

## **American Sovietology and the Soviet Economy**

I represent the country, which was the main object for the deep researches of Professor A.Bergson during the all his life. But in the soviet times economists of my country didn't know of his works because all of these were secreted, like antisoviet issues. But I personally was studying these works, receiving them from special libraries and as presents from the author during scientific trips.

In this paper I want to touch three questions:

- valuable contribution to science of Professor A.Bergson;
- soviet secret work on economic comparisons for the USA and the USSR;
- the contemporary soviet economic science in Russia.

### **1. Contribution of Professor A. Bergson**

I think that scientific works of Professor A.Bergson and his school were the most impressive, solid and fundamental among different sovietologist works in the West during the long period of Soviet-American confrontation. The main point of these works concerned the Soviet rates of economic growth. This research Professor A.Bergson began in the 1940s and developed during the next decades. In the care, detail and especially the conceptual bases of these works were much higher quality than majority works of other individual sovietologists.

Professor A.Bergson sampled hundreds of the representative commodities and services for personal consumption, government and investment for the USSR and the USA. All components of Soviet national income and GNP were estimated in recalculated constant prices of the year 1937 using hundred of price indexes and with some important price corrections. The soviet state or administrative prices in

contrast of market prices did not include land's rent and part of profit, but included big turnover tax for consumer goods.

According to Professor A.Bergson the average annual growth of net national product in the former USSR was 4,8% for the period from 1928 to 1958, that was much less than according to official data<sup>1</sup>. However, more important were his estimates of Soviet GNP. The main results of Bergson's calculations of Soviet GNP by use in ruble factor cost of 1937 are shown in the table 1.

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<sup>1</sup> A.Bergson. Productivity and the Social System – the USSR and the West. Harvard University Press, 1978, pp. 122, 123.

## Soviet GNP by Use, 1928-1955 (at adjusted factor cost)

Items of GNP used	1928	1937	1940	1944	1950	1955
	<i>Bln. Rubles, Prices 1937 Year</i>					
Household purchases	55,1	66,1	73,2	36,5	90,0	148,3
- in retail trade	...	57,7	66,4	35,7	77,9	136,2
- in kolkhoz markets	...	8,4	6,8	0,8	12,1	12,1
Housing, services	10,2	17,2	18,9	13,1	21,3	31,6
Peasant consumption in kind	39,8 <sup>2)</sup>	28,0	33,6	20,2	31,4	35,8
Military subsistence	0,6	1,9	3,8	13,1	4,6	7,3
Household consumption	105,7	113,2	129,5	82,9	147,3	223,0
Communal services (health, education and other)	6,1	22,6	27,0	20,7	32,8	40,3
Government administration	2,8	6,9	10,1	7,9	13,8	9,8
Defense (as recorded in budget) <sup>2)</sup>	1,7	17,0	45,2	115,2	41,7	60,9
Total investment	16,6	55,9	50,1	34,3	86,8	130,7
- gross fixed investment	11,0	35,6	39,9	24,5	67,3	113,6
- other gross investment	5,6	20,3	10,2	9,8	19,5	17,1
Total GNP	132,9	215,6	261,9	261,0	322,4	464,7
	<i>I n d i c e s</i>					
Household purchases	100,0	120,0	132,8	66,2	163,3	269,
- in retail trade	...	100,0	115,1	61,9	135,0	1
- in kolkhoz markets	...	100,0	81,0	9,5	144,0	236,
						0
						144,
						0
Housing, services	100,0	168,6	185,2	128,4	208,8	309,
						8
Peasant consumption in kind	100,0 <sup>3)</sup>	70,3	84,4	50,7	78,8	89,9
Military subsistence	100,0	316,6	633,3	2183,3	766,6	1216,
						6
Household consumption	100,0	107,0	122,5	78,4	139,3	210,
						9
Communal services (health, education and other)	100,0	370,4	442,6	339,3	537,7	660,
						6
Government administration	100,0	246,4	360,7	282,1	492,8	350,
						0
Defense (as recorded in budget) <sup>2)</sup>	100,0	1000,0	2658,8	6767,4	2452,9	3582,
						3
Total investment	100,0	336,7	301,8	206,6	522,8	787,3
- gross fixed investment	100,0	323,6	362,7	222,7	611,8	1032,
- other gross investment	100,0	362,5	182,1	175,0	348,7	7
						305,3
Total GNP	100,0	162,2	197,0	196,3	242,5	349,
						6
Total national income (official data)	100,0	...	445,4	369,7 <sup>c)</sup>	739,5	1265
						,5

<sup>2)</sup> including farm wages in kind; <sup>3)</sup> exclusive of pensions to officers; <sup>c)</sup> 1945.

Sources: A.Bergson. The Real National Income of Soviet Russia since 1928. Cambridge, 1961, p. 128; V.Kudrov. Mirovaya Ekonomika. Moscow, BEK, 2002, p. 181.

The important peculiarity of Professor A. Bergson's calculations was the estimation of Soviet GNP not in soviet administrative prices but in market prices in ruble factor cost. It is known that soviet prices were artificial state prices. They distorted the real rates of economic growth as well as the pattern of national economy by levying turnover taxes only on industrial consumer goods, by subsidizing agriculture, by not accounting of rent and interest and by very arbitrary estimates of profit rates. Professor A. Bergson worked out a special approach for estimation of Soviet value aggregates in accordance with western methodology, deducted turnover taxes and added subsidies, rent and interest.

It was a pioneering work which gave more reliable results for assessing more realistic rates of growth, and better measurement of structure of the Soviet national economy. Both points are closely linked, because the new structures and rates of growth (compared with official data) gave more realistic understanding of real structure of soviet production, weights for calculation of rates of soviet economic growth and real rates of this growth.

Data of table 1 shows that shares of gross accumulation in Soviet GNP (total investment plus defense and government expenditures) were 13,8% in 1928, 33,8% in 1937, 36,4% in 1940, 57,3% in 1944 and around 40% in 1950 and 1955. Shares of consumption funds were very low.

Professor A. Bergson wrote at that times, that the real aim for Soviet leaders was maximal economic growth, the future and not present time, the accumulation but not consumption. And the process of accumulation was based on subjective arbitrary rule and directed to artificial increasing of production of means of production or production for production for supporting of high rates of growth<sup>2</sup>.

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<sup>2</sup> A. Bergson. The Economic of Soviet Planning. New Haven, 1964, p. 7.

The data of table 1 shows also that during 1928-1955 Soviet GNP increased by 3,5 times (the official estimate was 13 times), in 1928-1940 relative growth consisted 97 and 445% (a difference at 4,5 times), in 1940-1950 23,1 and 66% (a difference of 2,9 times) and in 1950-1955 44 and 71% (a difference of 1,6 times). Growth in Soviet defense and investment was especially fast, but very slow in retail trade, personal consumption and housing.

Afterwards followers and learners of the Bergson's school continued and developed this work. The Bergson's school had carried out calculations of Soviet GNP for every year for 1928-1961 excluding the war years and introduced some adjustments to previous estimates. One of these estimations contents in the famous book of P.Moorsteen and P.Powell (see table 2).

Table 2

GNP of the USSR in 1937 prices, 1928-1961

Years	Bln. Rubles	Percentage	Years	Bln. Rubles	Percentage
1928	123,7	-	1947	220,5	11,1
1929	127,0	2,7	1948	250,7	13,7
1930	134,5	5,9	1949	277,7	10,8
1931	137,2	2,0	1950	304,3	9,6
1932	135,7	- 1,1	1951	327,1	7,5
1933	141,4	4,2	1952	351,8	7,6
1934	155,2	9,8	1953	374,6	6,5
1935	178,6	15,1	1954	404,1	7,9
1936	192,8	8,0	1955	441,6	9,3
1937	212,3	10,1	1956	483,4	9,5
1938	216,1	1,8	1957	514,0	6,3
1939	229,5	6,2	1958	558,9	8,7
1940	250,5	9,1	1959	594,3	6,3
1945	199,0	- 20,6	1960	627,0	5,5
1946	198,4	- 0,3	1961	666,4	6,3

Source: Moorsteen P., Powell P. The Soviet Capital Stock, 1928-1962. Homewood, Illinois, 1966, p. 361, 362.

I think that the Bergson's school's calculations of soviet national income and product are classics of American sovietology. They are much better than the calculations of C.Clark, N.Yasny and

many other individual scientists and may be disproved only by the new calculations on the base of the archives of Russian Federation Goscomstat in cooperation with some living Western sovietologists. But this is a job for the future.

Now it is clear that the most reliable and realistic rates of soviet economic growth calculations were made in 1970-1980<sup>s</sup> by CIA. The CIA engaged hundreds of people using modern personal computers and other equipment and working according to one methodology and one system. This was the real counterpart of CSO SSSR on the other side of the ocean.

Nothing similar on an official level was done in the USSR on US or China performance at that time. The CIA became the principal source for western estimates of Soviet GNP for all post-war period till 1990. However, the CIA practical work was a direct extension of the Professor A.Bergson and his school works and tradition to the postwar years.

Professor A.Bergson had cultivated the special method of estimation of factor productivity and compared this indicator for the USSR with other countries. According his calculations, the level of factor productivity in the USSR in 1960 was 35% in compare with USA<sup>3</sup>. The share of scientific and technological progress in rates of soviet economic growth was less than in capitalist countries and rates of factor productivity growth were also less. All of these Professor A.Bergson connected with totalitarian system, centralized directive planning, with the absence of real innovative motivation in the Soviet economy.

This method was used and developed by other sovietologists and CIA. So, S.Cohen calculated average annual rates of factor productivity growth in Soviet national economy for 1961-

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<sup>3</sup> A.Bergson. Planning and Productivity Under Soviet Socialism. N.Y., 1967, p. 22.

1965 as 0,6%, 1966-1970 – minus 1,8 and 1971-1975 minus 0,3%<sup>4</sup>. According to the CIA calculation average annual rates of factor productivity in the USSR were 0,3 in 1961-1965, 0,8 in 1966-1970, minus 1,2 in 1971-1975, minus 1,3 in 1976-1980, minus 1,1 in 1981-1985 and minus 1,9 in 1987<sup>5</sup>.

The main source of nonefficiency of the Soviet economy Professor A.Bergson saw as the absence of labor motivation. He considered that introduction of public or state ownership in the USSR (artificial socialization) did not create the increasing the level of interest for productive labour and socialism as a system and did not create their own levers for increasing of efficiency of production and factor productivity<sup>6</sup>. He has written that soviet workers have not been interested as free workers, they have not been interested in wages and scientific and technological progress.

Professor A.Bergson was one of the first western sovietologists who revealed the shadow inflation process in the USSR in particular in the soviet machinery building industry.

His conclusions were absolutely well founded from scientific point of view and soviet economists could not even think about it at that times. They supported ideas on the preference of socialism as a social system, on usefulness of centralized planning and progressive rule of communist party.

Beside these Professor A.Bergson published his estimates of Soviet GNP in compare with the USA. So, for 1955 the relationship of these indicators he defined as 35%, for 1965 as 45%. As famous American sovietologist G.Shrouder writes, A.Bergson considered these relationships as overstated<sup>7</sup>.

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<sup>4</sup> Soviet Economy in a New Perspective. Wash. (GPO), 1976, p. 450.

<sup>5</sup> Estimation the Size and Growth of the Soviet Economy. Wash. (GPO), 1991, p. 54.

<sup>6</sup> A.Bergson. Planning and Productivity Under Soviet Socialism, p. 22.

<sup>7</sup> Post-Soviet Affairs. 1995, ? 11, p. 213.

As a whole, Professor A.Bergson's contribution to science was great. He was pioneer and the founder of a wide American school of economic sovietology and his conclusions were extremely important not only for American scientists, but for soviet scientists too. And now that is especially clear.

## **2. Alternative Comparisons of the USSR and USA Economies by IMEMO in the 1970<sup>s</sup>**

Alternative to officials estimations of economic indicators of the USSR and USA carried out in the former USSR as well. Current well-known indices of rates of soviet economic growth of G.Khanin have been made him in 1980-1990<sup>s</sup>. But early (in the 1970<sup>s</sup>) in the Institute for the World Economy and International Relations (IMEMO) of the USSR Academy of Science other comparisons were carried out of national income, industrial and agrarian production, capital formation, fixed capital, employment and labour productivity.

This study (I was a Head of the special Laboratory for international economic comparisons in this Institute) was extremely secret because its results not only did not support the official Soviet comparisons but also because its results, in many cases, were very closed to the American sovietologist comparisons. Once the director of IMEMO academician N.Inosemtzev told me, that I was spoiling his relations with many branch ministers and highest officials in party leadership (he was a member of Central Committee of CPSU).

We have written and sent "on the top" (to Central Committee, Council of Ministers, Gosplan and so on) many short memorandums or reports on the developments of "economic competitions" of the two great powers. And soviet leadership have known many real facts and tendencies in this process. But I do not remembering receiving any "thank you" from them. It was

impossible to publish the results of our work because there as the decree of suppressed publication of nonofficial comparisons. At that times CSO published national income ratio for USSR and USA as 60-65%, industrial production 75-80%, capital formation 90-100%, agrarian output 85%, labour productivity in industry 53-55% and labour productivity in agriculture firstly as 33% and then as 20-25%.

The comparison of national income of the USSR and the USA (soviet statistics did not recognize “the bourgeois” indicator GNP at that time) was made in two stages:

- 1) reclassification of American data according to Soviet concepts and classification;
- 2) convertation of national data for two countries into common currency using PPP<sup>s</sup> calculated previously for the main sectors of the economy and the main parts of national income used. 1963 was taken as the benchmark year.

The recalculation was made in two variants for national income produced and national income used, according to the oldfashioned narrow soviet concept of national income, which covered production only in the material sphere. All non-material services were excluded from the US national income data.

From the American data on national income produced by sectors of the economy we took net output only of industry (manufacturing, mining and electricity), agriculture, construction, trade, freight transport and communications serving the material sphere. From the American data on national income used we took only the expenditures on goods and material services for consumption and investment. Government expenditures were distributed between consumption and accumulation funds according

to soviet practice. After applying the PPP<sup>s</sup> we found a geometric average ratio of 46% for national income produced and 41,2% for national income used.

A ratio for consumption found was only 35%, for accumulation found 80% and for accumulation in the sphere of material production more than 100%. The share of accumulation found in soviet national income was around 35% (estimation in dollars) in compare of around 20% in the USA. The share of accumulation in the “production sphere” (excluding housing, culture and other “non-production” spheres) was 26% in the USSR and 11% in the USA (in dollar prices). See table 3.

Table 3

**Comparison of National Income Used in the USSR and USA, 1963**

Items	USSR			USA			Ratios (USA=100)		
	bln.rbl.	PPP	bln.doll.	bln.doll.	PPP	bln.rbl.	dollars	rubles	average
Consumption fund	124,1	1,11	111,8	297,6	1,34	398,8	39,2	31,1	35,1
Accumulation fund	42,5	0,718	59,2	74,7	0,705	52,7	79,3	80,6	79,9
<i>of which:</i> - accumulation in material sphere	31,8	0,718	44,3	43,7	0,705	30,8	101,4	103,3	102,3
Total national income	166,6	0,974	171,0	372,3	1,212	451,2	45,9	36,9	41,2

As table 3 shows the overall accumulation per unit of consumption in the USSR was 0,6 and in the USA 0,25 (a gap of 2,4 times); accumulation in the “production sphere” per unit of consumption was 0,4 and 0,11 (a gap of 3,7 times). On these economic proportions it was impossible to construct “a bright future for humanity as a whole”, to ensure “the steadfast growth of the material welfare of the Soviet people”, as claimed by the official leadership and communist propaganda of the country.

Our special comparisons of personal consumption were based on the detailed data from input-output table and sample survey of retail turnover for 1963 (USSR) and regular publications in Survey of Current Business (USA). All components of American personal consumption were reclassified according to Soviet concepts and classifications. PPP<sup>s</sup> were calculated for every item. According to our comparisons in 1950 the consumption ratio was around 22%, in 1969 more 37%.

Soviet food consumption level was rather high (more than 76% of the USA in 1969), but non-food goods had very low ratios (20% in 1969). Especially high ratios prevailed for non-processed agrarian products (the soviet ratio was 3,6 times that of the USA). Soviet alcohol consumption was high too (more than in the USA in 1969, after a very quick “catching up” process from 1950). However, means of transport, especially cars, had very low ratios. As a whole, ratios for durable goods changed from 2,4% in 1950 to 11% in 1969, and for non-durable goods from 27% to 47% respectively. In table 4, I give to my American colleagues more details of our comparisons of consumption levels for our countries in 1950-1969 (see table 4).

**Comparison of Total Personal Consumption in USSR and USA  
(USA=100; on the basis of 1963 prices)**

Items	At soviet prices			At US prices			Geometric average		
	1950	1960	1969	1950	1960	1969	1950	1960	1969
<b>Foodstuffs</b>	36,7	54,6	70,3	49,0	65,6	83,1	42,4	59,8	76,4
Food	36,9	53,7	65,8	55,7	69,3	84,6	46,6	61,0	74,6
Agrarian products not passed through industrial processing	273,6	319,1	325,0	364,9	382,1	405,4	316,0	349,2	363,0
Products of food industry	19,5	32,6	44,7	21,8	36,2	49,6	20,6	34,4	47,1
Alcohol	33,9	79,0	114,3	30,0	70,0	99,3	31,9	74,4	106,5
Tobacco	14,1	20,5	33,7	14,1	20,5	33,7	14,1	20,5	33,7
<b>Non-food goods</b>	7,3	17,7	19,4	7,5	18,5	20,6	7,4	18,1	20,0
Clothes and shoes	13,9	32,6	41,4	14,4	34,2	44,0	14,1	33,3	42,7
Household goods	5,8	19,3	21,1	6,0	21,2	23,8	5,9	20,2	22,4
Sanitary, hygiene and medical goods	5,8	11,5	15,9	6,8	13,6	18,6	6,3	12,5	17,2
Printing and cultural goods	4,3	13,5	16,6	7,4	20,8	24,1	5,6	16,8	20,0
Means of ransport	0,6	1,9	2,0	0,8	2,4	2,6	0,7	2,1	2,3
<i>of which cars</i>	0,3	0,5	0,7	0,3	0,6	0,8	0,3	0,5	0,7
Non-food goods, excl. cars	9,4	22,4	25,4	8,8	21,4	24,6	9,1	21,9	25,0
Repair and maintenance of buildings	15,2	26,6	29,5	18,6	34,9	36,0	16,8	31,9	32,6
Fuel, electricity, water	13,8	13,7	13,7	19,6	20,3	20,3	16,4	16,7	16,7
Depreciation of fixed non- productive assets	23,9	30,3	34,3	28,9	30,3	34,3	26,3	30,3	34,3
<b>Total personal consumption</b>	18,9	31,0	34,2	25,2	36,7	40,7	21,7	34,5	37,3
<i>of which</i>									
Durable goods	1,9	7,9	8,9	3,0	12,3	12,9	2,4	9,9	10,7
Non-durable goods	23,6	37,6	44,2	29,8	42,3	49,9	26,5	39,9	47,0

It should be noted that all these figures are for total consumption. Per capita consumption was less as the soviet population was about 17-18% higher than that of the USA. The population of the USSR and the USA in 1950 were 178,5 and 152,3 million, in 1960 212,4 and 180,7 million, and in 1969 239,5 and 202,7 million, respectively.

Direct comparisons of Soviet and US industry were made for 1954, 1958, 1963 and 1967 census years. All American census data were recalculated on the basis of the classification of economy and

branches of industry adopted by the CSO in 1967. For the USA we took the Standard Industrial Classification Manual (1957). For comparability with Soviet data it was necessary to redefine American industry as the sum of manufacturing, mining, electricity, industrial services and repair. For the USSR, indicators of gross output were used, for the USA, the value of shipments. The value of US shipments was corrected by including the net increase in inventories and unfinished production for comparability with soviet data.

The total value of American industrial output was calculated as 365,5 billion dollars in 1958, 469,1 billion in 1963 and 615,9 billion in 1967. Soviet gross output was 89,7 billion rubles in 1954, 127,2 in 1958, 201,0 in 1963 and 285,9 billion rubles in 1967.

The general number of matched commodities and groups of representative commodities was 255, including 44 for machinery. In the latter industry the share of matched commodities reached 17,3% for the USSR and 11,4% for the USA. For the output of the fuel, iron ore, glass, porcelain and pottery industries corrections for quality differences were made. As a result of the matching and weighting of sampled products in both countries, PPPs were calculated. As a result of the matching and weighting of sampled products in both countries, PPPs were calculated. Applying these PPP<sup>s</sup> to the gross output data gave the ratios of industrial outputs in the two countries (table 5).

**Total Results of the Comparison of Industrial Output in the USSR and USA  
(USA=100, geometric average)**

Branches	1954	1958	1963	1967
Electro-energy	35,5	43,9	50,8	51,3
Fuel	22,9	29,0	32,6	36,7
Ferrous metallurgy	57,0	70,2	82,0	94,8
Chemicals, petrochemical	19,4	17,6	20,3	22,0
Machinery	24,3	31,5	44,7	47,1
Construction materials	-	-	125,7	134,2
Wood, woodworking, cellulose and paper	43,3	47,8	43,8`	39,4
Glass, porcelain and pottery	23,8	26,6	26,5	24,4
Light industry	-	45,5	62,1	77,5
Food	-	43,9	52,1	61,7
Total industry	30,0	39,8	46,8	51,2

For comparison of labor productivity, soviet industrial employment data on industrial production personnel were taken (workers, apprentices, engineers, services staff, junior service personnel and security staff). For the USA we included all employees. These data were practically comparable for the two countries. Nevertheless corrections were made in the American data. To “all employees” was added the number of personnel in administrative offices of firms, storage and supplementary services and the number of owners of enterprises, and we deducted the number of workers engaged in construction work in industrial firms for comparability. The size of this correction was not more than 1%. At all, employment in 1954 in the USSR industry was 18,2 million, in the USA 17,8 million, in 1958 20,7 and 17,2 million, in 1963 24,9 and 18,2 million, and in 1967 29,1 and 20,6 million, respectively. Ratios of employment in USSR and USA industries are given in table 6.

Table 6.

**Comparison of Employment in USSR and USA Industries (USA=100)**

Branches	1954	1958	1963	1967
Electro-energy	80,4	91,5	135,4	185,1
Fuel	218,4	289,4	341,8	396,0
Ferrous metallurgy	108,4	126,2	155,8	153,0
Chemicals, petrochemical	60,9	68,0	98,7	93,8
Machinery	83,6	93,6	120,0	121,7
Construction materials	270,0	325,9	388,9	403,0
Wood, woodworking, cellulose and paper	181,5	180,1	168,7	164,9
Glass, porcelain and pottery	120,1	126,1	138,7	134,8
Light industry	124,5	143,2	157,8	175,2
Food	90,5	97,4	114,2	140,1
Total industry	102,8	120,0	136,2	141,6

All data from tables 5 and 6 were used for comparison of labour productivity in the industries of both our countries (table 7.)

Table 7

**Comparison of Labour Productivity in Industry (USA=100)**

Branches	At USSR prices				At USA prices				Geometric average			
	1954	1958	1963	1967	1954	1958	1963	1967	1954	1958	1963	1967
Electro-energy	44,3	43,2	37,6	27,8	44,9	48,9	38,2	28,1	44,6	48,5	37,9	27,9
Fuel	12,6	11,0	9,4	9,6	8,8	9,1	9,6	8,9	10,5	10,0	9,5	9,2
Ferrous metallurgy	52,4	55,2	52,1	62,1	52,6	56,0	58,2	61,7	52,5	55,6	52,6	61,9
Chemicals, petrochemical	29,2	24,6	20,9	20,5	34,7	27,0	21,4	23,6	31,8	25,8	21,1	22,0
Machinery	22,7	33,7	36,4	38,7	23,6	34,6	39,6	44,2	23,2	34,1	37,9	41,4
Construction materials	-	-	27,0	26,1	-	-	38,6	42,2	-	-	32,3	33,3
Wood, woodworking, cellulose and paper	21,5	26,1	22,9	20,7	26,4	27,1	29,3	27,4	23,8	26,6	25,9	23,8
Glass, porcelain and pottery	15,6	15,5	14,5	15,6	25,8	28,7	25,3	21,5	19,9	21,1	19,2	18,3
Light industry	-	29,2	36,7	42,1	-	34,6	42,6	45,2	-	31,8	39,5	43,6
Food	-	38,0	37,4	37,9	-	53,4	55,6	51,1	-	45,0	45,6	44,0
Total industry												
Electro-energy	27,2	30,5	31,3	31,3	31,6	35,9	39,3	39,3	29,3	37,1	34,6	36,2

Our direct comparisons of industrial performance in the USSR and the USA for selected postwar census years led to the following conclusions.

1. In the period reviewed there was a decreasing trend in the gap between the two countries in gross output and labor productivity in industry. But in the case of labor productivity this process was slower, owing to faster growth of employment in the Soviet industry. During 1954-1967 the USSR/USA ratio for industrial gross output increased from 30,0 to 51,2%, in industrial productivity from 29,3 to 36,2%. However, all our comparisons for industry concerned the indicator for gross output, all ratios for net output or value added will more less due to higher material-output ratios in the USSR.

2. By 1967 the Soviet Union had overtaken the US level in production of construction materials and almost reached the US level in ferrous metallurgy. The country reached almost 80% of the American level in light industry and more than 60% in food products.

3. The relative labor productivity levels in the wood, woodworking, cellulose and paper and the glass, porcelain and pottery branches were practically the same in 1967 as in 1954. But productivity in Soviet electro-energy, fuel, chemicals and food industries declined relative to the USA.

4. The lowest absolute and relative level of labor productivity was in the soviet fuel industry.

5. In the process of “economic competition” with the USA, the Soviet Union relied on increasing resource use because the country had huge resources, including labor power. During the period reviewed soviet employment rose relative to that in the USA; the ratio of soviet industrial employment in industry increased from 102,8% of the USA level in 1954 to 141,6% in 1967.

Special attention was directed to comparison of fixed capital. We began by gathering many components of US fixed capital in

American sources on the base of soviet concepts and classification. All primary data were expressed in constant prices (1958 prices for the USA, 1955 prices for the USSR).

The total PPP was defined as 0,615 rubles per dollar. Our calculations resulted in a final ratio for total fixed capital of 47,3% in rubles and 48,2% in dollars for 1969 (in 1950 16,7 and 17,0% relatively). The calculations were made also for industry, agriculture, housing and the production sphere as a whole (the material sphere which produced goods, not services), see table 8.

Table 8

**Comparison of fixed capital in USSR and USA (USA=100)**

Years	Total fixed capital		Fixed capital in material sphere		Industry		Agriculture		Housing*
	In rubles	In dollars	In rubles	In dollars	In rubles	In dollars	In rubles	In dollars	
1950	16,7	17,0	20,2	20,9	19,1	19,3	34,8	36,5	14,4
1955	25,3	22,6	27,7	26,6	-	-	-	-	
1960	30,8	31,3	38,7	39,6	49,1	42,5	60,1	62,9	23,1
1961	32,6	35,1	41,2	42,4	45,7	46,2	64,0	67,2	24,0
1962	34,4	35,0	44,1	45,5	49,7	50,2	69,2	72,8	24,8
1963	36,5	37,0	47,3	48,8	54,6	55,1	72,7	76,2	25,7
1964	38,9	39,2	50,6	52,1	59,4	60,0	76,8	80,3	26,4
1965	40,5	41,2	53,2	54,8	62,9	63,6	81,3	84,8	27,3
1966	42,1	42,8	55,2	56,7	65,6	66,2	84,2	88,6	28,0
1967	43,8	44,5	56,9	58,4	68,2	68,8	88,2	92,7	29,1
1968	45,6	46,3	58,8	60,3	70,3	71,0	93,1	97,5	30,1
1969	47,3	48,2	61,6	62,9	73,0	73,1	97,4	102,0	31,0

- The PPP of 0,639 rubles per dollar calculated for all structures in the economy was used.

These comparisons show that the former Soviet Union practically reached the American level of fixed capital in agriculture. In industry the ratio was around 75%, but in housing less than a third. The overall ratio for fixed capital was less than 50%, the ratio for fixed capital in material sphere was more than 60% or more than the ratio for national income. Hence capital-output coefficient in the USSR was more than in the USA. The same is true for industry too. It is another indicator of nonefficient production in the USSR.

Our comparison of employment in the USSR and the USA had the next results (table 9).

Table 9

**Comparison of Employment in USSR and USA (USA=100)**

Items	1950	1960	1970
<b>Total employment</b>	104,5	145,5	146,8
Industry	117,1	136,2	150,1
Construction	169,6	170,9	222,4
Agriculture	484,2	465,6	515,0
Transport	123,8	188,9	306,3
Communications	43,2	50,8	72,2
Trade	40,1	36,4	53,5
Health care (including social security)	139,3	122,0	115,6
Education, science, culture and arts	203,6	200,1	185,8
State administration, public organization	142,4	67,5	69,1
Credit, finance and insurance	18,5	8,6	10,1

Total employment in the USSR economy was 1,5 times more than in the USA, but agriculture had five times and transport three times the US level. The former Soviet Union had around twice of the US level of employment in education, culture and the arts but seriously lagged behind in the credit, finance and trade sectors. The essence of these is market-based, but the USSR had no market economy and this base had a very rudimentary character.

Now we can compare the overall productivity of labor in the USSR and the USA economies. The ratio of national income in the two countries in 1963 was 43,5% (average of ratios for national income produced and used). The ratio for employment in 1960 was 145,5. So the ratio for total labor productivity in the economies of USSR and USA was less than 30%.

As a whole the comparisons of the main macroeconomic indicators of the USSR and USA carried out in IMEMO reflected lower ratios than those published in the soviet statistics on a regular basis. In many cases the IMEMO ratios were close to those published by American sovietology. Our comparative study (not so

deep and important as studies of Professor A. Bergson and his school) leads to some conclusions on the process of “economic competition between the USSR and the USA”, as the popular slogan in the country had it at that time.

1. The former Soviet Union was especially active (and not without success!) in building up resources for catching-up the USA. In some cases we had more resources than the USA: employment in the economy was 1,5 times greater, and in industry 1,4 times; capital formation in agriculture was three times higher. The Soviet Union had reduced its lag behind the USA in fixed capital (especially sharp in agriculture), and produced more iron, steel, iron and manganese ores, metal-cutting tools, cement, woolen clothes, butter and many other products than the USA. The country was training more graduate engineers than the USA and more engineers worked in the economy. All of these were the result of huge investment and accumulation, faster rates of growth of production of means of production, the presence of gigantic natural resources and operation of extensive factors of economic development.

2. The Soviet Union had less impressive results in final output compared with the USA. The ratio for national income used was only 41%; in industry gross output was 51%. Today it can be said that these ratios are overestimated.

3. The Soviet Union had very weak result in the field of high tech output, personal consumption and efficiency of production. The USSR lagged behind the USA in production of plastics by 5 times, PC<sup>s</sup> by 10 times, and in consumption of durable goods by almost 10 times too. In the field of labor productivity and material and capital output ratios the soviet lag was very considerable too.

### **3. The Soviet Economic Science in the Contemporary Russia**

During soviet times the majority of our scientist-economists as a rule have not engaged in real science. They diligently have relied upon nomenclature, while fulfilling simultaneously propaganda functions. Many research institutions were like affiliates of Central Committee of Communist Party apparatus, fulfilling its instructions. Practically until the Soviet Union disintegration, soviet economists have spoken and written on the great usefulness of centralized planning, leading role of the communist party in society, the advantages of socialism and particularly that the socialism, as a social system has as its goal the maximum satisfaction of constantly growing of material and spiritual demand of the people.

Instead of the analysis of real economic facts and tendencies (imbalances, budget deficit, inflation, egalitarianism in incomes distribution, chronically underfulfilling of plans etc.) the soviet economic science painted the picture of general harmony and stability. All of these were contrasted with the realities of life. Even working out from under the Gorbachev's "concept of acceleration" the best soviet economists based the traditional soviet postulates on administrative-command stimulation of machinery-building and scientific-technological progress, but not on the changing of conditions and factors of production and the nonefficient model of economic development of the country.

Because the soviet economic science was not ready to the real market reforms, could not work out the valid economic program and more so, the strategy of economic development of the country until today. Still today Russia remains as the semimarket, semisocialist country. Whole sectors of the economy and social life are staying in old system and old fashioned Soviet model. There are first of all housing-communal complex, the Russian Academy of

Sciences and our army. The public mentality is not reconstructed on the modern thinking still. The role of economic science in the process reforming is not assisting yet and is contrproductive in some cases.

The conservative policy of the leadership of Russian Academy of Sciences brought us to a deep division of the Russian scientific community. This has led to the formation of many academies on public bases in the different spheres of knowledge. The influence of anti-scientific and anti-intellectual forces in our society was strengthened during transformation times.

The conservatism of the Russian economic science clearly displayed first of all the non-acceptance of even non radical variants of economic reforms by directors of academic institutes. The old academicians opposed the reconstructions and innovations in their institutes and the president's scientific policy giving evidence sometimes of an archaic clan psychology.

So, the former market-oriented (in Soviet time) economist, now academician N.Petrakov, changed his previous positions and began criticize the transformation processes in the Russian economy considering it as fundamental mistake. In 1996 N.Petrakov and V.Perlamutrov (now the member-correspondent of RAS) have written that the analysis of Gaidar-Chernomyrdin's policy gives the base to consider that due to their effort Russia had passed from crises situation to a situation of catastrophe. All their activity multiplied destabilization factors<sup>8</sup>. Now N.Petrakov as a director of the Institute of Market (RAS) is critiquing market reforms in Russia. The Petersburg's economist V.Riazanov has offered to refuse from policy of economic reform and to point not to

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<sup>8</sup> Voprosy ekonomiki ? 3, 1996, p. 76.

entrepreneurship and “primitive thirst of enrichment”, but to state, its economy and investments<sup>9</sup>.

Now it is clear that these conclusions are wrong. In 1999-2003 GDP of Russia increased by 37%, industrial production – 46, agrarian – 31, investments – 74 and real money income of population by 22%. The main economic indicators for Russia are giving in the following table.

Table 10.

**Annual Increase of the Main Macroeconomic Indicators of Russian Federation, 1999-2003 (%)**

	1999	2000	2001	2002	2003*
GDP	6,4	10,0	5,0	4,3	7,0
Industry	11,0	11,9	5,0	3,9	8,0
Agriculture	4,1	7,7	7,5	7,2	2,0
Capital formation	5,3	17,4	9,0	7,0	8,5
Retail trade	- 6,1	8,8	10,7	9,1	10,0
Consumer trade	36,5	20,2	18,6	15,1	12,0
Real money incomes per capita	- 12,5	11,9	8,5	8,8	10,0

\* Previous data from newspapers

*Sources:* Rossiyskiy Statisticheskiy Ezhegodnik. M., Goskomstat, 2002, pp. 38, 71, 594; Voprosy Statistiki ? 9, 2002, p. 55.

However, many other Russian scientists have also negative and nonobjective conclusions. So, the academician D.L’vov has written recently that all efforts and expenditures for pseudo-market reforms were in vain and people adapted to syndrome of getting used in catastrophe<sup>10</sup>. He considers that the Russian privatization is stealing and it is necessary to revise its results and to return to socialism<sup>11</sup>. The revision of the privatization results is the requirement of the Russian communist party. This party uses some results of “scientific” works of economists and requires the

<sup>9</sup> V.Riazanov. *Economicheskoe Razvitie Rossii*. Sun-Petersburg, Nauka, 1998, p. 712.

<sup>10</sup> *Ekonomicheskaya nauka sovremennoy Rossii*, ? 1, 2003, pp. 37. 38.

<sup>11</sup> *Ibid.*, p. 44.

deprivatization of many private companies and firms. It is the real way to civil war. I hope that the accident with Mr. Hodarkovsky is the only unic case.

It is necessary to recognize that Russian economic science as a whole could not and doesn't want to work out the real scientific basis for radical changes of the old soviet economic model and for the transition to the market economy, intensification of production with wide use of the scientific and technological potential of the country. Today the Russian economic science is to some degree the same as the old soviet economic science.

The economist from Novosibirsk G.Khanin recently published some articles with extremely positive estimation of socialism and soviet economy<sup>12</sup>. In 2003 in Moscow State University there had been hold conference, where they were talking on socialism recovery and the exhausting of resources of the market economy. In the resolution of the conference it was written that it was necessary to concentrate efforts of scientific workers and professors on the deepening studies of "the socialism theory"<sup>13</sup>.

Besides the application of some to return to socialism, some Russian economists apply to the construct "the market socialism" as during the NEP in the USSR (1921-1927) or in China now. The academician O.Bogomolov writes that the liberal market model is not relevant. "According to studies during the transition period the perspective and the effective is the model of market socialism or the model of mixed economy"<sup>14</sup>.

It is necessary to recognize that the inertia of old "values" and approaches is living and has influence in Russian society. Russian Academy of Sciences doesn't want to restructure. It sees

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<sup>12</sup> Svobodnaya mysl, ? 7 and 8, 2003.

<sup>13</sup> Ekonomist ? 7, 2003, p. 49.

<sup>14</sup> Vlast, ? 11, 1997, p. 6.

only one problem – increasing of budget financing. But the financing now is increasing indeed and RAS is not carrying out their own restructuring although the gap in salaries between academicians and usual scientific workers is growing. Also growing is the gap in rent from real estate leasing and the huge redundancy of personnel remains. Not one academic institute wants to carry out studies on political-economy based on socialism, which was present for 74 years in our country (as Ya.Kornai) and on the soviet economy performance in XX century (new view).

It's necessary to notice the opinion of Nobel's laureate J.Alferov (physician), that the "RAS more and more is isolating from real science and becoming as reserved community forming it's own life for state account"<sup>15</sup>. The other physician Ze Don Kvon from Novosibirsk considers that "many scientific workers are revolting by being critics of the government, which is destroying the brilliant Russian science, remembering the epoch of great Soviet science. But this science is a Myth... On behalf of the name Science there were blessed BAM (Baikal-Amur Magistral), the transference of rivers, militarization of the country and other follicles of national economy. Now Russian science is the same soviet science. But greatly improverished... And the Russian Academy of Science is remained as the Academy of Sciences of the USSR and could not be other"<sup>16</sup>.

So, the soviet nomenclature scientists preserved their posts since 1992 in their majority did not sustain the test of reforms and market. Fort many of them the real market reforms is misfortune. Their "science" doesn't want to construct the capitalism in Russia, doesn't want to correspond to modern life and Russia's choice of

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<sup>15</sup> Newspaper "Nezavisimaya", 25 Dec., 2002.

<sup>16</sup> Newspaper "Nezavisimaya", 12 Febr., 2003.

civilized way of development. As all known Russian businessmen V.Potanin writes, Russia moving to the Truth has two ways: 1) the way of normal development with cooperation with most developed countries; 2) the way of degradation or the way of conversion in the beggar country of the third world, managed by forced methods<sup>17</sup>. The choice is for us.

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<sup>17</sup> Rossiya v global'noy politike, ? 3, 2003, p. 24.