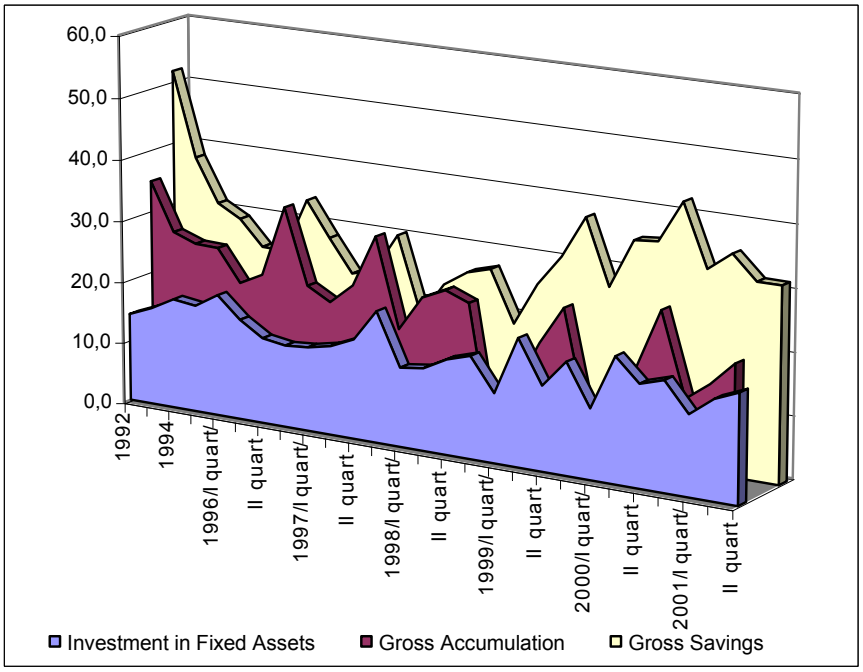

Figure 1.3 Shares of Gross Savings, Gross Accumulation, and Investment in Fixed Assets in GDP in 1992 through 2001, % of Total

Positive stable dynamics of production observed in 1999 through 2000 resulted in changes in the investment sector situation. In 1999 through 2001, there were registered outpacing rates of growth in accumulation and investment as compared with overall GDP dynamics. In year 2001, as compared with 1998

figures, gross accumulation increased almost 1.67 times, while GDP grew by 20.1 per cent. More brisk business activity in the Russian economy accounted for the fact that growth in investment demand generated almost one fourth of the volume of GDP. The investment rate increased from 14.9 per cent in 1997 to 17.7 per cent in 2001. However, the redistribution of GDP resources in favor of the investment component resulted in a more pronounced trend toward falling share of expenditure for final consumption.

After a prolonged investment pause, the producers' natural reaction to the growing demand was to more intensively use the accumulated production capacities at the expense of higher operating rates and reactivation of competitive reserve capacities. However, the reactivation of reserve and non-competitive capacities in the production did not permit to consistently follow the course toward import substitution and diversify export flows. In spite of the positive dynamics of investment growth, it turned out that pursuit of active structural and investment policies was impossible under existing technological, reproduction, and age conditions of fixed assets. As the scope of saving and accumulation grew, the problems of defining the strategies aimed to attract investment in sectors traditionally experiencing lack of competitive capacities gathered in importance.

Under conditions of economic growth, it became apparent that investment management was not consistent with dynamic processes of restructuring of the Russia's economy. The analysis of investment structure reveals that the high concentration of revenues within the export oriented sector determined the nature and dynamics of investment expenditures for reproduction of fixed capital. The problem of investment maneuver in favor of industries producing goods and services with higher degrees of value added, which would be able to increase the competitive effectiveness of the Russian economy, remains unsettled.

The character of investment operations is most illustrative of the mixed developments taking place over last three years. In spite of extremely favorable combination of the world business situation and persisting effect of devaluation, the investment climate has hardly changed over two last years. High risks persisted due to instability of the legal environment. The lack of laws and regulations, which would guarantee the protection of ownership rights, development of corporate governance, fair competition, optimization of administrative regulation of markets, transparency of businesses, is the factor restraining investing activity of both domestic and foreign capital.

The situation was aggravated due to the lack of a developed mechanism of capital flow and transformation of savings in investment. The analysis of the situation permits to state that the extremely slow process of bank and crediting insti-

tutions becomes a factor restraining economic growth. In 1999 through 2001, the investing activity formed under the influence of diametrically opposite trends. This situation accounted for the fact that in 1999 through 2001 investment operations developed under influence of quite opposite trends. On the one hand, there was registered a high rate of growth in investment and expansion of internal sources of financing, on the other hand, calculations reveal that the capital flight from Russia remained high.

The formation of an investment model of economic development of Russia in the framework of a long term strategy shall be aimed at the elimination of these negative factors.

As the open market economy is taking shape, the cumulative impact of external and internal factors of economic growth becomes more considerable. A comparative analysis of changes in GDP dynamics and structure over the years of reform reveals that while in 1992 through 1996 the growing external demand was a factor compensating for contraction of the domestic market. A sharp deterioration of business situation on financial and commodity markets observed in 1997 through the first half-year of 1999 was a factor behind the formation of a new wave of downfall in the Russia's economy. However, this crisis did not result in a collapse and was rather effectively checked by higher business activity of Russia's businesses.

Simultaneous growth in domestic and external demand taking place in the Russian economy in 1999 through 2001 was a distinctive feature of the Russian economic recovery. On the one hand, almost twofold shrinking of imports as compared to the pre-crisis level of 1997 provided the room for an intensive expansion of domestic production and growing revenues of producers of goods and services. On the other hand, since the second half-year of 1999, economic growth based on the exceptionally favorable business situation on world markets. Outpacing rates of growth in external demand generated almost one fourth of the increase in the volume of GDP in the 3rd quarter of 1999 through the 3rd quarter of 2000. The share of net exports in GDP made 20.4 per cent in 2000, as compared with 16.8 per cent in 1999 and 7.2 per cent in 1998.

In the course of analysis of the stability of the Russia's economy, it is necessary to stress that the proportion of external and internal factors affecting the growth in production in 1999 through 2001 varied.

While in 1999 the most important factor of production recovery was the Ruble devaluation, which increased the effectiveness of export operations, in 2000 the rising world prices of energy resources and non-ferrous metals took its place. Since the second half-year of 1999 it has been observed that devaluation effects

were gradually wearing off, while the influence of the second group of factors noticeably weakened by end-2000. As a result, the dynamics of macroeconomic indicators registered over the year demonstrated that economic growth had been gradually decelerating.

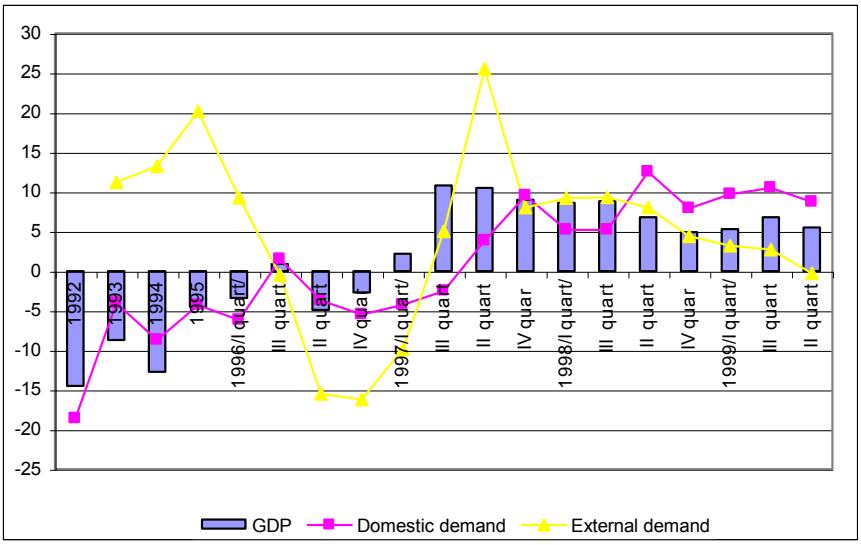

Figure 1.4. GDP, Domestic, and External Demand: Changes in Dynamics in 1992 through 2001, in comparable prices, % of respective period

In year 2000, the volume of imports again grew at a faster rate than exports and GDP. Since the beginning of 2000, there was observed an increase in the share of imports in the structure of material resources of the consumer market and the market of material and technical products. Besides, the real Ruble appreciation facilitated the growth in imports. According to the RF Ministry of Economic Development, in 2001 net exports made 94.2 per cent of the level registered in the preceding year. While some deceleration of increase in the volume of exports may be explained by developments on world markets of raw materials, internal factors accounted for an intensive growth in imports over the year.

A growth in export revenues considerably affected the character and proportion of production and final consumption. As the foreign trade situation changed, the priorities of economic policy shifted to the expansion of domestic demand.

In 1999, production expanded at the background of low consumer demand caused by a sharp downfall in household incomes due to the Ruble devaluation. In 1999, real household incomes decreased and made 72.2 per cent of the level registered in pre-crisis 1997. The level of effective demand on the consumer market limited a further growth in production of goods and services. As a result, the aggregate expenditures for final consumption fell by 3.5 per cent over the year. In this situation, the government consistently pursued the course toward increase in wages, salaries, and pensions, what positively affected the nature of economic development. Since the 4th quarter of 1999, the household expenditures for final consumption were characterized by a stable trend to growth. An increase in the household final consumption accounted for almost two fifths of the increment in GDP in 2000 through 2001. It shall be stressed that the analysis of the development of the Russia's economy over the decade reveals that the amount of household expenditures for final consumption reached the level registered in pre-reform 1991.

C. Changes in the Investment Structure across Sectors of the Economy

A distinctive feature of transformational shifts in investing activities is the change in proportion between the sector of goods production and the sector providing market and non-market services. The analysis of dynamics of investment and GDP across the sectors of economy reveals that in spite of the general trend towards the decrease in the amount of investment and production the downfall in the sector of services was less pronounced in comparison with dynamics observed in the sector of goods. In year 2000, the investment in the sector of services made 40 per cent of the level registered in 1991, while the sector of goods was at 16 per cent.

The market of services formed under the influence of opposing trends. On the one hand, the downfall in production of goods initiated the decrease in demand for services of branches of the production infrastructure; on the other hand, the changes in the structure of demand facilitated trends towards the intensive development of new and transformations of traditional segments of the market of services. While the production of goods contracted by almost 40 per cent in 1992 through 2000, the production of services fell by only 11.6 per cent. The share of production of goods in GDP decreased from 61.8 per cent in 1991 to 46.8 per cent in 2000, while the share of service-providing industries increased from 37.2 per cent to 53.2 per cent respectively.

In year 2000, the investment in the sector of services made 54.9 per cent of the total investment in the national economy (as compared to 43.0 per cent on the eve of reforms). The share of industries providing services related to the commissioning of fixed assets increased from 44.0 per cent in 1990 to 59.0 per cent in 2000. The redistribution of investment flows to the sector of services was accompanied by an increase in the share of infrastructure industries. The dynamic development of transport, communications, and the sector of information services was facilitated by an intensive process of investment and was a factor accounting for decelerating rates of decline in these sectors of the economy. In 1999 through 2001, the average share of transport, communications, and trade was at 1/5 of the total amount of investment in fixed assets, as compared to 12 per cent in 1992 through 1996. Over the years of reform, the share of transport in the structure of investment in the real sector of the economy increased almost twofold. While in 1992 the share of investment in communications was below 0.6 per cent of the total amount of investment in the national economy, in year 2000 it made 2.6 per cent. The intensifying investment activity in the infrastructure and growing demand for services provided by these sectors are the indicators of the economic potential for growth. Moreover, these developments indicate that the investment policy in this sector was primarily oriented towards the solution of perspective problems. A characteristic feature of the period from 1999 to 2001 was a trend toward the expansion of the market and the infrastructure of services, while tariffs were restrained. It permitted entrepreneurs not only to expand their segments on the market of services, but also to form a certain potential for further growth. In the situation of recovering economic growth, the potential of the sector of services accumulated over the years of reform was totally called for by the market and became a factor facilitating an intensive growth in production of goods.

The formation of the market structure of the economy was supported by the growing demand on the part of industries of the production infrastructure whose share in year 2000 made almost 30 per cent of investment in fixed assets in the economy on the whole. Since 1995, there had been registered a gradual recovery of positive dynamics of investment in fixed assets in such sectors as transport, communications, informational technical servicing. In year 2000, the investment in communications nearly doubled, while investment in trade increased by 11.5 per cent in comparison with 1995 figures.

At the background of the general decline in investing activity in the Russia's economy, the slump in investment in fixed assets of transport was less pronounced as in other industries. Although the investing activity in transport was maintained at a certain level, the structure of investment in transport fixed assets

varied across types of transportation. A characteristic feature of the period from 1995 to 2000 was the trend towards the decrease in the share of investment in the development of railroad transport at the background of increasing share of investment expenditures for the development of motor road network by 13.5 percentage points over this period and for the motor transport – by 1.3 percentage points. Over the period of reform, the length of paved motor roads increased by almost 200 thousand kilometers, while the density of the motor road network grew from 23 km per 1000 sq. km in 1990 to 30 km per 1000 sq. km in 2000.

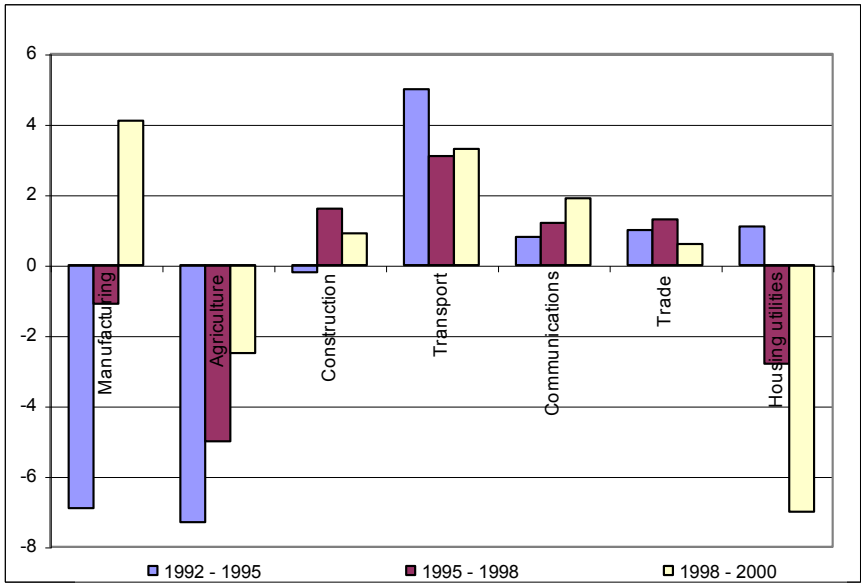

Figure 1.5. Changes in the Investment Structure across the Sectors of the Economy in % of the respecitve period

Investing activity in the sector also grew due to foreign investment. In 1995, the foreign investment in transport made US $ 11 million, or 0.4 per cent of the total amount of foreign investment in the national economy. Since the demand for freight was high, while the market was underdeveloped, foreign investors became more active in this sector of the economy. In 1999, the amount of foreign investment made US $ 521 million, or 5.5 per cent of the total amount of foreign investment, while in year 2000 this indicator was at US $ 1020 million, or 9.3 per cent. The sphere of road construction was most attractive for foreign investors.

Since 1995, there have been registered positive stable dynamics of investment in the communications sector. The investment in communications increased almost 2.5 times over the last five years. Investment expenditures for the development of electrical and radio communications grow at outpacing rates. The coefficient of renewal of fixed assets in communications increased from 2.0 per cent in 1995 to 4.5 per cent in year 2000. The high capacity of the market of communication services and high profitability of this sphere accounted for the fact that foreign investors intensify their activity in this sector of the economy. Foreign investment in communications made US $ 927 million in 2000, or 3.4 times in comparison with 1998 figures.

Table1.5

The Development of General-Use Telephone Communications: Key Indicators

	1992	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
Length of inter-town telephone channels, mil. km.	271,7	279,5	283,0	295,8	413,4	502,5	607,2	843,2	1222,7
Capacity of automatic inter-town stations, thous. channels	306,4	350,0	410,7	455,4	506,0	589,0	654,4	709,1	718,9
Capacity of automatic international stations, thous. channels	...	...	...	23,5	54,7	61,6	67,7	106,1	102,5
Number of inter-town (international) pay telephones, thous.	29,6	26,5	25,0	24,8	24,4	24,0	22,9	19,6	16,3
Number of satellite telephone channels				1855	2318	3177	5159	4526	5430

Source: RF Goskomstat

In spite of an increase in the share of the branches of production infrastructure in the GDP structure and the structure of investment in the national economy, the underdeveloped transport and communications systems remains a factor restraining the processes of formation of a principally new system of siting of productive forces of the Russia's economy.

The analysis of structural shifts in the investment in fixed assets demonstrates that redistribution of investment in favor of trade fully correspond to the change in the role and place of this sector in the national economy. Investment in trade makes 2.3 per cent of the total amount of investment in the Russia's economy. This sector of the economy demonstrate the highest rates of development. The national business pursues an active policy aimed to develop the sector. The commissioning of trade and public catering capacities increased twofold in comparison with 1997 figures. The number of jobs in trade and public catering grew by 38.6 per cent and made 9.4 million over this period, while the turnover of retail trade increased by 10.7 per cent and wholesale trade turnover rose twofold. In 2001, there operated 1153 thousand retail trade and public catering enterprises, and 50.3 thousand wholesale trade enterprises. A specific feature is an intensive development of small businesses in this sphere. Almost 35 per cent of retail trade and public catering enterprises are classified as small businesses (76.6 thousand jobs). High profitability and recoupment rates make trade a priority for foreign investors. In year 2000, the amount of foreign investment in trade and public catering made US $ 1954 million, or 17.8 per cent of the total foreign investment.

Table 1.6

Commissioning of Trade and Public Catering Enterprises (New Construction and Reconstruction of Operating Enterprises)

	1997	1998	1999	2000	2001
Trade enterprises, thous. sq. m.	160,5	208,5	297,0	358,9	332,5
Public catering enterprises, seats	7608	10074	8814	17649	14305

Source: RF Goskomstat

While analyzing the dynamics of investment across the sectors of the economy, a special attention shall be paid to the specifics of dynamics and structure of investment in housing construction. The market of residential housing was traditionally scarce in the Russia's economy, therefore, to maintain business activity in this segment was a natural reaction of entrepreneurs to expanding demand. A specific feature of the crisis of the Russian economy was a change in the structure of investment in favor of increasing share of investment expenditures for housing construction. While in 1970 through 1990, the average share of investment in housing construction was 16 per cent of the total amount of investment in fixed assets, in 1992 through 1995 this share increased to 23 per cent, what made 5.6 per cent of GDP. However, since 1996, when the economy experienced the contraction of effective household demand and a sharp increase in interest rates on

credit resources, the slump in investment in housing construction had been more serious than in other sectors of the economy. In year 2000, the share of investment in housing construction made 11.6 per cent of investment in fixed assets, or 3.0 per cent of GDP.

The analysis of the structure of commissioning of residential housing demonstrates that business activity in this sector of the economy was maintained mainly at the expense of increasing role played by non-state investors (80 per cent of commissioned housing). At the same time, over the last decade, it was observed that households took increasingly important and active part in the financing of housing construction. The level of household investment activity to a considerable extent depended on the dynamics of housing prices and household saving ratio. The specific weight of housing constructed at the expense of household own funds and credits made 41.6 per cent in 2000, as compared with 11.8 per cent in 1992 and 22.0 per cent in 1995.

Table 1.7

Dynamics of Key Indicators of Investing Activity, in % of the preceding year

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001*
Investment in fixed assets, total	**60,0**	**88,0**	**76,0**	**90,0**	**82,0**	**94,5**	**93,3**	**104,5**	**117,4**	**108,7**
Amount of construction works	64	92	76	94	84	94	95	105	111	109,9
Housing construction	84	100,7	94	105	84	95	94	104	95	102,7
Including individual housing construction	91	114	127	127	111	115	105	114	91,9	103,2

*) estimates

Source: RF Goskomstat

The redistribution of capital flows in favor of more capital-intensive sector of services taking place in the situation where resources were limited facilitated the recession of fixed capital in the sector of goods. A decrease in investment in the sector of production of goods took place at the background of declining investment activity across all sectors of the economy. In the crisis situation, the production (entrepreneurial) investments were mainly directed to maintain the accumulated productive capacities and were just sufficient to ensure simple reproduction of fixed capital. The amount of fixed assets remained at the level registered in pre-reform 1991.

The most considerable change in the sector of goods was the shift in the ratio between investment in industry and agriculture. As the institutional structure of the economy changed and the state withdrew from the market of capital, the share of investment in agriculture decreased from 10.8 per cent in 1992 to 2.5 – 3.0 per cent in 1996 though 1999. The investment in industry accounted for about 1/3 of the total amount of investment in fixed assets. The decrease in investment demand across the sectors of the industry (five times as compared to 1990) had the dominating effect on the structure of the economy at large and the character of reproduction in individual branches. As the downfall of production slowed down, there was registered a gradual deceleration of decline in investing activity. This process was considerably differentiated across individual periods, sectors of industry, and regions.

D. Transformational Shifts in the Structure of Investment in Fixed Assets in Industry

The investment slump taking place in 1992 through 2001 was of the structural nature and was determined by the aggregate impact of factors related to sectoral, technological, and reproductional shifts in the national economy. In the course of the analysis of an acute investment crisis experienced by industry, the retrospective specifics of reproduction of fixed capital and formation of the structure of the Russia's economy shall be taken into account.

Over the last decade, the sectoral structure of investment in industry had been formed under the influence of a sharp decline in investment in mechanical engineering and industry of construction materials occurring due to the unprecedented rates of decrease in demand for capital goods. While the share of industries of the investment complex in the pre-reform economy was about 30 per cent of the total investment in industry on the whole, in year 2000 their specific weight decreased to 10 per cent. At the background of shifts in traditional priorities of development, the structure of investment transformed under the influence of increasing demand in the fuel, energy, and metallurgical complexes (their aggregate share in investment in industry was above 70 per cent in 2000). Investment in the consumer complex remained practically at the pre-reform level (9.7 per cent).

In 2000, the amount of industrial output decreased by more than 2/5 in comparison with the figures registered in pre-crisis 1990. However, there was registered a rather significant differentiation of the slump across branches. A specific feature of the functioning of the economy in the period of transition was a dramatic shift in proportions between extracting and processing industries.

A retrospective analysis of the Russia's economy reveals that a faster growth in processing industry in comparison with extracting industry was a distinctive feature over a rather long period of time. On the eve of reforms the share of processing industries was 11.4 per cent of the total industrial output. It even decreased by 0.8 percentage points in 1970 through 1990. At the same time, an opposite trend was registered in the structure of investment expenditures. At the background of high capital intensity and systematic trend towards declining effectiveness of the use of fixed assets, the investment in the extracting sector grew at outpacing rates in comparison with processing industries. The share of extracting industries in the structure of investment in industry made more than 50 per cent of the total investment expenditures for industry at large.

The dynamics and structure of investment demand in 1992 through 2000 were significantly affected by changes in the amount of domestic effective demand, on the one hand, and by fluctuations of the business situation on traditional world markets of export oriented industries of the extracting sector, on the other hand. Since 1991, the ratio between the dynamics registered in the extracting and processing industries has changed dramatically. In the structure of industrial output there is observed a stable trend towards the increase in the share of extracting industry to 15.9 per cent in 1995 and 17.1 per cent in 1998. In comparison with the pre-reform level, the output of extracting industries decreased by about 30 per cent, while the output of processing industries in 1998 made about 45 per cent of the level registered in 1990. According to our estimates, the increase in the share of extracting industries resulted rather from shrinking domestic demand for the products of these industries, what occurred due to the diminishing scale of production in the economy and the restructuring of production at all levels of the economic system, than their more intensive orientation toward exports.

The most significant slump of production was registered in final industries oriented toward the domestic market. The analysis of the sectoral structure demonstrates that mechanical engineering and light industry were the major generators of industrial recession. According to estimates, the contraction of production in these industries accounted for more than 40 per cent of the total downfall in industry at large. At the same time, while in light industry the crisis was initiated by the traditionally low competitiveness of its products in comparison with imported substitutes, the downfall in mechanical engineering accumulated the impact of all major factors of the industrial crisis.

The changes in the structure of demand for domestic products on the domestic and foreign markets have determined the major trends in the formation of investment flows. The comparison between the changes in the structure of invest-

ment and gross output demonstrates that a moderate decline in production of export-oriented industries of the metallurgical and fuel complexes was generated at the expense of the modest decrease in investment in these industries. While there was registered the general trend towards a decrease in the scope of investment in industry, the share of the fuel complex in year 2000 increased by 7.6 percentage points, the share of the metallurgy grew by 1.2 percentage points, and the specific weight of the investment complex decreased by 6.3 percentage points in comparison with the pre-reform levels.

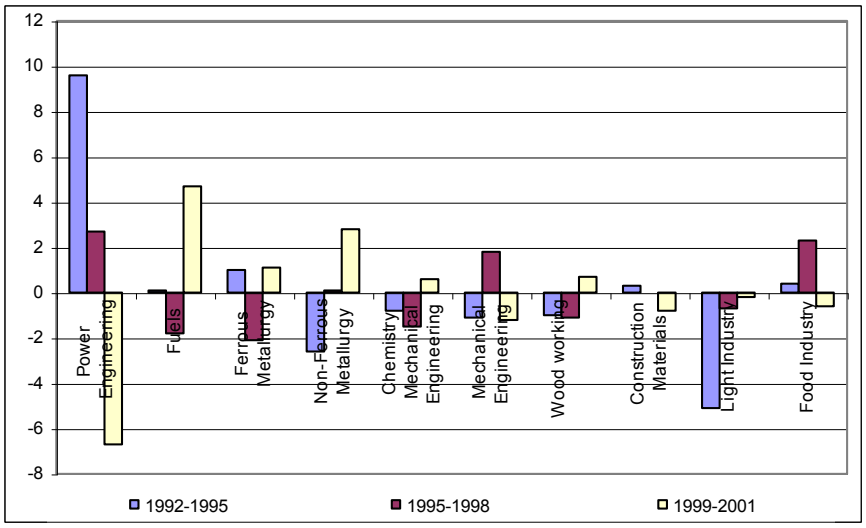

*Figure 1.6.*Changes in the Structure of Industrial Output,
in percentage points over the period

In 1991 through 1998, the investment fell by more than 15 per cent, while the average annual rates of decrease in the gross domestic product were registered at 6.0 per cent and gross industrial output – at 7.4 per cent. Some apparent signs of investment recovery were observed in the end of 1998. Since the fourth quarter of 1998, the investment in industry had significantly outpaced the dynamics of industrial output and were the major generator of economic growth. In 1999 through 2001, the average annual increase in investment in fixed assets made 12.2 per cent, while industrial output grew by 7.3 per cent.

The growth in the investment in fixed assets had a dominating effect on the dynamics of production and was accompanied by an intensive increase in output across all branches. A specific feature of the economic recovery taking place in 1999 through 2001 was the simultaneous growth registered both in extracting and processing industries. The recovery of positive dynamics in the processing sector was related to the growth in demand for domesitc products on the internal market and intensive import substitution. Besides, a considerable impact on the increase in production of the processing sector had the introduction of measures limiting import of competing products and the expansion of state support for a number of industries, including the defense procurement.

It is an important fact that the economic recovery in 1999 was initiated by outpacing rates of growth in production of consumer goods as compared to the dynamics of production of capital goods. The share of investment in fixed assets in food industry in 1999 increased by 7.1 percentage points in comparison with the figures registered in 1997. For the first time since the beginning of the reform, in 1998 through 1999 there had been registered an increase in investment in light industry. In 2000 through 2001, the ratio between rates of growth in consumer and capital goods changed dramatically.

As profitability and levels of investing activity grew, there was observed a gradual reverse of the trend towards a decrease in demand for investment goods. In the investment complex, the growth of output of mechanical engineering made 50.5 per cent, construction materials industry – 40.0 per cent, construction works and services – 27.3 per cent as compared with the figures observed in 1998. However, these developments did not resulted in more brisk investing activity in mechanical engineering per se. The orientation of production towards the activation of reserve capacities did not require large investment, therefore, a small shift towards an increase in the specific weight of this industry observed in 1999 was replaced with a stable downward trend in next years.

In the course of evaluation of the standing and prospects of development of the Russia's economy, it shall be taken into account that the surge of investment activity was caused primarily by factors related to the market situation. As a matter of fact, the investment demand in 2000 through 2001 was totally generated by oil extracting industries. Their share made more than 1/3 investment in industry and 12 per cent in the national economy. Although exporters increased their investment expenditures for the development of major production, they invested their spare internal funds in the Russia's economy with caution. Therefore, the gap between producers (exporters) of energy resources and the major part of the rest of the economy widened.

Table 1.8

Indices of Volumes of Investment and Production across Fuel Industries in 1995 through 2000, in % of the preceding year

	1995	1998	1999	2000
Fuel industry				
Index of investment volume	92,8	70,2	118,5	151,6
Index of industrial output	99,2	97,4	102,5	104,9
Oil extracting industry				
Index of investment volume	89,3	77,0	125,0	156,9
Index of industrial output	96,3	99,0	100,5	105,9
Oil processing industry				
Index of investment volume	90,2	110,6	74,2	200,0
Index of industrial output	101,0	92,6	101,8	102,3
Natural gas industry				
Index of investment volume	109,2	51,0	133,9	144,7
Index of industrial output	99,6	100,8	102,2	102,3
Coal industry				
Index of investment volume	91,5	62,7	83,5	91,7
Index of industrial output	98,7	95,0	109,6	105,0

Source: RF Goskomstat

In the structure of investment as broken down by industries, the complex of fuel industries makes 53.3 per cent, oil extraction accounts for 34.8 per cent of this investment. The proportions of distribution of investment across extracting and processing sectors of the oil complex change in favor of oil extraction. More reserved dynamics of investment in oil processing registered in 2000 resulted in stabilization of specific weight of higher-degree processing technologies at the level of the preceding year. Modernization and development of oil processing aimed at the increase in the degree of processing is of paramount importance with regard to the settlement of the problem of meeting world standards. At present, capacities involved in the primary oil processing are used at about 60 per cent. The capacities of oil processing industry were commissioned in the 1980s. Since the capacities are worn out by 80 per cent, their utilization is very ineffective and results in waste of energy resources, materials, and catalytic agents. It is required to withdraw worn out capacities, while according to expert estimates it is more feasible to close certain oil refineries.

In the oil extracting industry, there was commissioned more than 3000 new drilling wells in year 2000 and 4023 new drilling wells in 2001. However, almost ¼ of the aggregate increment in the national oil extraction was generated by the activation of idle drilling wells. The production and surveying oil drilling in-

creased by 81.5 per cent and 47.7 per cent respectively over year 2000 in comparison with the previous year's figures. The increase in investment demand on the part of oil companies initiated an acceleration of the growth rates in output of equipment for oil industry. In spite of the intensively growing production of oil equipment, its insufficient volumes and non-rational structure of production do not allow to overcome the persistently lagging rates of production drilling. On the other hand, a factor restraining the rates of growth in production is the insufficient scope of investment in oil extraction and related industries.

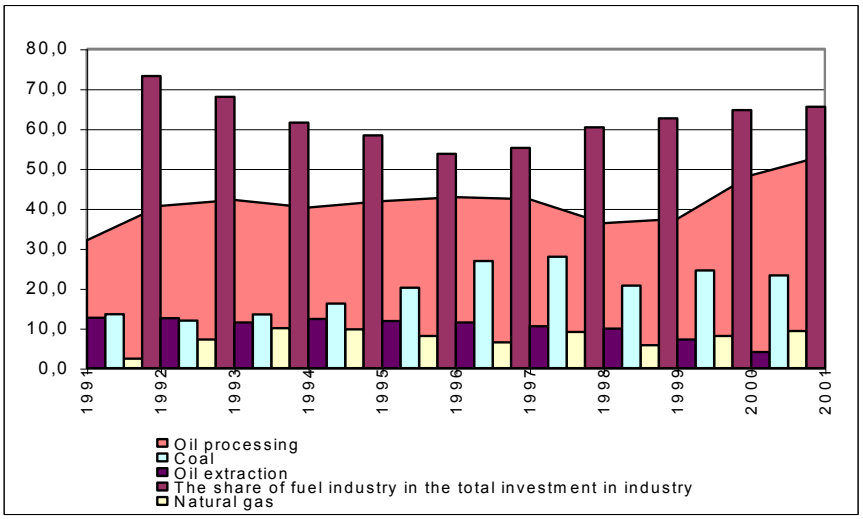

*Figure 1.7.*The Structure of Investment in Fuel Industry, in % of the total

In the metallurgical complex the total amount of investment decreased by almost 40 per cent over the years of reform. The interaction of opposite trends of domestic and external demand accounted for rather complicated dynamics of indicators of investment in this industry. The share of ferrous metallurgy in the total amount of investment in industry made 5.2 per cent in 2000 (a decrease by 0.4 percentage points as compared with the figures registered in 1992), while the share of non-ferrous metallurgy increased to 7.0 per cent as compared with 5.6 per cent.

Table1.10

Indices of Volumes of Investment in Fixed Assets and Output across the Industries of the Metallurgical Complex in 1995 through 2000, in % of the preceding year

Ferrous metallurgy	**1995**	**1998**	**1999**	**2000**
Investment in fixed assets	96,1	97,3	108,6	115,7
Output	109,6	92,4	116,8	115,7
Non-ferrous metallurgy				
Investment in fixed assets	80,7	76,3	152,3	128,7
Output	102,8	95,7	110,1	115,2

Source: RF Goskomstat

A major factor behind the maintenance of the level of investment activity in the metallurgical complex was the massive turn of enterprises to external markets. Export revenues contributed a considerable part of resources invested in projects of modernization and technical re-equipment of certain factories. Over the first years of reform the state to a certain extent supported metallurgical enterprises – they were granted tax privileges with regard to exports and profits allocated for investment, customs duties and transport tariffs. These measures permitted certain enterprises to undertake measures aimed to withdraw obsolete capacities involved in major degrees of metal processing. For instance, in ferrous metallurgy the investments were allocated for the development and modernization of capacities across all degrees of processing, however, the major part of investment was allocated for steel smelting and rolling production. In the steel smelting, there was withdrawn productive equipment (mainly Martin furnaces) of the total capacity of 27 million metric tons. It permitted the enterprises of the complex to survive in the situation of the acute crisis of the Russia's economy, however, it could not become the basis of the strategy of sustained development. The analysis of reproduction processes across sub-industries of the metallurgical complex reveals that both in ferrous and non-ferrous metallurgy the decrease in the scope of investment most negatively affected the development of mineral and raw material base. Thus, while in 1986 through 1990 up to 38 per cent of investment in non-ferrous metallurgy were allocated for extraction and primary processing of raw materials, over the last years this investment was below 7 per cent. Therefore, in spite of availability of prospected deposits of major types of mineral wealth, the operation ratios and effectiveness of operations of many enterprises depend on imported raw materials.

Table 1.11

The Structure of Investment in Ferrous Metallurgy across Major Degrees of Processing in Russia and EU countries in 1992 through 1997, in % of the total

	Russia	EU countries
Total	100,0	100,0
Including, by the degree of processing:		
Mining production	12,3	-
Coke blast furnace production	8,5	16,7
Steel smelting production	34,6	15,9
Rolling production	31,7	52,3
Other	12,9	15,1

Source: Metally Evrazii, 1998, No. 5

A sharp decline in investing activity in the lumber and wood working complex registered in the first years of reform negatively affected the dynamics of production. However, already in 1994 through 1995 there was registered a gradual increase in the share of investment in the lumber and wood working complex in the total amount of investment in industrial fixed assets, what was a major factor behind decelerating rates of the downfall. In the last years, structural transformations in industry progressed at the background of increasing investment activity in the lumber and wood working complex. The intensification of investing activities observed in 1999 through 2000 gave a new impetus to the development of the lumber and wood working complex. In year 2000, the share of the lumber and wood working complex in the total amount of investment in the industrial fixed assets made 3.9 per cent as compared with 3.0 per cent in 1998. The pulp and paper industry maintained the level of investment mainly at the expense of export revenues. The dynamics of investment activity in the lumber and wood working complex were significantly affected by the specifics of the institutional structure of production. On the whole, the internal funds of the complex made almost 80 per cent of the expenditures for investment purposes, while in lumbering and sawmill operations this indicator made 93 per cent. The share of private property (41.0 per cent) and mixed property (25.0 per cent) accounted for almost 70 per cent of production. Exactly this type of private investors determines the character and dynamics of investing activity.

An active involvement of reserve production capacities determined the recovery of investing activity. In year 2000, the operation ratio of production capacities in lumber, wood working, and pulp and paper industries reached the maximal level registered over the last decade and made 66 per cent for this com-

plex on the whole. The comparison between the indicators of depreciation and utilization of fixed assets reveals that the lumber and wood working complex is close to a certain constraint on the use of equipment. As the workload of the equipment increased, it became clear that the technical and economic conditions of the production capacities prevent the settlement of the problem of accelerating rates of growth and improving the competitiveness of domestic products. In lumber industries the combination of the high level of wear and tear and operating ratios is an evidence of critical workloads on machinery and equipment. In processing industries, especially technology-intensive branches, the reserves for increases in output are determined by the quality of equipment and technologies. A significant depreciation of fixed assets is a factor behind lower workloads on the equipment and a factor limiting the potential for further growth in production.

Table 1.12

Key Characteristics of Fixed Assets Reproduction in Lumber and Wood Working Complex in 1995 through 1999

	Industry		Lumber and wood working complex	
	1995	**1999**	**1995**	**1999**
Renewal rate of fixed assets	1,7	1,1	1,2	1,1
Retirement rate of fixed assets	1,5	1,0	3,3	2,6
Depreciation of fixed assets	43,2	50,4	45,4	50,2

Source: RF Goskomstat

The ratio between the indicators of depreciation and age structure of fixed assets is a clear illustration of an urgent need to intensify the process of renewal. A prolonged investment pause resulted in the conservation of the structure of fixed assets, and in the situation of transition to the model of economic growth basing on investment the lack of equipment and machinery emerged as a factor constraining expansion of production in the lumber and wood working complex. The situation is aggravated by the fact that the lumber and wood working complex being inadequate to market quality requirements is unable to achieve a level of sales necessary to generate funds sufficient for a massive investment in modernization of its capacities.

The changes in dynamics and structure of domestic demand were underway at the background of heightening competition among domestic producers and between domestic and imported substitute goods. The situation is aggravated by the fact that as incomes grow and the competitive price advantage of domestic

producers diminish, there are forming conditions for an increase in imports. This situation is provoking a slowdown in the rate of growth in processing industries. The potential for further expansion of production across a number of goods has been more and more determined by dynamics of investment and innovative development strategies. Obsolete equipment and production technologies, low efficiency of labor are considerable constraints on the expansion of aggregate supply and changes in its structure. In this situation, taking into account the high market capacity and gradually recovering of effective demand foreign producers take a stronger hold of the Russian market. Contraction of investment operations on the part of domestic producers may result in the surrender of their newly taken up position and unfavorable changes in the competitive environment.

The contraction of investment demand determined a sharp decline of production in mechanical engineering and the industry of construction materials. While over the pre-reform period these industries accounted for about 30 per cent of investment expenditures for the industry on the whole, in year 2000 their specific weight was below 10 per cent.

In this connection it shall be reminded that studies of long term retrospective trends of the Russia's economy observed over the Soviet period illustrate the high elasticity of production with regard to demand for the products of mechanical engineering. Exactly this factor accounts for the fact that changes in demand for products of mechanical engineering were the generator of both decline and recovery in the national economy, while the technical and technological structure of production capacities remained the same.

In 1992 through 1998, the low investment activity in the economy, diminishing demand for capital goods across industries servicing the military and industrial complex, outpacing rates of growth in prices of investment and products of investment industries in comparison with the dynamics of prices of industrial products were the factors aggravating the crisis in mechanical engineering and the industry of construction materials. The decrease in effective demand for products of mechanical engineering on the domestic market was accompanied by a systematic decline in amounts and share of export of machinery and equipment as traditional partners in CIS and East European countries turned to world markets. As a result, the level of production of machinery and equipment, according to our estimates, in year 2000 made about 1/3 of the pre-reform level, while the share of mechanical engineering and metal working in the structure of industrial output decreased by almost 6.0 percentage points since the beginning of reforms.

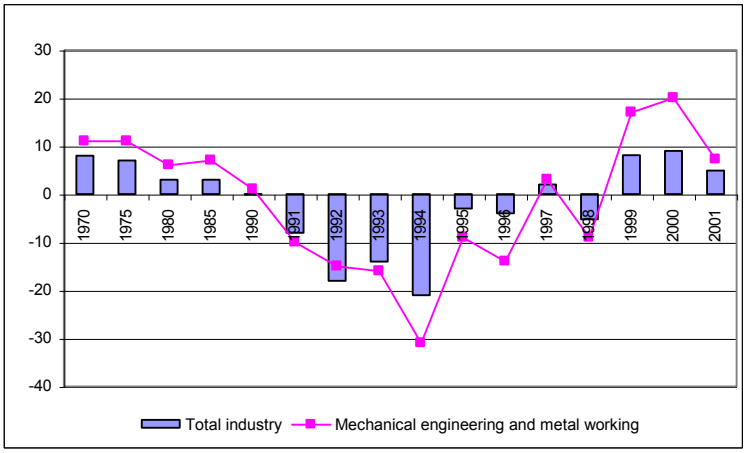

Figure 1.8. The Dynamics of Growth Rates in Industry and Mechanical Engineering in 1970 through 2001, in % of the preceding period

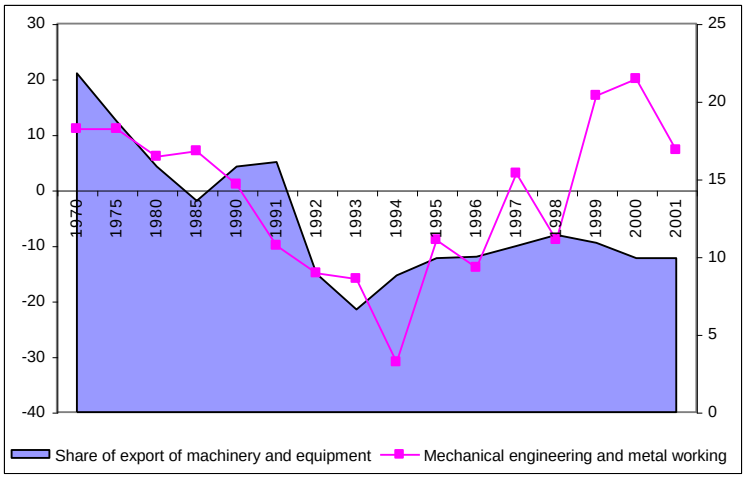

Figure 1.9. Changes in the Dynamics of Output of Mechanical Engineering and Share of Machinery and Equipment in the Structure of Exports in 1970 through 2001

The slump in mechanical engineering had very negative consequences. The condition of industries within the investment mechanical engineering complex is a technological factor limiting the potential for the settlement of urgent problems of reconstruction and modernization of production on a new technical basis – the obsolete structure of mechanical engineering can reproduce only obsolete proportions of reproduction.

The situation in the investment sphere is aggravated by the fact that the economy requires not only an increase in the scope of investment, but also in the elaboration of a strategy aimed to attract investment in industries traditionally experiencing a lack of competitive capacities. The hypothesis that it is possible to accelerate rates of economic growth at the expense of activation of reserve capacities can not be justified in the course of the analysis of operating capacities with regard to the competitiveness of production. The comparison between the share of competitive capacities and dynamics of output explains the specifics of the crisis in individual industries, in particular, in mechanical engineering, where more than one third of production capacities are non-competitive.

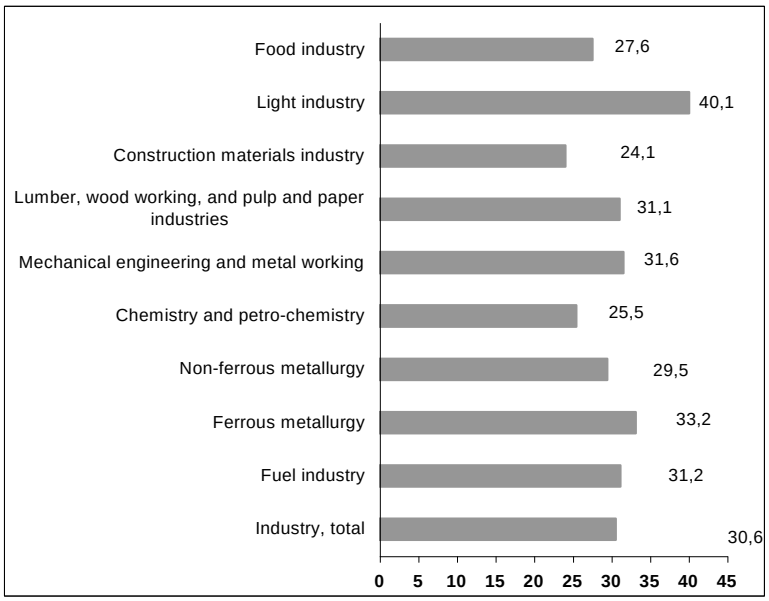

Figure 1.10. Specific Weight of Production Capacities not Meeting the Requirements Necessary for Production of Competitive Products

Modernization of the Russian economy depends on dynamics of import of equipment. While there is observed a general trend towards growth in the share of expenditures for machinery and equipment, the systematic increase in expenditures for purchase of imported equipment is registered in the structure of investment in fixed assets. While in year 2000 the investment for purchase of imported equipment made 22.9 per cent of the total investment expenditures for machinery and equipment, in 2001 their specific weight increased to 24.8 per cent. Import of machinery and equipment in 2001 grew at outpacing rates in comparison with the import dynamics on the whole and the dynamics of growth in domestic mechanical engineering.

At the same time, it shall be noted that the development of investment process towards import of second hand equipment alongside with the involvement in production of obsolete production capacities and expansion of capital repairs of functioning domestic and imported equipment at the background of limited potential of the mechanical engineering complex to produce modern machinery results in deceleration of economic growth.

The commission for protective measures in foreign trade approved the list of complex technological equipment subject to import privileges aiming to stimulate the reconstruction of the Russia's economy. Customs duties were lowered with regard to products of such industries as metallurgy, ship and automobile construction, light and textile industries, machine tool industry, food industry. Duties on import of equipment for food, light, and textile industries were reduced from 10 per cent to 5 per cent, and from 15 per cent to 10 per cent for other goods. In case the high rates of economic growth persist, the implementation of these measures may accelerate the renewal of production.

The analysis of the development of the investment process in domestic mechanical engineering demonstrates that the factors causing the catastrophe of the industry are related to the non-competitiveness of the majority of its products and significant structural shifts in the industry. A specific feature of transformational shifts in the mechanical engineering complex was demilitarization of the economy, which affected practically all industries, including final production of the investment complex and the production of intermediate goods (for instance, construction materials). Taking into account the developed system of inter-industry ties related to the military and industrial complex, the change in the place and role of defense industries in the national economy significantly affected the character of financing of investment expenditures in mechanical engineering. Over the last decade, as the military doctrine changed and the state expenditures for defense sharply decreased, the dismantling and conversion of defense enterprises

intensified. According to the estimates of the Ministry for Economic Development, only in 1992 through 1995 the decrease in defense state procurement accounted for 20 to 25 per cent of the total decline in industrial output. According to the RF Goskomstat, at present the output of military products in Russia is at about 12 to 15 per cent of the level registered in 1991. Falling demand for military products was accompanied by decrease in state investment expenditures at enterprises belonging to the defense complex.

Over the years of reform, the rates of decline in production of civil mechanical engineering approximately corresponded to the indicators observed in the industry at large. The inadequacy of the traditional structure of production capacities to the structure of investment demand became very apparent in the situation of the emergence of the market. Even in the situation of recovery of economic growth the trend towards the decrease in the share of investment expenditures for mechanical engineering and the industry of construction materials in the total amount of investment in industry and economy persists. Changes in the structure of output of capital goods were primarily determined by dynamics of demand of oil industry, transport, and communications. Exactly these sectors of the economy accounted for the highest rates of growth in investment in production in 1999 through 2001.

Table 1.13

Indices of Output across Mechanical Engineering Industries, in %

	Annual				**of preceding year**			
	1991-1995	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**
Industry, total	87	97	96	102	95	108	109,0	104,9
Mechanical engineering	**83**	**91**	**96**	**103**	**89**	**116**	**115,5**	**107,2**
By industry:								
Metallurgical mechanical engineering			93	85,2	70,6	98,1	130,2	86,1
Hoisting and conveying mechanical engineering	80	87	67	90	70	119	142	121,8
Railroad mechanical engineering	85	91	98	81	87	109	107,4	126,0
Electrical engineering industry	77	90	86	85	86	127	130,1	112,6

	Annual				of preceding year			
	1991-1995	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**
Chemical and oil mechanical engineering	84	93	78	106	96	121	119,5	121,6
Machine tool and tool making industry	78	95	67	87	82	99,6	111,5	99,4
Instrument making industry	87	99,9	95	94	103	141	118,4	98,0
Motor vehicle industry	87	94	100,2	113	89	115	103,3	101,7
Tractor and agricultural mechanical engineering	64	70	73	95	71	159	148,5	129,1
Mechanical engineering for light and food industries and household appliances	81	82	59	98	91	116	109,5	107,1

Source: RF Goskomstat

The dynamics and structure of production of capital goods across mechanical engineering industries reflects the reaction of Russian businesses to shifts in the situation on the domestic market. However, in spite of an intensive growth in output, the worn out material and technical base of mechanical engineering and low investment activity in mechanical engineering per se are factors restricting the recovery of a stable trend towards economic growth.

Table 1.14

Indices of Volumes of Investment in Fixed Assets and Output across the Industries of the Investment Complex in 1995 through 2000, in % of the preceding year

	1995	**1998**	**1999**	**2000**
Mechanical engineering				
Investment in fixed assets	101,2	93,0	174,9	121,7
Output	90,7	91,3	117,2	120,0
Industry of construction materials				
Investment in fixed assets	80,8	62,6	118,8	119,7
Output	92,0	93,7	110,2	113,1

Source: RF Goskomstat

Investment activity initiates growth in production of construction materials. The recovery of economic activity in the industry was accompanied by the shift of activity in branches and productions oriented towards new technologies in construction, in particular, import substituting types of products. Over the last years, exactly these industries demonstrated active modernization of production on the basis of modern domestic and foreign technologies, and creation of enterprises with foreign participation. As economic situation changes and the demand for expensive imported products sharply declines, the domestic producers successfully fill in the niches offering competitive (both in terms of prices and quality) construction materials on the domestic market. Besides, both the change in proportion between industrial and social-civil construction, and introduction of new technologies of construction and assembly works significantly affect the dynamics and structure of output in the industry of construction materials.

The comparative analysis of structural shifts in investment and production reveals that at the first stage of reforms the formation of sectoral proportions was determined by rather sharp transformations of domestic prices.

The liberalization of economic activities was accompanied by spontaneous growth in prices of goods and services, while the overwhelming majority of producers ignored demand constraints. Under conditions of tight monetary policy it provoked an avalanche-like accumulation of inter-enterprise payment arrears and negatively affected the administration of the state budget. Putting in place the mechanism of prepayment for supply of goods in mid-1992 facilitated a certain improvement of payment discipline, however, at the same time it resulted in even more pronounced slump in industrial output. The level of effective demand began to produce a regulating effect on the character of economic activities.

The next wave of crisis broke out in 1993 through 1994. However, the factors behind this crisis were different from those behind the contraction of economic activity in 1992 through 1993. In 1993, the prices of a number of domestically produced goods achieved the level of prices on world markets, and in 1994 the scope of this phenomenon increased significantly. As a result of ongoing transformational shifts in the system of relative prices and the changes in the real exchange rate of the national currency there were registered changes in the competition environment.

Enterprises of light industries were first to encounter competition on the part of importers. Due to initial conditions, the potential for a hike in prices of products of light industry was much lower than in other industries, therefore, they were first to reach the ceiling of world prices, what resulted in the mass squeezing of domestic producers out of the market. Due to higher costs of production

and lower quality of products, the domestic producers were also exiled from other commodity markets – of automobiles, household appliances, other durables, foodstuffs. Thus, only in 1994 the amount of output of light industry fell almost twofold, while in mechanical engineering it decreased by 30 per cent, and in food industry – by 17 per cent.

Changes in domestic relative prices and proportions of world and domestic prices determined the structural shifts in industry. The calculations of the structure of industrial production in current prices demonstrate that the share of the fuel and energy sector increased from 10.3 per cent in 1991 to 30.5 per cent in 1995, metallurgy – from 11.3 per cent to 17.1 per cent, while the specific weight of gross output of light industry decreased from 16.2 to 2.5 per cent. Therefore, the structure of production was adapting to the economic realities of the period of transition under the impact of transformational shifts in relative prices.

The comparison between price dynamics and output volumes permits to draw the conclusion that in 1994 through 1995 there was forming a new structure of the Russia's economy and that dynamics of output volumes made the major contribution in the change in branch proportions of industry. The structure of domestic prices did not experience significant changes and remained rather stable in 1995 through 1997, what limited the possibility of significant redistribution of financial flows among branches at the expense of changes in prices. Correspondingly, the profitability or non-profitability of industries and enterprises increasingly depended on the real volumes of output and effectiveness of production. Since that moment, the Russia's industry had generated certain spots of growth. The share of mechanical engineering and food industry in the structure of industry had increased. A number of industries compensated the decline in domestic demand at the expense of world markets (raw materials, energy resources, and certain intermediate products of industry). More brisk activity in certain industries was generated not only by factors related to the current market situation, but also certain changes in the motivation of economic operations.

In 1999 through 2001, the domestic market situation changed as a result of the Ruble devaluation. Mobilization of internal resources and active policies oriented towards the recovery of positions on the domestic market lost over preceding years on the part of producers were the factors behind both the expansion of output of traditional goods, and intensive development of import substituting production. In general, the Ruble devaluation stimulated economic growth as it created price advantages of domestic products over imports. However, the substitution effects caused by switches in demand from imported to domestic substitute products in similar price groups shall be discerned from creation of price barriers

preventing the access of imports to the domestic market. In case devaluation is "excessive," the difference in prices of imported and domestic goods becomes prohibitive for imports. In this case the level of competition on commodity markets becomes too low and the quality of domestic goods remains at the same level, what eventually results in a decrease in wellbeing of consumers, while the domestic production lacks the incentives to improve the competitiveness of its products at the expense of more active technological renewal of production.

The increase in profitability of the export-oriented extracting sector of industry was accompanied by the redistribution of profits in the economy in favor of these industries, even in spite of growing production in the import substituting sector. Besides, forex-denominated profits of export-oriented enterprises do not depreciate, their stock market rankings remain high, and they get additional opportunities to attract external credit resources (internal credit resources become more available due to the high profitability of their business).

Therefore, the "excessive" devaluation in the economy results in a massive redistribution of funds in favor of a limited number of industries. As a rule, they include capital-intensive branches of extracting industries, what results in lower factor remuneration of labor in labor-intensive sectors, first of all, in processing industries and the sector of services, and the outflow of labor resources from these sectors. These processes make the economy more dependent on raw materials and therefore more susceptible to fluctuations in world prices.

The experience acquired in 1999 through 2001 shows that, on the one hand, at the present level of integration of the Russia's economy in the system of world economic ties potentially possible fluctuations of the exchange rate caused by changes in the situation on world financial and commodity markets undoubtedly may be destabilizing. However, on the other hand, the developing structure of the Russia's economy has internal reserves for stable functioning. However, it is necessary to remind that transformational shifts in the structure of production in the situation of prolonged influence of tight investment constraints were determined by changes in the business situation and had practically no effect on material and technical conditions of production. This fact is confirmed by persistence of rather stable proportions of production in 1996 through 1998. It may be ascertained that the accumulated competitive potential determined both the structure of production and possible limits of economic development.

As economic growth recovers, the processes of restructuring of production aimed to increase the competitiveness of enterprises play more significant role in changes in the investment structure. In this connection, the issues of diversifica-

tion of investment flows, more efficient utilization of investment and accumulated fixed assets gather in importance.

1.2. Specifics of the Reproduction of Fixed Assets in the Russia's Economy over the Reform Period

A. The Condition of Fixed Assets across Sectors of Economy and Industries

As economic growth recovers, the processes of restructuring of production aimed to increase the competitiveness of enterprises play more significant role in changes in the investment structure. In this connection, the issues of diversification of investment flows, more efficient utilization of investment and accumulated fixed assets gather in importance. The analysis of dynamics of investing activity over the last decade demonstrates that investment in fixed assets makes about ¼ of the level registered in pre-reform 1990, while the amount of fixed assets in the national economy practically remains at the level of 1990, what may be explained both by specifics of revaluation of fixed capital, and a sharp deterioration of characteristics of its reproduction.

The renewal rate of fixed assets in the national economy fell from 5.8 per cent in 1990 to 1.4 per cent in 2000, while the retirement of fixed assets remained at about 1.1 per cent. In industry, the renewal rate of fixed assets declined from 11.8 per cent to 1.4 per cent over the same period, while the average age of productive equipment respectively increased from 10.8 to 18.7 years. The systematic decrease in the rate of commissioning of fixed assets facilitated the trends towards the higher degree of depreciation of fixed assets. Due to the lack of financial resources, agricultural enterprises could not purchase necessary machinery and equipment. As a result, the level of mechanization in the sector decreased to 40 – 60 per cent of the standard requirements, while the degree of depreciation made almost 70 per cent. The persistence of these trends may result in irreversible processes in the sector's productive capacities. In year 2000, the depreciation of fixed assets in the national economy made 45.8 per cent, however, this indicator rather significantly varied across the sectors of the economy and types of fixed assets.

Depreciation is above the average levels across practically all sectors, except construction. At the same time, it shall be noted that the highest degree of depreciation is registered in the active part of production capacities. Depreciation of machinery and equipment across the sectors of the economy varies in the in-

terval from 57 to 80 per cent, while in the passive part of fixed assets the average depreciation level is 50 per cent.

Table 1.15

Depreciation of Fixed Assets as Broken down by Sectors of Economy, in %

	All fixed assets	Buildings, constructions, and facilities			Machinery and equipment	Means of transportation
		total:	buildings	constructions		
Industry	51,5	44,6	32,4	53,9	62,7	49
Agriculture	50,8	49	46,5	53,5	66,4	64,5
Construction	44,7	34,8	34,8	34,9	57	52,2
Transport	51,7	47,4	36,5	48,6	56,5	62,4
Trade	53,8	50,5	40,6	51	80,7	33,8

Source: RF Goskomstat

The analysis of the state of fixed assets in industry demonstrates that the decrease in investing activity resulted in a significant deterioration of characteristics of technical and economic situation of production capacities. Rates of renewal of fixed assets in industry fell almost twofold. The minimal rate of renewal was registered in mechanical engineering, chemistry, and light industry. These industries take leading positions in terms of depreciation. Indicators of low investment activity registered in power engineering and fuel industry are an alarming sign, since the project resources of capacities are worn out by more than 50 per cent across all industries of the fuel and energy complex, while the degree of depreciation in oil processing makes 80 per cent.

Table 1.16

Depreciation of Fixed Assets in Industry, in %

	1970	1980	1990	1995	1998	1999	2000
Industry, total	25,7	36,2	46,4	48,5	52,9	51,9	51,3
Power engineering	23,2	31,6	40,6	45,7	49,4	50,4	51,6
Fuel industry	34,7	43,4	46,7	51,2	54,7	52,6	50,2
Ferrous metallurgy	25,8	38	50,1	46,9	53,1	53	53,5
Non-ferrous metallurgy	29,9	37,8	46,9	47,5	52	49,1	44,5
Chemistry	22,1	35,8	56,3	57,6	62,6	60,9	60,2

	1970	1980	1990	1995	1998	1999	2000
Mechanical engineering	25,3	34,4	47,5	47,4	53,2	53,3	55,3
Lumber, wood working, and pulp and paper industries	29,3	38,5	48,3	50,2	55,2	51,6	48,7
Construction materials industry	24,7	34,5	42,1	46,5	53,6	54,2	53,7
Light industry	25,1	32,8	40,2	47,7	54,9	55,7	54,2
Food industry	25,7	38,9	40,7	42,8	44,5	39,9	38,3

Source: RF Goskomstat

The systematic underinvestment of mechanical engineering has negatively affected the dynamics of reproductional characteristics of equipment. While on the eve of the reform equipment at the age below 10 years made more than half of production capacities, in year 2000 the specific weight of this group was only 15 per cent. By year 2000, the share of equipment at the age above 20 years doubled in comparison with the pre-reform period, while machinery and equipment at the age from 11 to 20 years make half of production capacities.

Table 1.17

Age Structure of Productive Equipment in Industry, in %

	1970	1980	1990	1995	1998	1999	2000
Total equipment	100	100	100	100	100	100	100
Of which, (age brackets, in years):							
5	40,8	35,5	29,4	10,1	4,1	4,1	4,7
6 – 10	30	28,7	28,3	29,8	20,1	15,2	10,6
11 – 15	14	15,6	16,5	21,9	25,3	25,7	25,5
16 – 20	6,9	9,5	10,8	15	18,9	20,1	21
Over 20	8,3	10,7	15	23,2	31,6	34,8	38,2
Average age, years	8,42	9,47	10,8	14,25	17,01	17,89	18,7

Source: RF Goskomstat

The high share of worn out fixed assets, unfavorable age structure of machinery and equipment are rather tight constraints on economic growth. The persistent trend towards a decrease in the share of gross accumulation in fixed assets in GDP resulted in the disturbance of the normal cycle of reproduction of fixed assets. The calculations of the structure of gross accumulation in fixed assets

demonstrate that since 1995 there had been registered an absolute decrease in the amounts of net accumulation in the economy. In this situation investing activity was limited to the functions aimed to maintain the accumulated potential. The comparison of dynamics of production with the efficiency of utilization of labor and capital reveals that under the influence of the trend towards deterioration of technical and economic characteristics of production capacities and decline in investment activity the branches of industry "exchanged" factors of production. The high level of manual labor to a certain extent compensated for the lack of investment resources, however, at the same time, it resulted in the technological stagnation of production. The situation was aggravated by the fact that in certain sectors of the economy there was observed a trend towards the absolute decrease in the volume of fixed assets. Recession of fixed capital in industry was most acute in the complex of processing industries, especially in mechanical engineering, chemistry, and light industry.

Table 1.18

Indices of Volume of Fixed Assets across Sectors of Economy, in % of preceding year

	1995	1996	1997	1998	1999	2000
All fixed assets	100,1	99,9	99,6	99,6	100,1	100,4
Including:						
Production of goods	99,1	99,2	98,6	98,6	99,3	99,6
including:						
Industry	100,1	100	99,5	99,4	99,8	100,2
Agriculture	99,6	97,7	96	96,2	97,2	97,1
Construction	98,3	97,9	98,6	98,4	99,3	99,5
Production of services	100,9	100,6	100,4	100,6	100,9	101,1
Including:						
Transport and communications	100,3	100,1	99,5	99,5	100	100,9
Trade	100,6	98,9	99,1	99,3	99,8	99,8

Source: RF Goskomstat

The trend towards an increase in capital repairs also negatively affects the reproduction of fixed assets. The calculations concerning the period from 1995 to 2000 demonstrate that the average expenditures for capital repairs made about 20 per cent of the investment in fixed assets. The high share of capital repairs con-

firms the argument that the investment process is oriented towards cheap and short term methods of renewal of production capacities at the expense of costs. As a result, the demand is oriented to the components of technical equipment, which it is easy to replace without attracting long term investment in fixed assets, i.e. at the expense of working capital, what is the specific and distinctive feature of the investment process in the Russia's economy. However, in the long term this practice will result in economic and technical stagnation. The production capacities created over preceding decades is oriented towards production under conditions of a closed economy not affected by competition. At present the problem of renewal of the active part of fixed assets and qualitative change in the technological level of production, improvement of its effectiveness becomes more urgent than ever.

The deceleration in the rates of renewal of fixed assets was accompanied by changes in the technological structure of investment in fixed assets. While at the first stages of the reform there was observed an increase in the share of expenditures for construction and assembly works, since 1995 there was registered a gradual increase in the share of expenditures for purchase of machinery and equipment in the total amount of investment in fixed assets. The increasing expenditures for purchase of machinery and equipment was caused by shifts in the reproduction structure of investment. A distinctive feature of the period from 1995 to 2000 was the expansion of works aimed to modernize and reconstruct enterprises. In year 2000, the expenditures for machinery and equipment increased to 35.7 per cent of the total amount of investment as compared with 22 per cent on the average in 1992 through 1995.

Table 1.19

Structure of Investment in Fixed Capital as Broken Down by Types, in % of the total

	1998	**1999**	**2000**
Total investment in fixed assets	100	100	100
Including:			
Residential housing	16,3	14,3	10,7
Buildings (except residential housing) and constructions	45,1	41,5	43,6
Machinery, equipment	29,9	36,3	35,7
Other	8,7	7,9	10

Source: RF Goskomstat

The investment activity of enterprises in 1998 through 2001 was mainly oriented towards the intensive activation of competitive reserve capacities in production and modernization of production at the expense of modern technological lines. Besides, as business situation changed, in the structure of capital expenditures there was registered an increase in expenditures for implementation of highly effective projects aimed to reconstruct and re-equip the production, while new construction declined. A specific feature of the period from 1999 to 2001 was the increase in the share of expenditures for purchase of machinery and equipment in the structure of investment expenditures occurring at the background of falling expenditures for capital repairs.

Table 1.20

Specific Weight of Investment in Machinery and Equipment in the Total Amount of Investment Expenditures as Broken Down by Industries in 1998 through 2000, in % of the total

	1998	1999	2000
Power engineering	29,4	36,9	40,5
Oil extracting industry	25,4	30,5	32,3
Oil processing industry	34,6	46,6	44,4
Natural gas industry	10,6	16,9	13,8
Coal industry	60,9	66,7	76,2
Ferrous metallurgy	49,7	51,6	58,3
Non-ferrous metallurgy	47,1	62,5	60,8
Chemistry and petro-chemistry	49,8	57,4	63,7
Mechanical engineering and metal working	66,3	72,0	78,6
Construction materials industry	45,7	51,3	60,2
Light industry	57,4	78,7	72,7
Food industry	60,0	68,0	77,9

Source: RF Goskomstat

The rationalization of the flows of resources used for the reproduction of fixed capital rather than the scope of utilized means accounted for the intensification of investing activity. As business situation changed, enterprises oriented towards the expansion of their positions on the domestic market both at the expense of increasing competitiveness of their products in comparison with domestic substitutes, and more intensive development of import substituting production. The motivation of investment activities also changes. In the situation, where financial resources are very limited, investment decisions are determined by such goals as improvement of the quality of products and implementation of modern standards, diversification of products, and technological aspects of reduction of costs.

Table 1.21

Specific Weight of Industrial Enterprises as Broken Down by Goals of Investing Activities in the Total Number of Innovative-Active Enterprises, in %

	1995	1996	1997	1998	1999
Substitution of obsolete products	16,1	16,6	14,7	21,7	18,2
Diversification of the range of goods	71,5	75,5	78,8	85,1	77,2
Maintenance of traditional sales markets	23,3	27,9	28,8	35,6	32,7
Creation of new markets				38,5	34,5
Reduction of expenditures for wages and salaries	8,3	8,5	7,3	10,6	8,3
Reduction of material costs	19,4	18,5	17,7	22,6	19,4
Reduction of power costs	12,3	13,9	13,1	18,7	16,9
Implementation of modern standards	-	-	-	27,8	28,4
Improvement of quality of products	31,5	34,2	32,8	51,0	46,9

Source: RF Goskomstat

The limited amount of investment resources made enterprises mainly orient towards the intensive activation of competitive reserve capacities in production and modernization of production at the expense of modern technological lines. According to a survey conducted by the Center for Economic Situation, purchases of separate units make 45 per cent of the total amount of investment in equipment, while technological lines account for about 15 per cent, and complexes for production of new goods – for less than 5 per cent. In this connection, it shall be stressed that such a structure of investment determined by financial constraints results in the conservation of obsolete technologies and does not facilitate production of competitive technology-intensive goods.

As a result, since 1999 there has been observed the recovery of investment demand, while the growth in mechanical engineering significantly outpaces the rates of industrial production. These developments are an evidence that producers reacted to changes in the situation on the domestic market rather flexibly and operatively.

The analysis of utilization of production capacities demonstrates that a considerable part of equipment can not be used for production due to the degree of its wear and tear and obsoleteness. The workload on production capacities is rather differentiated. In raw material industries characterized by low shares of added value, the workload on equipment is much higher than in processing indus-

tries. Even within the same industry, the degree of utilization of equipment varies across branches. Although the intensive activation of reserve capacities was a factor behind the recovery of economic growth in 1999 through 2001, there are certain constraints on the workload.

As concerns raw material industries, in general it is possible to meet the increase in demand by activation of available capacities, since the quality of raw materials depend on the deposit and not on the way of extraction. As a rule, in these industries new technologies facilitate reduction of costs, increase in labor productivity, growth in output of auxiliary products, etc. However, the combination of worn out capacities and high workload on equipment in the extracting industry is an evidence that the machinery operates at the critical level.

The reserves for increase in output in processing industries are determined by the quality of equipment and technologies. The significant depreciation of fixed assets in processing industries is a factor behind the low workload on equipment and a constraint on the further growth in production.

Table 1.22

Level of Utilization of Average Annual Capacity for Production of Certain Industrial Goods, in %

	1990	1995	1996	1997	1998	1999	2000
Primary processing of oil	87	62	61	65	60	64	68
Coal	93	72	72	70	66	73	84
Cast iron	94	70	70	73	71	84	86
Steel	94	67	68	68	63	71	77
Rolled ferrous metals	92	66	65	67	59	63	72
Iron ore	98	84	81	81	81	90	92
Mineral fertilizers	75	50	46	49	47	58	63
Synthetic resins and plastics	84	45	36	40	45	55	62
Paint and varnish materials	74	20	17	17	15	20	24
Tires	91	43	52	62	59	69	71
Metal cutting machine tools	81	24	18	16	13	14	17
Forging and pressing machinery	83	13	7,8	7,8	10	10	13
Tractors	81	11	10	9,7	8,4	14	19
Household refrigerators	98	37	24	27	25	31	39
Electric vacuum cleaners	82	19	13	14	12	21	20
Household clocks	98	40	22	16	18	28	55

	1990	1995	1996	1997	1998	1999	2000
Timber	69	31	28	27	29	34	39
Plywood	88	52	53	53	67	76	82
Splint slabs	92	39	27	30	36	47	55
Cardboard	87	41	29	35	38	52	63
Paper	94	57	49	47	54	70	79
Cement	93	45	36	36	36	39	44
Wall materials	81	50	41	38	34	45	48
Constructions from reinforced concrete	78	32	24	20	20	22	28
Cotton fabrics	91	28	24	31	29	39	55
Wool fabrics	68	16	12	12	11	14	17
Jersey products	93	21	13	12	13	24	28
Footwear	87	23	18	17	14	23	29
Powdered sugar from sugar beets	87	86	85	81	75	77	76
Bread and baked goods	67	44	41	38	35	39	40
Canned fruits and vegetables	72	21	15	16	20	24	32
Meat	76	32	25	19	17	14	18
Sausage products	90	54	52	44	41	42	52
Animal fat	76	35	29	27	26	24	25
Unskimmed milk products	76	24	24	24	26	28	32

Source: RF Goskomstat

In the situation, where the trend towards decrease in real accumulation persists, the growth in production is only temporary, and, as a rule, is determined by more active use of operating capacities and more intensive activation of reserve capacities at the expense of modernization and reconstruction of accumulated potential. The average workload on oil processing capacities made 68 per cent in year 2000, while the economically efficient level should be from 80 to 85 per cent. At the same time, their structure is characterized by a low specific weight of secondary processes of deep oil processing and extremely depreciated operating capacities. The high rate of workload on operating capacities in aluminum industry (99.3 per cent) mainly resulted from tolling operations related to processing of domestic and imported raw materials. The rate of operation of production capacities in chemistry and petro-chemistry made 53 per cent as compared with 43 per cent in 1998 due to the favorable situation on the external market and increasing demand for these products on the part of domestic consumers. In me-

chanical engineering and metal working the positive trends were supported by the processes of optimization of production capacities, improvement of quality characteristics of machinery and equipment, and introduction of modern technologies in the production.

The ratio between depreciation indicators and the age structure of fixed assets is a clear illustration that modernization shall be urgently intensified. Mechanical engineering is lagging behind other industries in terms of capacity utilization. A prolonged investment pause resulted in the conservation of mechanical engineering structure, and in the situation of transition to the model of economic growth basing on investment the lack of equipment and machinery emerged as a factor constraining expansion of production in the economy. The situation is aggravated by the fact that mechanical engineering being inadequate to market quality requirements is unable to achieve a level of sales necessary to generate funds sufficient for a massive investment in modernization of its capacities.

B. Investment Expenditures: Problems of Financing

The comparative analysis of GDP dynamics by components of final demand demonstrates that investment expenditures are more volatile than consumer expenditures, therefore, the analysis of the dynamics and structure of change in these expenditures facilitates understanding of trends developing in economic activity. In the course of analysis of dynamics of investment in the Russia's economy, it is necessary to follow the nature of change in the gross accumulation in GDP. It shall be reminded that even in the pre-reform period the Russian economy demonstrated a stable trend towards decrease in net investment, while depreciation was the dominating source of financing for investment. A sharp contraction of spare cash resources provoked the practice to use depreciation funds for the replenishment of tangible floating assets and consumption, in particular, for remuneration of hired labor. Correspondingly, it resulted in formation of negative trends in the reproduction of fixed capital. On the average, over the last decade investment expenditures made about 16.0 per cent of GDP. While the slump in business activity in 1992 through 1998 accounted for the period of decreasing share of investment in fixed assets in GDP, the economic growth observed in 1999 through 2001 based on the redistribution of resources in favor of the investment component. A specific feature of the recovery of the Russia's economy was the increasing efficiency of the use of gross accumulation in fixed capita. Economic growth stimulated processes of transformation of the resources of accumulation in investment. The share of investment in fixed assets in GDP

increased to 17.6 per cent in year 2000 as compared with 14.1 per cent registered in 1998.

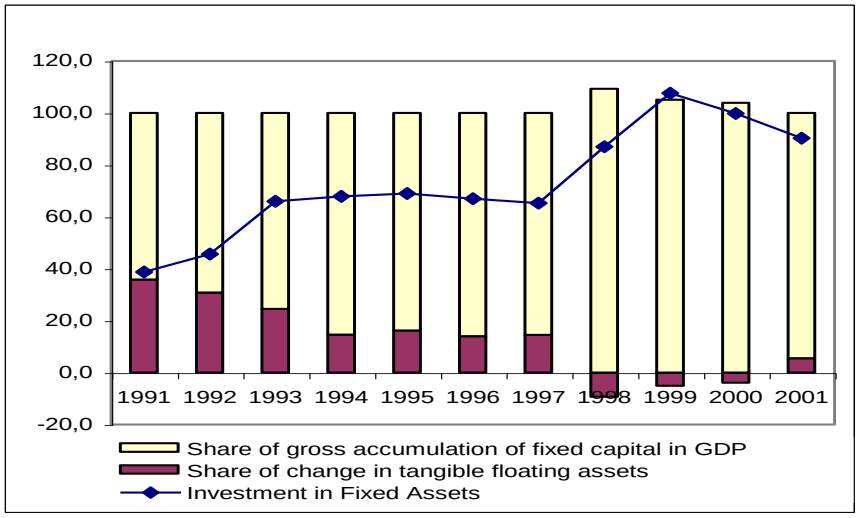

Figure 1.11. Structure of Gross Accumulation in GDP in 1992 through 2001, in % of the total

A major factor behind the transformational shifts in the formation of investment across the sources of financing was a rather sharp withdrawal of the state from the capital market. In year 2000, the share of investment of state-owned enterprises in the total amount of investment expenditures registered in the national economy decreased by 17 percentage points in comparison with the level of 1993 and made 23.1 per cent. Almost 3/5 of investment expenditures registered in 1995 were generated by enterprises in private or joint stock ownership. The shift in favor of non-state sector of the economy was accompanied by the decrease in the share of state investment expenditures in budgets of all levels. In 1993 through 2000, the share of budget expenditures for investment in fixed assets decreased across all levels of the budgetary system from 5.4 per cent of GDP to 3.0 per cent. While in 1993 budget funds accounted for 34.3 per cent of the total investment in fixed assets, in year 2000 their share made only 21.2 per cent. It shall be stressed that the contraction of budget financing was accompanied by redistribution of the functional participation of budgets of all levels in the financing of investment programs. While in 1992 the federal budget accounted for 3/5

of the structure of budgetary sources of financing, in year 2000 its share decreased to ¼. In year 2000, state capital investment financed from the federal budget made 0.41 per cent of GDP, or 2.2 per cent of the total investment in fixed assets. The larger part of state capital investment was allocated for the settlement of urgent federal problems of social and economic importance that had no alternative sources of financing.

A specific feature over the last three years was that investment activity of enterprises intensified at the background of continuing decline in the budget financing of investment. Own funds of enterprises remain the major source of financing of investment in fixed assets. The outpacing growth in investment in fixed assets observed in 1999 through 2001 was accompanied by increasing profitability of the economy. In year 2000, the profitability of production in the national economy increased to 18.9 per cent, while the profitability of assets grew to 7.8 per cent. The improving financial standing of enterprises and growth in effective demand were among the factors stimulating an increase in the share of accumulation fund in the sources of financing of investment in fixed assets. While in 1996 through 1998 profits made less than ¼ of own funds of enterprises used for investment purposes, in year 2000 their share grew to 50 per cent.

Table 1.23

Profitability of Production across Key Sectors of Economy and Industries, in %

	1992	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
Economy, total	29,3	26,3	14,5	15,8	4,8	6,3	8,1	18,5	18,9
Industry	38,3	32	19,5	20,1	9,2	9	12,7	25,5	24,7
Including:									
Power engineering	24	25,5	18,6	17,5	14,3	14,1	12	13,7	13,5
Fuel industry	31,9	19	9,4	20,8	11,7	13,1	15,7	44,5	51,1
Including:									
Oil extraction	31,3	15,1	4,2	21,2	14,9	14,7	17,6	57,9	66,7
Oil processing	33,5	28,6	21,2	26,1	10,8	9,4	12,5	32,1	34,5
Coal industry	26,8	4,2	-4,2	8	1,6	2,3	0,4	0,7	3,2
Ferrous metallurgy	53,7	48,5	20	22,1	5	3,6	10,3	28,2	25,6
Non-ferrous metallurgy	52,3	43,6	33,2	32,7	10,4	11,4	33	57,4	51,6
Chemistry	59,7	38,5	25,9	20	6,1	4,3	9,7	22,3	17
Mechanical engineering	47	43,6	27,3	20,9	10,9	8	10	17,4	14,1

	1992	1993	1994	1995	1996	1997	1998	1999	2000
Lumber and wood working industry	37,6	32,8	16,1	21,8	-5,5	-5,5	5	23,9	16,5
Construction materials	26,7	31,3	19,9	17,9	8	5,6	5,2	8,6	9
Light industry	40,9	36,2	18,9	9,3	1	-1,5	0,9	9,5	7,2
Food industry	27	23,5	16,6	16,3	5,5	8,4	12,8	13	10,1
Medical industry	66,5	40,8	62,7	35,8	25,2	22,7	29,3	30,2	26,4
Agriculture	37,5	31,6	-10	-3,1	-22,2	-20,9	-24,7	8,2	6,3
Construction	20	27,8	23,2	23,3	11,6	11,2	6,8	9,2	9,7
Transport	5,7	15,4	10,3	15,1	2,9	6,8	10,6	27,3	17,2
Communications	20,3	28,1	26,2	39,2	27,3	27,4	29,4	33,6	30,7
Trade and public catering	23,3	15,6	2	9,8	0,5	2,7	2,6	4,9	18,5
Wholesale trade (goods)	18,4	15,6	6	25,1	2,8	2,3	4,9	5,8	3,5
Housing and public utilities	1,4	-4,3	-6,6	-17,5	-10,7	-12,1	-13,3	-16,2	-17,6

Source: RF Goskomstat

In this connection it shall be noted that in the situation of economic growth the structure of sources of formation of investment funds of enterprises has changed. Over last years, the practices of misuse of depreciation funds for consumption became widespread, what facilitated the development of negative trends in the simple reproduction of fixed assets. Besides, the systematic growth of expenditures for capital repairs also negatively affected the reproduction of fixed assets. The calculations concerning the period from 1995 to 2000 demonstrate that the average expenditures for capital repairs made about 20 per cent of the investment in fixed assets. The high share of capital repairs confirms the argument that the investment process is oriented towards cheap and short term methods of renewal of production capacities at the expense of costs. As a result, the demand is oriented to the components of technical equipment, which it is easy to replace without attracting long term investment in fixed assets, i.e. at the expense of working capital, what is the specific and distinctive feature of the investment process in the Russia's economy. Productive changes in the economy and recovery of economic growth will require a transformation of the investing mechanism.

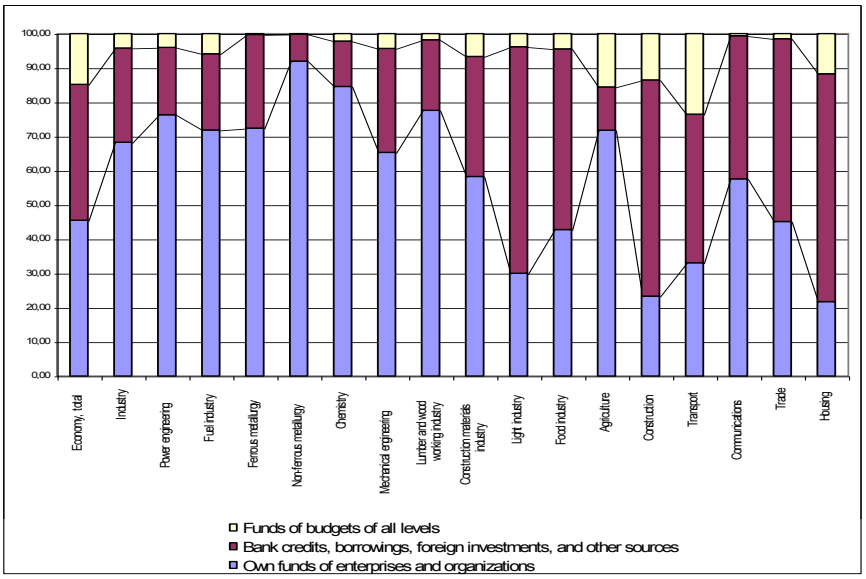

Figure 1.12. Structure of Sources of Financing of Investment in Fixed Assets across Sectors of Economy and Industries in 1999, in % of the total

As profitability grew, enterprises became more active in implementation of investment programs. Although own funds of enterprises still dominate as a source of financing of investment, in the structure of sources of financing of investment there is observed a gradual increase in the share of borrowings. The ratio between own and borrowed funds varies rather significantly across the sectors of the economy and industries. In the economy on the whole, less than half of the investment in fixed assets is financed at the expense of internal funds of enterprises. However, own funds form ¾ of investment expenditures for reproduction of fixed assets in such profitable industries as fuel, energy, and metallurgical complexes. Profitability of production in these sectors significantly affects the overall level of this indicator in the national economy and industry. They account for 1/3 of gross profits in the economy at large and 3/5 of profits in industry. High concentration of profits in the export-oriented sector has a significant impact on the character of investment activities in the processing sector. Since the profitability rate in mechanical engineering and construction materials industry is

considerably lower than industrial averages their potential for financing investment programs at the expense of own funds are limited. In the investment complex at large, about 1/3 of expenditures for reproduction of fixed capital are financed at the expense of borrowings. Taking into account the high price of credit resources and the irregularity of inflow of budgetary funds allocated for the financing of investment expenditures, it becomes more easy to understand why the trend towards a decrease in the share of investment in this complex in the total amount of investment in the national economy persisted over last years. The same factors are behind the low investment activity in the consumer sector of the economy. While food industry due to the high competitiveness of domestic products on the internal market and fast rate of recoupment of investment projects expands borrowing, in light industry the low efficiency of production prevents the attraction of investment in spite of the high demand for credit resources.

The crediting of investment projects in the real sector of the economy is checked by high levels of risks, non-transparency of financial operations of recipients and security mechanisms, as well as insufficient legal protection of such operations. Enterprises prefer to attract external investment resources via mutual crediting. This type of investment financing accounts for about 11 per cent of the total amount of investment expenditures in the national economy.

Table 1.24

Structure of Investment in Fixed Assets across Sources of Financing, in % of the total

	1992	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
Investment in fixed assets, total	100	100	100	100	100	100	100	100	100
Including, as broken down by the sources of financing:									
Own funds	69,3	57,4	64,2	49	52,3	60,8	53,2	52,4	46,1
Of which:									
Profits (accumulation fund)				20,9	15	13,2	13,2	15,9	23,4
Borrowings	30,7	42,6	35,8	51	47,7	39,2	46,8	47,6	53,9
Of which:									
Budgetary funds	26,9	34,3	26	21,8	20,1	20,7	19,1	17	21,2
Including:									
Federal budget	16,6	19,2	15,4	10,1	9,9	10,2	6,5	6,4	5,8
Budgets of RF subjects	10,3	15,1	10,6	10,3	10,2	10,5	12,6	10,6	14,4

Source: RF Goskomstat

Bank credits play a very insignificant role in the financing of the Russia's economy. At given high risks the sector of credit and banking services is very cautious with regard to the projects related to the investment in the real sector of the economy. The literature on the subject often refers to the specifics of formation of the system of credit organizations, in particular, the absence of investment banks per se, as a factor behind the unwillingness of banks to invest in the real sector. Operations on the short term market dominate the sector of credit organizations. The share of long term investment is below 5.0 per cent.

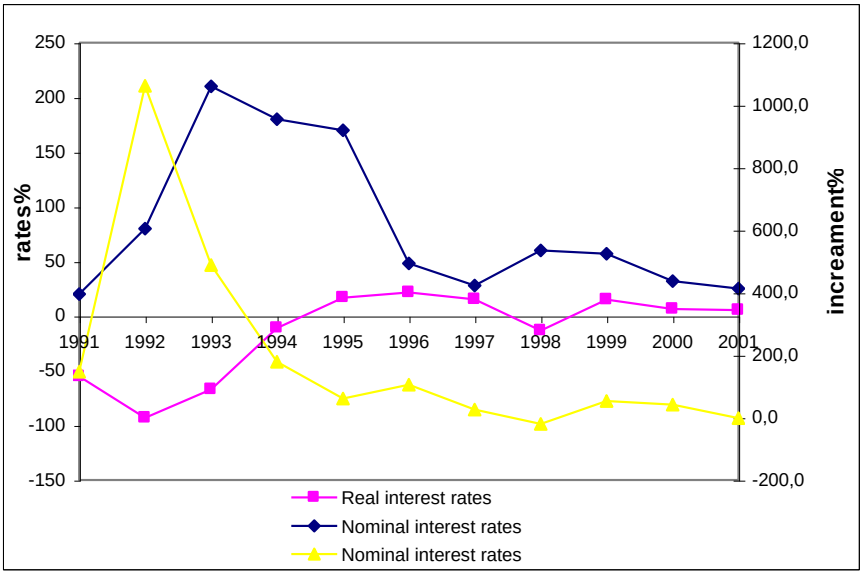

Figure 1.13. Real and Nominal Interest Rates, and Increment in Credit Investment in the Economy in 1992 through 2001, in %

The decrease in discount rate from 170 per cent in 1995 to 25 per cent in 2001 did not result in increase in the level of long term financing of the real sector of the economy. In 1995 through the first half of 1998, high profitability of operations on financial markets was a powerful factor behind the outflow of financial resources from the real sector, in spite of systematic reduction of interest rates. After the August crisis of 1998 the almost twofold increase in discount rates (60 to 55 per cent as compared to 28 per cent in 1997) practically cut the real sector off the market of credit resources. In the situation of high inflation

rates observed inn 1999, the real interest rate became negative, what, due to increasing credit risks, prevented the redistribution of credit resources in favor of production.

Gradually decelerating inflation rates resulted in the fact that over two next years credits of commercial banks became significantly cheaper. However, no significant demand for bank credits on the part of the real sector was registered. In the structure of sources of financing of investment in fixed assets, the share of bank credits made 2.9 per cent in year 2000 as compared with 4.2 per cent in 1999 and 4.5 per cent in 1997. The persistent high risks also determined the trend towards a decrease in the share of foreign investment in fixed assets in the total amount of investment in the Russia's economy from 6.6 per cent in 1999 to 4.6 per cent in year 2000.

Table 1.25

Specific Weight of Long Term Financial Investment in the Total Amount of Financial Investment, in %

	1998	1999	2000
Power engineering	43,1	18,6	30,2
Fuel industry	37,3	39,8	29,9
Oil extracting industry	39,3	41,0	31,4
Oil processing industry	16,1	23,8	16,4
Natural gas industry	58,0	57,4	17,8
Coal industry	51,1	27,1	34,1
Ferrous metallurgy	23,0	6,3	5,6
Non-ferrous metallurgy	52,3	30,5	30,1
Chemistry and petro-chemistry	44,8	30,0	18,4
Mechanical engineering and metal working	85,6	36,4	22,3
Construction materials industry	61,9	34,2	50,8
Light industry	83,7	36,6	43,2
Food industry	34,1	7,2	24,8

Source: RF Goskomstat

Since own funds of enterprises and organizations still dominate the structure of sources of financing, it would be prematurely to define the situation existing in 1999 through 2000 as an "investment boom."

First, in spite of the stable growth of gross national accumulation related to the favorable external economic situation, the mechanisms which could transform it in investment in the real sector practically do not work. A comparison of dynamics of savings, gross accumulation in fixed capital, and investment in the real sector reveals that negative dynamics persist in net accumulation. Reproduction

of fixed capital is still financed at the expense of depreciation funds. At the same time, it is necessary to stress that the use of these funds for investment purposes ensures only simple reproduction, since the outpacing growth in prices of investment goods and construction works is a factor restricting the renewal of production capacities.

Second, the lack of investment financial institutions, underdevelopment of the stock market, instability of the legal environment renders the process of attraction of borrowings and bank credits more difficult. In essence, the economy failed to form a mechanism ensuring inter-sectoral flows of capital, what makes investment activities more difficult at the level of enterprises, sectors, and regions. In the situation of economic growth it became apparent that investment management is not coordinated with dynamic processes of restructuring of the Russia's economy.

And, third, as experience shows, the investment-related decision-making requires more caution and rationalization of investment flows at the given reserves of savings. The lack of a long term development strategy and undefined priorities are a factor preventing motivation for long term investment.

* * *

The above analysis of investment processes underway in the Russia's economy and regions demonstrated that the dynamics of investment were, to a considerable extent, determined by the general progress of transformation processes, the rate and profoundness of economic and institutional reforms in individual sectors and RF subjects. On the whole, four sub-periods characterized by different qualitative and quantitative changes in the real sector and investment may be singled out in the period under consideration (1992 – 2001).

At the first stage (1992 – 1995), there were observed a front decline of all types of investment coinciding with a decline in output across all industries and sectors of the economy. At this time, average rates of decline in investment in real terms were about twice higher than average rates of decline in real output.

At the second stage (1996 – 1997), the decline in investment in the real sector persisted, while output somewhat stabilized. At the same time, since 1996 the inflow of foreign investment in Russia, including direct investment, increased. It is worth note that in this period both internal (the largest commercial banks and financial and industrial groups), and external (foreign portfolio investors) sources accounted for a sharp growth in the amount of investment in financial assets (state and corporate securities).

After the financial crisis of 1998, the Ruble devaluation resulted in an import-substituting growth of the Russia's economy; however, no massive increase in investment activity had been observed before the end of 1999. In fact, this subperiod was the transition from the transformational slump in the investment process to the growth in investment and output.

The fourth stage (since 2000) is characterized by a rapid growth in real output and investment, at the same time; the rates of increase in investment outpace the rates of growth in industrial output and GDP.

The investment processes taking place in 1992 through 2001 considerably differ across economic sectors and RF regions. This difference is much more pronounced than that usually observed in developed economies. The differences may be explained by both starting pre-reform levels of development of individual industries and regional specialization in the framework of the Soviet planned economy, and geographical and sectoral structures of foreign investment. The latter were primarily determined by the level of development of market relations in a sector or a RF subject, institutional and political factors.

Chapter 2. Econometric Analysis of Investments in the Russian Regions

The chapter is devoted to an econometric analysis of factors that influence the investment processes taking place in the regions of the Russian Federation. In particular, we studied the correlation between a set of variables describing some aspects of the investment processes across the Russian territorial entities and a variety of economic variables that characterize the economic situation in a region and make a potential impact on a share and structure of investments in the region. The analysis has been carried out on the basis of the regional data made public by the State Committee for Statistics of the Russian Federation.

2.1. Registering Fixed Assets and Investment in Fixed Capital: A Methodology

The information base of the analysis of investment and reproduction of fixed capita are the following forms of statistical reporting:

- Information on commissioning of objects, fixed assets, and use of capital investment, form No. 2-ks (annual);
- Information on individual sources of financing of capital investment, No. 3-ks (annual);
- Information on operations of joint ventures and foreign enterprises, No. 1-ves;;
- Information on availability and movement of fixed assets (capital) and other non-financial assets, form No. 11 (annual);
- Record of key indicators of financial operations of enterprises (organizations), form No. 10-f..
- Results of a snap-shot survey of economic agents across all sectors of the economy on the composition of newly commissioned fixed assets.

The data of capital transfers calculation tables were used as benchmarks. SNA defines gross capital accumulation as residents investing in fixed assets to use them in production aimed to bring returns in the future. Gross capital accumulation is determined at gross value without taking into account depreciation.

Calculation of gross capital accumulation is carried out separately for each element:

- investment in fixed assets according to the SNA methodology;

- costs of capital repairs of fixed assets.

According to the generally accepted practices, investment is defined as any placement of resources. Investing activity includes all types of investment-related operations. According to the International Accounting Standards, investing activity embraces purchase and sale of long-term assets and other investments not related to cash equivalents.

The structure of investments is rather complicated. Investments may be broken down by types: financial investment and investment in non-financial assets; by source: own and borrowed investment; by ownership forms: domestic and foreign investments.

Financial investment may be defined as the placement of money, material and other values in securities issued by other legal persons, interest-bearing government and municipal bonds, authorized (equity) capitals of other legal persons situated in the national territory, capitals of enterprises situated abroad, etc, and also loans legal persons grant to other legal persons.

Investment in non-financial assets may be defined as investment in fixed assets, capital repairs costs, investment in purchase of land and natural resources, investment in non-tangible assets (patents, licenses, software, R&D projects, etc.), investment in increase in tangible floating assets.

Sources of financing of the investment process are:

Own funds:

- Profits remaining at the disposal of organizations;
- Amortization (as a possible source of investment);
- Savings;
- Payments on the part of insurance institutions made to compensate for damanges, etc., and other types of assets (fixed assets, land plots, industrial property, etc.);

Outside funds:

- bank credits, profits related to equity sales, charity and other contributions, non-repayable resources allotted by higher holding and joint stock companies, industrial and financial groups;
- different types of borrowings, including repayable state credits, credits granted by foreign investors, funded loans, credits extended by institutional investors: investment funds and companies, insurance societies, bills, and other funds;
- funds granted from the federal budget and budgets of RF subjects;

- resources of extra-budgetary funds;
- foreign investment in the form of financial or other participation in the authorized capital of joint ventures, as well as in the form of direct investment (in money form) of international organizations and financial institutions, states, enterprises and organizations of different forms of ownership, and individuals.

Investment in fixed assets is defined as the total amount of outlays for purchase, production, and reproduction of fixed assets. Basing on the structure and specifics of fixed assets the investment in fixed capital may be defined as outlays for construction, installation, design and survey works, purchase of equipment, tools, and inventory, breeding stock and draught animals, planting and rising of perennial fruits and berries, timber tracts, and other costs included in the investment in fixed assets.

Intangible assets comprise patents, licenses, rights to use land plots, natural resources, copyrights, organizational expenses, trademarks, software, know how, etc. The legislation and other normative acts determine the composition of intangible assets and the procedures, according to which objects are included in intangible assets. The data is taken into account basing on invoices (paid and accepted for payment).

Investment in purchase of land plots and natural resources are determined basing on purchase costs as stated in documents issued by state land resource and management agencies in accordance with invoices (paid and accepted for payment).

Investment in fixed assets as defined by SNA methodology differ from investment in fixed assets as per capital construction statistics as concerns the following:

- outlays not increasing the value of fixed assets (deducted from other capital works and outlays);
- value of cheap and non-durable items and spare parts purchased at the expense of outlays for capital construction (deducted from the value of purchased machinery, equipment, tools and inventories);
- the volume of individual residential construction (added to the volume of construction without design and survey works);
- value of non-installed equipment and equipment purchased on credit (added to the value of purchased machinery, equipment, tools and inventories).

Besides, the amount of investment in fixed capital taken into account by the construction statistics is diminished by the amount of VAT in the investment for

purchase of machinery, equipment, tools and inventories in form No. 2-ks (annual). This adjustment is necessary, since VAT related to purchased machinery, equipment, tools and inventories is deductible and shall be gradually written off over six months (since January 1, 1996 it shall be written off at the moment of registration).

Investment in the increase of tangible floating assets is defined as the outlays arising in the process of intake and retirement of floating assets and are determined as the balance between the intake and withdrawal of inventories. Changes in tangible floating assets occur similarly to other assets in the process of intake and retirement of inventories. According to SNA principles, these changes are defined as a balance of incoming and withdrawn stocks. The inventories shall be evaluated at market prices existing at the moment of intake or withdrawal. The stocks of purchased tangible floating assets are evaluated at purchasing prices. The stocks of own tangible floating assets are evaluated at basis prices.

However, in practical terms it is rather difficult to obtain information on all intakes and withdrawals of products over the reporting period, therefore, the change in stocks is calculated as the balance between the value of stocks at the beginning and the end of the period basing on the accounting records of enterprises or statistical reporting (form No. 10-f) "Report on key indicators of financial operations of enterprises (organizations)." In this case, the amount of change in stocks includes the change in their value resulting from the change in prices occurring over the period the assets were stocked. In the periods of high inflation rates it may seriously distort the reporting on real changes in inventories. For instance, accounts may show increase in stocks even in case their volume diminished. In order to neutralize the effect of price changes on the changes in the tangible floating assets, there is used a special method of calculating inventories at the beginning and the end of reporting period at average prices of the reporting period. Taking into account the uneven process of change in stocks and prices over the year, it is feasible to apply this calculation on the quarterly basis and determine the annual change as the sum of quarterly data.

The greatest difficulty in the calculation of gross fixed capital accumulation is presented by delimiting investment in fixed assets and outlays for capital repairs. The consumption of fixed capital is the decrease in the value of fixed assets resulting from normal wear and tear and foreseen obsolescence. This indicator is calculated as the aggregate costs of complete restoration and capital repairs evaluated at average annual value of fixed assets basing on average annual prices. The complete restoration cost is calculated according to actual proportions

among sectors of the economy in the fixed assets balance. Capital repair costs are evaluated at 55 per cent of the complete restoration cost.

Due to the fact that at the moment accounting methods do not single out the indicator of capital repairs from the cost of all repairs (capital and current), it is difficult to evaluate capital repairs costs. The data obtained in the course of statistical survey were checked by the method of flows of goods across sectors related to capital formation (construction and mechanical engineering). Accordingly, capital repairs of fixed assets is subdivided in capital repairs of equipment, machinery, transportation means, and buildings. The gross accumulation of fixed assets takes into account capital repairs only to the extent of considerable improvement of characteristics of fixed assets, increase in operating time, or complete restoration. The total amount of outlays for capital repairs of fixed assets is taken from the capital account.

In terms of technology, the structure of investment in fixed assets comprises the outlays for the following works and costs: construction works; installation works, equipment (both installable and not installable), included in construction cost estimates; tools and inventories included in construction cost estimates; machinery and equipment not included in construction cost estimates; other capital works and costs.

In terms of objectives of reproduction of fixed capital, the investment in fixed assets comprises the investment for new construction, expansion, reconstruction, technological modernization of existing enterprises and maintenance of existing capacities.

Investment in fixed assets is attributed to respective objectives within the reproduction structure in accordance with the type of construction. New construction is carried out at new construction sites and is aimed to create new production capacities to be included in a separate balance sheet after the commissioning. The expansion of existing enterprises includes the construction of additional capacities at the operating enterprise, construction of new and expansion of existing sections and facilities of productive, auxiliary, and utility nature located within the territory of the existing enterprises or adjacent sites and aimed to create additional or new production capacities. The expansion of existing enterprises requires less time and outlays to expand its production capacities in comparison with the new construction of similar capacities, while at the same time improving their technological level and technical and economic indicators on the whole.

The reconstruction of operating enterprises comprises the reconstruction of existing sections and productive, auxiliary and utility objects aimed to expand production capacities, improve quality and assortment of output without increas-

es in the numbers of employees, while improving working conditions and protection of the environment. Reconstruction is aimed to expand production capacities due to elimination of disproportion of technological units; introduction of technologies involving less or no waste and flexible production lines; decrease in the number of employees; increase in labor productivity; improvement of input – output ratio and decrease in production costs; improvement of capital productivity and other technical and economic indicators of existing enterprises.

The technological modernization of existing enterprises is aimed to intensify production, increase in production capacity and output, while improving labor productivity and decreasing the number of employees, improving input – output ratio and decreasing production costs, lessening consumption of tangible, fuel, and energy resources, improving other technical and economic indicators of existing enterprises.

These factors are primarily important in extracting industries (fuel sectors of the industry, mining enterprises of ferrous and non-ferrous metallurgy, chemistry, industry of construction materials, timber industry), which are characterized by permanent changes in the process of productive activities.

The maintenance of capacities of existing enterprises comprise measures related to the constant reacquisition of fixed assets consumed in the process of production. For instance, for extracting industries there are included the following works: preparation of new levels of mines and sections of open pits without increasing project capacity of enterprises on the whole; new mining at existing levels; stripping and preparation of mineral deposits for extraction; measures aimed to resume the extraction of resources; construction of certain buildings and utilities related to the maintenance of current level of extraction of mineral resources.

The types of investment comprise dwellings, construction of buildings, machinery and equipment.

Dwellings are defined as residential housing (general-purpose, hostels, living quarters of boarding schools, orphanages, various nursing homes), and other types of housing.

Investment in construction of buildings include the outlays for construction of buildings (except dwellings) and utilities defined as the sum of completed construction works and other related capital outlays included in the inventory value of the object at the moment of commissioning (design and survey works, works related to the allotment of land plots for construction, etc.).

At the same time, construction expenditures include outlays for installation of utility systems necessary to use buildings.

Investment in purchase of machinery, equipment, tools, and inventories comprise outlays for purchase of machinery, means of transportation, equipment, and expenditures for the installing energy equipment, hoisting and conveying machinery, pumping and compressing equipment in place. Costs of equipment, tools, and inventories are reflected in actual prices.

For statistical purposes, indicators of investment in fixed capital, commissioning of fixed assets, and uncompleted construction are registered at current prices of respective years. It is of paramount importance to have time series in comparable prices for studies of investment processes. The data in comparable prices permit to analyze the dynamics of investment and to eliminate price factor in the course of determining the efficiency of investment in fixed assets in terms of the final results of construction.

Form No. 2-ks was used as the database for the analysis of time series of price indicators at the federal and regional levels. Price indices related to the investment in fixed assets are aggregate indicators reflecting the dynamics of prices across all their components (construction works, machinery, and equipment, other capital works and outlays). The calculation of price indices was carried out in accordance with the Manual on the methodology of price indices for capital construction approved by RF Goskomstat on May 21, 1997 (Resolution No. 30). These recommendations determine the procedures of conversion of key value indicators at the federal and regional levels into comparable prices and were used to build time series.

In order to convert amounts of investment in fixed assets into comparable (basis) prices there was employed the chain method to determine coefficients of conversion of investment proceeding from respective annual actual prices of reporting year as compared to the preceding year to be finally converted in the comparable prices. The actual prices of 1996 were used as comparable prices. In order to calculate the amount of investment in fixed assets over a number of preceding year in comparable prices there is determined the coefficient of conversion of investment from current prices into prices of 1996.

The coefficient of conversion of investment over a number of preceding years into comparable (basis) prices of 1996 is determined by using the chain method to multiply price indices of respective years.

The coefficient of conversion of investment in comparable (basis) prices of 1996 for following years is calculated by using the chain method to divide the coefficient of conversion for the basis year by the price index of the following year to the preceding year. Further, the investment in comparable prices is deter-

mined by multiplying the investment in fixed assets in current prices by the obtained coefficient of conversion.

In order to convert the amount of newly commissioned fixed assets in actual (mixed) prices into comparable (basis) prices, it is necessary to calculate the coefficient of conversion of current (of respective years) prices related to the new commissioning of fixed assets into prices of 1996.

The determination of the coefficient of conversion of newly commissioned fixed assets is based on coefficients of conversion of investment adjusted for a coefficient of correction.

Coefficients of correction determined basing on the model of the distributed construction lag have the following values p_t

Years	Coefficient of correction
1991.	0,66
1992	0,83
1993	0,65
1994	0,85
1995.	1,0
1996.	1,0
1997	1,0

The values of these coefficients for regions where the specific weight of investment in housing construction is significantly above the average national level are set at 0.02 to 0.05 points above the indicated coefficients due to the fact that reevaluation of fixed assets carried out before 1995 did not embrace residential housing and, accordingly, uncompleted construction.

The conversion of the amount of newly commissioned fixed assets into comparable (basis) prices is carried out by multiplying the amount of newly commissioned fixed assets measured in actual (mixed) prices by the coefficient of conversion of the amount of newly commissioned fixed assets from actual to basis prices.

The calculations were analyzed and evaluated by experts in accordance with the general situation in respective regions. For these purposes there were used ratio indicators, i.e. rates of increase (decrease) and ratios between indicators describing the process of reproduction of fixed assets and investing activities.

The analysis of reproduction of fixed assets was carried out in terms and the framework of the fixed assets balance. The fixed assets balance is a statistical table whose data characterize the amount, structure, and reproduction of fixed assets in the economy on the whole, as well as across sectors, forms of ownership, and regions. The indicators of depreciation, renewal, mortality, and consumption of fixed assets are calculated on the basis of this balance.

Statistical agencies at the federal and regional levels calculate the fixed assets balance basing on the gross book and net (less wear and tear) value. The fixed assets balance for the reporting year is calculated at prices registered before the reevaluation as on January 1 of the next year.

Evaluation of fixed assets at the balance sheet value is carried out at the moment they are registered in the accounting balance. Therefore, the balance sheet value is a mixed evaluation of fixed assets, since some objects are entered in the balance sheets at their physical value determined at the moment of the last evaluation, while fixed assets commissioned over the next period are registered at their original (acquisition) cost.

Original cost is defined as the actual cost of commissioning of fixed assets at prices current for the period of construction or acquisition of these objects. The physical value is determined by outlays for reproduction of new fixed assets and is taken into account in the process of their evaluation proceeding from actual conditions of the reproduction of fixed assets: contract prices and estimate costs for construction and installation works, wholesale prices of construction materials, fuel, energy, machinery, equipment, inventories, etc., transportation tariffs, etc.

The balance registers the gross book value of the volume of fixed assets, which remains unchanged over the whole time of their operation. The balance reflects the fixed assets at the beginning of the year, commissioning of new assets, acquisitions from other sources, liquidation, withdrawal due to other causes, and fixed assets at the end of the year, and also the average annual value of fixed assets.

Net original cost comprises the value of fixed assets at prices taken into account at the time of their registration in the balance and the depreciation at the time of evaluation. It equals the gross original book value of fixed assets less the value of accumulated depreciation according to the accounting records. The net original cost changes as wear and tear of fixed assets progress and also in relation to their expansion, modernization, and reconstruction. In the course of reevaluation of fixed assets the net original cost is replaced with net physical cost. The balance in terms of net physical cost characterizes the value aspect of reproduction of fixed assets. Apart from indicators registered in the balance at their gross book value (although taking into account their depreciation), it also contains an indicator of annual wear and tear of all fixed assets. The balance also includes the data on annual replacement cost depreciation of fixed assets and completed capital repairs as a memorandum item.

In the situation characterized by inflationary growth of prices of goods produced by sectors related to capital formation, where fixed assets are registered at different values and it becomes impossible to directly compare respective indicators, it is feasible to convert the data of the fixed assets balance made in terms of mixed evaluation at the balance sheet values into comparable prices.

For the purposes of comparability of fixed assets and reflection of their real dynamics, the annual indicators related to fixed assets (annual value, coefficients of renewal and mortality, service time characteristics) over a number of years are converted in constant prices of a basis year. Until 1991, prices of 1973 (determined in the result of the reevaluation of fixed assets carried out in 1972 and 1973) were used as constant prices (at the moment for these purposes there are used prices of 1990). The calculations are based on the results of reevaluations of fixed assets determining the ratio between prices of the reporting year and the physical value of fixed assets registered in the basis year.

The following information is used to calculate fixed assets at constant (basis) prices over a number of years:

- Price indices across mechanical engineering products and sectors, as well as indicators related to the construction materials industry;
- Price indices of capital investment in general, and construction and installation works and other works;
- Average standard coefficients elaborated on the basis of aforementioned indices pertaining to types and groups of fixed assets and periods of their acquisition;
- Final (resulting) statistical indices of reevaluation across types of fixed assets and sectors of the economy and industry;
- Indices of changes in market prices of fixed assets basing on the information of their market value.

Fixed assets may be evaluated at comparable prices in two ways: index and balance methods.

The index method determines aggregate indices of changes in prices and tariffs over the period from the basis to reporting year, according to which fixed assets of the reporting year are reevaluated.

According to the balance method the value of fixed assets evaluated at their physical value at the basis date is decreased by the amount of assets withdrawn (liquidated and due to other causes) prior to the reporting year and increased by the value of fixed assets acquired over this period (newly commissioned and acquired from other sources). At the same time, all assets are converted in prices of the basis year according to respective price indices.

The correctness of the results of conversion of the outlays for the commissioning of fixed assets may be analyzed by comparing the data on fixed assets and their movement obtained in the course of making up balances of Russia's fixed assets at comparable prices of the basis year and balances of national and regional fixed assets at average annual prices of the reporting year with the indicators of conversion in comparable prices: in case the trends are similar, the results of conversion may be regarded as satisfactory.

2.2. Data

In our study, we are going to consider 16 indices characterizing the investment activities in the regions, see Table 3.1. The indices can be provisionally divided into seven groups: 1) the general level of the investment activity (variables 1 and 2); 2) allocation of the investments across a variety of property forms (variables 3 and 4); 3) distribution of the investments across the investment mediums (variables 5, 6 and 7); 4) governmental investments (variable 8); 5) investments from own funds (variables 9 and 10); 6) investments from outside funds (variables 11, 12, 13 and 14) and 7) foreign investments (variables 15 and 16).

Table 2.1.

№	Index	Designation	Unit of measurement
1	Fixed asset investments	INV	% of the GRP
2	Index of a physical amount of fixed asset investments	INVR	% against the prev.year
3	Percentage of fixed asset investments in state-owned enterprises	INVSE	%
4	Percentage of fixed asset investments in the joint venture enterprises involving the foreign capital	INVJV	%
5	Percentage of investments in housing	HOUS	% *
6	Percentage of investments in buildings, other than apartment houses, and facilities	BUILD	% *
7	Percentage of investments in machines, equipment, instruments and implements	EQUIP	% *
8	Percentage of fixed asset investments across the sources funded from budget money, such as the federal budget, budgets of the Russian Federation territorial entities and local budgets	INVFRB	%
9	Percentage of fixed asset investments financed from own funds	INVOW	%
10	Percentage of fixed asset investments financed from	INVPRF	%

№	Index	Designation	Unit of measure-ment
	the profits remaining at the enterprise (the accumulation fund)		
11	Percentage of investments in fixed assets financed from the outside funds	INVBOR	%
12	Percentage of bank loans as part of the outside funds used to finance the investments in the fixed assets	INVL	%
13	Percentage of budget money as part of the outside funds used to finance investments in fixed assets	INVB	%
14	Percentage of capital from stock emission as part of the outside funds used to finance the investments in fixed assets	INVST	%
15	Foreign investments in the economy of the Russian Federation	INVF	% of the GRP
16	Direct foreign investments in the economy of the Russian Federation	FDI	% of the GRP

Note: * Data as of 1999 only.

We have picked up 60 indices that characterize various aspects of regional economy as explanatory variables, see Table 3.2. In particular, the variables under consideration include general indices for a region, some indicators of the living standard, a number of variables for a structure of the region's economy and regional fixed assets, financial results of the economic activity, innovation activity, indices for a budget sphere, the structure of sources of the investment funds, foreign trade activity of a region, indices for foreign investments and joint venture operations involving the foreign capital. A number of factors and, in particular, some characteristics of the investment activity can be interpreted in various regressions both as explanatory and explainable variables.

Table 2.2.

№	Index	Designation	Unit of measurement
1	Change in the average annual employed labor force in the economy	LAB	% against the prev.year
2	Real money incomes of the population	INCR	% against the prev.year
3	Percentage of business incomes as part of the money earnings of the population	INCENT	% *
4	Increase in savings from deposits, securities and purchase of hard currency	SAVER	
5	Balances on deposits in Sberbank of the Russian Federation	DEP	% of the GRP

№	Index	Designation	Unit of measurement
6	Housing security of the population	FLAT	$м^2$
7	Percentage of the private housing stock	FLATPR	%
8	Physical index of the gross regional product	GRPR	% against the prev.year
9	Percentage of industry in the gross regional product	GRPIND	% of the GRP **
10	Percentage of agriculture in the gross regional product	GRPAGR	% of the GRP **
11	Value of the fixed assets of the economic sectors	F	% of the GRP
12	Percentage of agricultural fixed assets	FAGR	%
13	Percentage of industrial fixed assets	FIND	%
14	Percentage of fully depreciated fixed assets	FD	%
15	Percentage of fully depreciated industrial fixed assets	FDIND	%
16	Index of industrial production	INDR	% against the prev.year
17	Percentage of fuel sector in the industrial production	INDOIL	%
18	Percentage of electric power industry in the industrial production	INDEN	%
19	Percentage of machine building and metal processing in the industrial production	INDM	%
20	Percentage of industrial products manufactured at government-owned and municipal enterprises	PROPS	%
21	Percentage of industrial products manufactured at priva enterprises	PROPPR	%
22	Percentage of market-dominant enterprises in the aggre output	MONOP	%
23	Level of profitability of the sold industrial products (services, goods, etc)	RENT	%
24	Domestic research and development expenses	RDINT	% of the GRP
25	Technological innovation expenses	RDINN	% of the GRP
26	Percentage of budget expenses in the Russian Federation territorial entities used to fund the industry, power and construction sectors	EXP	%
27	Incomes in the budgets of the Russian Federation territorial entities	REV	% of the GRP
28	Regional budget deficit	DEF	% of the GRP
29	Percentage of loans given to the economy, banks and population	LOANS	% of the GRP
30	Profits of enterprises and organizations	PROF	% of the GRP
31	Percentage of unprofitable enterprises and organizations	LOSS	%
32	Credit indebtedness of enterprises and organizations	CRED	% of the GRP
33	Overdue credit indebtedness of enterprises and organizations	CREDOV	% of the GRP

№	Index	Designation	Unit of measurement
34	Debit indebtedness of enterprises and organizations	DEBIT	% of the GRP
35	Aggregate overdue wage indebtedness	WAGE	% of the GRP
36	Percentage of fixed asset investments in the state-owned enterprises	INVSE	%
37	Percentage of fixed asset investments in private enterprises	INVPR	%
38	Percentage of fixed asset investments in joint ventures involving foreign capital	INVJV	%
39	Percentage of fixed asset investments funded from the federal budget	INVFB	%
40	Percentage of fixed asset investments funded from budgets of Russian Federation territorial entities and local budgets	INVRB	%
41	Percentage of fixed asset investments financed from ow funds	INVOW	%
42	Percentage of fixed asset investments financed from the accumulation fund	INVPRF	%
43	Percentage of fixed asset investments financed from outside funds	INVBOR	%
44	Percentage of bank credits in outside funds used to finance fixed assets investments	INVL	%
45	Percentage of budget funds in outside funds used to finance fixed assets investments	INVB	%
46	Percentage of shares emission money in outside funds used to finance fixed assets investments	INVST	%
47	Percentage of fixed asset investments in industry	INVIND	%
48	Percentage of fixed asset investments in agriculture	INVAGR	%
49	Percentage of fixed asset investments in transport sector	INVTR	%
50	Percentage of fixed asset investments in communications enterprises	INVCOM	%
51	Percentage of fixed asset investments in trade and catering facilities	INVTRD	%
52	Foreign investments in the Russian economy	INVF	% of the GRP
53	Direct foreign investments in the Russian economy	FDI	% of the GRP
54	Consumer price index	CPI	% against the prev.year
55	Non-CIS export-import balance	TB	% of the GRP
56	Export-import balance inside the CIS	TBCIS	% of the GRP
57	Percentage of fuel-power complex in export operations (at real prices)	EXOIL	% of the GRP
58	Percentage of machine building products in the export operations (in terms of real prices)	EXM	% of the GRP
59	Percentage of machine building products in the im-	IMM	% of the GRP

№	Index	Designation	Unit of measurement
	port operations (in terms of real prices)		
60	Percentage of products (works, services) made at joint venture enterprises involving foreign capital (in terms of real prices)	JV	% of the GRP

Note: * Data as of 1999 only. ** Data as of 1998 only.

The basic criteria for choosing the explanatory variables were not only some theoretical assumptions concerning specific interdependence between the indicators of the investment activity and regional economic indices, but also availability of the needed statistical data for a maximum number of years. For example, the initial sample of data embraced the five-year period between 1995 and 1999 inclusive (regional statistical data for 2000 are expected to be released at the end of the first quarter of 2002). However, out of a set of variables (as many as 66 indices), the 1995 data were available only for 30 items, 1996 – 40 items, 1997 – 45 items. There were 59 and 64 indices available respectively for 1998 and 1999. Therefore, for the sake of a maximum balanced cross-year sampling, we seek to test the panel data for 1998 and 1999 only. Besides, the years 1998 and 1999 have been chosen, because the period under review witnesses a specific phase in the dynamics of the investment activities in the Russian economy, namely - the period of transition from a cut in the investment activity (1992 – the first quarter of 1998) which resulted from the reform-related recession in the Russian economy to an investment rise in the economy following the 1998 crisis (starting from mid-1999 onward).

The initial statistical information includes data for all the 88 territorial entities of the Russian Federation. However, for some regions and primarily for autonomous districts, the statistics are not available for a great number of variables under study. That is why we analyze cross-regional data concerning indices of the investment activities and factors influencing the investment processes for 76 territorial entities of the Russian Federation. Excluded are all the autonomous districts, Yevreyskaya autonomous oblast, Republic of Ingushetia and Chechen Republic.

In addition, in order to take account of the key differences in the economic behavior of the regions of the Russian Federation, we make use of the results of the typology of the Russian territorial entities which were gained in the course of work on the subject 'Typology of the Russian regions' made as part of the CEPRA project. In particular, we investigate two groups of the dummy variables. The first group (variables T1-T6) embraces six types of Russian regions as specified in the above-mentioned project, such as Consumers-oilers, Consumers-

Producers, Poor Consumers, Rich Investors, Poor Investors and Wobblers. The second group of the dummy variables (G1 and G2) demonstrates a much wider typology. For instance, variable G1 is common of all the consuming regions and includes T1, T2 and T3 types, while variable G2 is typical of the investing regions, such as T4 and T5.

2.3. Methodology of econometric analysis

Within the frameworks of the present cross-regional study, we investigate impact of some indices describing various aspects of the economic situation of a region on some characteristics of the investment activity. Analysis of regressions for corresponding dependences is based on a nonbalanced sampling of 76 regions for two years – 1998 and 1999. In order to take account of likely cross-year interdependences between various regions and differences in the investment processes, we made use of the methods of panel data analysis.

The simplest technique of evaluating regressions in panel data is to ignore the panel structure of the data, but in this case no regard is paid to individual and/or time features of the sampling. In order to allow for specific features of the data, evaluation is made of the models featuring invariable and/or individual effects. Our investigation evaluates the regressions on nonbalanced panels with invariable time effects[3].

$$y_{it} = \beta x_{it} + z_i \delta + \varepsilon_{it},$$

$$\varepsilon_{it} = \alpha_t + \eta_{it},$$

where y_{it} is an indicator of the investment activity of i region at t time, x_{it} - an explanatory variable, z_i - a row vector of dummy variables, δ - a column vector of the respective coefficients, α_t - an invariable time effect.

The use of panel data in constructing regressions allows, on the one hand, for an increase in the sample size and, as a result, regard for more information about the changes taking place in space and time, which makes it possible to

[3] We note that it is not feasible to evaluate the models with random time effects in our case, since we have at our disposal the data only for a two-year period, which is less than the number of the parameters under evaluation. In principle, evaluation of the regressions with random or invariable individual effects, i.e. with due regard for differences between separate regions of the sample, is feasible, but in this case the number of the evaluated parameters would be more than 50 per cent of the observations available, which would undoubtedly affect negatively the quality of the evaluated regressions.

build much fuller models[4]. On the other hand, it leads to an increased possibility of violating the conditions of the theorem of Gauss and Markov, including those of time noncorrelatedness and homoskedasticity of random errors[5].

It should be noted that since the data are specific (the sample includes the data for a two-year period, T=2), we could disregard the problem of probable time correlatedness of the errors in evaluating the econometric models. Availability of autocorrelatedness means that regression errors for each region are described, say, by means of a model of autoregression of p order. In order to correctly evaluate it, we need rather long time rows, which are not available to us in this case. Besides that, there is no need to consider the problem of unit roots available to the panel data, since the notion of invariability implies that the time rows are long enough, i.e. $T \to \infty$[6].

However, since the sample includes data for years 1998 and 1999 witnessing radical changes in the fundamental factors of development of the Russia's economy in general, it can be assumed that in evaluating we will fail to avoid the problem of heteroskedasticity of the errors, i.e. cross-year dispersion differences.

As is known, in case of heteroskedasticity of the random dispersion errors, evaluations of the coefficients obtained by means of the least-square method proves to be ineffective. There are various techniques that help overcome the problem of heteroskedasticity of the random errors of 'classical' regression. They are described in detail in econometric papers, see, for example, Johnston, DiNardo (1997), Kennedy (1999); Mátyás, Sevestre (1992). One of the commonest methods of obtaining the best (most effective and consistent) evaluations in case of heteroskedasticity of the random errors, as well as of their inter-medium correlatedness is the generalized least square (GLS) method. Its use is, however, hampered by the lack of information concerning the form of the covariance matrix and, consequently, the need for its evaluation, which, in practice, leads to a use of the method of feasible (estimated) generalized least squares (FGLS). As a result, the estimates obtained through the use of the FGLS method cease to be linear (because of the corresponding transformations of the variables) and unbiased. Nonetheless, with the estimates of the covariance matrix being consistent, evaluations of the coefficients obtained by means of the FGLS method have asymptotic

[4] See more details about the advantages of the use of the panel data in: Balltagi (1995).

[5] Some techniques of evaluating the panel regressions in case of homoskedasticity of random errors are given in: Baltagi (1995).

[6] See more details about testing for unit roots in the panel data in: Banerjee (1999); Maddala, Wu (1999); Maddala, Kim (1998).

properties which are similar to those of the estimates obtained by means of the GLS method, see more details in: Kennedy (1999).

Another technique used to improve the regression estimates in case of heteroskedasticity of the random errors is the White's procedure, see White (1980). It helps obtain consistent estimates of the dispersion-covariance matrix of the regression coefficients, which, however, are not supposed to be effective (those obtained by means of the GLS method prove to be the best in any case). Thus, the White's procedure helps overcome the sensitivity of the least square method towards a violation of the condition of heteroskedasticity of the random errors. It is noteworthy that as with the FGLS method, the procedure gives good results, if the sample has a large size. In order to correct the heteroskedasticity of the random dispersion errors in small or short samples, we offer to combine the FGLS method and the iterative procedure of estimating regression weights and coefficients.

Consequently, because of the specific sample used (our panel has a sufficiently great number of regions and a small number of time intervals), the regressions were evaluated by means of the FGLS method[7] combined with the iterative procedure of estimating regression weights and coefficients.

2.4. Basic assumptions

As mentioned above, the investment processes taking place in the transition economies and, in particular, in Russia are characterized by a considerable number of important features which are different from the standard prerequisites in the theory of investments. That is why, in addition to the general assumptions concerning the factors of the investment activities listed in Chapter 1, we intend to focus on verification of the hypotheses put forward on the basis of generalized conclusions stemming from an analysis of the investment processes in the transition and developing economies[8].

In particular, in line with transformation decline and large-scale structural changes occurring in the transition economies, the character of the investment processes can vary sharply across the sectors of economy, at least much stronger than in the developed economies. The lopsided (in terms of a market structure of economy) development of various sectors which took place in the environment of the administrative-command economy led to the situation where at the start of the

[7] See more details in: Dormont (1999).

[8] See: IEPPP (1998); Blanchard, Froot, Sachs (1994); Yeyati (1996); Buiter, Lago, Rey (1997); Bosworth, Collins (1999); Roland (2000).

market reforms some sectors proved to be 'overinvested', whereas the others proved to be 'underinvested'. That is why once triggered following the liberalization, the market mechanisms result in an unsteady rate of a decline and subsequently of a rise in the investments across a variety of sectors.

The investment activity is negatively dependent on the inflation rate and duration of a stabilization period in economy. In the countries which carried out an inconsistent policy of financial stabilization and where a high average rate of inflation was maintained for a longer period of time, the rate of decline and that of investment restoration were higher than in those which had achieved a fast decline in the inflation.

In transition economies, the investment activity financed from the domestic funds is often hampered by non-payments and low payment discipline of juridical persons. In such countries as Albania, Poland, Rumania and Slovakia, a key role is played by foreign investments in the investment processes.

The government investments, such as budget investments, investments in the government-controlled enterprises, have a low level of efficiency. More often than not, they have an obviously political (social) character. Accordingly, the governments primarily invest in a narrow range of sectors, such as social sphere, agriculture and natural monopolies.

In most of the developing and transition economies, the investments are primarily made by foreign companies involving both an inflow of capital which a country frequently does not have in a sufficient amount following an economic or financial crisis and subsequent devaluation of the savings and attraction of the innovative production facilities and technologies. Accordingly, the domestic investments financed at the expense of the capital base or outside funds are chiefly used as complementary sources.

Since the developing (following a financial and currency crisis) and transition economies lack developed financial markets and a bank sector, the bank credits and share emission profits make up a very small portion of the sources of the investment financing. Under conditions of rationing of credits, the bank sector grants loans for mid-term and long-term investment projects only to affiliated companies. Placing of shares as a means of obtaining funds proves to be ineffective for two reasons. First, the fund market is underdeveloped and therefore cannot attract a huge amount of capital when placing the shares in public; moreover, the shares of companies are primarily underestimated very much. Second, with specific corporate management in effect during the early company post-privatization period, its owners cannot frequently resolve to place a large parcel

of shares in public to attract the investment funds. As a result, investments are normally made at the expense of the company's own funds.

Given limited own financial resources and mostly redundant fixed assets, specifically in the most industrialized socialist economies, such as Hungary, East Germany, the Czech Republic and ex-Soviet republics, the bulk of investments is made in sophisticated machinery, equipment and technologies. At the same time in most countries of Central and Eastern Europe, foreign investments were used to set up production facilities from scratch, i.e. the so-called greenfield investments.

Accordingly, the investment processes under way in the developing and transition economies witness a ratchet effect to a less extent than in the developed countries, and the current investments are poorly tied up to the volume and degree of depreciation of the available fixed assets and the old structure of economy.

For Russia, it is also important to note one more feature of the investment processes which is typical of a number of developing economies. Huge reserves of power resources, such as oil and gas, and domination of raw materials (oil, gas, ferrous and non-ferrous metals) in export lead to the so-called Dutch disease, i.e. supernormal development of the power and fuel complex and mining industries and parallel reduction of processing industries. It ultimately results in concentrated investments in a narrow set of raw material, mining and extraction industries because of the sufficient own funds available to them, whereas an amount of investments elsewhere, i.e. in the remaining sectors, is going down.

Inclusion of the dummy variables responsible for attributing the regions to a variety of types allows us to expand the set of hypotheses under verification concerning some common features of the investment processes across homogenous (in terms of basic economic characteristics) groups/types of Russian regions.

Thus we assume, first, that the investor-type regions will have higher indices in terms of volume and dynamics of investments than the consumer-type regions, with the remaining regional economic indices being comparable.

Second, it can be assumed that in consumer-type, wobbling and depressive regions, investments by government-controlled companies and from budget sources play a higher role than in the investor-type regions, first of all, thanks to a greater weight of the state property there.

Third, the regions typed as poor investors feature a higher share of joint venture investments, because the regional own funds are not large enough for investments.

Fourth, it is our assumption that in rich investor-type regions, the investment sources are equally distributed between the capital base and loan proceeds, since high profits of a region allow both investments to be made at the expense of profit and loan capital to be attracted (a high level of monetized economy is used as an additional factor favoring placement of financial resources).

Fifth, as an actual fact, the companies across the rich investor-type regions can primarily attract funds by placing shares in public, for their financial position, investment activity and institutional environment of operation make their private securities attractive for investors.

Sixth, it is expected that with rich investor regions, the ratio of realty investments between residential housing and production building is approximately the same or the former dominates, whereas in the poor investor regions the latter dominate.

Seventh, in consumer-type regions the volume and structure of the investments depend on the structure and degree of depreciation of the fixed assets, whereas investor-type regions place the bulk of investments in constructing new production facilities.

2.5. Results of evaluation

The results of the evaluation of panel and inter-medium regressions for all the variables under study characteristic of the investment processes across Russian regions in 1998-99 are given in Annex 1. We are going to analyze the results obtained along the two lines. First we intend to consider an impact of some factors on indices of the investment activity within the above-mentioned seven groups of variables which characterize the investment processes in regions and then we plan to summarize the effects made by a number of factors on the investment processes across the Russian regions in general.

In the course of our econometric analysis we have considered 643 pairs of dependences, with due regard for the dummy variables and without them, between 16 selected indices of the investment activity and 60 factors listed above, which, in our opinion, affect the character of the investment processes going on across the regions. We have found out the statistical significance of the explanatory variables in 179 cases, i.e. 27.8 per cent of the dependences under consideration. In 102 cases, which account for 57 per cent of the models with statistically significant explanatory variables, the inclusion of the dummy variables, which identify a type of a region under the CERPA project ‘Typology of Regions of the Russian Federation’, allowed us to improve the statistical qualities of the regression models. Among other things, in 30 cases the typology of territorial entities

of the Russian Federation made the explanatory variable statistically significant at a level of 5 per cent.

Before describing the results obtained, we should note that in discussing the statistical significance of the explanatory variables as factors of the investment activity with the models which include indices of the investment activity as explanatory variables, we more often than not can only state that there is such a dependence, but cannot determine the direction of the dependence, i.e. whether an explanatory variable leads to an explained one or vice versa. In particular, the small size of the time panel (as little as two years only) does not allow us to carry out formal tests for causation between the variables, e.g. the test of Granger-Sims.

General characteristics of the investment activity (INV and INVR)

Table 2.3.

Variable INV

	Adj. R^2	**C**	**FE1998**	**FE1999**	**X**	**T1**	**T2**	**T3**	**T4**	**T5**	**T6**	**G1**	**G2**
1	0,536		0,476	0,510	-0,003								
					-0,974								
2	0,422		0,269	0,296	-0,001								
					-0,863								
4	0,172	0,264			-0,010								
		2,423			*-1,594*								
5	0,536		0,190	0,217	-0,001								
					-1,145								
6	**0,279**		**0,089**	**0,115**	**0,001**				+				
					2,553								
9	0,536		0,303	0,341	-0,001								
					-0,952								
10	0,162	0,204			-0,001								
		8,410			*-1,235*								

	Adj. R^2	**C**	**FE1998**	**FE1999**	**X**	**T1**	**T2**	**T3**	**T4**	**T5**	**T6**	**G1**	**G2**
11	0,213	0,196			-0,002								
		14,032			*-1,725*								
13	**0,453**		**-0,236**	**-0,100**	**0,048**				+	+	+		
					9,777								
14	0,527		0,174	0,198	0,004								
					0,587								
15	**0,276**		**0,161**	**0,185**	**0,013**							-	+
					2,371								
16	0,431		0,195	0,221	-0,002								
					-0,788								
18	0,414		0,192	0,218	-0,001								
					-0,717								
19	0,517		0,143	0,161	0,000								
					0,371								
20	**0,324**		**0,155**	**0,183**	**0,002**							-	+
					3,629								
21	0,442		0,153	0,185	0,001								
					1,047								
22	0,516		0,190	0,216	-0,001								
					-1,448								
23	0,427		0,186	0,210	-0,001								
					-0,741								
24	0,514		0,184	0,209	0,000								
					-0,449								
25	0,443		0,149	0,180	0,000								
					-0,349								
26	0,415		0,167	0,199	-0,002								

	Adj. R^2	C	FE1998	FE1999	X	T1	T2	T3	T4	T5	T6	G1	G2
					-0,516								
27	0,436		0,176	0,200	0,000								
					0,394								
28	0,565		0,161	0,192	0,001								
					1,350								
29	0,427		0,169	0,196	0,004								
					1,129								
30	**0,771**		**-0,061**	**-0,039**	**1,001**				+	+	+		
					20,794								
31	0,404		0,179	0,204	0,170								
					0,942								
32	0,433		0,178	0,202	-0,068								
					-0,976								
33	**0,668**		**0,231**	**0,156**	**0,516**	-	-	-	+				
					15,893								
34	0,434		0,130	0,164	0,001								
					0,921								
35	**0,694**		**-0,055**	**0,000**	**0,252**							-	+
					17,350								
36	**0,507**		**-0,038**	**0,032**	**0,379**							-	+
					11,344								
37	**0,787**		**-0,042**	**0,004**	**0,344**	-			+	+			
					21,771								
38	**0,523**		**0,179**	**0,125**	**0,000**							-	+
					2,935								
39	0,523		0,188	0,213	0,000								
					-0,561								

	Adj. R^2	**C**	**FE1998**	**FE1999**	**X**	**T1**	**T2**	**T3**	**T4**	**T5**	**T6**	**G1**	**G2**
40	0,387		0,203	0,225	-0,001								
					-1,341								
41	0,353		0,166	0,190	0,000								
					0,626								
45	0,446		0,159	0,183	0,001								
					1,316								
46	0,533		0,188	0,211	-0,001								
					-0,915								
47	0,531		0,192	0,216	0,000								
					-0,521								
48	**0,566**		**0,207**	**0,236**	**-0,002**							-	+
					-2,469								
49	0,531		0,169	0,193	0,000								
					0,521								
50	0,435		0,172	0,201	-0,001								
					-1,011								
51	0,438		0,167	0,192	0,000								
					0,599								
52	**0,624**		**0,136**	**0,121**	**0,004**				+		+		
					3,429								
53	**0,549**		**0,143**	**0,166**	**0,001**							-	+
					2,220								
54	0,502		0,183	0,207	-0,001								
					-0,374								
56	0,433		0,164	0,187	0,000								
					0,657								

	Adj. R^2	C	FE1998	FE1999	X	T1	T2	T3	T4	T5	T6	G1	G2
57	**0,555**		**0,210**	**0,224**	**-0,009**							-	+
					-3,149								
58	**0,512**		**0,188**	**0,212**	**-0,009**							-	+
					-2,308								
60	0,595		0,162	0,184	0,000								
					1,862								
61	**0,642**		**0,163**	**0,179**	**0,001**							-	+
					3,748								
62	0,532		0,166	0,193	0,000								
					0,113								
65	**0,579**		**0,155**	**0,143**	**0,259**							-	+
					13,032								
66	**0,696**		**0,203**	**0,214**	**1,508**							-	
					16,614								
67	**0,925**	**0,110**			**0,319**					+			
		4,568			***26,701***								
68	0,143	0,156			-0,189								
		1,823			*-0,379*								
69	**0,188**	**0,077**			**1,197**								+
		1,182			***2,753***								
70	0,363		0,171	0,192	0,093								
					1,083								

Table 2.4.

Variable INVR

	Adj. R^2	C	FE1998	FE1999	X	T5	T6	G1	G2
1	0,248		213,101	230,780	-1,225				
					-1,234				

	Adj. R^2	**C**	**FE1998**	**FE1999**	**X**	**T5**	**T6**	**G1**	**G2**
2	**0,174**		**22,551**	**34,238**	**0,817**	+	+		
					2,276				
4	0,047	103,943			0,495				
		8,022			*0,596*				
5	0,209		93,431	107,239	-0,054				
					-0,128				
6	**0,294**		**87,503**	**102,312**	**0,245**			-	+
					2,360				
9	**0,273**	**0,779**			**1,076**			-	+
		0,026			***3,577***				
10	0,040	126,705			-0,768				
		13,331			*-1,024*				
11	0,027	99,760			0,332				
		15,220			*0,722*				
13	0,229		84,652	100,718	1,019				
					0,927				
14	0,207		99,827	113,666	0,437				
					0,205				
15	**0,305**		**104,311**	**118,041**	**-3,343**			-	+
					-2,544				
16	0,225		102,992	116,794	-0,227				
					-0,367				
18	0,206		93,743	107,258	-0,041				
					-0,096				
19	**0,252**	**30,689**			**0,731**			-	
		1,565			***3,879***				

	Adj. R^2	C	FE1998	FE1999	X	T5	T6	G1	G2
20	0,196		103,575	118,294	-0,281				
					-1,673				
21	0,222		99,769	113,661	0,035				
					0,131				
22	0,186		95,640	109,580	-0,212				
					-1,261				
23	0,205		98,718	112,624	0,115				
					0,523				
24	**0,300**		**92,507**	**105,286**	**0,271**			-	
					2,363				
25	**0,483**		**95,200**	**110,631**	**-0,328**		+		
					-2,002				
26	0,372		87,137	102,267	1,037				
					1,815				
27	0,177		93,788	107,593	-0,256				
					-0,843				
28	0,300		88,773	103,893	0,277				
					1,152				
29	0,227		90,963	105,307	1,017				
					0,917				
30	0,218		91,979	105,678	5,074				
					0,308				
31	0,222		100,912	114,653	43,571				
					0,767				
32	0,207		100,552	114,239	-6,664				
					-0,327				

	Adj. R^2	**C**	**FE1998**	**FE1999**	**X**	**T5**	**T6**	**G1**	**G2**
33	0,214		92,979	106,850	-0,827				
					-0,090				
34	0,217		95,642	108,813	-0,043				
					-0,171				
35	0,235		105,725	118,712	-5,983				
					-1,402				
36	0,220		105,704	118,256	-9,691				
					-1,241				
37	0,240		104,558	117,795	-7,335				
					-1,362				
38	0,225		100,468	114,729	-0,001				
					-0,136				
39	0,223		99,194	112,851	0,042				
					0,260				
40	0,162		98,083	111,240	-0,156				
					-0,915				
41	0,272		107,975	121,686	-0,277				
					-1,805				
45	0,206		90,299	103,950	0,143				
					0,678				
46	**0,258**		**107,316**	**119,833**	**-0,684**			-	+
					-2,212				
47	0,209		91,178	104,945	0,037				
					0,261				
48	0,231		98,655	112,542	0,118				
					0,480				
49	0,209		94,836	108,603	-0,037				

	Adj. R^2	**C**	**FE1998**	**FE1999**	**X**	**T5**	**T6**	**G1**	**G2**
					-0,261				
50	0,217		104,824	120,479	-0,085				
					-0,285				
51	0,171		96,388	109,920	-0,120				
					-0,689				
52	**0,355**		**87,530**	**104,823**	**1,716**				
					2,755				
53	0,222		101,420	115,184	-0,024				
					-0,177				
54	0,126		97,559	111,610	-0,849				
					-1,390				
56	0,155		85,399	97,937	0,263				
					1,487				
57	0,195		95,482	108,312	-0,756				
					-0,718				
58	0,274		105,887	119,756	-2,210				
					-1,639				
60	**0,196**		**97,990**	**113,190**	**0,050**			-	
					2,067				
61	**0,234**		**99,042**	**113,588**	**0,085**			-	
					3,221				
62	0,222		70,863	88,958	0,126				
					0,506				
65	0,234		100,826	115,377	-6,063				
					-1,203				
66	0,217		100,385	114,106	-3,657				

	Adj. R^2	C	FE1998	FE1999	X	T5	T6	G1	G2
					-0,138				
67	0,047	110,308			-2,716				
		14,013			*-0,550*				
68	0,083	104,794			-117,248				
		9,394			*-1,804*				
69	0,041	96,115			24,207				
		7,734			*0,392*				
70	0,193		93,015	105,900	19,940				
					0,946				

The study of the factors that bear on the group of indices of the investment activity, such as the volume and real rate of growth in the fixed assets investments, has led us to the following conclusions:

- The dynamics of real incomes of the population is positively correlated with the real rate of investment growth, but it does not depend on the total amount of investments. At the same time both indices of investments positively correlate with the housing security of the population. In our view, both cases witness an impact of a third factor, i.e. wealth and rate of development of a region. In particular, the dynamically developing regions of the Russian Federation boast a higher growth rate of real incomes of the population as well. We have also discovered a positive dependence between the real rate of growth of investments and that of the gross regional product. Not only is the living standard as well as the housing security higher in the rich regions, but they also have a greater potential for investments.
- The real rate of growth in investments is higher in regions with a higher weight of industry in the GRP. In other words, it is in the industry that the most intensive renewal of the fixed assets is taking place. At the same time we should note that although the industrial sector also includes the fuel-power complex which has maximum investment resources, we have failed to find out positive dependence between the share of industry in the GRP and the total volume of investments in the fixed capital. Still there is a positive correla-

tion between the volume of investments and the weight of the fuel-power complex in the region's industry.

- The previous conclusion can also be confirmed by estimates of the models where the volume and quality of the fixed assets are used as explanatory variables. The fixed asset investments have a ratchet effect: regions where there is a huge amount of fixed assets also witness a huge amount of investments. A similar conclusion is also true of the industrial fixed assets. At the same time there is a negative dependence between a share of the industrial fixed assets and a real rate of investment growth. In other words, a large amount of industrial fixed assets, such as the mobilization capacity and the military-industrial complex, is a dead weight for the economy of a region, if anything, and although heavy investments are used to maintain them, the general dynamics of the investment process is still negative in such regions.
- The real rates of growth in the fixed asset investments is higher across the Russian territories witnessing a higher weight of the industrial products made at private enterprises, i.e. private enterprises demonstrate a higher investment activity.
- The real rates of investment growth are lower in the regions with a higher weight of products manufactured at enterprises that dominate the market, i.e. are monopoly enterprises. In other words, the monopoly enterprises do not build up the volume of investments. Moreover, most of them are state-owned, which means that with all other conditions being equal, they invest less than the private enterprises.
- The volume of investments has a positive correlation with the volume of budget incomes of a territorial entity. In this particular case we observe an impact of a third factor – wealth of a region.
- The volume of investments is positively dependent on that of profits of enterprises and organizations. When combined with the mentioned positive dependence between the total volume of investments and the share of investments financed at the expense of the capital base, the result obtained is in favor of the hypothesis that the internal funds (profits) are a key source of investments in the Russian economy.
- Of interest is the positive statistically significant correlation of the volume and real rate of investment growth with the weight of the

investments financed at the expense of emission of company shares. Given the underdeveloped Russian market, specific corporate management and the strategies pursued by major shareholders of Russian companies, we assume that the emissions of shares held were carried out by either the oil-producing companies, with a huge volume of investments primarily at the expense of their internal funds, or by companies registered in the rich regions, such as Moscow.

- Less obvious is the positive correlation between the volume of investments and indices of total and overdue debit indebtedness. Since we analyze both indices as part of the GRP, an assumption concerning the impact of scale of the economic activity can be excluded from our consideration. Such a result can most likely be due to the fact that the largest volume of nonpayments was with enterprises of the fuel-power complex which were making the heaviest investments in the fixed assets at the same time.
- It is all the more odd that there is a positive correlation between the volume of investments and arrears of enterprise wages. The direct interpretation of the result to the effect that while seeking to make investments the firms have delayed paying wages to their employees cannot be confirmed by the practical operations of the Russian companies.
- When analyzing the impact of the sectoral structure of investments, we found that there was a positive correlation only between the volume of investments and the share of industrial investments, see above. At the same time the volume of investments is negatively correlated with a share of investments in communications enterprises, trade and public catering facilities, which, in our view, is due to a relatively low volume of investments required to be made in these two sectors of economy, unlike the industry and transportation. In sum, whereas the communications and trade account for a high share of the region's total investment volume, their weight in the aggregate volume of investments proves to be small.
- The volume of both aggregate and direct foreign investments makes a positive impact on the real rate of fixed asset investment growth. The direct foreign investments have a positive impact on the total volume of all investments in the fixed assets as well. In other words, the inflow of the foreign investments to a large extent

contributes to dynamic investment processes across the Russian Federation.

- Our analysis has revealed that there is a positive correlation between the export share in the GRP (net export and export of products of the fuel-power complex) and the volume of investments. Still there is no correlation between these factors and the real rates of investment growth. Consequently, a high share of exporting enterprises in the economy of a region does not boost the investment processes, although the profits gained allow them to make heavy investments in the fixed assets. Similar conclusions about the companies of the fuel-power complex have already been listed above.
- It is interesting that there is a positive dependence between the volume of investments and import of machine-building products, i.e. that of predominantly capital goods.
- The estimates of coefficients of the dummy variables support the hypothesis that the regions designated as consumer-type demonstrate a lower level of investment activity (their volume of investments is less and real rates of investment growth are lower), whereas the investor-type regions show the opposite results. We have also found positive estimates of coefficients of the dummy variables showing that the region is identified as a wobbling type. It means that such regions invest more heavily than on the average across Russia. However, as noted in the project 'Typology of Regions of the Russian Federation', their typologization as the wobbling ones chiefly depends on some institutionalized and political factors, rather than economic ones, although in terms of investment behavior they can behave as investors.

Distribution of investments across forms of property (INVSE and INVJV)

Table 2.5

Variable INVSE

	Adj. R^2	**C**	**FE1998**	**FE1999**	**X**	**T1**	**T2**	**T4**	**T6**	**G2**
1	0,058		106,540	110,406	-0,788					
					-1,582					
7	**0,076**	**56,541**			**-1,362**					-
		4,855			***-2,237***					
9	0,062		59,727	64,113	-0,313					
					-1,613					
11	0,092		37,204		-0,188					
			7,639		*-0,653*					
13	0,055	27,587			0,539					
		7,806			*1,244*					
14	0,109	35,002			-2,962					
		13,432			*-1,850*					
15	0,010	33,430			-2,198					
		14,483			*-1,256*					
16	0,116	49,287			-1,619					
		12,862			*-1,651*					
17	0,166	38,172			-0,258					
		10,891			*-1,700*					
18	0,033	44,277			-0,789					
		10,884			*-1,853*					
19	0,156	27,930			0,068					
		3,062			*0,797*					
20	0,069	32,943			-0,114					

	Adj. R^2	C	FE1998	FE1999	X	T1	T2	T4	T6	G2
		12,864			*-1,439*					
21	**0,295**		**12,295**	**20,107**	**0,864**					-
					7,187					
22	0,157	35,810			-0,076					
		11,542			*-0,958*					
23	**0,250**		**21,091**	**23,464**	**0,628**					-
					6,257					
25	0,050	29,827			-0,091					
		13,267			*-1,490*					
29	0,155	35,621			-0,433					
		11,438			*-0,756*					
30	0,055	29,303			8,867					
		11,243			*1,259*					
31	0,065	31,451			56,908					
		13,977			*1,804*					
34	**0,171**		**0,685**	**8,621**	**0,531**					-
					4,637					
45	**0,343**	**21,803**			**0,661**					-
		9,979			***8,183***					
46	0,153	35,324			-0,057					
		10,910			*-0,369*					
51	**0,248**	**20,073**			**0,470**					-
		7,574			***6,302***					
53	**0,261**		**45,954**	**48,137**	**-0,399**					-
					-6,566					
54	**0,181**	**39,041**			**-0,673**	-	-	-	-	
		11,570			***-2,384***					

	Adj. R^2	C	FE1998	FE1999	X	T1	T2	T4	T6	G2
56	**0,306**	**17,363**			**0,530**					-
		6,528			***7,435***					
57	**0,187**	**38,249**			**-1,235**	-	-	-	-	
		11,999			***-2,483***					
58	0,146	35,874			-0,311					
		10,965			*-0,428*					

Table2.6.

Variable INVJV

	Adj. R^2	C	FE1998	FE1999	X	T1	T2	T4
1	0,133	27,177			-0,038			
		0,676			*-0,093*			
9	0,134	27,921			-0,047			
		1,867			*-0,305*			
10	**0,083**		**14,248**		**0,432**			
			2,625		***2,973***			
11	**0,063**		**33,215**		**-0,667**			
			9,393		***-2,690***			
16	0,127	25,120			-0,159			
		5,288			*-0,465*			
18	0,138	28,709			-0,345			
		6,296			*-1,571*			
19	0,124		43,816	47,252	-0,216			
					-1,672			
20	**0,259**	**22,199**			**0,372**			
		9,450			***4,991***			
21	**0,069**	**31,390**			**-0,269**			

	Adj. R^2	C	FE1998	FE1999	X	T1	T2	T4
		9,610			***-2,103***			
22	0,141	24,458			-0,075			
		7,404			*-0,877*			
25	0,164	27,263			-0,022			
		6,589			*-0,238*			
27	0,157	24,375			-0,249			
		7,787			*-1,619*			
28	**0,164**	**26,835**			**-0,333**	+	+	+
		7,328			***-2,598***			
30	**0,144**	**18,822**			**20,759**	+	+	
		5,380			***2,736***			
34	**0,158**		**7,759**	**11,114**	**0,269**	+	+	+
					2,102			
47	0,130	25,288			-0,036			
		5,276			*-0,502*			
52	0,295		27,705	20,049	-0,366			
					-0,843			
53	**0,161**	**14,431**			**0,304**			
		4,095			***4,456***			
54	**0,095**	**31,353**			**-0,955**			
		11,427			***-3,233***			
56	0,135	24,973			-0,051			
		6,163			*-0,581*			
57	0,151	25,513			-0,708			
		7,434			*-1,365*			
58	0,130	23,223			0,146			
		6,602			*0,194*			

	Adj. R^2	C	FE1998	FE1999	X	T1	T2	T4
60	0,123	25,689			-0,018			
		7,038			*-1,500*			
61	0,132	25,007			-0,019			
		6,720			*-1,461*			
65	**0,126**	**25,357**			**9,719**			
		11,156			***4,201***			
66	**0,102**	**27,431**			**45,599**			
		11,931			***3,749***			
67	**0,144**			**21,784**	**7,511**		+	
				4,494	***3,120***			
69	0,043			19,009	36,794			
				3,240	*1,261*			
70	0,155	25,962			-18,066			
		7,842			*-1,752*			

- There is a negative dependence between a share of investments in the government-controlled sector and housing security of the population, which can testify both to a small role of the state-run enterprises in residential construction and to the fact that in richer regions where the level of housing security is higher, the share of the state sector in economy is less than in poor territorial entities. Similarly, there is a positive interdependence between the volume of investments in the joint venture enterprises and a share of regional budget profits in the GRP, which can be interpreted as an evidence of a general wealth of a region.
- In analyzing an impact of the structure of the region's economy on the structure of investments across the forms of property, we have found out that a share of investments in the state-run enterprises is higher in regions where power engineering industry accounts for a greater share of the industrial sector (the industry remains to be largely state-owned) and the state sector plays a greater role in the economy. At the same time the share of investments in the joint venture enterprises is higher across the regions with a higher share

of the industrial sector in the GRP, as well as with a higher share of the fuel-power complex in the industrial output. There is also a negative dependence between the volume of investments in the joint venture enterprises and the share of agriculture and power sector in the GRP. It is obvious that these two sectors are not invested by the foreign capital as a matter of fact.

- It seems interesting to note that there is a negative dependence between the share of investments in the joint venture enterprises and the volume of expenses for technological innovations (in the GRP shares). Consequently, involvement of the foreign capital does not lead to increased technological innovations in the economy of a region.
- The share of unprofitable enterprises is positively correlated with a share of investments in the state-run enterprises and negatively correlated with a share of investments in the joint venture enterprises. It is obvious that there are more unprofitable enterprises across the regions where a share of the state sector is higher, whereas the foreign capital is present predominantly across economically stronger Russian regions.
- It is natural that there is a positive interdependence between a share of investments in the state-run enterprises and a share of investments financed from the federal budget plus shares of budget funds of all levels as part of the borrowed capital.
- In analyzing the correlation between the structure of investments across the forms of property and structure of investments across the sectors of economy, we have found out that the share of investments in the state sector is higher with the transport enterprises, most of which are state-controlled, while a share of investments in the joint venture enterprises is higher with the industry. It is noteworthy that the two indices for the investment structure across the forms of property are negatively correlated with a share of agricultural investments. It means that the given sector is primarily invested by the Russian private companies, while the state-controlled agrarian enterprises play a minor role in the investment process. Besides, a share of investments in the state sector is negatively correlated with a share of investments in the industry and transport, which is apparently due to a relatively low share of the state sector in the above sectors of economy.

- It seems to be logical that there is a positive correlation between a share of investments in the joint venture enterprises and indices of foreign trade activity of a region (net export and export of products of the fuel-power complex). It is evident that a share of the joint venture enterprises is higher among the exporters than on the average across the economy of a Russian region.
- The analysis of signs of the dummy variables which characterize a type of a region shows that a share of investments in the state-run enterprises is lower across the rich regions whether they are consumers or investors, which is due to a low total share of the state sector in such territorial entities. The opposite is true of a share of investments in the joint venture enterprises. It is evidently in the rich regions that the foreign capital mostly works.

Structure of investments across investment mediums (HOUS, BUILD and EQUIP)

Table 2.7.

Variable HOUS

	Adj. R^2	**C**	**X**
2	-0,044	18,367	0,009
		1,169	*0,048*
4	**0,122**	**9,129**	**0,664**
		3,114	***3,536***
5	-0,034	20,418	-0,159
		6,552	*-0,798*
6	**0,072**	**9,488**	**0,127**
		3,271	***2,729***
7	-0,037	12,412	0,366
		1,184	*0,661*
8	**0,325**	**-6,907**	**0,370**
		-1,631	***6,164***
9	-0,032	5,490	0,135

	Adj. R^2	**C**	**X**
		0,356	*0,896*
19	-0,009	5,302	0,131
		0,566	*1,537*
20	-0,082	17,256	-0,016
		5,696	*-0,226*
22	**0,050**	**15,066**	**0,158**
		7,282	***2,481***
23	-0,036	20,086	-0,076
		6,719	*-0,709*
24	-0,039	18,118	0,030
		5,763	*0,591*
25	-0,026	15,450	-0,052
		6,447	*-0,878*
26	-0,012	20,619	-0,250
		7,312	*-1,459*
29	-0,027	16,946	0,349
		8,006	*0,480*
31	-0,030	19,165	-49,514
		7,240	*-0,956*
32	-0,044	19,079	1,768
		7,135	*0,140*
33	0,037	18,062	-5,536
		9,569	*-1,243*
34	0,010	28,216	-0,200
		5,245	*-1,932*
39	-0,028	21,832	-0,080
		5,885	*-1,045*

	Adj. R^2	C	X
40	**0,187**	**8,144**	**0,292**
		3,008	***4,396***
46	**0,051**	**16,107**	**0,392**
		5,775	***2,608***
47	**0,035**	**23,410**	**-0,114**
		7,096	***-2,218***
49	**0,035**	**12,007**	**0,114**
		3,934	***2,218***
50	-0,047	13,881	0,088
		4,613	*0,773*
51	**0,122**	**11,858**	**0,241**
		5,019	***3,541***
56	0,020	20,814	-0,125
		8,031	*-1,928*
57	**0,026**	**14,589**	**1,118**
		6,313	***2,053***
58	**0,033**	**14,471**	**1,883**
		6,628	***2,244***
62	0,019	-24,677	0,304
		-1,112	*1,902*
65	0,015	17,943	-2,460
		9,404	*-1,838*
66	-0,026	18,862	-7,884
		7,114	*-1,085*
67	0,008	17,531	-1,979
		9,263	*-1,667*

Table 2.8.

Variable BUILD

	Adj. R^2	**C**	**X**
1	0,051	52,905	-0,134
		0,991	*-0,250*
9	0,050	80,175	-0,390
		4,055	*-1,075*
13	0,071	35,535	0,655
		7,572	*1,259*
14	0,083	41,209	-1,894
		11,532	*-1,541*
15	0,052	39,822	-0,356
		11,342	*-0,358*
16	**0,158**	**53,896**	**-1,246**
		11,944	***-3,753***
18	**0,169**	**55,395**	**-0,934**
		11,594	***-3,825***
19	0,060	29,336	0,097
		2,390	*0,870*
20	-0,017	40,794	0,005
		9,428	*0,047*
21	**0,082**	**33,061**	**0,483**
		9,995	***2,754***
22	**0,137**	**42,373**	**-0,225**
		12,246	***-2,613***
23	**0,059**	**35,881**	**0,289**
		12,087	***2,247***
24	0,050	39,580	0,000

	Adj. R^2	**C**	**X**
		9,688	*0,004*
25	0,010	41,139	-0,020
		10,300	*-0,249*
26	0,058	38,537	0,174
		10,429	*0,777*
29	0,069	41,491	-1,170
		10,990	*-1,187*
32	0,050	39,530	3,216
		11,408	*0,197*
33	0,064	39,241	3,672
		11,393	*1,018*
34	**0,125**	**25,030**	**0,320**
		3,642	***2,418***
39	**0,195**	**28,257**	**0,355**
		8,058	***4,256***
40	**0,199**	**49,908**	**-0,320**
		11,625	***-3,564***
41	0,015	41,970	-0,102
		13,085	*-1,288*
45	0,062	37,450	0,108
		9,121	*0,948*
46	0,100	42,555	-0,387
		11,531	*-1,946*
47	0,051	40,501	-0,018
		7,951	*-0,244*
48	0,062	40,906	-0,093
		10,631	*-0,776*

	Adj. R^2	**C**	**X**
49	0,051	38,724	0,018
		7,819	*0,244*
50	**0,157**	**40,795**	**-0,520**
		16,840	***-3,822***
51	0,050	39,873	-0,010
		9,014	*-0,103*
52	-0,237	40,347	0,528
		5,895	*1,247*
53	0,074	43,979	-0,111
		9,273	*-1,332*
54	**0,173**	**46,502**	**-0,963**
		11,976	***-3,188***
56	**0,339**	**27,245**	**0,443**
		9,419	***6,138***
58	**0,227**	**45,291**	**-4,110**
		12,488	***-3,939***
60	0,060	39,751	0,014
		9,743	*1,666*
61	**0,077**	**37,288**	**0,018**
		8,765	***2,020***
62	0,145	17,141	0,161
		0,557	*0,734*
65	0,057	39,233	1,411
		11,294	*0,732*
66	0,057	39,800	6,683
		11,524	*0,706*
67	0,061	39,417	1,522
		11,463	*0,891*
68	0,052	40,046	-8,522

	Adj. R^2	C	X
		11,028	*-0,403*
69	0,062	41,407	-18,459
		10,521	*-0,943*
70	0,073	37,257	12,193
		9,413	*1,257*

Table 2.9

Variable EQUIP

	Adj. R^2	C	X	T1	T2	T3	T5
1	0,109	9,104	0,224				
		0,159	*0,390*				
9	0,150	-7,323	0,382				
		-0,348	*1,866*				
13	0,112	41,219	-1,600				
		8,636	*-1,022*				
14	0,105	32,002	-0,794				
		8,288	*-0,598*				
15	0,119	30,657	1,015				
		8,201	*0,960*				
16	**0,218**	**18,709**	**1,163**	+			
		3,508	***3,107***				
18	**0,020**	**25,324**	**0,587**				
		4,505	***2,041***				
19	0,124	45,835	-0,137				
		3,502	*-1,155*				
20	0,107	37,521	-0,169				
		20,496	*-1,920*				
21	0,122	35,693	-0,293				

	Adj. R^2	C	X	T1	T2	T3	T5
		7,341	*-1,335*				
22	0,125	29,919	0,113				
		7,777	*1,184*				
23	**0,037**	**39,527**	**-0,338**				
		11,922	***-2,356***				
24	0,107	31,587	-0,008				
		7,221	*-0,113*				
25	**0,049**	**34,282**	**0,184**				
		10,346	***2,233***				
26	0,108	30,914	0,068				
		7,783	*0,280*				
27	0,118	30,684	0,167				
		8,204	*0,919*				
28	0,110	32,748	0,281				
		7,925	*1,466*				
29	0,107	31,686	-0,224				
		7,761	*-0,210*				
32	0,108	31,423	-5,512				
		8,472	*-0,315*				
33	0,108	31,440	-1,245				
		8,467	*-0,320*				
34	0,140	42,052	-0,236				
		5,589	*-1,628*				
39	**0,084**	**44,896**	**-0,303**				
		10,868	***-3,085***				
40	0,112	29,192	0,066				
		5,846	*0,633*				

	Adj. R^2	C	X	T1	T2	T3	T5
41	0,123	29,126	0,097				
		7,023	*1,130*				
45	**0,233**	**38,869**	**-0,382**				
		9,480	***-3,350***				
46	0,107	30,936	0,050				
		7,622	*0,230*				
47	**0,018**	**27,070**	**0,156**				
		5,420	***2,001***				
48	**0,101**	**28,000**	**0,415**				
		7,989	***3,305***				
49	**0,018**	**42,642**	**-0,156**				
		9,227	***-2,001***				
50	**0,234**	**37,534**	**0,527**				
		9,876	***3,670***				
51	**0,196**	**39,057**	**-0,282**	+			
		8,693	***-2,755***				
52	0,182	36,560	-0,490				
		18,089	*-1,278*				
53	**0,206**	**21,485**	**0,250**	+	+		
		4,430	***2,918***				
54	**0,024**	**39,301**	**-0,713**				
		11,624	***-2,122***				
56	**0,167**	**37,039**	**-0,207**	+	+		
		8,408	***-2,216***				
57	**0,171**	**27,074**	**1,778**	+	+		+
		6,740	***2,290***				
58	**0,184**	**30,062**	**3,010**	+	+		

	Adj. R^2	C	X	T1	T2	T3	T5
		7,615	***2,650***				
60	**0,127**	**39,745**	**-0,017**			-	
		9,802	***-2,005***				
61	**0,221**	**40,295**	**-0,028**			-	
		9,896	***-3,367***				
62	0,090	114,240	-0,595				
		3,626	*-1,648*				
65	0,109	31,543	-0,875				
		8,457	*-0,423*				
66	0,114	31,081	-7,622				
		8,408	*-0,752*				
67	0,116	31,493	-1,512				
		8,546	*-0,826*				
68	0,127	32,851	-28,490				
		8,538	*-1,271*				
69	0,113	29,924	14,197				
		7,078	*0,675*				
70	0,131	31,103	16,604				
		7,572	*1,649*				

- A share of investments in housing is higher across richer regions inhabited by economically active population (a positive correlation with a share of population‘s incomes from entrepreneurship and remaining deposits in Sberbank of the Russian Federation), with the housing investments closely correlated with a share of the private housing fund. In other words, the bulk of private housing is private-owned.
- There is a negative correlation between a share of investments in buildings and constructions and a share of fully depreciated fixed assets (in the aggregate economy of a region and across the industrial sector), which along with a positive dependence for shares of

investments in machines and equipment, testifies to the fact that, given a huge amount of fully depreciated funds, the firms prefer to invest in equipment, whereas there is no need to construct new production facilities. In most cases, use is made of old facilities, but the equipment is replaced.

- In regions with a higher share of power industry used in the industrial sector, a share of investments in nonresidential facilities is higher, which is apparently due to specific investment requirements in a given industry.
- There is a positive correlation between a share of the state sector in the GRP and a share of investments in production building and facilities, which is apparently due to specific distribution of the state-run enterprises across the sectors of economy. Similar reasoning is also true for a positive correlation between the investments in buildings and facilities and a share of unprofitable enterprises. At the same time the negative correlation with a share of investments in machines and equipment can be interpreted as an evidence of reluctance of the state-run enterprises to renew their pool of equipment and machines.
- A share of investments in industrial buildings and facilities is lower across the regions with a higher share of machine building. It is evident that the fixed assets available to the machine building are quite sufficient, but the machines and equipment should be replaced. Lack of the dependence for investments in machines and equipment might be due to a low rate of upgrading across the industry.
- It is noteworthy that a share of investments in housing is higher across regions with a higher share of machine building across the industry. It is most likely that the result is largely due to a bibber share of machine building across most of the rich regions.
- The conclusions given above are supported by estimates of the models where a share of investments in the state-run and private enterprises is used as explanatory variables. In the regions with a higher share of the state sector, that of investments in buildings and facilities is higher and that for machines and equipment is lower. In the territorial entities with a higher share of the private sector, larger investments are made in construction of residential houses and less investments in construction of production buildings and

facilities. It is, however, noteworthy that there is a positive correlation between a share of investments in machines and equipment and a share of monopoly enterprises in the region's economy. In other words, it can be assumed that it is precisely the monopolists that carry out a policy of updating the production machines and equipment.

- In analyzing an impact on the structure of investments across the investment mediums in terms of financing the investments, we have found out that residential houses are primarily built at the expense of budget funds and, in particular, regional and local budgets. A share of investments in housing has a statistically significant negative correlation with a share of internal funds as part of sources of investment financing. The comparison of the given results and the above-mentioned reasoning allows us to assume that the rich regions where regional and local budgets have sufficient resources to finance the housing construction account for the biggest share of investments in the housing sector, with Moscow being the most striking example.
- Investments in machines and equipment are chiefly made at the expense of internal funds (profits), as well as bank credits. As noted above, a bigger contribution of the state to a region (a higher share of budget funds in the sources of investment financing) correlates with a lower volume of investments in machines and equipment in many cases.
- For investments in nonresidential buildings and facilities, there is only one statistically significant (negative) relation, namely – with a share of bank credits in the outside funds. It is most likely that such investments cannot be made at the expense of bank credits because of an obvious mismatch between the investment payback terms and common terms of bank crediting. Across the regions with a higher share of bank credits in the sources of investment financing, a share of short-term payback investments is apparently higher.
- In considering the cross-sectoral structure of the investments, we have found that there is a positive correlation between a share of investments in housing and shares of investments in communications sector, as well as trading and public catering. In our view, however, we should keep in mind a complementary character of such investments, rather than causation. It is obvious that expan-

sion of communications, trade and public catering systems is a result of increase in the housing fund across a region.

- A share of investments in nonresidential buildings and facilities is negatively correlated with shares of investments in agriculture, trade and public catering, but positively with a share of investments in transportation. It is most likely due to an objective demand for the investments of such a kind, given a specific activity in each sector. Similar reasoning is also true of a share of investments in acquisition of machines and equipment. It is positively correlated with a share of investments in industry, communications, trade and public catering, but negatively with a share of investments in agriculture and transportation.
- Another interesting finding is that there is a statistically significant negative correlation between a share of investments in machines and equipment and a volume of foreign investments across the territory of a region, as well as a positive correlation between a share of investments in nonresidential buildings and facilities and the volume of the direct foreign investments. In our view, it is due to the fact that a major part of foreign (direct) investments in Russia is used to construct new production capacities from scratch, rather than update the enterprises already in place.
- Another important finding is that there is no statistical significance of the dummy variables in the models for the investments in housing, nonresidential buildings and facilities. Consequently, different Russian regions cannot be distinguished in terms of the two indices.
- At the same time in the models where a share of investments in machines and facilities is used as an explanatory variable, some dummy variables prove to be significant. In particular, a share of such investments is higher in the rich consuming regions and poor investing regions, but it is lower in poor consuming regions. In other words, in taking an investment decision, should they have sufficient funds, the consuming regions prefer to invest in updating of machines and equipment. Similar decisions are also made by poor investor regions, apparently because such investments require fairly less funds.

Government investments (INVFRB)

Table 2.10.

Variable INVFRB

	Adj. R^2	C	FE1998	FE1999	X	T2	T4	T6	G2
1	**0,123**		**137,289**	**139,616**	**-1,127**	-	-	-	
					-2,428				
7	**0,204**	**73,836**			**-2,513**	-	-		
		7,021			***-4,487***				
9	0,101	44,966			-0,173				
		3,316			*-1,264*				
10	**0,241**	**46,954**			**-0,639**		-		
		8,236			***-4,198***				
11	**0,024**	**18,890**			**0,550**				
		4,940			***2,049***				
13	**0,139**	**19,726**			**1,186**	-	-	-	
		4,805			***2,854***				
14	**0,121**	**30,147**			**-2,229**	-	-		
		9,969			***-2,121***				
15	0,097	28,793			-0,807				
		9,747			*-1,004*				
16	**0,313**	**48,008**			**-1,874**		-	-	
		12,396			***-6,744***				
18	**0,162**	**38,857**			**-0,690**	-	-	-	
		9,280			***-3,409***				
19	0,102	39,492			-0,111				
		4,388			*-1,320*				
20	0,127	26,628			0,108				
		8,425			*1,240*				

	Adj. R^2	C	FE1998	FE1999	X	T2	T4	T6	G2
21	**0,056**	**17,575**			**0,324**				
		5,866			***2,655***				
22	0,096	29,192			-0,073				
		9,479			*-0,927*				
23	**0,175**	**22,246**			**0,409**	-	-	-	
		6,954			***3,796***				
25	0,046		17,328	15,507	0,000				
					-0,001				
29	**0,054**	**21,099**			**1,452**				-
		9,175			***2,545***				
30	**0,175**	**22,957**			**24,311**	-	-	-	
		7,350			***3,751***				
31	**0,170**	**29,177**			**102,088**	-	-	-	
		10,398			***3,548***				
34	**0,145**		**7,755**	**10,961**	**0,363**	-	-	-	
					3,124				
49	**0,445**		**-0,908**	**-3,025**	**0,532**				-
					10,673				
67	0,074	27,289			1,079				
		6,578			*0,524*				
68	**0,126**	**24,640**			**51,619**	-	-		
		5,818			***2,092***				
69	0,071	26,765			6,555				
		5,625			*0,277*				

- First, the estimates obtained testify that the government investments are extremely ineffective. In particular, there is a negative correlation between a share of government investments and a change in the full employment in the region's economy and population's housing security. In the meanwhile, a share of the govern-

ment investments is negatively correlated with a weight of depreciated fixed assets, both industrial and aggregate ones, but positively with a share of unprofitable enterprises in the economy of a region.

- Second, the government investments have a strong sector-oriented displacement. For example, there is a positive correlation between a share of government investments and that of agriculture in the GRP and a share of power industry in the industrial sector. However, we have found negative estimates of coefficients, when a share of industry in the GRP is used as an explanatory variable.
- Third, some statistically significant models demonstrate that there is only a direct quantitative dependence, rather than causation between a share of budget-funded investments and that of the state sector in the economy of a region, weight of economic expenses in the budget of a territorial entity and that of region's incomes in the GRP.
- At the same time, we have got quite a number of interesting or ambiguous findings. For one example, there is a negative correlation between a share of the government investments and fixed assets in agriculture. Given the above-mentioned positive dependence of such investments on a share of agriculture in the GRP, such a conclusion supports the contention that the agricultural fixed assets are redundant and inefficient. Even with region's authorities making a decision to finance the investments in farming, the volume of agricultural fixed assets is not an indicator of importance of the sector in the economy of a region.
- A share of the budget investments is positively correlated with a deficit of the region's budget. To put it differently, the deficit of the region's budget frequently results from high expenditures of the region's authorities aimed at funding the investment processes.
- The share of the government investments is higher where a total share of borrowed funds is higher. In our opinion, it is apparently due to an impact of the situation in some major (in terms of investment activity) regions, such as Moscow, St.Peter-sburg, Sverdlovsk region, Nizhegorodskaya region, Novgorod region, etc, where budgets, as well as the potential of making the government investments accordingly, are strong enough and the bank sector and financial markets are developing well, and we do not think such a conclusion supports the assumption that while complementing and

to a certain degree guaranteeing the private investment projects, the government investments help attract additional financing.

- Similar reasoning concerning an impact of specific regions can also be applied to explaining a positive dependence between a share of the government investments and export of machine building products. Given the above-mentioned findings, it seems to be unlikely that the government investments can bear on or be a function of a region's potential on the machine building market.
- Our analysis of the dummy variables shows that on the average a share of budget investments is lower across the rich and investor-type regions.

Investments at the expense of own funds (INVOW and INVPRF)

Table 2.11.

Variable INVOW

	Adj. R^2	**C**	**FE1998**	**FE1999**	**X**	**T1**	**T2**	**T5**	**T6**
1	0,134	28,718			0,236				
		0,628			*0,508*				
4	0,041	65,224			-0,988				
		9,582			*-1,265*				
9	0,114	40,314			0,112				
		2,322			*0,636*				
10	**0,217**	**30,314**			**0,719**				
		5,084			***4,510***				
11	0,034	57,543			-0,563				
		13,525			*-1,887*				
13	**0,134**		**65,019**	**59,972**	**-1,536**				
					-2,581				
14	0,156	49,538			1,824				
		12,967			*1,370*				
15	**0,130**	**51,054**			**1,759**				

	Adj. R^2	C	FE1998	FE1999	X	T1	T2	T5	T6
		18,005			***2,130***				
16	**0,292**		**31,986**	**29,715**	**1,950**				
					5,646				
18	**0,197**	**38,221**			**0,878**				
		7,776			***3,555***				
19	0,118	56,357			-0,052				
		4,847			*-0,476*				
20	0,103	52,280			-0,056				
		12,796			*-0,489*				
21	**0,126**		**61,913**	**57,474**	**-0,396**				
					-2,426				
22	0,124	50,515			0,045				
		12,962			*0,446*				
23	**0,234**		**64,862**	**62,087**	**-0,760**				
					-6,203				
24	0,137	47,978			0,101				
		11,196			*1,386*				
25	**0,213**	**61,715**			**0,203**			-	-
		14,814			***2,199***				
26	0,223		53,802	48,390	0,350				
					1,081				
27	0,121	51,963			-0,235				
		13,999			*-1,294*				
28	0,212		54,906	52,667	0,097				
					0,739				
30	**0,170**	**57,006**			**-21,116**				
		18,045			***-2,354***				

	Adj. R^2	**C**	**FE1998**	**FE1999**	**X**	**T1**	**T2**	**T5**	**T6**
32	0,137	51,535			-24,105				
		14,161			*-1,786*				
33	0,126	51,286			3,977				
		13,986			*0,840*				
34	0,123	56,978			-0,111				
		7,678			*-0,910*				
35	0,124	50,218			1,069				
		12,046			*0,447*				
36	0,120	50,972			0,257				
		11,788			*0,058*				
37	0,121	50,637			0,846				
		12,557			*0,279*				
38	**0,098**		**53,770**	**47,884**	**0,008**				
					2,064				
39	**0,190**	**63,366**			**-0,335**				
		16,109			***-3,519***				
40	0,124	49,239			0,057				
		9,994			*0,567*				
41	0,115	52,453			-0,058				
		12,172			*-0,595*				
45	**0,446**	**68,305**			**-0,889**			-	
		19,165			***-8,691***				
46	**0,249**		**58,554**	**55,833**	**-0,702**	+	+		
					-3,832				
50	**0,159**	**57,019**			**-0,671**		+		
		14,785			***-4,046***				
51	**0,570**		**75,510**	**72,794**	**-0,816**			-	

	Adj. R^2	C	FE1998	FE1999	X	T1	T2	T5	T6
					-10,382				
60	0,126	55,721			0,020				
		13,665			*1,571*				
61	**0,093**	**55,138**			**0,026**		+		
		13,430			***2,009***				
62	0,130		26,231	29,768	0,145				
					0,923				
65	0,126	50,931			2,333				
		13,862			*0,830*				
66	0,124	50,728			-13,684				
		13,754			*-0,948*				
67	0,021	51,428			-0,835				
		8,956			*-0,293*				
68	0,033	53,149			-33,818				
		8,860			*-0,968*				
69	0,024	53,060			-17,527				
		8,080			*-0,537*				
70	0,084	51,195			12,426				
		13,314			*1,080*				

Table 2.12.

Variable INVPRF

	Adj. R^2	C	FE1998	FE1999	X
1	0,051	-36,125			0,524
		-1,332			*1,896*
3	0,036		13,411	15,487	0,309
					0,811
9	0,041	-3,056			0,188
		-0,307			*1,864*

	Adj. R^2	**C**	**FE1998**	**FE1999**	**X**
10	-0,065	14,290			-0,035
		3,575			*-0,326*
11	0,001	12,669			0,159
		5,599			*0,998*
13	**0,066**	**20,981**			**-0,863**
		8,629			***-2,923***
14	0,057		12,916	15,172	1,106
					1,535
15	0,031		14,309	16,522	0,135
					0,291
16	**0,090**		**7,693**	**9,671**	**0,609**
					2,914
18	**0,108**		**7,138**	**9,266**	**0,435**
					3,190
19	0,036		18,558	21,450	-0,043
					-0,485
20	0,064		14,152	16,727	-0,109
					-1,589
21	0,046		16,150	17,763	-0,082
					-0,906
22	0,061		13,075	15,184	0,095
					1,725
23	**0,109**		**18,449**	**20,213**	**-0,269**
					-3,590
24	0,022		12,373	14,535	0,015
					0,363
25	0,038		14,195	16,280	0,068

	Adj. R^2	**C**	**FE1998**	**FE1999**	**X**
					1,482
26	0,045	15,727			0,207
		7,556			*1,199*
27	0,043		13,800	15,977	0,098
					1,027
28	0,056		14,619	16,549	0,122
					1,572
30	0,056		16,241	18,476	-9,493
					-1,746
32	0,021		12,805	15,022	1,018
					0,134
33	0,027		12,479	15,205	-2,644
					-0,863
34	**0,060**	**23,093**			**-0,153**
		5,922			***-2,188***
35	0,043		15,041	16,949	-2,495
					-1,734
36	**0,094**	**19,034**			**-7,703**
		9,885			***-3,069***
37	0,041		14,560	16,580	-2,969
					-1,622
38	**0,061**	**14,446**			**0,004**
		9,506			***2,512***
39	0,037		15,493	17,747	-0,034
					-0,597
40	0,029		10,966	13,375	0,055

	Adj. R^2	**C**	**FE1998**	**FE1999**	**X**
					0,934
41	0,024		13,557	15,773	-0,031
					-0,557
45	**0,111**		**18,384**	**20,699**	**-0,281**
					-3,979
46	0,021		13,078	15,250	-0,026
					-0,234
50	0,010		13,665	16,888	-0,114
					-1,097
51	**0,092**		**19,433**	**21,354**	**-0,207**
					-3,343
60	0,028		15,899	18,668	-0,009
					-1,120
61	0,025		16,453	19,638	-0,014
					-1,580
62	0,047		-12,910	-5,587	0,146
					1,675
65	0,040		12,895	15,238	-2,047
					-1,192
66	0,038		12,593	14,735	-9,891
					-1,122
67	0,032	14,293			-1,022
		4,056			*-0,584*
68	0,032	14,857			-12,645
		4,010			*-0,585*
69	0,035	12,691			15,092
		3,149			*0,752*

	Adj. R^2	C	FE1998	FE1999	X
70	0,038		13,975	15,667	3,561
					0,532

- Estimates of the models used show that the investments from own funds (profits) are primarily made across the regions with a high share of industry in the GRP, including the one as measured against the volume of the fixed assets in the industry. At the same time the aggregate volume of the region's fixed assets makes a negative, rather than positive, impact on the share of investments from own funds.
- The share of investments from own funds is higher across regions with a higher weight of fully depreciated fixed assets (both in the industry and as a whole), as well as with monopolies playing a great role in the region's economy, since they have enough own funds to invest.
- On the whole, the share of investments from own funds is negatively correlated with that of the government investments. For example, we have got negative estimates of the coefficients for the share of power industry in the industrial sector (we have shown previously that the government investments prevail there), a share of the state property in the GRP (the state-controlled enterprises are apparently less efficient and do not have enough own funds to invest), a share of region's budget (tax incomes) in the GRP, including through reduction in the net income following the tax deduction, and shares of investments separately funded both from the federal and region's (local) budgets.
- Quite logical are the findings that there is a negative correlation between a share of the investments from own funds and a weight of unprofitable enterprises, a volume of overdue credit indebtedness and a share of credits in the investment financing.
- There is a positive correlation between a share of investments from own funds and a volume of direct foreign investments across the territory of a Russian entity, and, in our opinion, first of all, it lends support to the assumption that the foreign investments are primarily made in the regions with a more efficient economy and where the enterprises have their own funds to invest. On the other hand, it is an advent of the foreign investments that can contribute to higher

profitability of an enterprise and make it possible for it to get its own funds to be invested. However, given the fact that we do not take into consideration the lag variables in the model, it is not quite correct to state that there is such a correlation for each separate year.

- In analyzing the share of investments from own funds, we have over again got an odd positive dependence on the enterprise's arrears of wages. As before, we doubt if it could be directly interpreted as a result of firms' delays in paying wages to their employees because they make investments.
- Our estimates of coefficients of the dummy variables indicating a type of a region support the above-mentioned assumption that the share of investments from own funds is higher across the consumer-type regions and, first of all, the rich ones, but is lower across the investor-type regions, primarily the poor regions. It is noteworthy that the conclusions were drawn for an investment aggregate from own funds, whereas in the models with a share of investments from profits, the dummy variables are statistically insignificant, i.e. spending of the very profits for investments is of equal character throughout all the regions.

Investments from borrowed funds (INVBOR, INVL, INVB and INVST)

Table 2.13

Variable INVBOR

	Adj. R^2	**C**	**FE1998**	**FE1999**	**X**	**T2**	**T3**	**T4**	**T5**	**G2**
1	0,068		116,977	120,785	*-0,714*					
					-1,187					
2	0,070	*34,085*			*0,171*					
		1,817			*0,805*					
5	0,082	*51,795*			*-0,388*					
		12,642			*-1,545*					
6	0,088	*42,568*			*-0,003*					
		8,169			*-0,045*					

	Adj. R^2	C	FE1998	FE1999	X	T2	T3	T4	T5	G2
9	0,069		79,818	84,691	*-0,344*					
					-1,433					
10	**0,217**	***69,686***			***-0,719***					
		11,687			***-4,510***					
11	0,034		42,457		*0,563*					
					1,887					
16	**0,228**		**68,014**	**70,285**	***-1,950***					+
					-5,646					
19	0,069	*43,643*			*0,052*					
		3,753			*0,476*					
20	0,060	*47,720*			*0,056*					
		11,680			*0,489*					
21	**0,071**		**38,087**	**42,526**	***0,396***					
					2,426					
22	0,072	*49,485*			*-0,045*					
		12,698			*-0,446*					
23	**0,210**		**35,138**	**37,913**	***0,760***					+
					6,203					
24	0,084	*52,022*			*-0,101*					
		12,140			*-1,386*					
25	**0,167**	***38,285***			***-0,203***		+	+	+	
		9,190			***-2,199***					
26	0,074		46,198	51,610	*-0,350*					
					-1,081					
27	0,075	*48,037*			*0,235*					
		12,941			*1,294*					
28	0,092		44,999	47,241	*-0,048*					

	Adj. R^2	**C**	**FE1998**	**FE1999**	**X**	**T2**	**T3**	**T4**	**T5**	**G2**
					-0,347					
30	**0,111**	***44,574***			***19,569***	**-**				
		10,852			***2,194***					
32	0,088	*48,465*			*24,105*					
		13,318			*1,786*					
33	0,076		47,530	50,125	*-5,712*					
					-1,125					
34	**0,065**		**27,635**	**33,306**	***0,335***					
					2,290					
35	0,072	*49,782*			*-1,069*					
		11,941			*-0,447*					
36	0,069	*49,028*			*-0,257*					
		11,339			*-0,058*					
37	0,070	*49,363*			*-0,846*					
		12,241			*-0,279*					
38	0,073		47,800	52,270	*-0,005*					
					-1,372					
39	**0,125**	***36,634***			***0,335***					
		9,313			***3,519***					
40	0,072	*50,761*			*-0,057*					
		10,303			*-0,567*					
41	0,068	*47,547*			*0,058*					
		11,034			*0,595*					
60	0,090	*44,279*			*-0,020*					
		10,859			*-1,571*					
61	**0,077**	***44,862***			***-0,026***	**-**				

	Adj. R^2	C	FE1998	FE1999	X	T2	T3	T4	T5	G2
		10,927			***-2,009***					
62	0,077	*58,765*			*-0,061*					
		5,193			*-0,921*					
65	0,071	*49,069*			*-2,333*					
		13,355			*-0,830*					
66	0,071	*49,272*			*13,684*					
		13,359			*0,948*					
67	0,021			48,572	*0,835*					
					0,293					
68	0,033			46,851	*33,818*					
					0,968					
69	0,024			46,940	*17,527*					
					0,537					
70	0,063	*48,805*			*-12,426*					
		12,693			*-1,080*					

Table 2.14

Variable INVL

	Adj. R^2	C	FE1998	FE1999	X	G2
1	0,133		25,909	27,558	-0,253	
					-0,804	
2	**0,143**	**-13,533**			**0,201**	+
		-1,520			**1,985**	
5	0,135	2,446			-0,082	
		1,127			-0,678	
6	0,163	7,065			-0,054	
		3,181			-1,686	
9	0,137	-5,505			0,076	

	Adj. R^2	C	FE1998	FE1999	X	G2
		-0,627			0,848	
10	0,238	0,928			0,023	
		0,280			0,265	
11	0,282		1,162		0,057	
					0,403	
19	0,128	-3,316			0,070	
		-0,524			1,174	
20	0,049	3,251			0,046	
		2,815			1,271	
21	0,133	2,626			-0,042	
		1,048			-0,542	
22	0,132	1,749			0,001	
		0,853			0,016	
23	0,132	1,642			0,008	
		0,755			0,116	
24	0,135	2,641			-0,029	
		1,180			-0,770	
25	0,132		1,614	3,406	-0,078	
					-1,443	
26	0,080		1,208	3,927	-0,201	
					-1,076	
30	0,147	3,120			-6,815	
		1,482			-1,522	
32	0,151	1,927			-10,499	
		1,014			-1,690	
33	**0,180**		**0,538**	**2,768**	**-7,019**	
					-2,833	
34	0,139		-3,715	-1,739	0,091	
					1,239	

	Adj. R^2	C	FE1998	FE1999	X	G2
35	0,151	3,646			-2,081	
		1,664			-1,741	
36	0,147	3,653			-3,422	
		1,604			-1,526	
37	0,148	3,203			-2,421	
		1,519			-1,603	
38	0,150		1,393	4,355	-0,004	
					-1,835	
39	0,134	6,156			3,110	
		-0,073			-1,522	
40	0,133	1,096			0,022	
		0,449			0,443	
41	0,138	0,605			0,048	
		0,270			1,010	
60	0,124	1,993			0,917	
		0,002			0,255	
61	0,170	3,552			-0,008	
		3,104			-1,646	
62	0,149		23,862	20,215	-0,127	
					-1,741	
65	0,150	1,733			-2,598	
		0,904			-1,768	
66	0,138	1,535			-7,814	
		0,793			-1,077	
67	0,311			2,250	-1,661	
					-1,223	

	Adj. R^2	C	FE1998	FE1999	X	G2
68	0,215			1,886	9,016	
					0,414	
69	0,236			-0,333	22,393	
					1,339	
70	0,133	1,524			1,896	
		0,733			0,312	

Table 2.15

Variable INVB

	Adj. R^2	C	FE1998	FE1999	X	T2	T4	T5	T6	G2
1	**0,126**	**113,779**			**-0,872**	-	-	-	-	
		3,142			**-2,366**					
9	0,103	45,991			-0,182					
		3,395			-1,330					
10	**0,252**	**46,184**			**-0,717**					
					-5,219					
11	**0,025**	**19,144**			**0,548**					
					2,042					
16	**0,315**	**48,186**			**-1,874**		-		-	
		12,451			**-6,748**					
19	0,105	40,251			-0,117					
		4,477			-1,391					
20	0,131	26,838			0,107					
		8,495			1,231					
21	**0,059**	**17,562**			**0,332**					-
		5,866			**2,719**					
22	0,098	29,352			-0,072					
		9,535			-0,917					

	Adj. R^2	C	FE1998	FE1999	X	T2	T4	T5	T6	G2
23	**0,178**	**22,411**			**0,410**	**-**	**-**	**-**	**-**	
		7,011			**3,805**					
24	**0,124**	**32,432**			**-0,130**	**-**	**-**	**-**	**-**	
		9,641			**-2,277**					
25	0,046				-0,001					
					-0,008					
26	0,133		23,822	25,354	-0,221					
					-0,959					
27	0,094	28,674			-0,072					
		9,701			-0,498					
28	**0,042**	**20,588**			**-0,197**					
		11,028			**-2,151**					
29	**0,055**	**21,200**			**1,465**					**-**
		9,221			**2,570**					
30	**0,177**	**23,147**			**24,258**	**-**	**-**	**-**	**-**	
		7,413			**3,742**					
31	**0,173**	**29,360**			**101,798**	**-**	**-**	**-**	**-**	
		10,468			**3,542**					
32	0,099	28,210			11,081					
		9,704			0,999					
33	0,096	28,348			-2,512					
		9,753			-0,707					
34	**0,104**		**-0,935**	**3,137**	**0,447**					
					3,930					
35	0,093	28,324			0,103					
		8,716			0,058					
36	0,095	27,255			2,281					

	Adj. R^2	**C**	**FE1998**	**FE1999**	**X**	**T2**	**T4**	**T5**	**T6**	**G2**
		8,103			0,677					
37	0,093	28,303			0,191					
		8,973			0,085					
38	0,095	28,646			-0,001					
		9,755			-0,574					
39	**0,235**		**15,629**	**13,613**	**0,397**		-		-	
					5,225					
40	0,093	29,286			-0,027					
		7,492			-0,337					
41	**0,053**	**28,019**			**-0,184**					-
		9,729			**-2,532**					
45	**0,752**		**10,440**	**8,525**	**0,991**					
					20,866					
46	**0,381**	**19,362**			**1,024**	-	-	-	-	
		7,237			**8,034**					
60	0,071		22,192	20,087	-0,012					
					-1,578					
61	0,069		22,546	20,405	-0,012					
					-1,420					
62	0,102		58,567	51,266	-0,167					
					-1,300					
65	0,096	28,359			0,462					
		9,718			0,222					
66	0,104	28,751			12,276					
		9,871			1,164					
67	0,073			27,278	1,075					

	Adj. R^2	C	FE1998	FE1999	X	T2	T4	T5	T6	G2
				0,522	0,522					
68	**0,126**			**24,620**	**51,791**		-	-		
				5,815	**2,100**					
69	0,071			26,755	6,543					
				5,623	0,277					
70	**0,124**		**29,004**	**26,995**	**-18,902**	-	-	-	-	
					-2,379					

Table 2.16

Variable INVST

	Adj. R^2	C	FE1998	FE1999	X	T5
1	-0,037	-11,527			0,119	
		-0,651			0,653	
5	-0,047		-0,188	0,985	0,008	
					0,119	
6	0,174	-0,837			0,016	
		-1,073			1,535	
9	-0,045	-1,642			0,018	
		-0,267			0,275	
10	0,023	3,219			-0,097	
		2,423			-0,972	
11	0,009	0,641			0,071	
		0,915			1,154	
16	-0,043		-0,682	0,501	0,036	
					0,211	
18	0,026		-2,299	-1,162	0,155	
					1,610	
19	0,007		9,195	11,552	-0,084	

	Adj. R^2	C	FE1998	FE1999	X	T5
					-1,333	
20	-0,025		-0,441	1,236	0,009	
					0,234	
21	-0,028		-1,554	-0,081	0,079	
					0,800	
22	-0,008				-0,025	
					-0,798	
23	-0,022		0,542	1,642	-0,047	
					-0,910	
24	0,046	-0,044			0,039	
		-0,052			1,833	
25	-0,043		-0,500	0,928	0,025	
					0,745	
26	-0,116		-1,553	-0,371	0,108	
					0,558	
33	-0,047		-0,151	1,040	-0,028	
					-0,006	
34	-0,042		-0,902	0,434	0,013	
					0,321	
35	0,027	2,903			-1,822	
		2,218			-1,582	
36	-0,021	1,212			-1,971	
		0,696			-0,979	
37	0,034	2,968			-3,134	
		2,322			-1,685	
38	-0,013		-0,190	2,597	-0,002	
					-1,093	

	Adj. R^2	C	FE1998	FE1999	X	T5
39	-0,020		0,990	2,335	-0,042	
					-0,940	
40	-0,044		-0,339	0,853	0,007	
					0,176	
41	0,042	2,554			-0,043	
		2,487			-1,830	
60	**0,102**	**0,471**			**0,015**	
		0,765			**2,455**	
61	**0,168**	**-0,191**			**0,055**	
		-0,258			**3,235**	
62	-0,035	2,586			-0,015	
		0,644			-0,674	
65	-0,048		-0,302	0,885	0,665	
					0,233	
66	-0,028		-0,153	1,189	17,431	
					0,762	
67	**0,449**			**-3,273**	**39,214**	+
					3,169	
68	0,215	1,096			-58,869	
		0,280			-1,603	
69	0,135	-2,288			58,145	
		-0,483			0,974	
70	**0,057**	**-1,725**			**8,891**	+
		-1,175			**2,093**	

- The most striking finding is that a majority of the statistically significant dependences with this group of variables were found for a share of the budget funds, i.e. actually for a share of the government investments we have already considered above. An additional finding that supports our assumption of a low efficiency of the

budget investments is that there is a negative dependence between a share of budget funds as one of the sources of investment financing and expenditures for technological innovations.

- The findings for the other indices of the borrowed funds are mostly obvious. Thus our estimates of the models demonstrate a logical negative correlation between the share of borrowed funds and the variables positively correlating with the share of own funds. In particular, the investments from own funds are negatively dependent on the share of industry in the GRP, the weight of fully depreciated fixed assets (mainly because the enterprises having such fixed assets are not attractive for investments), the share of monopolies in the region's economy and direct foreign investments.
- Some findings support that there is a direct quantitative correlation between a share of the borrowed funds used to finance investments and the role that the budget plays in the investment process across the region (the budget investments are an integral component of the investments financed from the borrowed funds). For example, we have got positive estimates of coefficients for variables of a share of power industry in the industrial sector and that of the state sector in the GRP, incomes of the region's budget and a share of unprofitable enterprises.
- The share of investments from credits, according to our estimates, is correlated with only two factors, namely the real incomes of the population, which means that there is a resource base for banks, and the profits in the economy (investments are primarily financed from own funds where the profits are higher).
- The share of investments which are financed from emission of the stock are exclusively correlated with indices of the foreign investments and foreign trade across the region. It is obvious that the share of such investments is higher across the regions where the volume of foreign investments is higher (the causation is quite the reverse here), as well as where the fuel-power complex produce accounts for a high share of the export.
- The signs and statistical significance of the estimates of coefficients for the dummy variables, given a share of the budget funds, fully match the estimates obtained in evaluating the models with a share of the state investments. As for the remaining variables, we have found that there is a positive correlation for investor-type and wob-

bling regions and a negative correlation for the consumer-type regions.

Foreign investments (INVF and FDI)

Table 2.17

Variable INVF

	Adj. R^2	**C**	**FE1998**	**FE1999**	**X**	**G1**	**G2**
1	0,112		-54,850	-26,208	0,891		
					0,410		
2	0,103		-30,474	-0,660	0,545		
					0,711		
9	0,049		210,138	261,803	-1,906		
					-1,073		
10	0,207		25,028		-0,307		
					-0,651		
11	**0,196**		**46,489**		**-1,650**	-	+
					-2,551		
16	0,106		32,904	64,809	-1,349		
					-0,907		
18	0,101		24,565	56,356	-0,403		
					-0,438		
19	0,122		159,570	213,586	-1,466		
					-1,876		
20	0,078		19,453	55,488	-0,221		
					-0,450		
21	0,120		36,214	65,995	-0,232		
					-0,449		
22	0,115		33,838	65,500	-0,133		
					-0,395		
23	0,116		32,318	63,742	-0,041		

	Adj. R^2	**C**	**FE1998**	**FE1999**	**X**	**G1**	**G2**
					-0,082		
24	0,100		15,602	46,650	0,067		
					0,244		
25	0,194		32,263	51,581	0,049		
					0,185		
26	0,008		27.67510	86.28437	-4,127		
					-1,608		
27	**0,156**		**22,353**	**53,428**	**1,270**	-	+
					2,343		
28	0,125		32,329	65,720	0,415		
					0,963		
29	0,122		35,671	65,616	-2,433		
					-1,211		
30	0,122		39,842	71,493	-45,698		
					-0,797		
31	0,134		28,850	61,131	-180,186		
					-1,441		
32	**0,162**		**30,067**	**61,977**	**94,877**	-	+
					2,639		
33	0,109		12,299	50,583	-33,629		
					-1,130		
34	0,113		41,991	71,140	-0,188		
					-0,361		
35	0,123		22,456	55,178	10,390		
					0,798		
36	0,119		29,798	61,748	3,641		
					0,184		

	Adj. R^2	**C**	**FE1998**	**FE1999**	**X**	**G1**	**G2**
37	0,126		21,421	54,066	18,589		
					1,049		
38	**0,125**	**32,100**			**0,042**	-	+
		3,437			**2,054**		
39	0,133		46,792	79,089	-0,558		
					-1,544		
40	**0,134**		**55,650**	**84,184**	**-0,705**	-	+
					-2,036		
41	0,099		29,426	60,782	-0,451		
					-1,142		
45	0,131		38,366	69,550	-0,628		
					-1,339		
46	0,121		38,450	68,714	-0,663		
					-1,053		
47	0,089		7,051	38,491	0,201		
					0,574		
48	0,099		23,467	56,273	-0,369		
					-0,616		
49	0,089		27,153	58,593	-0,201		
					-0,574		
50	0,125		30,558	61,033	0,588		
					0,921		
51	0,135		44,086	74,089	-0,590		
					-1,639		
52	0,216		33,739	77,164	5,882		
					1,863		
62	0,130		-72,095	-19,913	0,593		
					1,347		

	Adj. R^2	C	FE1998	FE1999	X	G1	G2
65	0,110		16,850	50,513	-9,995		
					-0,547		
66	0,129		32,366	64,370	51,312		
					0,509		
67	0,115	62,944			11,699		
					0,482		
68	0,147	79,371			-604,950		
					-1,609		
69	0,112	57,312			60,080		
					0,201		
70	**0,180**		**20,381**	**47,009**	**137,491**		+
					3,079		

Table 2.18

Variable FDI

	Adj. R^2	C	FE1998	FE1999	X	T5	G1
1	-0,016		-47,544	-27,404	0,566		
					0,369		
2	0,000		-3,781	17,781	0,180		
					0,405		
9	0,007		52,473	79,105	-0,435		
					-0,733		
10	-0,023	12,221			-0,155		
		1,177			-0,559		
11	**0,029**	**17,905**			**-0,942**	+	
		2,105			**-2,002**		
16	0,004		15,940	38,164	-0,357		

	Adj. R^2	C	FE1998	FE1999	X	T5	G1
					-0,435		
18	0,002		11,223	33,636	0,031		
					0,060		
19	0,004		35,791	61,695	-0,246		
					-0,511		
20	-0,037		5,597	31,264	0,161		
					0,477		
21	0,005		15,255	35,921	-0,179		
					-0,560		
22	0,000		12,229	34,292	-0,030		
					-0,137		
23	0,009		16,866	38,308	-0,350		
					-1,089		
24	0,008		6,639	28,139	0,166		
					1,052		
25	0,009		14,359	21,446	-0,056		
					-0,468		
26	-0,055		9,916	44,780	-2,124		
					-1,014		
27	**0,049**		**5,530**	**27,093**	**0,847**		
					2,516		
28	0,002		12,996	35,828	-0,074		
					-0,274		
29	0,000		9,532	32,447	1,271		
					0,906		
30	0,003		12,199	34,226	-2,264		
					-0,053		

	Adj. R^2	**C**	**FE1998**	**FE1999**	**X**	**T5**	**G1**
31	0,003		11,400	33,519	-23,509		
					-0,298		
32	0,001		11,728	33,758	2,131		
					0,091		
33	0,003		12,682	32,913	8,545		
					0,418		
34	0,001		35,256	50,955	-0,494		
					-1,386		
35	0,003		9,406	31,731	2,660		
					0,292		
36	0,006		7,782	30,730	7,526		
					0,586		
37	0,004		8,393	30,786	6,101		
					0,472		
38	0,003		11,794	34,302	-0,001		
					-0,028		
39	0,003		15,281	37,515	-0,131		
					-0,556		
40	**0,032**		**28,562**	**48,477**	**-0,496**		-
					-2,210		
41	0,010		20,444	42,388	-0,300		
					-1,310		
45	0,003		12,091	34,096	-0,028		
					-0,095		
46	0,017		18,623	39,479	-0,679		
					-1,643		
47	0,000		3,233	25,348	0,155		

	Adj. R^2	**C**	**FE1998**	**FE1999**	**X**	**T5**	**G1**
					0,725		
48	0,009		17,983	41,658	-0,410		
					-1,118		
49	0,000		18,708	40,822	-0,155		
					-0,725		
50	0,007		15,520	37,025	-0,517		
					-1,160		
51	0,009		16,724	38,168	-0,236		
					-1,028		
52	**0,255**		**18,007**	**27,182**	**3,454**		-
					3,141		
62	0,003		4,261	27,775	0,043		
					0,157		
65	0,013		12,133	36,325	-8,517		
					-0,728		
66	0,009		11,614	34,751	-15,110		
					-0,189		
67	0,015	8,876			9,400		
		0,141			0,402		
68	0,031	22,230			-410,880		
		0,351			-1,097		
69	0,020	-18,091			216,335		
		-0,245			0,712		
70	0,008		1,924	22,429	53,258		
					1,651		

- The findings obtained show that there are some direct functional relations that have some bearing on the volume of the foreign investments. As one example, the foreign investments (both total and direct ones) are negatively dependent on the agricultural share in the GRP and that of investments in the private enterprises, but are positively dependent on the share of products made at the joint venture enterprises in the GRP.
- There is a statistically significant relation between the volume of direct foreign investments and a share of funds gained from emission of the stock as a source of investment financing. In our view, the finding shows that the foreign investments are frequently attracted through an issue of stock, i.e. by means of acquisition of some property by foreign partners on the security of the attracted funds.
- Foreign investments are also positively correlated with the volume of credits furnished. The relation is apparently due, first, to the influence of the regions that have a well-developed financial sector and are heavy borrowers of foreign capital at the same time and, second, to the fact that expanded crediting of the real sector by banks means a rise in the financial stability and transparency of enterprises across the region. It goes without saying that such enterprises find it easy to attract foreign investments.
- Of interest are some estimates of the model that demonstrate a positive relation between the volume of foreign investments and that of internal expenditures for research and development. It is likely that attraction of the foreign capital, basically a cheaper and lasting one, allows the companies to finance their research and development work.
- For a total of the foreign investments, we have also found an unexplainable positive dependence on the wage arrears.
- Our estimates of the dummy variables show that the foreign investments, as well as investments in total, primarily go to the investor-type regions, whereas in the consumer-type regions their volume is lower than the average Russia's level. It is noteworthy that we have found positive estimates of the coefficient for the regions of poor investor type. As we have already assumed previously, it is precisely the foreign investments that become a key source of funds used to finance the investments activity in such regions.

Impact of some other factors

In analyzing an impact of some other factors on the investment processes, we are going to note, above all, an absence of some dependences assumed:

- First, it is noteworthy that neither the volumes and growth rates nor the structural indices of the investment activity depend on the growth rates of population's savings on bank deposits and in securities, i.e. on an increase in money that can be potentially used for financing of investments. In our opinion, it is chiefly due to a substantial gap between the financial (bank) and real sectors of economy. In the background of rationed credits, expansion of liabilities frequently has no bearing on the banks' willingness to transform the savings into investments. The statistically significant index of the remaining deposits on the accounts of Sberbank recorded in one case shows, as noted above, an over-all level of well being across the region, rather than the financial potential of the regional bank system.
- Second, an important finding is that there is no dependence between any index of the investment activity and a level of profitability of region's enterprises. It is evident that, given a over-all low level of financial transparency of economy and a common practice of evading the taxation through a decreased declared profit, the profitability index can neither be used as an important guideline for potential loaners nor demonstrates an actual capability of a company to make investments from its own funds.
- Third, we have come to a conclusion that runs counter to the traditional hypotheses concerning the investment processes occurring in developing and transition economies - there is no dependence between the indices of the investment activity and the growth rate of consumer price index. In our opinion, however, it is basically due to the fact that we have considered cross-regional, rather than cross-nation data. With all the regions being within the common economic space and pursuing a common monetary policy, the inter-regional differences in growth rates of a consumer price index are small and have no significant bearing on the dynamics and structure of the investment processes taking place at the regional level.

Chapter 3. Some Institutional Factors and Constraints of Investment Operations of Companies on the Regional Level

3.1. Methodological Approaches

Russian regions differ considerably in terms of local conditions for businesses. This can be attributed both to differences in their material and resource bases, different level of development of market infrastructure and different approaches exercised by local administrations and legislature. Specifics of the economy of a Subject of the Federation as an object for research is determined by two reasons: a) it is the very level on which notes differences in formal business procedures as well as administrative procedures exercised by local authorities that appear complementary to federal ones; and b) the constitutional provisions provided for the existence of a region-Subject as a separate unit from the statistical perspective. Apparently while studying regions, one should take into account the specificity of unique pairs: Moscow- Moscow oblast and St. Petersburg- Leningrad Oblast. These four Subjects have their specifics because a standard region comprises a city-center of it with the adjoining geographical area, while as far as these noted pairs are concerned, there is no center or adjoining area there. At this point one should note that in view of investment attractiveness the status of a capital or "another capital"(ie. an informal center of a part of the country, for instance the city of Novosibirsk as Siberian capital) bears its own, independent significance, and the position of the city of Moscow and St. Petersburg appear illustrative both in terms of investment inflow and their positions in various ratings.

While classifying institutional constraints, one should agree there is a relatively successful approach[9] allowing to single out three main groups of regions:

1. The constraints associated with enterprises and regions -potential recipients of investment;
2. The constraints related to infrastructure of the market for investment; and

[9]Danilov Yu.A. Institutsionalnye ogranichenya v privlechenii investitsiy rossiskymi predpriyatiyami/Investitsionny klimat i perspektivy ekonomicheskogo rosta v Rossii, M., GU VSHE, 2001

3. Disproportions in the structure of investment (investors).

Nonetheless, the purposes of the present research dictate expediency of a slight modification of approaches towards each group. While below groups (1) and (2) to a greater extent are regarded as characteristics of an object for potential investment (in our particular case- a region's economy), group (3) determines the attitude of a subject of investment activity to the object.

While discussing the subject of investment, one should distinguish external (foreign) investors from investors from other regions (given that the region's center is separated as a transit point for investment flows),and the to groups from investment sources being domestic relative to the region.

While describing characteristics of a region as an object for investment, one should also take into account the methodology of making a rating of investment attractiveness of regions practiced by analysts of "Expert"[10] weekly. The methodology in question is based upon analysis of two groups of factors that accordingly determine investment capacity and investment risks.

- The first group (**investment capacity**) comprises eight main factors:
- resources and minerals (the average weighted self- sufficiency with balance sheet stock of main kinds of mineral resources);
- labor (labor resources and their educational level);
- production (performance in main spheres of the local economy);
- innovation (the level of development of R&D and their financing, introduction of achievement of scientific progress in the region);
- institutional (the level of development of leading market institutions);
- infrastructure (the region's location from the perspective of transport and geography and its self-sufficiency in terms of infrastructure);
- finance (the volume of budget revenue; enterprises' profitability rates and the local population's incomes);
- consumer factor (the aggregate purchasing capacity of the local population).

At this point it should be noted that our approach to institutional factors given below appears considerably broader than the one above. We believe that while estimating a region's capacity in terms of institutional development, it would be expedient to have the latter embrace a number of indicators falling within the

[10] Expert, # 39 (202), October 18, 1999

groups of labor, innovation and infrastructure factors. At the same time the factors that the authors of the methodology attribute to the group of 'institutional" factors undoubtedly can be attributed to the group of infrastructure factors. Regretfully, the authors do not provide a clear interpretation of the above, however, it is likely to be correct to have correlations between private and public property fall under this particular group, thus specifying the problems of this group.

The value of **investment risk** shows the probability of loosing investment and return on that. The authors of the methodology consider main kinds of risk as follows:

- economic (tends in economic development of the given region);
- financial the extent to which the regional budget is balanced and the state of enterprises' finance);
- political (polarization of the population's political preferences according to the outcome of the past parliamentary elections, legitimacy of the local authorities, intensity of non-allowed protest actions);
- social (the level of social tension);
- ecological (the level of pollution, including nuclear contamination);
- criminal (crime rate in the region with account of the seriousness and magnitude of economic crime);
- legislature-related risk (legal conditions of investing in certain areas or sectors, procedures of utilization of single production factors, tax benefits).
- Form our viewpoint, it is political, social, criminal and legislative risks that can be attributed to institutional components.

In conclusion, we have the following grouping of institutional factors of investment in a region:

Capacity factors	Factor of risk
Correlation between property forms	Political
Labor resources	Social
Innovation capacity	Criminal
Maturity of market infrastructure	Legislative

3.2. Impact of single factors of investment processes

The current correlation of property form was taking its shape resulting from the privatization process of the '90s. The analysis of inter-regional differences of the privatization process completed in the course of IET-CEPRA research[11] has highlighted a relative general homogeneity of Russian regions from the perspective of formal indicators of overall dynamics and dynamics of privatization across different kinds of public property. However, as far as the correlation between different kinds of property (federal, that of Subjects of the Federation, and municipal one) is concerned, the structure of the whole mass of privatized enterprises (objects) showed a substantial inter-regional differentiation.

In principle such a situation can be asserted as rather a natural one, for In Russia the stage of mass privatization and primary fixing of private property rights (1992-94) was happening on the basis of the prevailing federal center's ideology which was secured by directive appointment of heads of the major part of regional administrations by presidential Decree[12]. At that time, regional authorities had relatively few opportunities to exercise a serious (from the quantitative perspective) influence on the process of privatization of big enterprises being in federal property (as a rule, those were enterprises of basic sectors that would be directly subordinated to the former USSR and republican authorities).

Despite the magnitude of the Russian privatization process between 1992 through 1997, a huge public sector is still there. According to the methodology of computation developed by the State property Committee, as of early 1998 there were 59% enterprises that changed their property form of the overall their quantity as of the moment of the launch of privatization. Similar to many other indices, this particular index as characterized by a substantial inter-regional differentiation that appears clearly visible, should all the RF Subjects be grouped by this particular classification sign:

1. The group of regions with the least intensity of privatization (26 Subjects): Murmansk oblast, Leningrad oblast, Vladimir oblast, Moscow city, Republic of Mordovia, Republic of Kalmykia, Republic of Tatarstan, Samara oblast, Republic of Dagestan, Ingush Republic, Republic of Kabardino-Balkaria, Karach-Cherkesian Re-

[11] Transformacia otnoshenij sobstvennosti i sravnitelny analyz rossiyskykh regionov. M., 2001

[12] On the impact of relationship between the federal center and regions on the Russian privatization process in the '90s, see: Ibid, p. 4.1.

public, Republic of North Ossetia - Alania, Krasnodar krai, Perm oblast, Republic of Bashkortostan, Republic of Tyva, Republic of Sakha (Yakutia), Nenetsian AO, Yamal-Nenetsian AO, Taymyr (Dolgano- Nenetsian) AO, Evenk AO, Ust'-Orda Buryat AO, Aguinsky Buryat AO, Chukotka AO, Koryakian AO, - where less than a half of all enterprises has been privatized, while in Republic of Mordovia, Republic of Kabardino-Balkaria, Republic of North Osetia - Alania, Republic of Tyva, and Taymyr (Dolgano- Nenetsian) AO the proportion of privatized enterprises accounted for under 1/5.

2. The group of regions where the number of privatized enterprises accounted for over 50%, however, it proved to be less than nationwide on average (ie. under 60%) comprises 16 Subjects of RF: Republic of Karelia, Novgorod oblast, Pskov oblast, Moscow oblast, Nizhny Novgorod oblast, Penza oblast, Ulianovsk oblast, Republic of Mariy El, Chuvash Republic, Republic of Adygea, Novosibirsk oblast, Khanty-Mansi AO, Krasnoyarsk krai, Yevreyskaya AO, Amur oblast, Magadan oblast).
3. The group of regions with the biggest intensity of privatization (with over 80% of enterprises transferred to the non-government sector) comprises 12 regions (Oryol oblast, Ryazan oblast, Belgorod oblast, Volgograd oblast, Saratov oblast, Stavropol krai, Orenburg oblast, Chelyabinsk oblast, Tomsk oblast, Republic of Buryatia, Chita oblast, Sakhalin oblast).
4. The group of regions where the level of privatization was higher than the average one nationwide, but less than in the third group (ie. not under 80%) comprises all other Russian regions not included in the three groups above).

This grouping is based on the data across the whole mass of enterprises as of the moment of the start of privatization, and it includes both federal, municipal property and property of the Subjects of the Federation across all the sectors of the economy. Interestingly, by the practical completion of the privatization process some RF regions reported a serious role of public sector there. Proceeding from statistical data regularly collected by Goskomstat, to evaluate the role of the sector, one should compare indicators of sectors' shares in economic output and employment. At the same time the share of the sectors in the overall number of enterprises is just a secondary index due to its virtual essence, so it can be used only in combination with the noted indices.

The group of regions where the share of public and municipal enterprises in the overall volume of industrial output accounted for over 15% comprised: Ingush Republic (70,9%), Republic of Altai (49,9%), Smolensk oblast (42,3%), Chukotka AO (41,1%), Republic of Tyva (34,1%), Tomsk oblast (33%), and another 5 regions (Republic of Mariy El, Republic of Dagestan, Republic of North Osetia - Alania, Udmurt Republic, Khabarovsk krai) where the index made up beteen 0 to 30%, and another 12 ones (Moscow city, Arkhangelsk oblast, Tver oblast, Kirov oblast, Kursk oblast, Tambov oblast, Penza oblast, Chuvash Republic, Republic of Kalmykia, Republic of Kabardino-Balkaria, Sverdlovsk oblast, Novosibirsk oblast, Yevreyskaya AO), where the respective value accounted for between 15 to 20%.

The role public and municipal enterprises played in the overall employment in the industrial sector was far bigger than nationwide as a whole (over 1/5 of the overall number of employees) in: Chukotka AO (64,2%), Ingush Republic (61,4%), Arkhangelsk oblast, Republic of North Osetia - Alania è Republic of Tyva (40-41%), Republic of Kalmykia, Republic of Dagestanå and Tomsk oblast (30-31%), as well as in another 16 regions (Murmansk oblast, Smolensk oblast, Tambov oblast, Penza oblast, Republic of Mariy El, Republic of Mordovia, Chuvash Republic, Republic of Tatarstan, Republic of Bashkortostan, Udmurt Republic, Sverdlovsk oblast, Novosibirsk oblast, Omsk oblast, Republic of Altai, Republic of Sakha (Yakutia), Khabarovsk krai) (20-30%).

While analyzing the aggregate information on the share of public sector in the economy on the whole, one can argue that to the greatest extent the government is involved in economic operations in: Republic of Mariy El, Chuvash Republic, Republic of Kalmykia, Republic of Dagestane, Udmurt Republic, Republic of Tyva, Republic of Sakha (Yakutia), Yevreyskaya AO, Chukotka AO и Khabarovsk krai. In these regions public and municipal enterprises' contribution to economic operations in the industrial sector, constriction and trade was higher than nationwide on average.

It was Moscow city, Murmansk oblast, Arkhangelsk oblast, Smolensk oblast, Tver oblast, Kirov oblast, Tambov oblast, Republic of Mordovia, Ingush Republic, Republic of Kabardino-Balkaria, Republic of North Osetia - Alania, Republic of Tatarstanå, Republic of Bashkortostan, and Republic of Altai where the government's role of economic agent was somewhat lower, but still rather significant. In these regions the proportional weight of public and municipal enterprises was higher than the average one nationwide at least by one of indicators (apart from the industrial sector) and, at least by one of indexes characterizing the sector fro construction or trade.

Having singled out the group of regions that by the end of the decade of reforms showed a greater level of the government's direct involvement in economic activity than throughout the country on average, it would be logical to identify the opposite pole - that is, the territories were private sector dominates.

Comprehensive analysis of the above data on the share of private sector across main sectors of the economy allows arguing that it is Vladimir, Nizhny Novgorod, Belgorod, Voronezh, Saratov oblasts, Krasnodar, Stavropol and Altay krais where judging its formal quantitative criterion, it has developed to the greatest extent. The proportion of private sector in the noted regions accounted for at least a half of the industrial sector, as far as the indexes of output and employment are concerned, 60% of accomplished contractual works (and, in parallel with that, at least 50% of accomplished design and exploration works in a number of regions), and a half wholesale trade turnover. The group of the noted Subjects of the Federation can be complemented by Leningrad, Pskov, Bryansk, Kostroma, Moscow, Tver, Kursk, Tambov oblasts, Adygeya, karachaevo-Cherkessia, Kamchatka and Sakhakin oblasts. In these regions private enterprises secured at least 50% of industrial output or employment (or both at once), and either at least 60% of accomplished contractual works, or at least 50% of the volume of accomplished design and exploration works, or a half wholesale trade turnover (with different combination in regard to construction and wholesale indices, but at least by either of them).

As concerns other RF Subjects that have failed to be included in the two noted groups, they form a huge mass of regions where enterprises of the mixed property form play a big role.

As the research shows, a correlation of property forms does not have a significant effect on economic activity. From the perspective of formal quantitative criteria, an advanced development of private sector has not form a prerequisite for a prompt overcoming of the crisis. The prevalence of private companies in a particular sector does not necessarily form a guarantee of the private sector's qualitative maturity, as far as its capability to secure an economic progress of the given region's economy. It is initial conditions prior to the launch of reform and the impact of macroeconomic and political factors that appear far more significant.

In their paper, Yanovsky et al[13]. laid out a hypothesis, according to which economic factors indeed have a significant impact on a region's economic development and its ability to attract investment. Specifically, one can single out the following factors:

1. legal ones, more specifically - particular aspects of legal and law enforcement practices, the strength of institutions being independent of authorities - that is, free press and organizations protecting human rights; and
2. Political, particularly stability of power and political conflicts.

At this point, we witness a narrowing of the focus of research (nonetheless, related to its concrete purposes). One of major conclusions is that the given set of variables characterizing institutional specificity of regions allows a sufficient explanation of 10 to 20% of variables reflecting the level of development of the given regional economy and dynamics of economic growth. The authors of the cited research argue that their final models allow the first step towards building a rating of regions in regard to levels of political and legal risks.

It also worth noting that, according to the noted paper, the variables associated with guarantees of basic rights (personal inviolability, freedom of speech and private property) appeared substantially more significant vs. the quality of civil court and tax system (given all the indisputable importance of the latter two factors). In our view, personal safety should be regarded both in terms of protection of citizen's rights, as well as rights of investor, and owner from illegal actions of government authorities, and, even to a greater extent, in the context of general situation with crime. With all the significance of the problem of corruption, the attention paid to it clearly overweight the significance of problems of the physical comfort of residing and doing business in a region or in the country[14].

Below, it is intended to consider the impact of the noted institutional factors on investment climate. It is an actual change in the level of investment in a region as well as the change in specialized institutions', for example, rating agencies' conceiving the respective shifts as an output, ie. "climatic shifts". It should be noted that as far as rating agencies are particularly concerned, their estimates of investment attractiveness in turn appear an important institutional factor per se,

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[13] Yanovsky K.E. (team leader), Zhavoronkov S.V., Kochetkova O.V., Mazhuga A.Yu., Cherny D.A., Pierre-Marcele Dejardin, Paul Hobson, and Domald Savoy. "Economico-political problems of Russian regions". Mosco, IET, October 14, 2001

[14] See: "Investitsionny klimat i perspektivy ekonomicheskogo rosta v Rossii". Ed. by E. G. Yassin. M., GU VSHE, 2001. This collection of essays comprises three papers on corruption, and no papers on crime.

as they influence investors too. Whilst analyzing changes in such estimates, let us use the aforementioned rating of investment attractiveness of Russian regions suggested by analysts of Expert weekly. Specifically, we will be considering cases of a substantial change (up or don) in a concrete region's rating that can be explained by the impact of the factors we attribute to institutional ones.

Obviously, the factors forming the region's capacity appear less mobile than those associated with risks. A sharp change in the region's position under the impact of reasons attributed o the given group may become possible primarily under the impact of fairly revolutionary events (of course, exclusive of a radical change of the estimates themselves). Analysts note that it is incomparably cheaper and simpler to improve investment climate in a region by lowering risks rather than by increasing its capacity. The analysis of dynamics of ratings across the two components over the period between 1998 to 001 shows that the average change in the rating position in regard to capacity (the difference between the maximal and minimal values) accounted for 6.6 v. 18.3 characteristic of the risk-associated rating.

It is just the level of development of market infrastructure that can be called a certain exception, however, there is an interesting nuance here. Given that for the purpose of generally estimating investment capacity a loose infrastructure may be conceived as an undoubtedly negative factor, such a conclusion is unlikely worth making as far as investment in infrastructure itself is concerned.

Let us consider development of the finance infrastructure, more specifically - a part of it, that is, the banking system. At this point, we believe it would b interesting to focus on development of a network of branches of 'alien' (ie of other regions) banks. An establishment of a branch office means, first, the head office carry out direct investment in the banking system of the given region, and, secondly, one can assume that such a new establishment will be dealing particularly with investing in a form of provision of credit resources and control over them at the local level. The assumption could be back-upped by an analysis of the branch offices' balance sheets in the part of their relation to the data the Central Bank publishes in its statistical releases.

Our assumption suggests that the number of banks' branches opened in a region can tell fairly a lot of its investment attractiveness from the viewpoint of a substantial group of institutional investors - that is, banks. In view of this it appears interesting to compared this value with a rating of regions. For this purpose we considered the data on Siberian and Far-East federal super-regions[15].

[15] See Annex 3

Correlation between values is there, and its coefficient appears fairly high - 0.79. In other words the estimates of the regions' attractiveness on the part of the banking sector tend to converge with those made by experts.

There are, however, regions in regard to which the noted estimates differ greatly.

Specifically, obviously banks "overestimated" Yakutia and Magadan oblast relative to the experts' rating - the difference between the two ratings accounts for 12 and 11, respectively. One of the reasons for such differences is that, first, the data of establishment of a branch is not available, and this nuance is of course important to ensure a more accurate comparison, because the financial institution could have been established in the region when its rating was different both in terms of its investment capacity and risk. For instance, given that over the period between 1989 to 1991 Republic of Yakutia's position in the capacity-related rating remained practically unchanged (the 17th to 18th), the risk component deteriorated substantially. The Republic slid from the 57th position to the 71st one thus finding itself in the group of high risks instead of the former moderate one. The scandals accompanying the 2001 presidential run in the Republic undoubtedly will not assist to increase of the region's investment attraction in the eyes of both analysts and external investors. As concerns Magadan oblast, the region is likely to fall within the group of Subjects of RF whose initial attractiveness was related to their abundance with natural resources which in the experts' view has a diminishing effect on investors' attitudes.

At the same time, in contrast to the noted regions, banks "underestimated" Altay Republic - in our case the gap between the banking estimates (ie. the number of branches established there) and the higher ranking in the rating of investment attractiveness accounts for 11 positions. AR has showed a serious progress in the rating of investment risk (from the 79th up to the 40th position over the period between 1998 to 2001). However the Republic still finds itself at the bottom of the investment capacity rating (the 82nd position), which determines it still appears obscured for financial institutions of other regions. Interestingly, according to Expert, Russian investors proceed with ignoring small low-risk regions, including those scarce with minerals in the upper part of Volga basin and North - West, and Karelia and Murmansk oblasts neigboring to the EU countries. As for AR, the region somewhat contradicted the correlation also noted by analysts: namely, the ñ[16]correlation between popularity of a head of the local

[16] In their comments to the rating of regions of 1999-2000 (Expert # 41 (53) of October 30, 2000), analysts note that in the regions experience a rise in investment risk their

administration and lowering investment risks. The last elections held on January 6, 2002, then legitimate Governor S. Zubakin was defeated in the second round by the leader of Agrarian Party M. Lapshin who won 68.15% of votes vs. 22.98% gained by his rival.

We have conducted a small-scale research into the correlation between the number of newly established banks' branches in all the regions of RF and regions' rating across tow major components: that is, investment capacity and rating[17].

There is a clear correlation between the number of newly established banking institutions and investment capacity. The respective coefficient accounts for 0.888. At the same time the correlation with the rating of risk is unclear enough, with the respective coefficient accounting just for 0.45. Proceeding from this, one can assume that it is most likely that financial institutions estimate regions' attractiveness by focusing mostly on its capacity. A reverse assumption - that is, the capacity is computed proceeding from the financial institution network appears less true, though natural. This approach, however, does not clarify as well the question as to what the reasons for a financial institution are to ensure its greater expansion in a certain region. The risk, - at least in the form the respective rating agencies conceive it, - appears less significant for making an investment decision such as an establishment of a new branch of a bank in a region.

Upon considering the correlation between the rate of development of banking infrastructure and ratings, let us proceed with dynamics of rating estimates

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heads, even though re-elected they were, lost a considerable part of votes. Specifically, the deterioration of the situation in the area of investment risk in Orenburg oblast at 37 positions lead to the defeat of the former governor Elagin; in Omsk oblast, the governor lost 11% of votes due to deterioration of the same index at 31 position. The same situation was noted in Leningrad (13 positions and 6% of votes) and Tver (13 positions and 11%, respectively). It was only Primorksy krai and the city of Moscow where their heads were loosing popularity against the background of maintenance of the regions' investment risk levels.

On the contrary, the fall in investment risk in the major part of regions was accompanied by a growth in their leaders' popularity. In Altay krai, the rise in the index by 16 positions ensured a 27% increment in votes for the governor, in Murmansk the improvement at 14 positions brought about 45% votes, in Khanty-Mansy- 13 positions and 28%, respectively. This trend is noted even in the regions where the governors have long enjoyed a high popularity. In Saratov oblast Dmitry Ayatzkov gained another 5% of votes after theOblast improved the respective index by 6 positions, while Mikhail Prusak in Novgorod oblast gained another 9% of votes after the oblast got 5 positions up.

[17] The data on the rating for 2001: Expert's data base availabale at: www.old.raexpert.ru

per se and institutional factors that are assumed to influence their dynamics. The dynamics of rating estimates paid out in Expert over the period between 1998-2001 is given in the Annex. However, we are interested primarily in dynamics of components of the rating characterizing risk, due to the presence of clearly visible changes in that.

Specifically, Arkangelsk oblast improved its position in the rating notably, with the respective rise accounting for 28 positions (from the 71st place in 1999 up to the 43rd line in 2001). Apparently in this particular case the improvement of investment climate can be related to a sharp fall in strike movement among other reasons. in fact the number of strikes has declined recently throughout he country: given that the peak of strikes fell on 1997, - according to Goskomstat, as much as 887.3 thousand ere involved in them,- in 2000 the respective number was just 31 Thos. It is well known that it was employees in the coal sector who formed the driving force of the strike movement. As far as the present paper is concerned, those were coal miners from Vorkuta. In the year 1998, it was the picket organized by coal miners from Arkhangelsk oblast close to the Prime Minister office that enjoyed mass media's attention.

The same situation is noted in Kuzbass, with Kemerovo oblast' rating climbed up to the 59th positions from the 72nd one over the period in question.

Interestingly, the majority of southern regions demonstrate growth in their ratings, with the biggest rise reported in North Ossetia (+49), Adygea (+32) and Stavropol krai (+31). Let us note that it was in 1999 when the military conflict in Chechnya renewed, and that was likely to lock up the conflict within this notorious region, thus precluding crime from expansion outside beyond the zone of the conflict.

Naturally, all the North Caucasian republics bear their specificity. For example, North Ossetia to a great extent owes the rise in its attractiveness to the victory of a very influential politician, Mr. Dzasokhov[18], at the 1998 presidential elections.

As far as regions' own efforts to promote themselves are concerned, it is provision of information of themselves and projects planned that constitutes one of major directions in this regard[19]. The level of investors' awareness is different:

[18] According to Nezavisimaya gazeta (#132 (2442) of July 21, 2001, Mr. Dzasokhov was ranked the 10th among the best regional leaders- lobbysts.

[19] See: Kuznetsov A.V. Territorialnoye razvitiye firm kak prichina mezhregionalnykh razlichiy v intensivnosti vneshneekonomicheskikh svyazey// Investitsionnaya privlekatelnost regionov: prichiny razlichiy i ekonomicheskaya politika gosudarstva. Collection of essays. Ed . V.A. Mau, O.V. Kuznersovoy, IET Working papers # 38, Moscow, 2002

the bigger companies or those from foreign countries usually can easier collect the data on regional specifics. The longer the company operates in the given country, the greater its management's awareness.

What does popularity among investors from different countries brings about to regions? As the companies' behavior, primarily foreign ones, is determined both by political and economic factors, while estimating investment capacity and risks, entrepreneurs take into account current information and experience the impact of different stereotypes. All that necessitates encouragement of investment both simply by enhancement of the level of investors' awareness and rendering them an elementary assistance to ensure a swifter implementation of their projects rather than by providing various subsidies and benefits to them.

For example, it was monitoring of implementation of promising projects conducted by the Novgorod oblast authorities that formed one of the factors of its successful attraction of FDI (for reference: while being # 62 in the capacity-related rating, the oblast holds the 1st position in the risk-related rating). The mechanism of monitoring allows holding presentations of projects before local regulatory and control agencies, with project supervisors appointed from the list of the oblast or local authorities. At the same time the oblast ensured a free provision of information to potential investors, plus, the oblast authorities have held a large-scale advertising of the region's investment attractiveness in mass media.

As far as the risk component is concerned, Smolensk oblast increased its investment attractiveness substantially: from 70th position in 2000 it climbed up to the 19th position in Expert's rating in 2001. Measures the oblast authorities undertake in the area of informational provision of the region's investment attractiveness have also been fairly notable. Suffice it to browse the oblast administration's Homepage on the Internet[20]: the Web-page provides a detailed review of the local law, investment advantages as well as potential objects and projects for investment.

Investment opportunities existing in regions and investment needs of the latter necessitate a well targeted and consistent work on their highlighting. Potential foreign investors recommend Russian regions to take part in specialized international fairs. As well, it is important to collaborate with mass media, for they usually are hungry for sensations, while an information on success stories related to attraction of FDI are less visible than failures. However, the account of the informational factor does not at all implies ignorance of economic and legal measures.

[20] www.admin.smolensk.ru

It is political stability that forms a major factor of a regions attractiveness. Political stability in Russia is a characteristic predictability of local authorities' actions and certain political risks while doing business in a certain territory.

Shekovtzov A.O. studied[21] investment activity of Russian Far-East regions. Overall, the political situation in Far East can be called relatively stable, which can be attributed to all the regions, except Primorsky krai. However, the situation with the 2001 presidential campaign in Yakutia contributed with a certain share of political instability to this super- region, too. At the same time Primorsky krai has long been notorious for direct clashes between different authorities, the population's numerous protest actions, and conflicts with the federal center (during Mr. E. Nazdratenko's tenure). It should be noted that the gap between the positions Primorsky krai holds in the capacity-related and risk-related ratings accounts for 46 positions.

Analysts notes rather a high level of corruption and criminalization among the major part of Far East authorities, nonetheless, one should recognize that such a situation has also become widespread in other regions.

There also are problems due to lack of mismatch between the local and federal law (which is particularly characteristic of Yakutia), however, overall regional authorities always appeared loyal to the federal center (except the noted E. Nazdratenko).

The year 1999 became the most successful period for the super-region in terms of attraction of foreign investment, with the latter practically doubled vs. 1998. That could be attributed chiefly to a sharp rise in PSA-related investments in Sakhalin oblast. By and large, in 1999 the share of the super-region in the overall volume of foreign investment in Russia accounted for 13.2% (with some 80% of local investment forwarded to Sakhalin oblast).

The fall in the respective index in 2000, again, should be attributed to the fall in foreign investment in Sakhalin oblast (at 75.65 compared with 1999). At the same time the foreign investment inflow in Yakutia showed a considerable (85.5%) growth which allowed the region to get much closer to Sakhalin oblast. Basically, the two regions has become major investment recipients since 1997 when Magadan oblast has lost its leading position in this regard. Interestingly, upon creation of a special economic zone in the territory of the latter in 1998, the

[21] Shekovtzov A.O. Osnovnye faktory investitsionnoy privlekatelnosti Dalnego Vostoka i perspektivy eye povysheniya//investitsionnaya privlekatelnost regionov: prichiny razlichiy i ekonomicheskaya politika gosudarstva. Collection of eaasys. Ed. V.A. Mau, O.V. Kuznetsova, IET, Working Series # 38, Moscow, 2002

volume of foreign investment attracted to the region was declining constantly (from USD 63 mln. in 1997 to 28 mln. in 2000)

These facts allow assumption of investors being keen to prefer development of institutional environment for concrete projects (the noted PSA) rather than creation of zones with preferential legal regimes. The research into experiences of creation of free economic zones is based upon a serious background[22].

Despite the fact that free economic zones have been established over the whole '90s, the respective federal law was not introduced, though some drafts of it were developed. It was in 2000 that the federal law "On free economic zones" was passed by the State Duma and approved by the Federation Council, but it was eventually declined by President Putin.

President's comments on the most recent bill on FEZ address primarily the fact that a number of provisions of the bill contradict the effective federal law particularly the tax and customs law. O.V. Kuznetsova (2202) thinks that the effective statutory acts on FEZ simply are far from perfection. According to Kuznetsova, both international and, unfortunately, mostly negative Russian experiences prove that the bill in question has failed to solve both legal and a whole range of conceptual problems related to establishment of the FEZ regime and the respective operations there.

It was yet in 1991 when the Supreme Council of RSFSR declared establishment of a free economic zone in the territory of Kaliningrad oblast (FEZ "Yantar" ("Amber"). Because of the economic crisis and a vague legal base, the process of its organization was extremely slow between late 1991 through 1992. To expedite that, the RF President and government issued a number of decrees and resolutions that practically determined procedures of its functioning. In compliance with those acts, the free economic zone regime in Kaliningrad oblast provided a whole range of benefits including tax ones to foreign and domestic entrepreneurs. However, all the noted benefits were canceled in 1995-96.

Since 1996, the main document regulating the regime of economic operations in the Oblast is the federal law "On special economic zone in Kaliningrad oblast". According to the law, FEZ is established in the territory of the whole oblast, except the areas allocated to strategic and defense objects of RF and objects used by oil and gas sub-sectors in Russian continental shelf.

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[22] see, for example: Kuznetsova O.V. Federalnaya politika v otnoshenii svobodnykh ekonomicheskikh zon. Primer Kaliningradskoy oblasti//Investitsionnaya prrivlekateknost regionov:prichiny razlichiy i ekonomicheskaya politika gosudarstva. Collection of essays. Ed. By V.A. Mau, O.V. Kuznetsova, IET, Working papers # 38, Moscow, 2002

There have been no seriously unambiguous results of the functioning of SEZ/FEZ. Dynamics of numerous economic indices across the oblast in the '90s was worse than the average Russian one. More than that, the SEZ/FEZ regime led to a number of additional problems. First, duty-free importation intensified the decline in industrial and agricultural output (Tables 2 & 3), and local producers' products proved to be incompetitive compared to cheap import goods. The introduction of import quotes in 1998 could not help change the situation. Second, the government failed to reach one of the major objectives of the zone's functioning – that is, attraction of huge investments. Consequently, the Oblast has failed to become especially attractive in investors' eyes. The volume of investment in capital assets and foreign investment per capita in the oblast is lower than the respective average nationwide indexes.

It was during the whole '90s that Russian authorities would create (with different levels of intensity) free economic zones (or special economic zones, entrepreneurship zones). Whereas there was no single law on FEZ, such zones operated under single, specially passed acts, the overwhelming majority of which were government's resolutions and presidential decrees rather than federal statutory acts (at this point, it is worth noting that we discuss only federal FEZ, while apart from them there are numerous FEZs introduced by regional acts). As a result, no one has a clear idea how many special zones of different kinds currently are in Russia, though it is known there are at least tow dozens of them. The general view on their operations is that they have shown a low efficiency in terms of attraction of investment and economic development.

The failure in the area of CEZs compels analysts debate efficiency of regional economic policies on the whole. According to O. Kuznetsova[23], to measure efficiency of regional economic policies, it is expedient to compare indicators of current support of the industrial sector, construction and agriculture with indices of production dynamics in the respective sectors (both in physical and cash equivalent). Such an analysis showed that there was no correlation between the noted indices. This allows conclusion that it would be quite fair to argue that al regions have failed to create a model of their economic policy that would entail a constant positive dynamics of socio-economic indicators. There is, however, a certain positive experiences of single regions (for instance, the one of Novgorod

[23] Kuznetsova O.V. Otsenka ekonomicheskoy politiki regionalnykh vlastey po budgetnym indicatoram//Investitsionnaya privlekatelnost regionov: prichiny razlichiy i ekonomicheskaya politika gosudarstva. Collection of essays. Ed. By V.A. Mau, O.V. Kuznetsova. IET, Working series # 38. Moscow, 2002

oblast in the area of attraction of investment).Nonetheless, the above allows a unambiguous arguing that barriers to economic reforms, an excessive level of government regulation do not encourage seeking solutions to social and economic problems. This particular experience is highlighted by practices of Ulyanovsk oblast.

From the perspective of creation of favorable institutional environment for investment, the use of tax levers and benefits beyond the status of special zone can also be questioned, as Art. 12 of the Tax Code coming in effect along with its Special Section does not prohibit Subjects of the Federation and municipal entities to introduce complementary (relative to the federal law) benefits in regard to regional and local taxes and fees. So, status quo is retained, under which Subjects of the Federation widely practice provision of benefits in the part of federal taxes due to territorial budgets. Specifically, in the first half 2000 only because of granting various additional benefits, delays and credits in regard to compulsory payments, as well as lowered corporate profit rates in the part due to territorial budgets, the latter lost as much as Rb. 70 bln. (2.3% of GDP).

Interestingly, regions even practice granting benefits even on such a specific tax as alcohol excises (which are subject to the 50 to 50 splitting between territorial and federal budgets). This is practic4ed broadly in the regions where the respective output is especially huge (North Ossetia, Kalmykia, Kursk oblast).

At the same time a number of regions provide benefits on the territorial share of VAT. In contrast to the noted situation with VAT, this particular practice contradicts the federal law. Such a situation is characteristic primarily of the least prosperous regions (Tyva, Altay Republic, Agynsky Buryatsky, Ust –Ordynsky AO=s).

Given a chronic deficit of the majority of sub-national budgets, increase of the intensity of using tax benefits is unlikely to become an acceptable policy. It is often happens that such a policy is dictated by a wrong perception of some regional authorities of tax benefits being an efficient vehicle to encourage investment and economic activity as a whole. In reality, however, a chaotic granting of tax benefits both reduces budget revenues and distorts a normal competition environment and leads to monopolism and discrimination of the majority of economic agents in favor of their minority. In addition, tax benefits create favorable conditions for corruption. It is Ingush Republic, Kalmykia and Altay Republic that can as serve special examples of noxious inter-regional competition. In these regions the granting of tax benefits is exercised to such an extent that enterprises have found it more profitable to register themselves there even without carrying out any operations there. The same situation is also noted in so-called ZATO

(closed autonomous territorial entities, rather, military objects). Until recently these entities have allowed the order that permitted local authorities to register enterprises there and grant them with substantial benefits in the part of federal taxes. The 2000 federal budget law limited such a right substantially.

Given that in this case regional authorities anyway were motivated by their eagerness to promote a favorable investment climate in their regions vs. other regions, there are, however, there also are numerous administrative barriers. By restricting competition, the latter constitute direct obstacles to investment. The 2001 OECD[24] report highlights on some examples of such barriers existing exclusively on the regional level:

- Prohibition of sales of goods and services from one Russian region to another or restrictions on transferring business activity from one region to another; fixed prices; manipulations with licensing requirements and fees;
- Tolerance towards the law conflicting the respective provision of federal law;
- Intervention with arbitration procedures related to bankruptcy;
- Obstacles on the way of an enterprise seeking for debt recovery from another one.

3.3. Foreign Investment

Foreign investors' (primarily of those involved with FDI) presence across Russian regions is also very uneven. This phenomenon is discussed in a number of papers[25]. It is the most populated and economically developed regions that have become major recipients of foreign trade flows, while large foreign enterprises are established primarily in the 'economic capitals' of Russia, which is related to specifics of territorial expansion of a company expanding to the global level. In Russia, it is the Moscow agglomerate – the economic and political center of the country that takes a leading position in terms of attraction of FDI. In this respect the territory finds itself far ahead of another crucial center – the St. Petersburg agglomerate. The domination of the city of Moscow and Moscow oblast in terms of FDI cannot be explained just by mistakes of the government

[24] Investitsionnaya sreda v Rossyskoy Federatsii. Zakony, politka, instituty. OECD, 2001

[25] Kuznetsov A.V. Territorialnoye razvitiye firm kak prichina mezhregionalnykh razlichiy v intensivnosti vneshneekonomicheskikh svyazey// Investitsionnaya privlekatelnost regionov: prichiny razlichiy i ekonomicheskaya politika gosudarstva. Collection of essays. Ed . V.A. MaU, O.V. Kuznersovoy, IET Working papers # 38, Moscow, 2002

investment policy: practically all the countries face the same initial problem while opening their markets for foreign capital (unless they create special territories whose law being notably different from the one effective elsewhere nationwide, as in the case of China and a number of developing countries). It is a country's (economic) capital, which in Russia coincides with political one, where first representative offices and sales branches are established. This process had started in Moscow yet in the Soviet time.

There also is a number of other Subjects of the Federation with large economic centers or a general high economic capacity that have managed to attract huge foreign investment (for example, Kkransodar krai, Novosibirsk, Samara, Sverdlovsk oblasts). In this case the credit should not be claimed to regional authorities and their efforts to attract foreign investment and specifically FDI.

There are various factors determining foreign investors' territorial preferences. In view of this regional authorities' attempts to influence investors' preferences appear quite natural. However, while pursuing the policy of attraction of foreign investment, they make a common mistake- that is, their failure to provide investors with a sufficient information of the progress in their regions.

At the same time one should take into account the fact that initially regions have had unequal positions in terms of their participation in foreign trade. So, considering a region with limited financial resources, one has to understand it is not always possible for its authorities to make it attractive to investors by means of some measures. Rather, such attempts can be judged as a non-rational consumption of funds.

Generally speaking, the whole regional policy in the area of encouraging foreign investment should focus on expediting objectively existing processes of diffusion of foreign enterprises and their FDI throughout the country's territory, provided that it could be just a very small possibility for adjusting their outspread nationwide.

* * *

Some conclusions:

1. It is capacity-related factors, including historically emerged material base, geographic location and formal or informal status, that play a substantial part in identification of investment attractiveness of a region.Emergence of market institutions finds itself closely related to the given region's capacity.
2. On the regional level, a number of institutional factors, such as differentiation by property forms, do not have a considerable impact on the dynamics of economic development and invest-

ment attractiveness. The same can be argued in regard to models of government economic policies employed on the federal level, - at least, in the positive sense.

3. It is possible to improve investment climate in the concrete territory only by means of unification of law, bringing regional legal provisions in consistency with federal ones. At the same time one should understand that on the federal level the vector of legislative activity would aim towards deregulation and debureaucratization as well as improvement of judicial and administrative procedures. As governmental programs in the long run focus on provision equal competitive conditions for all investors, regardless of their property forms, encouraging an efficient placement of capital and sustainable economic development, an establishment of a system of specific benefits and special institutions 'on the spot'[26] is unlikely to be justified.
4. As far as activities conducted on the local level, which are aimed at improvement of investment climate, are concerned, apparently one should regard information highlighting on local economy and projects underway as a priority.

[26] A detailed comparative analysis of regional law in the area of corporate relations will be available shortly in the report on the IET-CEPRA project "Corporate governance in Russia and regions" (to be released in March 2002).

Chapter 4. Regional Policy and Climate for Regional Investment in Canada

4.1. Introduction

Programs to promote regional investment as a central component of regional development policy have taken a variety of forms since the inception of "regional policy" in Canada in the early 1960s. The purpose of this paper is to trace the range of instruments that have been deployed and the institutional structures within which that deployment has occurred. What is perhaps most significant is the recent shift in emphasis from promoting investment in physical capital to the promotion of investment in human capital as Canada seeks to reposition itself as a knowledge economy.

The paper proceeds by first reviewing the historical evolution of Canada's regional development policy with an emphasis on the Atlantic region. This is followed by a description of the Atlantic Innovation Partnership (AIP), a five-year initiative designed to increase the capacity of Atlantic Canadians to compete in the new economy through increased partnerships, knowledge, innovation, and productivity. The paper concludes with a summary of "lessons learned" from the Canadian experience.

4.1.1. The Evolution[27]

Investment incentives. Prior to 1960 there was little by way of explicit policy directed at combating regional disparities. The 1960 budget, however, made provision for firms to obtain double the normal rate of capital-cost allowances on most of the assets they required to produce new products subject to their locating in designated regions.[28] The thinking behind this initiative was that "footloose" industries could be attracted to slow growth regions.[29]

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[27] This section draws heavily on Donald J. Savoie, Rethinking Canada's Regional Development Policy (Moncton: The Canadian for Research on Regional Development, 1997).

[28.] See, among others, Anthony Careless, Initiative and Response: The Adaptation of Canadian Federalism to Regional Economic Development (Montreal: McGill-Queen's University Press, 1977).

[29.] Benjamin Higgins, *Entrepreneurship and Economic Development: Moncton and Cape Breton* (Moncton: Canadian Institute for Research on Regional Development, 1992), p.

Investment tax credits have remained as a component of both the personal and corporate income tax structures in Canada and these have continued to be biased in favour of underdeveloped regions. Thus, for example, the Cape Breton investment tax credit provides for a 60% deduction against tax liability for any approved project. At its inception, this expanded and enriched credits already available on designated properties at a rate of 50%. In turn, this enriched credits available for all investments in Atlantic Canada (and the Gaspe) at a rate of 20%.

ARDA: The Agriculture Rehabitation Act (ARDA) was an attempt to rebuild the country's depressed rural economy.[30] ARDA was a federal-provincial effort designed to increase the productivity of small farmers by providing assistance for the alternative use of marginal land, developing water and soil resources and setting up projects to support people in non-agriculture natural-resources industries. The initiative was soon found wanting, largely because it was not sufficiently flexible and lacked a clear geographical focus.

FRED: The Fund for Regional Economic Development (FRED) was instituted in 1966. This program had a clear geographical focus. It was concentrated in five designated regions with widespread low incomes and major problems of economic adjustment. Typically, a FRED plan provided for industrial development measures, employment-development activities and industrial infrastructure. Soon, however, FRED was found wanting from both a technocratic and political perspective. From a technocratic view, it was felt that FRED made little provision for coordinating a growing number of federal and federal-provincial initiatives in the economic development field. In addition, there was also the view that, in concentrating as it did on some of the poorest regions in the country, FRED was far too restrictive to meet the challenges of the 1970s.[31]

DREE: The Department of Regional Economic Expansion (DREE) was established in 1969. Under DREE two major new programs were introduced: One was designed to attract private sector investment to slow growth regions through cash grants. The other - labelled the Special Areas Program - was designed to promote faster industrial growth. In the case of the latter, twenty-three areas were designated and each became the subject of a federal-provincial agreement.

28, makes the important corollary that, by definition, “footloose” industries can locate anywhere they like, but “where they like” is usually where they have already chosen to locate.

30. Ibid.

31. T.N. Brewis, "Regional Development in Canada in Historical Perspective," in H. Lithwick (ed.), *Regional Economic Policy: The Canadian Experience* (Toronto: McGraw-Hill Ryerson, 1978), p. 220.

Special Areas Programs were set up drawing on the then vogue idea of growth poles. One perspective was that the main difference between Ontario and the Maritimes was that Ontario had major urban centres with vigorous economic growth to which people from northern Ontario could move. The Maritimes, on the other hand, had few cities capable of strong growth and providing employment; consequently, many people remained in economically depressed rural areas. The growth pole concept, it was believed, would create new opportunities at selected urban centres. Economic growth would take place through movement and change within regions, rather than between regions.

DEVO: A special case was the establishment of the Cape Breton Development Corporation (DEVCO). This was established to rehabilitate and reorganize the coal mining industry on Cape Breton Island. DEVCO is composed of two divisions: coal and industrial development. The industrial development division was created to encourage local industry and broaden the economic base. The federal government acquired the coal mines and property of the Dominion Coal Corporation and turned them over to DEVCO. Since 1971 the federal government has provided working capital advances and operating grants to cover the corporation's losses.

The Special Areas Program was short-lived. Among the criticisms levelled at it was that the approach was too "restrictive," that its concentration on a limited number of areas incurred the risk of overlooking economic development opportunities elsewhere. Henceforth, DREE would "pursue viable" opportunities whether they were in urban or rural areas, though it would be preferable if they were located in slow growth regions, and priority status would still be given to these.

In 1973, the department introduced a new approach - the General Development Agreement (GDA).[32] It was remarkably flexible, capable of supporting virtually any imaginable type of government activity. Negotiated by Ottawa with all provinces except Prince Edward Island (which was already covered by the fifteen year FRED plan), a GDA provided a broad statement of goals for both levels of government to pursue, outlined the priority areas, and described how joint decisions would be taken. GDAs were enabling documents only and did not in themselves provide for specific action; projects and precise cost-sharing arrangements were instead presented in subsidiary agreements that were attached to the umbrella-type GDAs.

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[32]. See Donald J. Savoie, Federal-Provincial Collaboration: The Canada-New Brunswick General Development Agreement (Montreal: McGill-Queen's University Press, 1981).

From a strictly administrative point of view, all nine GDAs were basically similar. Each had a ten-year life span; each stipulated that DREE and the provincial government in question would, on a continuing basis, review the socio-economic circumstances of the province; and each outlined a similar process for joint federal-provincial decision-making. They differed only in cost-sharing for subsidiary agreements. Under the GDA approach, DREE was granted the following authority to share the cost of a subsidiary agreement: Up to 90 percent for Newfoundland, 80 percent for Nova Scotia and New Brunswick, 60 percent for Quebec, Manitoba, and Saskatchewan, and 50 percent for Ontario, Alberta, and British Columbia.[33] The variety of projects supported under the various GDAs was truly remarkable. Virtually every economic sector was covered, particularly in the Atlantic provinces. GDAs sponsored, among *many* others, projects in tourism, urban development, the fishery, recreation, mineral development, rural development, agriculture, forestry, industrial development, communications, cultural infrastructure, and ocean-related industries.[34]

By the late 1970s, however, DREE was being assailed from a number of quarters, but particularly from central agencies in Ottawa. For one thing, the country's economic picture had changed since DREE was first established. Dealing with stagflation had become a central policy priority and Canada's industrial heartland - that is, the economy of southern Ontario and Montreal - was getting "soft."[35]

By 1980, the time was ripe to revamp Ottawa's economic development policies, in particular those related to regional development. Underpinning the new economic thinking was the view that "regional balance was changing as a result of buoyancy in the West, optimism in the East and unprecedented softness in key economic sectors in central Canada.[36] The economic prospects associated with resource-based megaprojects in Atlantic Canada (Sable Island and Hibernia) and the West, at least in part, gave rise to the new thinking. The solution was to encourage a "good" investment climate and market access in the West and East where large investments were bound to take place and to put in place measures to draw resources from declining industries and move them into growth sectors in central Canada.

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33. Ibid.

34. Ibid. See also Savoie, *Regional Economic Development*, 1992, chapter 5.

35. Ottawa, Department of Finance, Economic Development for Canada in the 1980s, November 1981.

36. Ibid.

During this period, a variety of programs were introduced. Included among these were:[37]

IRDP: The industry and regional development program (IRDP) was established in 1983 to deliver direct assistance to manufacturers and processors in all parts of Canada.

ERDA: Economic and regional development agreements (ERDAs). These were long-term vehicles for federal–provincial planning and cooperation The agreements were aimed at providing for the special economic development needs of each province while reducing economic disparity.

MSERD and DRIE: The Ministry of State for Economic and Regional Development (MSERD) and the Department of Regional Industrial Expansion (DRIE) were established in 1982. MSERD was designed to play a central agency role coordinating line department activities while DRIE was designed to deliver a regional industrial program based on a "development" index.[38] The index established the needs of individual regions, as far down as a single census district, with all regions arranged in four tiers of need. The first tier, which covered 58 percent of the population, covered the most developed regions of the country while the fourth, which included 5 percent of the population, covered the regions with the greatest need (based on level of employment, personal income, and provincial fiscal capacity). The thinking behind this initiative was that the private sector *everywhere* in Canada needed government assistance to locate, to expand or to modernize. MSERD became responsible for the GDAs and quickly began replacing them with a "new and simpler set of agreements with the provinces, involving a wider range of federal departments."[39] The agreements were labelled "Economic and Regional Development Agreements" (ERDAs), but in time came to resemble very closely the GDAs they replaced. The one important difference was a provision that would allow the federal government to deliver directly certain programs and initiatives rather than always having the provincial governments deliver them, as was the case with the GDAs.

Subsequently, MSERD was abolished and responsibility for the ERDAs was turned over to DRIE. In addition, there was a move to redirect more DRIE funding to slower growth regions. Within a few years, however, it became clear that

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[37] This summary draws, in part, on Canadian Tax Foundation, The National Finances (Toronto, Canadian Tax Foundation, various years).

[38]. Ottawa, DRIE, "Speaking Notes - the Honourable Ed Lumley to the House of Commons on the Industrial and Regional Development Program," 27 June 1983, pp. 1-2.

[39]. Ottawa, Office of the Prime Minister, "Reorganization for Economic Development," (News Release), 12 January 1982.

the government would have to overhaul its regional development policy completely.

The four Atlantic premiers, as well as many business groups in the Atlantic region, became extremely vocal in their criticism of Ottawa's regional policy. DRIE was accused of being extremely "bureaucratic" and not sufficiently concerned with the economic difficulties of the Atlantic provinces. In addition, the resource-based megaprojects never materialized in Atlantic Canada and in the West and the "unprecedented softness" in central Canada suddenly disappeared. Indeed, by the mid to late 1980s, the Ontario economy, if anything, was overheating. Atlantic premiers made the case that DRIE, by focusing many of its efforts in central Canada, was exacerbating the "regional disparities" problem. They argued that it was "better to have no federal regional programming at all than to have DRIE [and] DRIE programs favouring central Canada."[40]

ACOA: The Atlantic Canada Opportunities Agency (ACOA) replaced DRIE in Atlantic Canada. The intent was that ACOA would develop programs from within the region. They designed a new program labelled ACTION which was essentially a continuation of incentives programs to the private sector first introduced as early as the pre-DREE days. ACOA also took over the ERDA agreements and renamed them Cooperation agreements. They, too, are remarkably similar to earlier agreements, whether the ERDAs or GDAs.[41]

AEP: The Atlantic Enterprise Program (AEP), administered through ACOA, offers loan insurance and interest buydowns of up to six percentage points to commercial operations in the Atlantic provinces. Loans must be used to finance projects that establish, expand, or modernize commercial operations in an eligible sector.

ECBC: Enterprise Cape Breton Corporation (ECBC) primary purpose is to promote and assist the financing and development of industry on the island of Cape Breton outside the coal producing industry. It is an umbrella program that provides financial assistance under various programs administered by ACOA on Cape Breton Island. Financial assistance includes grants, contributions (repayable and non-repayable), interest buy-downs, loan insurance, and loan equity.

In other regions, DRIE was replaced by the Western Development Office and the Federal Economic Development for Northern Ontario (FEDNOR).

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[40]. See Donald J. Savoie, *Establishing the Atlantic Canada Opportunities Agency* - A report prepared for the Prime Minister (Ottawa: Office of the Prime Minister, May 1987), p. 20.

[41] IRDP was revised in 1988 concurrent with the establishment of ACOA and WDO.

FEDNOR launched three new programs shortly after it was established, all of which were designed to support private sector investment in the region.[42]

For Central Canada, the Department of Industry, Science and Technology (DIST) - was established to replace DRIE. It was to be the role of DIST to retain regional development responsibilities for Ontario and Quebec and assume "sectoral" responsibility for Canadian industry. Significantly, the department's focus was to be "national" and "sectoral" in scope rather than "regional."

DIST was being asked to assume responsibility for federal regional development programs in Quebec. Instead, it was decided to replace *Le Plan de l'Est*, a program dating back to DREE days, but which was scheduled to expire in March 1988, with a new province-wide agreement to develop Quebec's regions. It signed a five-year $820 million ERDA subsidiary agreement with the Quebec government. Ottawa agreed to contribute $440 million and Quebec $380 million. With DIST having federal responsibility for the agreement, the funding was increased by an additional $283 million in 1989. The agreement divided Quebec's regions into two broad categories: the central regions and the peripheral or resource regions. The central regions were awarded a larger share of the funds - $486 million. The resource regions consist of eastern Quebec (Bas-St-Laurent, Gaspésie), the North Shore, the North-Centre (Lac St-Jean), the western region (Rouyn-Noranda), and the northern region (Abitibi). The central regions cover the rest of Quebec.[43]

The period of federal fiscal restraint, beginning in the mid-1980s, did not exempt regional development spending. In the case of the Atlantic Canada Opportunities Agency, for example, the program review exercise cut about 40 percent of the agency program budget and made all assistance program to the private sector repayable.[44] Subsequently, some $700 million was restored to ACOA's budget, new money to be invested in research and development, training and community economic development. We will return to this in a subsequent section. First, however, we provide some assessment of forty years of regional development spending.

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42. Ottawa, Department of Industry, Science and Technology, *The FEDNOR Review*, 1989, p. 6.

43. See Ottawa, Department of Industry, Science and Technology, *Canada-Quebec Subsidiary Agreement on the Economic Development of the Regions of Quebec*, 9 June 1988, schedules B, C, and D.

44. Donald J. Savoie, *Rethinking Canada's Regional Development Policy* (Moncton: Canadian Institute for Research on Regional Development, 1997).

4.1.2. An Evaluation: Forty Years of Regional Development Policy

How successful have the various federal government programs described above been in alleviating regional disparity? The reviews are mixed. The reasons for this are varied. For one thing, federal government spending in regional development is very modest in the general scheme of things. There are a number of forces that invariably have a far greater impact on the health of Canada's regions than federal government regional development efforts. These include economic circumstances in the United States and Ontario, monetary policy, and fiscal policy. Accordingly, it is not possible to isolate regional development spending and make the case that it is directly responsible for new growth or new net jobs.

The goals and objectives of the GDAs, and the ERDAs and the Cooperation agreements were and remain extremely broad and of little benefit even as a checklist against which to assess proposed projects. New Brunswick's GDA did not, for example, prevent DREE from providing assistance for a variety of other projects.

Thus, it would be impossible to evaluate the effect of expenditures overall, given the variety of programs and frameworks. Even evaluating the impact of individual federal-provincial agreements is very difficult, if at all possible.

The frequent changes of policy and organizational direction have posed yet another difficulty. Before a thorough assessment of one approach could be initiated, a new one would take its place. Insufficient time had elapsed to determine the effect of a particular program on a given sector. With a new policy announced, officials had little interest in assessing a program that was now history. For this reason alone, we will never know, for example, if the "growth pole" concept ever had much of an impact when it was applied to Atlantic Canada.

In addition, new policies and new approaches have been introduced for a number of reasons, not simply because existing ones were no longer effective. In fact, federal-provincial competition appears to have been largely responsible for at least two of the three major policy reviews. In 1973, the federal government sought to establish closer links with provincial governments by introducing the GDAs. By 1981, Ottawa concluded that it was not getting the credit to which it was entitled and decided to scrap these agreements. Since the principal motive behind two major policy reviews was federal-provincial tension, it may well be more appropriate to assess them from this perspective rather than from one of regional development. Certainly, the 1973 policy review placed the provinces in a favoured position in shaping new regional development initiatives. The 1982 review appears to have made it much more difficult for provinces to do so, with the federal government retaining the option of delivering certain projects directly.

The establishment of ACOA, WD, and DIST, meanwhile, appears to have resulted from an urgent desire to deal with a crisis of confidence in DRIE, with strong pressure from the Atlantic region and the West to deal with their economies, which were not rebounding from the recession of the early 1980s, and with a strongly held desire to chart a new course in regional development.

Notwithstanding the above, there have been attempts to evaluate the effect of GDA- and ERDA-sponsored initiatives. The evaluations were incomplete — almost all concluded that more time was required — and were carried out either by federal-provincial committees of officials or by outside consultants.

Consultants and outside critics have also conducted numerous evaluations of regional development programs designed for the private sector. These programs in the past provided cash grants to businesses to locate or expand economic activities, but now provide loan guarantees or low interest loans. Evaluations have led to a variety of conclusions, favourable and unfavourable.

The Economic Council of Canada found that the incremental impacts on investment of projects under one program was between 25 and 59 percent and that on jobs between 35 and 68 percent. An investment project is considered incremental if the firm, without assistance, would not have undertaken the project or would have undertaken it outside the designated region. The lower rates, 25 and 35 percent, represent, according to the Council, a very conservative estimate of success. On the whole, the Council found the program beneficial, with a benefit-to-costs ratio of between 3 and 19 to 1. The Council concluded: "The subsidies seem successful enough to be a paying proposition. The value of the jobs created appears to outweigh the inefficiency involve in locating production inappropriately."[45]

Regional disparities persist in Canada in spite of forty years of regional development policy. There has, however, been some progress in reducing regional disparities in per capita income during the past forty years. The largest reduction in income disparities has been in average family disposable income while the least reduction was with respect to earned income per capita. What this may suggest is that federal transfer payments of one kind or another to the slow-growth provinces had a greater impact than measures to promote economic growth.

There are signs, however, that regional development measures may not have worked as well as it was first envisaged. Regional disparities are as persistent today as they always have been in unemployment levels, population growth, and

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[45]. Economic Council of Canada, *Living Together: A Study of Regional Disparities*, Ottawa, 1977, p. 160, 215.

research and development activities and they favour the same provinces, notably the four Atlantic provinces.

4.1.3 The Innovation Strategy: A New Direction

We are beginning to see evidence that learning has resulted from past regional development efforts. Learning, not necessarily from proper evaluations of past programs and initiatives but rather from a process of elimination. We now have a better understanding of what has not worked well and have certainly learned that evaluation is a crucial step in program delivery. It is very difficult to learn from mistakes when you cannot identify them and equally as difficult to build upon program success when you cannot identify the strengths and weaknesses.

It appears the Federal Government is rethinking its economic development policies and has clearer objectives for regional development in Atlantic Canada. They are transferring more decision-making power relative to regional development to the provincial governments and to those in the region who understand the socio-economic circumstances. They are contracting the private and not-for-profit sector to develop and deliver programs as opposed to government agencies delivering the programs. Additionally, they are promoting Atlantic Canada's participation in the global economy and enabling capacity building as opposed to undertaking capacity building in the region.

The most compelling evidence of this shift in thinking is the recently created Atlantic Innovation Partnership (AIP). This $700 million, five-year initiative is designed to increase the capacity of Atlantic Canadians to compete in the new economy through increased partnerships, knowledge, innovation, and productivity. AIP is the vehicle through which the federal government will make major investments in research and development, community economic development, and entrepreneurship, management skills development, and trade and investment in Atlantic Canada.[46]

There are three (3) major investment funds under the Partnership as follows:

AIF: The Atlantic Innovation Fund (AIF) is an investment fund is designed to build innovation capacity, boost the regions competitiveness and support the transition to a more knowledge-based economy. There is also $110 million available for the expansion of National Research Council facilities in Atlantic Canada.[47]

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[46] See http://www.acoa.gc.ca - Atlantic Investment Partnership Overview

[47] See http://www.acao.gc.ca - Atlantic Investment Partnership – Atlantic Innovation Fund

It has been recognized that Atlantic Canada's capacity to innovate will directly affect its future prosperity. The AIF supports leading edge research and development that directly contributes to technology-based economic activity. The AIF totals $300 million and will be administered over five years beginning in the 2001/2002 fiscal year.

The stated objectives for the AIF are to:

1. increase activity in and to build capacity for innovation and research and development (R&D) which leads to technologies, products, processes or services which contribute to economic growth in Atlantic Canada;
2. increase the capacity for commercialization of R&D outputs;
3. strengthen the region's innovation capacity by supporting research, development and commercialization partnerships and alliances among private sector firms, universities, research institutions and other organizations in the Atlantic system of innovation; and
4. maximize benefits from national R&D programs.

Investments are to be reviewed and overseen by an Advisory Board comprised of academics, business leaders, research and development and high-technology field experts, and leaders in economic policy.

This investment demonstrates the Federal Government's attempts to improve the region's unimpressive Research and Development track record and bring expenditures on R&D in line with the other regions of Canada.

SCIF: The Strategic Community Investment Fund (SCIF) is designed to help communities fortify their economic base in order to attract investment and increase job creation opportunities.[48]

One of the key success factors in sustainable community development is community involvement. The days of engaging a consultant to conduct a needs assessment and develop a strategic plan seem to be gone. Community development from the inside out is now the preferred approach whereby members of the community are involved in identifying opportunities and assets and developing an action plan. The Federal Framework for Action in Rural Canada affirms that a cornerstone of community economic development is community involvement. SCIF is designed to encourage and support communities in taking control of their own economic agendas.

[48] See http://www.acoa.gc.ca - Atlantic Investment Partnership – Strategic Community Investment Fund

The SCIF will focus on rural communities since more than 50% of Atlantic Canadians live in rural communities and will concentrate on helping these communities adopt new technologies; improve the competitiveness of their industrial base; and develop necessary infrastructure that is crucial to their economic development.

The stated objectives for the program are:

To assist communities (primarily rural) throughout Atlantic Canada to create opportunities for economic development and increase investment and job creation.

To assist in creating an environment in Atlantic communities that fosters and augments:

- the development of strategic sectors,
- adjustment to the knowledge-based economy,
- the adoption of new technology and innovative practices, and
- capacity to compete in the global economy.

The fund totals $135 million will be administered by ACOA over the next five years. Assistance is non-repayable, and funds will be distributed based on the assessed needs of the project as opposed to an equal distribution per province.

Projects must have broad community support and must arise from an analysis of local and regional economic opportunities. The economic benefits must be clearly demonstrated and all projects will be alligned with the federal government's policies and priorities.

This approach is indicative of the shift in thinking and provides further evidence that the federal government is transferring responsibility for regional development to the regions and adjusting its role in economic development to that of enabler rather than implementer.

In addition, a portion of the AIP has been allocated to promote Entrepreneurship and Business Skills Development and Trade and Investment. This portion of the AIP totals $126 Million and is intended to strengthen Atlantic Canada's international trade and direct foreign investment performance by increasing trade, particularly with the United States and build on ACOA's past work in entrepreneurship development. There will be a strong focus on developing the necessary business, trade, and investment skills to increase the capacity of Small and Medium Enterprises (SME's) to manage innovation. [49]

[49] http://www.acoa.gc.ca - Atlantic Investment Partnership – Entrepreneurship and Business Skills Development and Trade and Investment

With regard to entrepreneurship and skills development, the stated objectives are to:

- increase the number of Atlantic Canadians who choose to start their own businesses;
- improve the ability of existing businesses to compete and grow successfully; and
- improve the innovation and technical competencies of Atlantic Canada's SMEs.

With regard to trade and investment, the objective is to ensure that small and micro businesses integrate internationalization into their business plans. This component of the program will encourage regional SME's to explore and pursue export opportunities and provide the support to enhance their capability to develop and implement an international business strategy. It will also contribute to an increase foreign direct investment.

More specifically, the stated objectives for AIP investments in trade and investment are to:

- increase trade and foreign investment with Atlantic Canada's major trading partners in the United States and Europe;
- increase exports of those Atlantic Canada industry sectors, which have a strong, export potential;
- increase the export skills of Atlantic Canada's potential, export-ready and exporting firms;
- increase the quality and number of Atlantic Canadian trade consultants;
- increase the number of trained university graduates pursuing a career in trade and investment;
- provide opportunities for university graduates to work in the international marketing field;
- increase Foreign Direct Investment in Atlantic Canada through a Pan-Atlantic cooperative effort in the areas of investment research and promotion.

Broadly stated, this portion of the investment portfolio demonstrates the government's desire to increase business and employment opportunities in the region, to address human resources out migration that has plagued the area for years, and to encourage a collaborative attitude among the Atlantic Provinces as opposed to a competitive one.

Overall the AIP initiative is a step in the right direction or at least in a new direction away from the practices of the past. It is demonstrating the Federal

Government's attempts to reshape programs rather than abandon them and providing evidence that mistakes made in the past were not in vain.

The Federal Government is also participating in efforts to make venture capital accessible to entrepreneurs. Through a partnership with the Atlantic Provinces Economic Council (APEC) the provincial governments and the chartered banks, the federal government has matched the contributions of the partners, providing a pool of investment funds available to SME's in Atlantic Canada that have growth potential.[50]

Another example of federal and provincial governments partnering in economic growth initiatives is the federal/provincial business service centers. These centers were established approximately five year ago and provide a gateway for SME's to both federal and provincial government services and programs in one location.

While the new regional development initiatives of the Federal Government provide encouragement, there remain a number of issues that have yet to be addressed. Namely, duplication of objectives and services among federal agencies, a continued focus on regional disparity, and the absence of a formal evaluation strategy.

Duplication of objectives and services not only results in misuse of public funds and poor performance due to multiple mandates but it also causes confusion among the people these agencies are supposed to serve – the public. Where does one go for assistance, advice and information concerning business start-up for example? The choices are many including ACOA, the Business Development Bank (BDC), the provincial Department of Industry, the local economic develop agency or a University Business Development Centre (UBDC) and many of these organizations exist in urban and rural centers in Atlantic Canada.

With respect to formally evaluating present and future regional development initiatives, there appears to be little learning from past experience. If an evaluation plan exists for the AIP it is not evident in the literature contained on the ACOA website, nor was it discussed in the information package made available to the individuals attending the formal announcement in June of 2001. This is not to say a plan does not exist, however, given the impact of past efforts is not known, one would think this would be a priority and be addressed in the planning stages of the AIP initiative.

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[50] Donald J. Savoie, Rethinking Canada's Regional Development Policy (Moncton: Canadian Institute for Research on Regional Development, 1997).

It will be incumbent upon the citizens of Atlantic Canada to force the governments to exercise due diligence and ensure there are formal evaluation strategies complete with measurable criterion for all Regional Economic Development investments. This will establish the corner stones for regional economic development – the foundation upon which to build future programming that achieves results and utilizes public funds efficiently.

4.1.4. Some Lessons Learned

The federal government and provincial governments have been consciously investing in Economic Development in the Atlantic Region for over 40 years. However, many programs have been unfocussed with unclear objectives, duplicated within government agencies and improperly evaluated. The government has not been able to measure the impact or return on investment. Because there was little focus, many projects and initiatives that did not fall under the auspices of "Regional Development" were, nonetheless, funded using monies earmarked for Regional Economic Development. Also, there are federal agencies with the same mandates causing duplication of services and programs and duplicate spending. This has resulted in lost confidence in government interventions and in regional development itself. Governments have also been highly criticized for investing for political reasons as opposed to economic reasons and have paid too much attention to solving regional disparity problems rather than regional economic problems.

Nonetheless, we have learned a number of things from forty years of regional development measures in Atlantic Canada. The first is that there is no quick fix or silver bullet. There are reasons why some regions do not grow as quickly as others and the challenges are not easily overcome. Some are historical, others are cultural and still others have to do with the existing urban structure.

We have also learned that politics matters. There are many forces that motivate political leaders to act and some do not always correspond to the requirements of proper economic planning. In addition, things that matter a great deal to politicians like visibility are not very relevant to community leaders or to permanent government officials.

The Canadian experience suggests that flexibility in organization and program design has its advantages. What works in one region may not work in another and one organizational model may be particularly well suited for one community but not another (e.g. urban versus rural). But the Canadian experience also suggests that there are important limits to flexibility. One can make a policy or even a program so flexible and open ended that in the end it means very little.

As the Canadian experience shows, a program can be so flexible that it actually means very little even as a guide for action. Some Canadian regional programs have been little more than enabling programs simply clearing the way for officials to design and implement virtually any conceivable activity.

Flexibility in regional development efforts comes with a price. While it enables officials to pursue virtually any opportunity, it also means that governments will never know if their efforts are successful. Having a capacity to evaluate ongoing efforts enables governments to adjust their efforts, to learn from past efforts about what works and what does not. It also gives government officials the capacity to explain and sell their efforts to citizens.

Lastly, we have learned in Canada that it is very important for governments to limit the application of their regional development programs to designated regions. The most important failure of past and present regional development efforts in Canada has been and continues to be the lack of political will to limit their application of the programs to carefully selected regions.

Since there are agencies similar to ACOA in each geographic region of Canada, the question of why Industry Canada, a federal department with a national focus, has identical mandates to the regional agencies arises. It would seem more effective and efficient if Industry Canada supported the regional agencies and coordinated efforts rather than competing with them. Identifying the core competencies of the various agencies and organizations that share similar or identical mandates, would allow a focused approach to service delivery and enable a complementary network of services as opposed to a duplication of effort.

There is still evidence the Federal Government is trying to level the playing field between Atlantic and the more prosperous regions of Canada rather than focusing on assisting Atlantic Canada to reach its own economic potential on its own merits. The regions of this country are extremely diverse in geography, culture, natural resources, population, and political climate. It is apparent that efforts in the past directed toward minimizing regional disparity have not been successful and some would claim "they have done the opposite by fuelling regional envy".[51] It would seem more reasonable to provide assistance to the economically depressed regions to help them help themselves and provide support to the prosperous regions such as access to timely, relevant information for decision-making purposes or assistance to enhance core competencies.

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[51] Donald J. Savoie, Rethinking Canada's Regional Development Policy (Moncton: Canadian Institute for Research on Regional Development, 1997, p. 46.

4.2. Canadian Regional Development Experience

4.2.1. Canadian Overview Elements

(a) Regions of Canada: "Classic" Regions

- Atlantic: Newfoundland & Labrador, Nova Scotia, Prince Edward Island, New Brunswick
- Fisheries and Forestry
- Quebec: «French Canada» - Predominantly francophone in culture and many institutions
- Ontario: Centre of «English Canada» - Commercial hub of Canada
- Prairies: Manitoba, Saskatchewan, Alberta
- Wheat and Oil
- British Columbia
- North: Yukon, Nunavut, Northwest Territories

Only recently developing self-governing status

(b) Federal Umbrella & Perspective

The Federal Government has jurisdiction over the whole of Canada:

(a) for the purposes of making laws - as long as those laws are in accordance with its subject matters of competence under the constitution; and

(b) for the purposes of spending money - a power not limited to those areas of legislative competence.

Accordingly, the federal government's approaches have tended to be a blend of legislation and spending. The spending is sometimes independent of the relevant provincial governments, and sometimes coordinated with them.

4.2.2. Investment Overview Elements

«Investment» Itself. The «classic» forms of investment are ownership interests (stocks, partnerships, joint ventures) and debt interests, loans (bonds, notes, debentures).

Investment in Context. The two main contexts for investment in Canada are Private and Public. In the Private sector context, investment relies primarily on the general legal, institutional and economic frameworks, and secondarily on governmental incentives.

In the Public context, investment involves: setting the frameworks (building the roads, the power supply, the courts; establishing the legal framework) and providing incentives (tax inducements, grants, loans, equity participations).

Canada as historic net importer of development capital. From its early colonial days, Canada has normally been more an importer than an exporter of capital. The costs of development of a frontier environment of great expanse have been high. The population base to draw on has been small,. See separate section on foreign investment.

Sources of funds. The main sources of funds for investment in Canada have been in time: firstly from the United Kingdom and secondly from the United States; in amount: now very heavily from the US, Canada's major trading partner.

Investment vehicles. Traditional stocks and bonds and loans have been mentioned. In recent years Mutual Funds and Pension Funds have become more and more important. For example, the Ontario teachers Pension Plan Board has well over $50 billion in investments. And pension funds in the US are now worth over $7 trillion.

KPMG Report Approach & Results. The consulting firm KPMG recently released a Report comparing business costs in North America, Eurpoe and Japan. Some relevant aspects are set out here.

(a) Cost Components:

- Labor: a key location-sensitive component, averaging 59% of location-sensitive costs for manufacturing and 81% for non-manufacturing operations.
- Taxes: represent the second-largest location-sensitive cost.
- Transportation: costs represent 2 to 14% of costs for the manufacturing costs examined.
- Energy: costs represent 2 to 8% of costs for the manufacturing operations examined.

(b) Business Costs:

- Land/building/office costs
- Labor/wage/salary/benefits costs
- Transportation and distribution costs
- Utility costs
- Financing costs
- Federal/state/local taxes

(c) Business Environment

- Labor availability and skills
- Access to markets, customers and supplies
- Road, rail, port, airport infrastructure

- Utility and telecom service reliability
- Suitable land sites
- Regulatory environment

(d) Cost of Living

- Personal taxes
- Cost of housing
- Cost of consumer products
- Healthcare costs
- Education cost

(e) Quality of Life

- Crime rates
- Healthcare facilities
- Schools and universities
- Climate
- Culture and recreation

(f) Industries Modelled (for the study)

- Manufacturing: Metal components, Plastic products, Food processing, Electronics assembly, Precision components, Pharmaceuticals, Specialty chemicals
- Research & Development: Biomedical R&D, Electronic systems development & testing
- Software: Advanced software, Content development
- Corporate Services: Shared services centre.

4.2.3. Canada's General Economic Development in Brief

The fur trade first created a single transcontinental trading economy; since Confederation in 1867, labour and finance have moved freely among the regions [note: that is, «relatively freely», there have been and remain a number of significant barriers]. The improvement of transportation - the railways between 1867 and 1915 and the highway and pipeline systems after 1945 - has helped. The provinces have become important markets and suppliers for one another, so that an investment boom in one region such as the Prairie West could create a nation-wide boom, while a slump in Ontario manufacturing becomes a nation-wide slump.

Central Canada

Central Canada's [Ontario and Quebec's] industrial advance was especially rapid between 1896 and 1914, when the whole nation experienced investment

and export booms. After 1900 a few industries such as carriage-making and black-smithing declined. But new industries appeared: electrical equipment and chemicals in the 1890s, cars and aluminum after 1900, pulp and paper 1890-1914, radio and home appliances in the 1920s and aircraft in the 1940s. Cheap hydroelectric power during this period helped accelerate industrial change, as did both world wars and nuclear power in the 1970s (at least in Ontario). In both provinces labour was drawn from natural population increase and immigration.

Because so many of the newer industries were concentrated in Ontario, during the 1920s Quebec's economic advance was less spectacular; although it shared fully in the development of pulp, paper and non-ferrous metals, it took no part in the automotive industry, and little part in the electrical appliance industries. Also, because a higher proportion of Quebec industries were low-productivity activities which could not pay high wages, Ontario workers earned more on the average than Quebec workers. After 1945, and especially after the 1960s, these gaps closed. Both federal and provincial authorities spent lavishly to attract factories into Quebec; indeed, the Quebec government owned plants in such industries as steel-making and auto assembly.

Although the national financial centre had shifted from Montreal to Toronto by the beginning of WWII, Quebec's financial system became more sophisticated and more francophone in its attitudes. In the 1970s and early 1980s, as anglophone business and professional people left a province in which they no longer felt at home, there was increasing scope for francophone expertise. Much more serious than the uncertainty among investors were the troubles of Quebec's established textile and clothing industries, increasingly threatened by cheaper goods from developing nations. The federal authorities provided advice, new kinds of protectionism and adjustment finance. Furthermore, thanks to the presence of Northern Telecom [now Nortel] and Bombardier, for example, Quebec has become an important player in the game of «high tech industry».

In Quebec and Ontario, as elsewhere in Canada, urbanization and industrialization were assisted by the thrift and diligence of the population, whose members were also willing to borrow funds and skills from abroad and, at least until the 1970s, to receive immigrants during times of prosperity. Educational arrangements helped, first by providing for general literacy; next by arranging for higher liberal and professional education; and then, starting in the 1970s, by offering various sorts of specialized secondary and tertiary technological studies in, for example, engineering and agriculture.

By 1987 both economies had become very urbanized, and the «service» industries and occupations were much more important than manufacturing, which in turn was more important than agriculture, forestry or mining.

Atlantic Canada

Although there was some early fur trading, serious economic development in the Atlantic provinces began with the sea fisheries, whose markets were in Europe and later in the West Indies. Prosperity came from the fisheries, forests and maritime carrying trades. Colonial lumber enjoyed preferential [tariff] treatment in Britain, while the carrying trades served the whole Atlantic basin.

The 1920s and 1930s were unhappy decades in the Atlantic region. The iron, steel, coal and machinery industries were in chronic difficulty and, like the fishery, they suffered severely in the Great Depression. Nor did new manufacturers make much headway, in spite of continuing federal subsidies for rail transport. The few rays of hope included new pulp and paper plants and new protected markets for apples and lumber in Britain ... By the mid-1980s, offshore oil had been discovered in commercial quantities, and there were good prospects for natural gas; but the old heavy industries and the fisheries were in chronic trouble and were kept alive by government subsidy (under various names) and government ownership.

Western Canada [Prairie Provinces]

The building of the Canadian Pacific Railway in the 1880s gave Manitoba a wheat economy. Winnipeg [Manitoba's capital and major city] became a centre for commerce and railways and soon acquired a few factories. In the late 1890s, the prospects for development brightened as world prices rose, transport costs fell, methods of dryland farming improved, and more appropriate varieties of wheat became available.[Note: Canada's National Research Council has been involved in this development of useful, disease resistant, and fast-growing types of wheat.] Until 1929 the Prairie Provinces enjoyed an immense expansion of the wheat economy, onto which was grafted, before 1914, a very much larger rail system, a network of cities and towns, coal mining and ranching. By 1914 the frontier of settlement had been pushed well toward the northwest, attracting migrants from many lands [and other parts of Canada]. The result was aregional economy which depended almost entirely upon the world price of a single crop [wheat] and on local yields, both of which fluctuated greatly. There was little diversification, except in Alberta, which began to produce small quantities of oil and gas.

British Columbia's [BC's] economic evolution before 1929 was very different. There was little agricultural land, and most farm products were locally con-

sumed. [Railroad connections to the East in the late 1800s and early 1900s, brought] much more rapid development and urbanization occurred. Important activities were lumbering, the fisheries, and copper, silver, coal, and base metal mining in the south. Ranching and fruit-growing were also established. Some industries, especially ship building and repairing, were set up and the great smelter at Trail came into operation in 1920.

From 1914 to the late 1940s, especially during the Great Depression, conditions were often difficult. All 4 provinces felt themselves to be the victims of Canada's tariff policy [Note: Canada's original 'national policy' of tariffs to encourage internal, east-west trade domestic trade] which raised the price of the manufactured goods that came from elsewhere but did nothing for the price of the primary products and simple processed goods which they had to sell. Prairie drought, adverse price movements and foreign protective tendencies, as in the 1920-22 recession and the slump of 1929-33, were serious matters. Ottawa [that is, the federal Government] provided relief money, protected the provincial governments from bankruptcy [except for Alberta which defaulted on its debt], and tried through trade negotiations to improve the conditions for western exports. After the collapse of the co-operative wheat pools in 1929-30, Ottawa also supported the marketing of prairie wheat.

The years after 1945 saw new resource-based development, rapid urbanization and dramatic increases in standards of living. The most striking new projects were in oil, gas, pipeline-building and potash, which transformed the economies of Alberta and Saskatchewan. BC began to produce oil and gas; BC and Manitoba acquired immense new hydroelectric plants, and aluminum smelting began at Kitimat, BC in 1951. There were new export markets, as oil and gas moved to Ontario and the US and as BC coal and lumber products moved to Japan. Prairie wheat, which gradually lost its old markets in Britain and Europe, eventually found new markets in the USSR, China and in developing nations. Federal policy was helpful: Ottawa began to make equalization payments to Manitoba and Saskatchewan, and it provided a protected Ontario market for expensive Alberta oil1960-73, although thereafter it held oil prices below world levels. It also reduced or removed many tariffs. Lumbering and pulp and paper expanded, and most of the time did well because of the North American construction and communication booms. In 1967 exploitation of Alberta's tar sands began.

By 1987 Alberta had developed a petrochemical industry and Manitoba was producing buses and light aircraft. Yet the western provinces remained heavily dependent on the export of a few primary products and on the investment activity

which the primary industries could generate. The West remained «development-minded», as it had been between 1896 and 1914.

Current state

By the 1980s most Canadians had become city dwellers and the majority of workers were in white-collar jobs, generally in the service-producing industries. Disparities in earnings, living standards and ways of life had been much reduced, especially after 1945. Nevertheless, the various regional economies are still very different. manufacturing remained largely a matter for Ontario and Quebec, while the 4 western provinces still generated immense surpluses of natural products. In the Atlantic provinces, living standards remained comparatively low and prospects were much less bright. Partly for this reason, interregional subsidies have become deeply entrenched in Canada's way of life.

4.2.4. Framework Matters

(a) Constitutional

- Property & Civil Rights - Provincial
- Municipalities - Provincial
- Trade & Commerce - Federal
- Banks & Banking - Federal
- Taxation - Both Federal & Provincial, but Provincial only «Direct» taxes
- Spending Power - Predominantly Federal
- Incorporation - Both Federal & Provincial

(b) Legal

- Contract, Commercial, Securities, Land Law, Mortgages

These matters set much of the basic «private law» framework for investment. For the Province of Quebec they are dealt with by the Civil Law and Statutes of that province's legislature. For the other Provinces and Territories the Common Law governs together with the relevant statutes[52]. Particularly relevant to investment are the rules respecting the «vehicles» used - both equity and debt - for companies and individuals. Some of these are the frameworks for issuing shares in Companies and selling and reselling them (initial public offerings and stock market rules).

- Enforcement Mechanisms

[52] Much of this background is set out in detail in many the Working Papers prepared for an earlier CEPRA Project (on Non-Payments).

The mechanisms for enforcement of investment rules are both Private and Public. In the Private arena are the rules of contract, with the Courts available to deal with disputes. In the Public arena are corporate and securities rules, with agencies to administer them.

- Labour Relations

The rules respecting Labour relations generally tend to be Provincial, with federal activity respecting federal entities or fields (like inter-provincial operations, such as national railways).

(c) Structural

- Stock Exchanges

The major Stock Canadian Stock exchanges are in Toronto and Montreal (with smaller, more special purpose exchanges in Calgary/Vancouver). Although major Canadian companies more and more have been listing and are traded in New York or on Nasdaq. And there is a further issue on the horizon of greater and greater consolidation into New York of more and more of the market represented by the 8-hour time zone centred in North America.

Securities Commissions

The main roles performed by Securities Commissions (the primary ones being in Ontario and Quebec, as there is no «national» securities commission - despite calls for one) centre around full and fair disclosure and anti-market manipulation/insiderism processes.

Currency, Dividend Controls

While there are withholding provisions in tax legislation, and new «money-laundering controls that are now in place, Canada does not presently have overall currency or capital or dividend controls.

Tax Treaties

To avoid «double taxation», Canada has tax treaties with many countries, that in effect allow a taxpayer to deduct the taxes already paid (or payable) to one jurisdiction from the taxes owing to another.

Other

There are, of course, broader frameworks at play too. For example, the Kyoto Treaty. Last week one national organization here came out with estimates that for Canada to implement Kyoto and the US not, would cost Canada 450,000 jobs ! The Government disagreed. Other estimates focus on money cost to the economy, with numbers like $40 billion mentioned.

4.2.5. Private Sector Initiatives & Intermediation

One theme that runs through the Canadian political economy is that central Canada (Ontario and Quebec) through its main cities (Toronto and Montreal) constitute a form of «metropolitan centre» that uses the rest of Canada as a «hinterland». That the centre has the high paying jobs and the high-value value-added, and the rest of Canada («ROC») supplies raw materials and captive markets. One aspect of this issue is the concentration of the Banking industry in the East, and at the present time, notably in Toronto. (Even if the official «head office» is elsewhere. For example, the head office of the Bank of Nova Scotia is in Halifax. But all the decision-makers are in Toronto office.)

This concentration of banking is exacerbated by the concentration as well of Securities and Insurance in Toronto (and the earlier take-over of the Trust industry by the Big Five Banks). An extract from the Estey Report into the failure in 1985 of 2 western banks gives a flavour of this issue:

At the Western Economic Opportunities Conference in July 1973, further pressure for the creation of new banks came from the four western provinces. In a joint submission, the governments of the four western provinces stated:

«The branch banking system, characterized by the five major Canadian chartered banks with branches coast to coast, and head offices in central Canada, has not been adequately responsive to western needs.»

To alleviate what they regarded as a bias towards the interests of central Canada on the part of the major chartered banks, the western provinces urged the formation of independent regional banks in Western Canada:

«Western-based banks in which there was a degree of public participation would be more sympathetic to the needs of residents of the West and [sic 'than'] the major chartered banks. In particular, they could provide a substantially greater amount of financial capital than in the past to rural and urban communities and would facilitate an expansion of the productive capacities of the western provinces' economies. They would infuse effective competition into the banking industry in the securing of deposits and the making of loans and by extending considerably greater assistance to small-scale and risky ventures. Increased competition for business would induce the established chartered banks to improve the quality of services provided to residents of Western Canada.»

Citing the experience of the Bank of British Columbia, then Minister of Finance John Turner expressed his sympathy for the creation of more western banks, and indeed more banks generally, to enhance competition. He announced the willingness of the federal government to recommend that the incorporation of

new banks be permitted through letters patent to eliminate the cumbersome and expensive special act [of Parliament] requirements of existing legislation.

4.2.6. Incentives/Disincentives in the Tax System

Registered Home Ownership Plans

In order to encourage Canadians to buy homes, in the 1970s the Federal Government introduced a feature into the Income Tax that allowed annual contributions (up to a limit) to «Registered Home Ownership Plans». These contributions were deductible. The amount in the fund accumulated and generated interest tax free. And could be withdrawn - again tax free - to purchase a house (once).

The program was successful, encouraging many average people to invest in houses. But it was in the end discontinued, apparently because it was «too successful», and, indeed, led to too great a loss of government tax revenue. And, ironically, in the press releases surrounding its ending, it was (wrongly) called a «loophole».

Registered Retirement Savings Plans (RRSPs)

Land Speculation Tax

In Canada, especially in Ontario, there was rapid and significant price inflation in the 1970s. Over a period of just a few years the price of houses doubled (a house that cost 25,000 in 1967, cost, say $50,000 less than 5 years later, and 5 years after that it was $100,000 plus). And, by 1981, interest rates for home mortgages were 21% per annum.

To deal with this situation, the Federal Government brought in Anti-Inflation legislation in the mid 1970s, and somewhat before that the Ontario Government enacted a Land Speculation Tax. The Federal legislation was in effect a price freeze. The Ontario legislation was a tax on excess profits.

Land Transfer Tax - Rates for Non-residents

Ontario taxes land transfers. In the 1970s it put in place a higher rate of tax fro transfers of recreational property to non-residents.

Stock Transfer Tax

Prior to 1974 Ontario taxed stock transfers. This encouraged incorporation in other provinces.

Tax Holidays

One way of encouraging industries to locate in particular jurisdictions is to give them a tax holiday for a length of time.

Capital Gains Tax

The Federal Government substantially amended the Income Tax in the early 1970s. One feature of this was to tax capital gains for the first time. The applicable tax rate was applied to 50% of the gain (by way of comparison, 100% of normal income, say from wages, was subject to tax at the normal rates.) Accordingly, if I bought stock for $1000 at time 1 and sold it for $2,000 at time 2 for a gain of $1000, then $500 of it would be taxed.

Estate Tax

Prior to the above referred-to introduction of capital gains tax, both Federal and Provincial levels of Government levied taxes on the death of the taxpayer. Federally, these were called «Estate Tax», Provincially they were called «Succession Duties». After capital gains tax was introduced, the Federal Government withdrew from the «death tax» field to avoid double taxation (as the Income Tax had deemed disposition on death, that triggered capital gains tax), and the Provinces were expected to do so as well. Some Provinces did so quickly, some dragged their feet. (Among the Provinces, Alberta - which had a theme of being relatively «tax-free» - was one of the quickest, Quebec was the probably the slowest.)

Overall

Alberta's theme of being «low tax» probably has helped it gain the ranking of (Calgary) having the second largest number of corporate head offices in Canada - and the economic activity that goes with them - only Toronto being ahead, and Montreal and Vancouver now being behind.

4.2.7. Government Programs and Structures

Grants (or Direct Action) for Infrastructure

Before Confederation (creating Canada as a country in 1867) and immediately afterwards, some significant publicly funded exercises in Infrastructure Creation included:

(a) Canal building to improve the prospects for the Port of Montreal generally, and to enhance access to the Great Lakes water system and thus the Canadian and US mid-western grain trade.

It was felt that Montreal could be the entrepot for eastern North America, rivaling New York, because of its strategic location on the St. Lawrence-Great Lakes Waterways. It was only the building of the Erie Canal (in the 1830s) connecting the Hudson River (and thus New York) with the Great Lakes at Buffalo that made New York the clear winner.

(b) Settlement roads build to facilitate opening land for new colonists - especially farmers in the Eastern Townships of Quebec.

(c) Substantial land grants to railways and especially the Canadian Pacific Railway (CPR) to support their funding and therefore their building.

(d) A «National Policy» of Tariffs to keep out foreign products, and railways to bind Canada togther as an East-West entity to resist the (natural) North-South inclination and (the feared) overwhelming influence of our American neighbours.

In more recent years there have been various transportation initiatives such as:

- Government's creation of Canadian National Railways (CNR) out of several failed lines.
- The creation of Air Canada (whose shares were originally held by CNR).
- Freight rate subsidies - the Crow Rate in the West, and Maritime Freight Rates in the east.
- The building of the St. Lawrence Seaway to allow ocean-going vessels access to interior ports in Ontario (Toronto) and the US (Detroit, Chicago).

And, of course, most recently (recognizing the rise of trading blocs and our heavy dependence on US trade)Canada has entered into first Free Trade with the US and then NAFTA - the North American Free Trade Agreement

Investment Partnerships Canada

«Assists companies seeking to directly invest in Canada. Either as an initial investment or to expand existing Canadian operations, IPC [Investments Partnerships Canada] business consultants work with companies to provide the information and strategic perspectives on Canadian-based advantages for servicing North American markets and for obtaining global market mandates».

«IPC is the focal point for direct investment support in Canada. With direct contacts to Canadian Investment Counsellors in Canadian Embassies and Consulates around the world and to investment consultants at national, provincial, and municipal levels within Canada, IPC has the capacity to assist companies with their direct investment decisions from the exploratory phase through to locations selection and follow-up».

«IPC provides this straightforward, professional assistance free of charge. All services are provided confidentially. The services range from economic data for site selection to personal assistance for exploration visits and guidance on available incentives, regulations, transportation and taxation. IPC arranges intro-

ductions for company investors to a wide variety of government and private sector resources and suppliers at national and regional levels, to academic and business consultants and others integral to your companies direct investment decisions.»

Public/Private Partnerships

The Canadian Council for Public Private Partnerships (whose Chair is former Federal Minister of Finance Donald Macdonald, and one of whose members is another former Federal Minister of Finance - Michael Wilson) is perhaps the leading example of such groups in Canada. «Burdened by increasing debt levels, governments around the globe are focusing on new ways to efficiently deliver services and build and finance infrastructure. Public-private partnerships bring together strengths of both the public and private sectors. They are innovative tools of public policy. In addition to maximizing efficiencies and innovations of private enterprise, public-private partnerships can provide much needed capital to finance government programs and projects of a commercial nature, thereby freeing public funds for core economic and social programs».

«Public and private interests have already worked together in many cases in Canada to bring us new and important infrastructure development critical to maintaining Canada's competitiveness. The link between the Provinces of New Brunswick and Prince Edward Island over the Northumberland Strait and the municipal water pipeline financed, built and now operated by a private sector company in Alberta are recent examples of the cooperative approach between public and private interests in Canada. Many new projects are expected to be developed in the near future on a partnership basis including the development of important highways in Canada. Municipal governments are looking closely at cooperative projects with the private sector in areas ranging from municipal recycling to water and waste water projects.»

4.2.8. Some Initiatives

National Energy Program

«The National Energy Program (NEP) was introduced on 28 October 1980 as part of the first Liberal budget after the 1980 election. Coming in the wake of the 160% in world oil prices in 1979-80 and the prolonged stalemate between the federal government and Alberta over energy pricing and revenue-sharing, the NEP was a unilateral attempt by the federal government to achieve 3 objectives: energy security, by which was meant oil self-sufficiency; a redistribution of wealth towards the federal government and consumers; and a greater Canadian ownership of the oil industry. To reach these objectives, the government

adopteda wide-ranging set of measures. Among these measures were grants to encourage oil drilling in relote areas; grants to consumers to convert to gas or electric heating; new taxes on the oil industry; an expanded role for the Crown Corporation Petro-Canada; and a 25% government share of all oil and gas discoveries offshore and in the North. These measures were all promised on the expectation that the world oil price would continue to rise indefinitely. When it did not (the price started to fall in 1982), any justification for these interventionist policies evaporated and the NEP itself was shown to have been ill conceived».

«The NEP, one of the most sweeping government policies ever taken in Canada, was dismantled by the Progressive Conservatives after their 1984 election victory. Although the NEP did reduce Canadian dependence on oil and foreign ownership of the oil industry, its chief legacy was one of distrust of the federal government by the western provinces.»

Foreign Investment Review / Investment Canada

«The Foreign Investment Review Agency [FIRA] was a federal agency formed by Parliament in 1973 as a result of concerns about foreign presence in the Canadian economy. The agency began screening foreign acquisitions of Canadian businesses in April 1974 and the establishment of new Canadian businesses in October 1975. The agency advised the government (through the Minister of Industry, Trade and Commerce) on what action should be taken, if any. In making its recommendations, FIRA took the following factors into consideration: the effect of the investment on employment and economic activity in Canada; the effect on Canadian productivity, technological development and product variety; the degree of Canadian participation in management; the effect on competition; and the compatibility of the investment with national policies».

«FIRA was criticized by those concerned about American economic influence because it approved most of the applications it received. The Agency was also strongly opposed by many business people, and in December 1984 Sinclair Stevens, Industrial Expansion Minister, revised its mandate to promote and facilitate investment in Canada by Canadians and foreigners; to undertake research and analysis; to provide policy advice; and to ensure that significant investment by foreigners created a net benefit to Canadians. The name was changed to Investment Canada in 1985».

4.2.9. Some Technical Aspects & Approaches

Aluminum

Canada is a major aluminum producer because of the availablity of abundant hydroelectric power at reasonable cost.

International Financial Centres

The Canadian Federal Government attempted to use Canadian Tax Law to establish Montreal and Vancouver (but, interestingly, not Toronto, which was the only real banking centre) as International Banking Centres - but without any real success. After WW2 some significant international banking business moved from New York City to London England because the Americans taxed the transactions and the British indicated that they would not do so.

4.2.10. Government as Investor, Supplier, Subsidizer

PetroCanada

Petro-Canada was established in the 1970s as a Federal-Government owned oil company (a «Crown Corporation»). A creature of the oil crisis and Canadian nationalism (and later associated to some degree with the National Energy Program) the Company was to give government some insight into, and some control regarding, an international oil industry which was mostly US controlled. It ended up as one of Canada's largest oil companies, and is now mostly in private hands.

Air Canada

Air Canada, Canada's major airline, began in the late 1930s as a subsidiary of the Government owned Canadian National Railways, under the name Trans Canada Airlines. Its role was - as with other countries' national carriers - to connect canadians to one another and to the rest of the world. The government substantially privatized the company in the late 1980s.

Crown Resources

The lion's share of natural resources in Canada - mineral and forest - are owned by governments, either Federal or Provincial. And, typically, these governments allow private companies to extract and develop them in return for royalty payments of various kinds.

Two of the major royalty arrangements involve those for oil extraction and those for timber cutting. And, if the rates are considered «low» in comparison with other competitor countries, then they have ben argued to constitute unfair forms of subsidy.

Unemployment / Employment Insurance

Unemployment Insurance «UI» (renamed «Employment Insurance» in the 1990s) is within Federal jurisdiction by virtue of a Constitutional amendment in the 1940s. In essence, both employees and employers pay into a fund, which fund will pay unemployed workers benefits if they become unemployed in defined circumstances and for defined periods.

Given that seasonal workers like fishermen have been able to supplement their income in «off-season», and that some manufacturers like the car companies will lay off workers, let them collect UI; and then rehire them later - as part of an industrial strategy, it has been suggested, in the international trade context, that UI is a form of unfair subsidy.

4.2.11. Government Provided Infrastructure

Road, Air, Rail, Water

Most major transportation systems are federally regulated and most involve some sort of federal monetary support. Most roads and highways are built by the Provinces, but with some form of federal subsidy or inducement. Airports, though now in part privatized (as is the air navigation system - Nav Canada), were built by and maintained by the federal government. Railroads were mostly developed through federal grants. And, one CNR, was federally owned, although now private. They are somewhat different from other modes of transport as they own and maintain their own right-of-ways. As for water transport, the federal government has traditionally built and maintained the canals, and the ports, dredged the channels, kept the aids to navigation (signals, beacons, lighthouses).

Communications

While the Post Office is now a separate Crown Corporation (rather than a government department) and possibly on the way to privatization, and while the major Telephone Company (Bell Telephone) has always been in private hands, the federal government has normally been involved in radio and TV (through its Crown Corporation - Canadian Broadcasting Corporation), and through helping establish microwave and other telecom networks.

Power

Both in Ontario and Quebec there has been a tradition in the 20th century of public ownership of the facilities for the production and distribution of power (largely from hydro, but also from coal, natural gas and nuclear). Ontario, however, is currently going through a process of division of the system into parts and their privatization.

Bridges (Vancouver, private building of Lion's Gate)

While most bridges have been government built (though often funded by tolls), some - such as the Lion's Gate Bridge in Vancouver - were originally privately built and owned.

4.2.12. Regional and Sectoral Approaches

Regional Development Programs

Canada has had a number of Regional Development programs over the years. The following note describes the big picture on them.

Regional Development Planning is undertaken by governments with the aim of improving the well-being of people in areas where there is concern about present and future living conditions. Economic conditions normally receive the greatest attention, but economic problems (such as high rates of unemployment, low income levels or lack of investment opportunities) are closely associated with a broad range of physical and social problems. These include substandard health and housing conditions, inadequacies in physical infrastructure (eg. water supplies, waste disposal, transport facilities), environmental pollution, and deficiencies in educational, recreational and social services. A planned program of regional development normally attempts to treat these problems comprehensively.

Canada has a long history of development programs of many kinds, the most notable being the system of income transfers among the provinces that followed the Rowell-Sirois report [see separate note on this] of 1940. Yet the federal government did not adopt an integrated approach to the problem of regional disparities until 1969, when the Department of Regional Economic Expansion (DREE) was established. DREE's chief purpose was to help create employment opportunities, but 2 levels of need were recognized. The first related to «designated regions» where unemployment was high but the infrastructure for development was already in place; here, grants were provided to firms willing to invest in new or expanded manufacturing plants. The second were «special areas» where infrastructure was not available, and social facilities and services were lacking as well. For these areas, DREE adopted comprehensive programs that included the development of industrial parks, vocational training, the construction of new housing, the provision of a wide range of health and social services, and the creation of jobs, which could be in service industries or in manufacturing. Both types of programs were funded and administered as federal-provincial partnerships, although the federal government bore a larger proportion of costs in the poorer provinces.

Beginning in 1973, in response to criticisms that the regional development programs were too much under central control, the provincial governments were given more autonomy over the design and implementation of projects supported by DREE. Then, in 1982, most of DREE's programs were moved to a Department of regional Industrial Expansion (DRIE) in the Ministry of Trade and Commerce. A new Ministry of Economic and Regional Development was created

at this time to co-ordinate federal government actions to generate beneficial regional impacts. With the national economy performing badly, it came to be argued that regional development could not be effective unless well-thought-out development strategies had first been formulated at the national and provincial levles. If regions were left to compete with one another for limited opportunities, it was feared that Canada would fail to develop an international comparative advantage in such emerging fields as communication electronics or northern transportation equipment.

In 1987 the federal government effected several significant changes in regional development policy. Firstly, a new Ministry of Industry, Science and Technology was created to formulate national development policy, particularly in the context of making Canada more competitive internationally. This new ministry was an amalgam of the former Minisrty of Science and Technology and DRIE and, to some extent, replaces the functions of the Ministry of economic and regional Development which was disbanded in 1984. Secondly, 3 regional development agencies were created. One, the Department of Western Diversification, is designed to be a planning agency and a conduit for funds to assist in the diversification of western Canada's economy. Another, the Atlantic Canada Opportunities Agency, is designed to plan and deliver projects and programs to improve welfare and expand the economy of the Atlantic Region. A third agency, the Federal Northern Ontario development Agency (Fednor), is designed to plan and fund economic expansion and and employment creation, including the tourism sector, in northern Ontario. It is possible that additional agencies will be created: eg. there has been discussion of a similar agency for the northern Territories of Canada. The creation of these new agencies indicates a trend toward creating larger regions for development programming in Canada - 2 of the new agencies are multi-provincial in composition. In allcases, the emphasis is on strengthening large-scale regional economies by concentrating on areas of potential comparative advantage. These swings in federal government policy reflect a fundamental disagreement about the proper approach to regional development in Canada. For their part, provincial governments have shown little enthusiasm for the idea of national strategies or plans. In general, provincial governments have seen regional development planning as their responsibility, on the grounds that they are closer to the problem areas than any national agency and have a better understanding of regional needs and priorities. Certainly the various provincial governments have instituted a variety of development programs of their own over the years, and are likely to continue to do so.

Product Support

What's one person's «price supports» is another person's «cartel». Perhaps the leading current example of this is OPEC. Another example is the so-called «uranium cartel».

On the one hand, the uranium industry in Canada (and elsewhere) was considered a strategic industry, an industry that «ought to» continue to exist. And to do so, companies must be able to make profits. In the 1970's, however, the price was only $6 per pound. Then, allegedly, a «cartel» engineered a rise of price to $40 per pound.

There was no government action against this arrangement. (Indeed, at least in Canada, government was (at one point) seen as at least tacitly supporting it.)

However, the private sector acted. Westinghouse had built nuclear reactors and contracted to supply uranium fuel for them for the $6 price. It animated anti-trust proceedings in the US in Chicago in 1977. These were, after much ado, settled in 1981.

In the «services» area, doctors in Canada have a fixed «tariff» of «fair» fees (on a per-service basis) that are paid to them through the government Medicare plan.

One approach centred in Canada has been Coal production and Steel production support in Nova Scotia though government subsidies to the producing companies in order to maintain local jobs.

Marketing Boards, Quotas

In agriculture - especially products like wheat, milk, cheese, potatoes - governments (federal and provincial), establish Marketing Boards that serve the economic purpose of preserving the industry by evening out the peaks and valleys of the open market prices by acting as exclusive buyer of the products from the farmers and exclusive seller of the product into the markets. They typically keep prices up by restricting the amounts sold into the markets and may also restrict supply by limiting the amounts produced by either barriers to entry or quotas.

By way of example, here is what the province of Ontario says about its Marketing Boards:

Approximately 60% of the value of all agricultural products produced by Ontario farms is marketed through twenty-one provincial marketing boards. In 1999/2000, that amounted to about $4.2 billion worth of farm commodities.

Marketing boards are primarliy governed by farmers who are elected by their peers for terms of at least one year. The boards have electoral districts that strive for equitable representation of producers and production. Two boards have directors representing other sectors of their industry.

Marketing boards play an important co-ordination role in the marketing or selling of their commodities. The nature of that role is determined by each board's 'marketing plan'. These plans vary widely in the degree to which the board influences how producers sell their commodities and how companies that purchase agricultural commodities (ie. food processors, dealers) source and purchase their requirements.

4.2.13. Foreign Investment in Canada

Foreign investment in Canada is both *direct* (made for control purposes) and *portfolio* (made only for the interest or dividends paid or the possible capital gain to be achieved). The amount of both types is very large, with the consequence that a considerable fraction of the Canadian economy is controlled by foreigners (mostly Americans) and the annual interest and dividend payments made to them takes a sizeable fraction of Canada's income. In 1995, when the national Income was $558 billion, investment income payments to foreigners totalled $49 billion.

This large foreign presence in the economy, quite unparalleled elsewhere in the world, has deep historic roots. Beginning in the mid-19th century, when Canada was still a British colony, British investors readily supplied capital, chiefly of the portfolio type, that financed construction of canals, railways, urban buildings and public works, in the half century prior to WWI.

Meanwhile, the US was building a huge national economy which would far surpass that of any European country. Its railway network joined all its regions into one immense market, making gigantic industrial plants feasible and profitable. For some of these plants it became desirable to set up distant branch plants that were closer to natural resources or to local markets that could be best served by a local plant. The railway, the telegraph and later the telephone made it possible to exercise effective control over operations far from headquarters.

As natural resources became depleted in the US, American industrial firms sought supplies elsewhere. The first Canadian resource upon which Americans drew heavily was timber. American lumbermen came to Canada and built large mills By 1929, Canada accounted for about 65% of world exports of newsprint; 90% of its output went to the US.

The discovery in the late 19th and early 20th century of valuable minerals (gold, nickel, zinc and other non-ferrous metals) created a mining industry in which US and some British capital soon played a commanding role.

During the 1920s, US firms in other industries began to operate branches in Canada on a large scale. The 1929 stock market crash and the great depression brought practically all forms of foreign investment to a standstill that lasted

throughout WWII. Following WWII, US investment resumed in Canada [especially in mining and oil.

Conceivably, goods and services produced in the branch plants of US firms could have been produced by Canadian-owned enterprises, but US firms had the enormous advantage of much greater capital and experience and strongly established, valuable connections.

Presumably the role of US-controlled firms in the economy would not have grown so rapidly if authorities had restricted it or had provided special assistance to Canadian-owned firms, but they were anxious to achieve as much economic development as possible and were unconcerned by the large increase in US participation in the economy. As a matter of principle, they treated US-owned and canadian-owned firms with absolute impartiality.

In addition to setting up branch plants in Canada, US firms bought established Canadian firms, incorporating them into their organizations ... As a result of all these considerations, US direct investment of $3.4 billion in 1950 was over 30 times that figure by the end of 1995.

Although US-owned firms initiated the production here of many novel products and services and provided welcome job opportunities, there have been - and still are - problems caused by their presence. Huge and increasing amounts of money have to be remitted to US owners in the form of dividends on their investment and contributions by branch plants toward head office costs of administration, research, product development and advertising.

Multinational corporations carried on their Canadian operations to serve their own best interests, not hose of Canada. Industrial research and development, essential to industrial innovation and growth and providing highly desirable job opportunities, was generally done not in Canadian branch plants but in US facilities.

The presence of giant, foreign-owned companies made it difficult for the government to stabilize the economy.

Aside from economic concerns, many Canadians objected on nationalistic grounds to the scale of foreign ownership and control over the economy. The federal government responded in the 1960s with new legislation forbidding foreigners to own radio and television stations; and with restrictions on foreigners' rights to set up banks, insurance companies and other financial concerns ... In 1973 the federal government established the Foreign Investment Review Agency to screen investments by non-residents.

As of the end of 1995 foreign investment in Canada totalled $672 billion. Half was by Americans, with 40% of their investment being direct, and therefore conferring control over business operations.

The flow of investment funds has not been entirely one-way. Canadians have set up branch plants in foreign countries and made portfolio-type investments in foreign stocks and bonds. In 1995 Canada paid out $49 billion in interest income to foreigners but we received only $16 billion from Canadian investments abroad. What's more, in no foreign country does Canadian investment play a dominant role.

Canada's largest foreign investment, which is in the US, gives Canadians control over only a minute portion of the US economy, in contrast to the very large fraction of the Canadian economy that is controlled by American interests.

4.2.14. Domestic Canadian Investment

Registered Retirement Savings Plans (RRSPs)

The Canadian Income Tax system provides for the deductibility of contributions to Registered Retirement Savings Plans. These Plans are typically held by Financial Institutions that invest the funds in predominantly domestic Canadian stocks and bonds and money market instruments. In 1998, for example, 6.1 million taxpayers contributed some $26 billion to RRSPs.

Mutual Funds

As the interest rates paid on bank deposits decreased in recent years from their highs (of some 10% per annum) in the early 1980s to Canadians began to move their money into mutual funds. As of 1998, about $332 billion was so invested.

Pension Funds

The Ontario Teachers' Pension Plan Board alone has some $70 billion in assets (in the US, pensions are said to total some $7 trillion.)

4.2.15. Government Sales Export Financing & Trade Facilitation

Export Development Canada («EDC») is a federal government Crown Corporation that provides Canadian exporters with financing, insurance and bonding services as well as foreign market expertise.

EDC describes its Financing as follows:

EDC provides export financing to buyers of Canadian capital goods and services. With our export financing in place, you can offer your international buyers flexible financing and payment options to increase your competitive advantage.

Direct Loans - Direct loans are a financing arrangement between EDC and a buyer, or a borrower on behalf of a buyer, for a predetermined transaction. Loans usually involve large transactions with long repayment terms.

Lines of Credit - EDC can lend money to a foreign bank, institution, or purchaser, which then onlends the necessary funds to foreign purchasers of Canadian goods and services.

Equity Investments - Through our equity program, EDC invests equity in transactions that generate direct, substantial, identifiable, export-related benefits to Canada.

4.2.16. Government Banking Support

Business Development Bank of Canada («BDC») is a federal government Crown Corporation providing financial and consulting services. These services include:

- Term Financing
- Innovation Financing
- Working Capital for Growth
- Working Capital for Exporters
- Tourism Investment Fund
- Productivity Plus Financing
- Micro Business Program
- Venture Capital
- Subordinate Financing
- techno.net: Term Financing to Implement E-Commerce
- Growth Capital for Aboriginal Business
- Young Entrepreneur Financing program
- Student Business Loans Program
- Cultural Industries Development Fund
- IDEA - SME Fund.

4.2.17. North American Free Trade Agreement («NAFTA»)

The following extract gives an overview:

Chapter 11 of NAFTA covers investments in one NAFTA country [there are 3 countries: Canada, the US, and Mexico] by investors from another NAFTA country. «Investment» covers all forms of ownership and interests in a business enterprise, tangible and intangible property and contractual investment interests [but financial services are dealt with in another chapter - 14].

General Principles: The guiding principles of the invstment provisions are national treatment, Most-Favored-Nation («MFN») treatment and a minimum standard of treatment. Subject to each Party's reservations and certain exceptions, each Party must treat investors of another Party and their investments no less favorably than its own investors and no less favorably than investors of other countries. At a minimum, each Party must accord to investments of investors of another Party treatment in accordance with international law, including fair and equitable treatment and full protection and security.

Performance Requirements: No party may impose or enforce «performance requirements» in connection with investments in its territory, such as commitments or undertakings relating to exports, domestic content, local sourcing, trade balancing, technology transfer or product mandates.

Senior Management and Boards of Directors: No Party may require that an enterprise constituted or organized under the laws of the Party that is an investment of an investor of another Party appoint to senior management positions individuals of any particular nationality. A party may, however, require that a majority of the board of directors, or any committee thereof, be of a particular nationality or resident in the territory of the Party, provided that the requirement does not materially impair the ability of the investor to exercise control over its investment.

Transfers: Subject to equitable, nondiscriminatory and good faith application of its laws relating to bankruptcy and insolvency, securities regulation, criminal or penal offenses, reports of transfers of currency or other monetary instruments and enforcement of judgments, no Party may prevent an investor of another Party from making transfers relating to an investment in the territory of the Party, including profits, dividends, interest, capital gains, royalty payments, management fees, technical assistance and other fees, returns in kind and other amounts derived from the investment, as well as proceeds from the sale or liquidation of an investment.

Expropriation and Compensation: No Party may directly or indirectly nationalize or expropriate an investment of an investor of another Party except for a public purpose, or a nondiscriminatory basis, in accordance with due process of law and international law and on payment of fair and adequate compensation.

4.2.18. Human Capital & The Knowledge Economy

Canada has had a tradition of free (that is: tax funded) public education at the elementary and secondary levels - compulsory until later childhood (about 16). And university and college education is encouraged through various forms

of government aid (loans, grants). As all economies move more and more into «knowledge-based» products, education will become more and more important.

Some comments on the «New Economy»:

«The new, proliferating forms of e-business and the extraordinary dynamism of the industries that produce information technology products are harbingers of a new economic era.» (US Secretary of Commerce, June 2000)

«What we are witnessing today - and what historians will likely call the defining event for the start of the new millenium - is the birth of a new economic order based on chips and networks. We call this the Network Economy. And in this new economic order, the old laws are being torn apart.» (Jean Monty, CEO of BCE to OECD October 1998)

«The last decade [1988-98] has been a period of great turbulence and massive change. Extraordinary advances in technology and knowledge have enabled entrepreneurs and innovators to develop new products, new services, new ways of doing things, new distribution channels, and new industries. We are living through an information revolution.» (Canada's MacKay Report, September 1998)

«We are witnessing an explosive increase in innovation. Using open standards, people around the world are creating new products and services that are instantly displayed to a global audience. We are witnessing myriad new forms of business activity, such as electronic marketplaces linking buyers and sellers in seamless global bazaars, and changes in business processes from customer service to product design that harness the new technologies to make businesses more efficient and responsive.» (US Secretary of Commerce, June 2000)

4.3 Regional Investment - Prince Edward Island

4.3.1. Context

The Provincial Framework.

PEI is Canada's smallest Province - by size and by population.

Size: PEI's size is 5,660 square kilometers.

Canada's size is 9,984,670 square k. (of which 9,093,507 is land and 891,163 is fresh water).

However, all of PEI is habitable, and in fact inhabited (23 persons per sq. k.).

Much of Canada is simply too bare, or remote or the climate is too harsh to be habitable.

The bulk of Canada's population occupies a strip some 100 to 200 miles wide along the border with the United States.

Population: PEI's 2001 population was 138,514 (60% rural). Canada's was 31,081,887.

The Political Framework

As a Province, PEI has its own Government with independent responsibility for those areas within the provincial sphere of competence, such as Property and Civil Rights and Direct Taxation. Also PEI has as Federal Government representatives - a guaranteed minimum of 4 members of Parliament and 4 Senators, more than if based on population.

An «Economic Region»

The «Economic Geography of Canada» («EGC») - published in 1964, but containing unique and still relevant perspectives - defines and describes 68 Regions in Canada. One of these regions is Prince Edward Island. By way of comparison, Ontario which is Canada's most populous Province has some 10 regions.

EGC describes PEI region as follows:

- Structural Factors: A separate spatial entity and a homogenous geographic area.
- Functional Factors: A functional unit revolving around two local office centres, Charlottetown (a 3rd order centre) and Summerside (a 2nd order centre).
- Production factors: Two primary industries, agriculture (mixed farming and potatoes) and fishing are dominant. [Note: To this tourism can now be added.]

- Marketing Factors: A natural marketing unit, with limited access lines of supply and export. [Note: A bridge has recently been added.]

Economic Indicators

As of fall 2001, the various Economic Indicators for PEI from Stats Canada are:

Employment (Nov):	66,700
Unemployment rate (Nov):	12.3%
Participation rate (Nov):	68.3%
Labour income (Sep):	$149,000,000
Average weekly earnings (Sep):	$521
Consumer price index (1992 = 100) (Oct):	115.4
Retail trade (Sep):	$103,900,000
Manufacturing (Sep):	$100,600,000
Residential construction (Oct) - Building Permits:	$15,310,000
Housing starts (Nov):	900

Note on Government Spending: In 1981 Federal spending amounted to 67% of PEI's GDP. And if the Provincial government's spending is included, total government spending was 87% of Provincial GDP.

Geographic Parameters

- East coast of Canada.
- A «Maritime» province (with Nova Scotia and New Brunswick).
- An «Atlantic» province (with NS, NB, and Newfoundland & Labrador).
- Natural vegetation: «Eastern forest Region»
- Part of Atlantic drainage basin.
- Length (crescent shape) - 224 km. Width - from 4 to 60 km.
- Bridge to adjoining Province of New Brunswick. Ferry to adjoining Province of Nova Scotia.

Geological Parameters

- An island. Part of Gulf of St. Lawrence sedimentary basin. Glacial debris.
- Red, sandy and clay soils - «Podzol» soils. Nearly level, some hills - highest; 142 m. No major rivers or lakes.
- Indented coastline, sand dunes. Few forests.

Climate Parameters

- Southeastern climatic region.

- Moderate. Winters long but mild. Cool summers.
- Average mean temperatures: -7 degrees C. Jan & Feb, 18 degrees C. July.
- Mean annual precipitation - 38 to 40 inches.

4.3.2. Federal Government's ACOA (Atlantic Canada Opportunities Agency) Framework:

- «Atlantic Canada» is composed of 4 Provinces - PEI, and Nova Scotia, New Brunswick and Newfoundland & Labrador.
- ACOA's goal is to improve the economy of Atlantic Canadian communities through the successful development of business and job opportunities.
- *ACOA's Performance Report 2001*

Extracts from this Report are set out here in some detail as they show the Government's approach and methodology for this Agency.

In 2000-2001, ACOA marked its fourteenth year of working in cooperation with Atlantic Canadians to increase economic opportunities for the region.

ACOA's primary contribution to the government priority of building a world-leading economy is made through efforts in creating opportunities through Innovation, Skills and Learning, and Trade and Investment. ACOA's success in this is strongly reflected by the performance of small- and medium-sized enterprises (SMEs) assisted by the Agency.

For example, over the period 1993-1997 ACOA client firms have consistently outperformed Atlantic firms in productivity growth. In the manufacturing sector, which is the focus of ACOA programming, productivity growth increased by 26.2% compared to 11.6% for unassisted Atlantic firms. In addition, growth in the number of exporters in this sector exceeded the growth for unassisted Atlantic firms by 125%. Similarly, during the same time frames, the productivity growth rate of innovation assisted firms was more than three times the growth rate for unassisted firms in Atlantic Canada. These levels of impacts have helped contribute to the creation or maintenance of 11,300 jobs in Fiscal Year 2000-2001.

ACOA had three broad goals in Fiscal Year 2000-2001:

- improved growth and competitiveness of Atlantic SMEs;
- increased economic opportunities for rural Atlantic Canada; and
- greater economic activity through national policies sensitive to the needs of the region..

The achievement of these broad goals was pursued largely within the context of ACOA's strategic priorities:

- access to capital and information;
- entrepreneurship and business skills development;
- trade, tourism and investment;
- innovation;
- community economic development; and
- policy, advocacy and coordination.
- Access to Capital and Information

To provide greater access to capital and information for SMEs; to address gaps in those financing areas lenders consider higher risk, with a focus on strategic sectors and most affected groups (eg. youth and Aboriginal peoples).

- Trade, Tourism and Investment

To increase the number of new exporters and increase sales of existing exporters; to increase foreign investment in the region; to support the tourism industry to increase growth.

The Agency with Investment Partnership Canada and the Department of Foreign Affairs and International Trade, was a funding partner and participant in the $ 6 million «Brand Canada» investment project. The project, which focussed on investment communities in Boston [Massachusetts] and Dallas [Texas], sought to develop an effective «Brand Canada» investment campaign for the United States by identifying the investors' perceptions of Canada's economy. A survey of over 135 companies, investment bankers and site selectors was completed in April 2001. The «Brand Canada» campaign is to be launched in the fall of 2001.

The Atlantic Investment Coordination Committee, whose membership includes provincial government officials responsible for investment promotion, organized a mission with the International Development research Council (IDRC) in Orlando [Florida] in January 2000 during which an Atlantic Canada reception for over 1400 guests was hosted by ACOA and the Atlantic provinces. The IDRC conferences are known as the largest investment conferences in the United States. Site selectors and corporate realtors were also in attendance. Meetings were held during the past fiscal year with some of the major states in the United States.

The Agency's working relationship with Investment Partnership Canada permitted key investments in areas such as investment information and intelligence dissemination to the Agency's provincial partners and facilitate the coordination of research, investment promotion and missions.

The Agency's investment promotion activities were integrated within the Team Canada Atlantic trade mission to Boston and Atlanta [Georgia] during the past fiscal year. Over 200 companies and investment firms in the IT [Information technology] sector from the Southeastern United States participated in one of the activities during the mission to Atlanta in May 2001 and met with a delegation of over 20 firms from Atlantic Canada.

AnAtlantic Familiarization Visit program for site selectors and media editors from the United States was established with the provincial governments. Program criteria and implementation guidelines were developed to encourage selected United States investment site selectors and investment media editors to visit the Atlantic area.

- Some Legislative Frameworks
- Federal Transfer Payments
- Small Business Loans Act
- Canada Small Business Financing Act
- Government Organization Act

ACOA Studies are: Finance:

Sources of SME Business Debt Financing in Atlantic Canada.

This Report is particularly interesting for two reasons: (i) findings on debt financing itself, and (ii) comments on data issues.

(i) Debt Financing

Chartered banks are much more important providers of SME debt financing in Atlantic Canada than in the rest of Canada. Thus, the greatest share of debt financing in Atlantic Canada came from chartered domestic banks, which accounted for 65 per cnet of total SME debt financing provided to the region in 1997, compared to 53.1 per cent for Canada as a whole, followed by Crown Corporations at 9.9 per cent (7.4 per cent for Canada as a whole). The smallest share of SME business lending in the region was attributed to the trust and mortgage loan sector which comprised only 1.3 per cent of total business lending.

The report does suggest that the SME debt market appears to be less developed in Atlantic Canada than in Canada as a whole. Indeed, there may be fewer local suppliers, less breadth, fewer providers and fewer local choices. This is an important finding, which may suggest an additional role for government agencies whose mandate it is to fill this possible regional financing gap.

(ii) Data Issues

There is a data availability issue: the small size of the market for financial services in the region means that Atlantic Canada lending often gets consolidated with Ontario and Quebec statistics.

This reason deserves further explanation. During the course of our research, it became apparent that many non-bank providers of lending products service clients electronically through data centres. Some of their loans or leases can therefore be booked outside Atlantic Canada even though they are actually done with Atlantic Canada customers. Indeed, there may be fairly significant tax reasons for doing this. As a result, consolidated accounting might also help explain the relative size of the bank presence in the SME debt market of the Atlantic region.

Such data distortions were found to be particularly present in the leasing business, whose firms tend to view the market as North American rather than regional. Thus many reported that the small size of the Atlantic Canada market did not warrant keeping separate data on operations in the region. Newcourt Credit, for instance, maintains data by product line but not by region.

Atlantic Canada: Top Business Investment Location.

An Investment Guide for Business Decisions:

Choosing a location for a new investment is a major undertaking. For businesses considering the establishment of an operation in North America or Europe, often the first major challenge is often to identify which countries or regions are most promising in terms of overall costs.

The final investment decision must go beyond cost factors, to include workforce availability, quality of life, education, and medical care - just to name a few. But it is still true that many of the investment decisions are related to costs.

The report analyzes the individual and combined impact of key location-sensitive cost factors, for eight industries in 42 cities within seven countries.

The Model:

The findings of this comparative study are based on a KPMG financial model that incorporates the key location-sensitive cost factors shown in [the Exhibit: Industrial land, Construction, Elecricity, Telecommunication, Labour, Wages and salaries, Statutory benefits, Other benefits, Transportation/distribution, Interest & depreciation, Income taxes, Other taxes] KPMG developed illustrative business senarios in eight industries, and collected data for all industries in each of the locations.

Key Findings:

1. Overall costs are lowest in Atlantic Canada.
2. Component costs vary by country and region.
3. Results are consistent across industries.
4. Results vary with exchange rates.
5. Other comparative factors are also important.

In addition to cost, numerous other factors need to be considered in selecting a business location:

* Economic environment - price stability, economic growth rates, business and consumer confidence, government fiscal responsibility, and public debt.

* Corporate environment - workforce quality and availability, industry clusters, public attitudes toward business, proximity to customers, suppliers and business partners, political stability, corporate crime rates, air travel connections, and local business travel.

* Personal environment - quality of education, cost of living, personal income taxes, personal safety (property and personal crime), quality and availability of health care, cultural values, climate and physical environment, recreational opportunities, lifestyle amenities, air quality, and local personal travel.

Informal Venture Capital Investment in Atlantic Canada

Informal venture capital investors have been classified as a subsector of venture capital [an «angel» investors as a further subsector]. As early-stage investors, they have been thought to occupy a prominent position in the advancement of entrepreneurial ventures. As suppliers of seed, start-up, and growth capital, informal investors promote the development of new ventures with equity and «non-repayable» loans following exhaustion of the amount of internal capital the entrepreneur is prepared to contribute ...

Methodological problems exist because there is no known population of informal investors so most of [the studies that have been done] have been completed with convenient samples of investors.

The study of informal investors is inextricably entwined with the study of entrepreneurship because entrepreneurial ventures are the most likely candidates for informal investments, and because there is a high incidence of entrepreneurship amongst informal investors. Entrepreneurship is a young field of research.

Sometimes, researchres of informal venture capital investors attempt to apply highly developed financial theories upon the newly developing area of informal investors. However, the informal investors may resemble entrepreneurs more than they resmble the «corporate return-maximising» investor.

Some Conclusions/Recommendations:

1. Angel investment is much wider than has otherwise been thought.
2. Make available informative materials for informal investors.
3. Establish a data base of informal investors.

Study of the Financial Intermediary Market in Atlantic Canada

Extracts from Executive Summary:

Objectives: This study has undertaken an examination of the nature and effectiveness of the financial intermediary function in Atlantic Canada with respect to assisting Small and Medium-sized Enterprises (SMEs) in accessing equity investment of $50,000 to $250,000.

Most Intermediaries: The equity capital market for SMEs in Atlantic Canada operates informally, assisted by a group of less than 100 intermediaries [who are mostly acountants and lawyers].

Majority not use intermediaries: Intermediaries were not involved in the majority of financing deals.

Intermediaries underutilized: We conclude overall that the intermediary network in Atlantic Canada is underutilized by entrepreneurs.

Information/Education: We recommend that a variety of information/education initiatives be undertaken to assist entrepreneurs in understanding how to raise equity financing and how intermediaries can assist this process.

4.3.3. Federal Government Financing Programs:

Venture Capital Program

PEI Business Development will assist entrepreneurs in raising the necessary capital to successfully launch or expand their business undertaking in the following sectors: information; information-based technology, manufacturing and processing.

The Venture Capital Program has been established with the expressed objective of providing small business enterprise with access to venture capital in amounts of up to $100,000.

Venture Capital will be provided to eligible small businesses by way of unsecured subordinated debentures loan, and promissory notes, signed jointly by the company and its shareholders. (Alternative option - redeemable convertible preferred shares bearing a fixed rate of return. Shares redeemed on a prescribed basis plus a nominal common share position.

As a result of the higher level of risk associated with unsecured debt, PEI Business Development expects to share in the rewards associated with the growth of the company by taking an equity position in the company between 10 and 49 per cent. The level of corporate ownership required by the Venture Capital Program will be based on, but not limited to, past financial history of the applicant, the current financial position, the type of industry, the product or services provided/produced by the company, the potential earnings and the management of the company.

The Venture Capital Program will, in general, be structured as follows:

1. An investment will be provided with interest only payable in the first year.
2. After the first year the investment will be amortized over the balance of the approved term in regularly scheduled payments of interest and principal ...
3. After the retirement of the investment, PEI Business Development will require the take out of the common share equity position

Capital Acquisition Support Program

The Capital Acquisition Support Program is designed to assist PEI businesses acquire the infrastructure needed to develop from start-up through to international exporting. Through this program, business and government work together with government providing financial assistance at those times when the business is most exposed to financial risk during the start-up period and during expansion of product lines or production of new products.

Eligible applicants to this program are manufacturers, processors, or providers of exportable services. Applicants must be sole proprietorships, partnerships, cooperatives and limited liability companies with well-developed business and marketing plans.

Eligible Activities: Capital acquisition of machinery or for renovations or leasehold improvements.

Levels of assistance include: Up to 40% of the cost of equipment and renovations, up to 25% of the cost of facility expansions.

Equity Investors' Incentive Program

The Equity Investors Program provides a non-repayable incentive to investors to encourage investment in eligible PEI based businesses. The incentive is available to investors (individuals or corporations) and is calculated at 20-25% of the purchase price of the equity investment made in small business.

The incentive is considered to be a reduction to the cost base of the shares in the small business and not as taxable income to the investor.

The primary objective of this program is to provide new and expanding industries in all areas of PEI with the means to attract private sector investment, thus reducing requirements for conventional term debt and working capital financing.

Eligible purchases include any person or corporation that is at arms length to the applicant company.

Approved equity issues may be common, preferred, redeemable, voting, or non-voting shares or limited partnership units and must in aggregate represent no more than 49% of the voting interest.

Assistance will be available to incorporated companies engaged in the following activities: manufacturing and processing industries; industrial research and development; aquaculture; horticulture on a year-round basis and other controlled conditions in man-made facilities; selected tourism projects; first-of-ther kind exportable service businesses.

The project must be expected to provide economic benefit to the province and that similar businesses will not be jeopardized as a result of the proposed project. Other conditions when evaluating an applicant's request for assistance will include: potential for long-term viability; qualifications and track records of managers; cost benefit to the province; employment creation; export sales; import substitution; environmental impact; availability of program funds; level of assistance from other government programs offered or available. Financial assistance will be in the form of a direct rebate to the investor.

Venture Capital Service

Venture Capital provider - Business Development Bank of Canada (BDC), a federal Crown Corporation.

Summary: BDC considers capital investments at any stage of a company's life cycle, from seed to growth, from acquisition or expansion to turnaround and will invest in both private and publicly listed companies.

Uses of Funds: To help finance a company's capital-intensive research and development cycle; to broaden a company's export market; to take a company public.

Stages of Financing: Seed and start-up; development and expansion; bridge and mezzanine; treasury issuing in listed companies; turnaround; management buy-out.

Investment Features: $500,000 to $5 million; up to 49% ownership; new and follow-on investments; sole investor or invests in syndication; Board of Director's representative; Shareholder's agreement; long-term perspectives.

Types of Instruments: Common shares; preferred shares; participative/convertible debentures; options and warrants.

Business Development Program

Summary: Provides assistance to SMEs to start-up, expand, modernize and become more competitive.

Eligibility: Most business sectors, except retail/wholesale, real estate, government services.

Activities include: Business studies; capital investment; training; marketing; quality assurance; not-for-profit activities that support business in the region.

Description: An unsecured, interest free contribution [loan] towards the eligible costs of a new establishment, expansion, modernization or a project which improves competitiveness. Repayable on a time schedule.

Costs eligible for up to 50% financing include: Building construction/acquisition; machinery; working capital; site improvements; leasehold improvements; leased equipment; infrastrucutre; self-built assets; patents; insurance.

Costs eligible for up to 75% financing include: Marketing; training; production/quality improvement; innovations; consultant advice; contract bidding; business proposal development; business support.

Canada Small Business Financing (CSBF) Program

Summary: Under the Canada Small Business Financing act, the CSFB Program was created to help small busiesses reach theit potential by making it easier for them to get term business improvement loans of up to $250,000 to finance the purchase or improvement of fixed assets for new or expanded operations. Loans are madedirectly by a qualified lender (Banks, Caisses populaires, Credit unions).

Uses: Purchase or improve real property or immoveables; leasehold improvements; equipment.

Limits: $250,000 total; up to 90% of cost; must be secured; repay within expected life of asset; interest rate can float or be fixed.

Major Business Projects Program

This Program provides financial assistance to eligible First Nation, Innuit and Innu businesses via their respective Community Economic Development Organizations (CEDOs). The objective is to enable the recipient to use the funding to lever conventional debt financing for business start-ups or expansions in order to pursue a major industrial, commercial or resource-based business opportunity.

Needs: Business plan; clear opportunity; need for equity contribution; knowledge & experience.

Goals: Create community wealth and significant benefits, including - increased jobs and skills, reduced social dependency.

Funding: Total project value must be greater than $2 million and need for equity contribution greater than $500,000. Contribution from Government (Department of Indian Affairs and Northern Development) not to exceed $3 million; total federal contribution (repayable & non-repayable) not to exceed 25% of total project value; 10% of proponent's equity must be cash.

PEI Business Development Inc. (PEI/BDI)

PEI/BDI is an Agency of the Department of Development and Technology, Government of PEI.

4.3.4. PEI Provincial Framework

(a) Statutes

Perpetuities Act (encouraging non-resident cash investments)

The aim of this Statute was to encourage residents of Britain to put their money in PEI financial institutions which would then be more profitable as financial institutions, but also have funds available to invest in PEI.

The method was to utilize: (a) Two established features of English law: (i) that there are limits to the length of time you can tie up money (defined by what is called a «Perpetuity Period»); and (ii) that these limits are determined by where the money is (not where its owner is); and (b) One well known characteristic of wealthy English families: that they have a tendency to want to tie up their money for as long as possible (so that their children, for example, can use the interest on the corpus of the money, but not be able to deal with the corpus itself), to keep the money (and the things it brings) always in the family, from generation to generation.

Accordingly, the Legislature of PEI passed a Perpetuities Act that let you tie up your money for 39 years longer in PEI than you could in Britain; and the Government of PEI advertised the fact through British solicitors, who in turn told their wealthy clients, some of whom then transferred some of their money to PEI financial institutions.

Lands Protection Act (limiting non-resident land ownership)

From PEI's colonization by the English (1767) until Confederation with the rest of Canada (1873) there was a significant problem with absentee landlords (the landlords were in England) when the last of the absentee landlords was bought out.

Accordingly, PEI has since remained concerned to keep ownership of land in PEI in the hands of PE Islanders. The Lands Protection Act addresses this by limiting a non-resident owner to 5 acres (unless there is government permission otherwise).

(b) Programs

Agriculture Loans

PEI Government web site gives Contact Information for responsible government officials.

Business Development

Online description. Refers to ACOA program. Gives Contact Information.

Business Support

Online description. Eligible capital costs up to $40,000; marketing up to $20,000. Gives Contact information.

Craft Development Program

Funding assistance. Contact Information.

Entrepreneur Loan Program

PEI Government web site gives Contact Information.

GST/HST Exemptions

Information on exemptions for small suppliers.

Growth Capital

Contact Information for Government of Canada programs.

Growth Capital for Aboriginal Business

Contact Information for Government of Canada program.

Infrastructure Program

PEI Government web site gives Contact Information

Lending Agency

Links to Contact Information and PEI Government Lending Agency site.

Loans for Capital Expenditures

PEI Government web site gives Contact Information.

Manufacturing/Processing & Information Technology Loans

PEI Government web site gives Contact Information.

Micro Business Development Program

PEI Government web site gives Contact Information.

PEI Food Products Development Fund

Established by the Province of PEI in 1997 to help Island businesses access the services of the PEI Food Technology Centre. The Fund is intended to help businesses generate new products, add value to existing products, and create new markets. Eligible businesses have annual sales of $20 million or less. Contact Information.

PEI Business Development Inc.

Has a Business Support Program, an Entrepreneur Loan Program, and an Equity Investors' Incentive Program

Small Business Loans Administration

Gives Government of Canada Contact Information.

Strategic Infrastructure Program

This program, under the Regional Economic Development Agreement, supports industrial, technological and informatics/software development infrastructure, such as wastewater treatment facilities, three-phase power plants and information technologies. Eligible applicants may include manufacturers, processors,

municipal governments, crown corporations, government departments, and non-profit organizations involved in economic development projects. Contact Information.

Tourism Loans

Tourism loans are available for purchase of an existing business, start up businesses, expansion, debt restructuring and refurbishing. Repayment depends upon the useful life of the asset, with a maximum amortization of 20 years for real property. More details and Contact Information.

Venture Capital Loan Program

Three funds are supported under this program. Contact Enterprise PEI, ACOA, Service Canada.

Women's World Finance

Women's World Finance (WWF) is a non-profit organization founded in 1989 by a group of Cape Breton [Nova Scotia] women who wanted to increase business ownership by women. WWF is the first and only Canadian Affiliate of the Women's World Banking - a global organization which is dedicated to helping women participate in their local economies. Refers to Royal Bank of Canada, WWF and Canada/PEI Contacts.

Conclusions

Our analysis of the investment processes going on in the Russian economy and across the regions show that the dynamics of investments largely have depended on the general trends in the transformation processes and on how fast and deep were the economic and institutional reforms across separate industries and territorial entities of the Russian Federation. On the whole, the period under study (1992-2001) can be roughly divided into four subperiods featuring various qualitative and quantitative changes in the real sector and investments.

The first phase (1992-95) saw a comprehensive fall in the investments of all types concurrently with a decline in the output across all the sectors and branches of economy, with the average rate of the real-time investment decline roughly doubling the average rate of reduction in the real output.

The second phase (1996-97) witnessed a continued cut in investments in the real sector, with the output somewhat stabilized. At the same time the year 1996 saw an increased inflow of foreign investments to Russia, including the direct investments. It is noteworthy that the phase saw a sharp increase in the volume of investments in the financial assets, i.e. the state and corporative securities, at the expense of both domestic sources, such as large commercial banks and financial-industrial groups, and outside sources, such as the foreign portfolio investments.

Following the 1998 financial crisis, the rubble devaluation led to a rise in the Russian economy to compensate for the missing import, still as long as the end of 1999 there was no large-scale increase in the investment activity. Only a few industries saw a real rise in the investments. As a matter of fact, it was a transition phase from a reform fall to a growth in the investments and output. It is the indicators and factors influencing the investment activity at this particular phase that we have made an econometric analysis of in our paper.

The fourth stage (from 2000 onwards) witnessed a fast rise in the real output and investments, with the rate of the investment growth being higher than that of industrial production and the GNP. However, given an insufficient amount of statistical information relating to the phase, we have not considered it in our paper.

The investment processes taking place in 1992-2000 differed radically across the sectors and regions of the Russian Federation, with much more difference than it is normally the case with the developed economies. The differences are due to both different levels of development of some industries and specialization of the regions within the frameworks of the Soviet planned economy and

geographical and branch-oriented structure of the foreign investments. The latter depended first and foremost on a degree of the development of market ties in a given industry or territorial entity, some institutional and political factors.

Our analysis of an impact of the institutional factors on the attractiveness of a region showed that formation of market institutions is of primary importance, along with its historically developed material base and geographical position.

A number of institutional factors at the regional level, such as differentiation across the forms of property, have no considerable bearing on the dynamics of the economic development and investment attractiveness. It should be emphasized that the models of economic policy carried out at the subfederal level also have no noticeable bearing on the attractiveness of a region, at least positively.

The investment climate in a specific territory can be improved primarily through unifying and bringing the regional laws into line with the federal ones. It can be assumed that the federal –level legislative business would be aimed at deregulation, debureaucratization and improvement of the judicial and administrative practice. Formation of a system of special benefits and institutions can hardly be justified locally. Information awareness concerning the local economy and projects by mass media seems to be a key line in improving the investment climate at a local level.

The econometric analysis of the interrelation between some indicators of the investment activity across the region and factors having a potential bearing on the investment activities allowed us to find out a number of all-Russia common principles in conformity with the hypotheses put forward.

In particular, we have found evidence in confirmation of the low efficiency and political character of the state investments. For instance, investments from budgets of all levels are most of all linked to indices of importance of agriculture and power industry in the region's economy, which means that they are made in the sectors that have undergone the least market reforms. At the same time an amount of the state investments made is at the level that is lower than the average national one across the rich industrial regions where the weight of the private sector and inflow of the foreign capital is high. An important indicator of the political character of the budget investments is that it is positively correlated with a deficit of the region's budget. In this connection, in order to enhance the efficiency of the state investments and expenditures on the whole, it is essential, first, to increase the rates of the reforms carried out in sectors of the Russia economy and, first of all, with the natural monopolies and agriculture and, second, better monitor implementation and allocation of the budget expenditures of the regions that are major recipients of money from the Fund of Financial Backing of Entrepre-

neurs. At the same time, in our opinion, insufficient funds are allocated from budgets to finance such a traditional public sector as residential construction.

A key source of financing the investment projects is the company's own funds and, first of all, the profits gained, although we have not found dependence of the investment processes on the profitability of enterprises. The investment from own funds prevails across most of the private and large government-run companies, i.e. the natural monopolies, with the firms primarily updating the production capacities, equipment and technologies and with continued exploitation of the available industrial buildings and facilities in the meanwhile. It is worthy of a note that we have found a negative correlation between the new investments and the volume of fixed capital, which testifies to a predominantly excessive amount of the fixed assets that have been retained since the Soviet time.

At the same time the foreign investments are positively correlated with a share of investments in the construction of industrial buildings and facilities, which means that the foreign capital is largely green investments and is intended to put up industrial capacities in Russia by non-domestic companies or set up new production facilities from scratch.

The estimates obtained indicate that the borrowed funds (bank credits) are not actually used to finance the investment projects, and the Russian corporations frequently use the stock emission to attract long-term, primarily foreign, capital.

Generalization of the findings obtained concerning the structure of sources and use of investments allows us to conclude that the current type of financing Russian companies is substantially different from both the American (stock-type) and German (bank-type) models. In fact, the Russian model of financing is built around the use of the corporate own funds and budget resources. The foreign investments are basically made in joint venture or all-foreign enterprises and do not influence the financial behavior of the Russian firms themselves. Under such conditions, the investment climate can be best improved in the regions that have no well-developed industry of their own, and foundation of new production facilities seems to be the most obvious way of raising the standard of living and developing the region's economy. In order to increase the investment capability of the home companies, it is vital to develop the capital market (the need is confirmed by a sharp rise in the corporate bonds seen over the recent two years) and reform the bank sector.

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