

# Competitiveness of Economy of **Vojvodina**

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Government of  
AP Vojvodina

## Competitiveness of Economy of Vojvodina

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# Competitiveness of Economy of **Vojvodina**



## INVESTMENTS

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# Competitiveness of Economy of **Vojvodina**

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## Introductory note

The study "Competitiveness of Economy of Vojvodina" deals with production and export potential of Vojvodina. It would be difficult to overestimate the importance of this topic. The economic crisis has dramatically emphasised the significance of export to economic growth and its sustainability in particular. Without a doubt, the main economic shortfall in Serbia and Vojvodina is the low level of tradable goods production, which results in the low level of export. Therefore, the objective of the Study is to determine competitive advantages of Vojvodina, its unused or insufficiently used potentials and production resources, as well as to determine measures of economic policy which could influence an increase in competitiveness of economy of Vojvodina. The analysis is the main recommendation for reforms and more adequate reactions by the Government on both regional and state level.

Findings and recommendations are presented in detail and summarized in a separate document in the Study. In this introductory note, it is appropriate only to point out two things to which the work on this Study refers.

First, it is extremely important to establish a proper database and to update and improve it on regular basis. It will enable following studies to be more profound and to provide answers to specific questions which could be posed in front of audience, local authorities, entrepreneurs and unions and all other institutions and associations. To continuously follow development of competitiveness of the Province is of great significance to foreign investors, as well as to European Union officials and multilateral institutions. It will facilitate an exchange of opinions and experiences, including an access to funds that are dedicated to regional development, infrastructure or small and medium enterprises.

Second, it is highly important to continue to develop institutions that are capable of dealing with regional development, applied economic policy and analysis of development projects and projects with objective to improve competitiveness of economy of Vojvodina. It would ensure transfer of knowledge and experience from neighbouring and more developed countries, as well as from European Union, that will undoubtedly be one of the major partners and financiers of regional development policy and competitiveness improvement.

This study is the first effort in analyzing competitiveness of economy of Vojvodina. However, it is abound with data and gives a detailed depiction of problems, together with possibilities. Additionally, it contains recommendations that are specific and firmly based, so it should be very useful as much as to the authorities as to entrepreneurs and citizens.



# INVESTMENTS

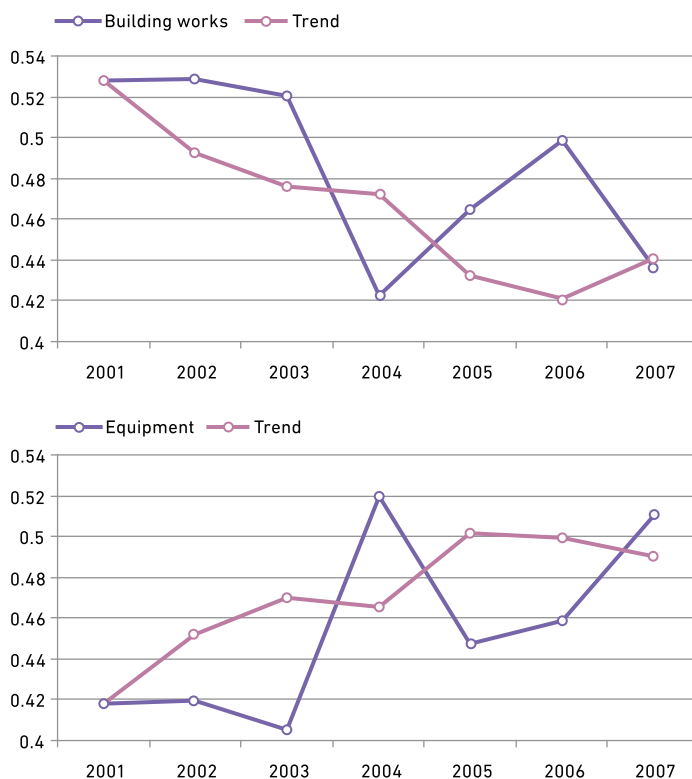
## 1.1 Technical structure of investments

Investments represent a precondition for economic growth. Increased economic activity brings with itself an increase both in the employment rate and in the rate of export. Investments are often viewed as investments in building works, equipment, and other investments. Statistics of the Republic of Serbia views investments in accordance with this division. This division represents technical structure of investments. It is known that in initial stages of development of economy as a whole, investments are largely focused on building works while, along with the development, they are largely focused on equipment. As the recovery of an entire Serbian economy started after the year 2000, in this chapter we will analyse the structure of investments only for the period after the year 2000. Through changes of the share of investments in building works, that is in equipment, looking at investments as a whole it is possible to analyse up to a certain extent the level of development of our country, namely whether the priority in investments is still held by building works or if that place "has been taken over" by investments in equipment. We will also focus on investments in Vojvodina and as a parameter with which we are going to compare these results, we will use the analyses of investments in the rest of Serbia and Serbia as a whole.

### 1.1.1 Technical structure of investments in Vojvodina

The Charts below present the share of investments in building works and equipment in total investments in Vojvodina, as well as soothed series of these shares. Looking at the soothed series, we will see how the share shifts that is, whether they have the tendency of growth or decline.

**Chart 1.1.1.** Share of investments in building works and equipment; original series and trend



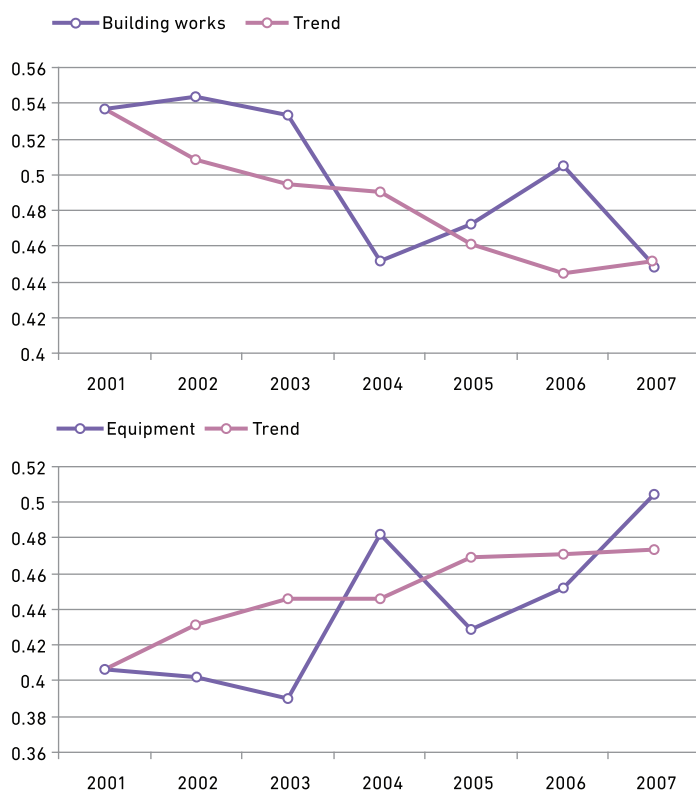
**Table 1.1.1.** Share of investments in building works and equipment

Purpose of investment, share in the total investments	2001	2002	2003	2004	2005	2006	2007
Building works	52.8%	52.9%	52.0%	42.3%	46.5%	49.8%	43.7%
Equipment	41.79%	41.95%	40.54%	51.94%	44.73%	45.89%	50.96%

The red line represents a soothed series. When it comes to building works, we can see that soothed series shows a tendency of decline, i.e. that the share of investments in building works in the total investments was declining from 2001 to 2007. When it comes to investments in equipment, the picture is somewhat different. Namely, the share of investments that was intended for acquisition of equipment has been increasing since 2001.

### 1.1.2 Technical structure of investments in central Serbia

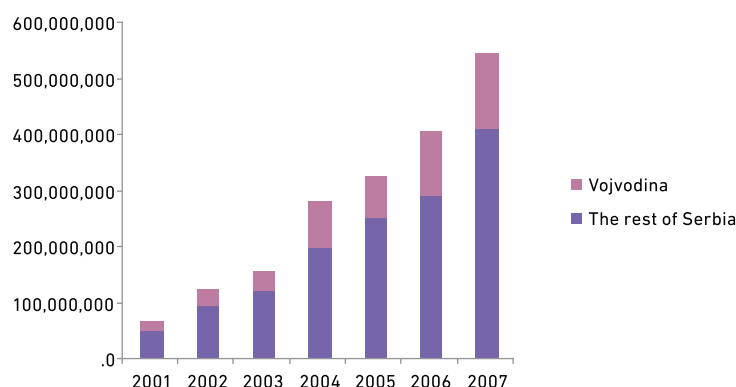
Compared to the rest of Serbia, there is no significant difference. This brings us to a conclusion that, relying on technical structure of investments, Serbian economy has completed the first (initial) phase of economic development, because the share of investments in equipment has risen to the level of 50% of total investments.

**Chart 1.1.2.** Share of investments in building works and equipment; original series and trend

## 1.2 Analysis of trends

In the period from 2001 to 2007, investments in Vojvodina made approximately 25% of total investments in Serbia.

**Chart 1.2.1.** Share of Vojvodina and the rest of Serbia in total investments in Serbia expressed in thousands of RSD



The average nominal growth rate of investments in Vojvodina for the period from 2001 to 2007 was around 49.4% while at the same time the rate at the national level was around 44.2% (for the rest of Serbia the average growth was 43.6%).

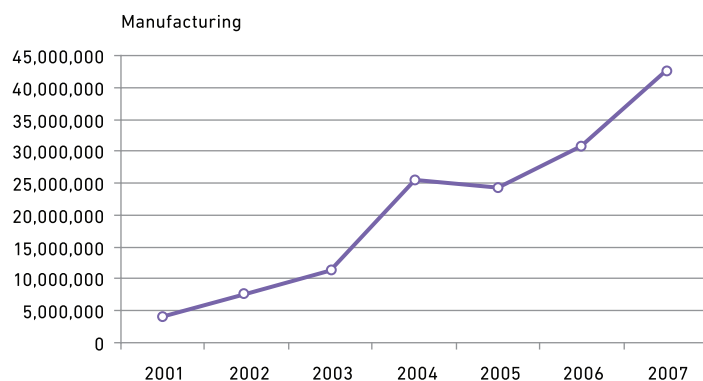
### 1.2.1 Investments in Vojvodina

The largest average annual growth rate in Vojvodina<sup>1</sup> is found in investments in retail trade sector that had recorded growth at the average rate of 375%. However, this data has to be taken with caution, considering the high rise of investments in this sector that happened in 2004. Thus, when we exclude this year we get an average growth rate of 200%, which is still the highest growth rate. This sector of economy is followed by investments in hotels and restaurants that have grown at the average rate of 76.7%, and investments in community, social and personal service activities (73.9%). Investments in public administration and defence and compulsory social security have been rising at an annual average rate of 71.2% while the investment in transportation, storage and communication have been rising at an annual average rate of 58.1%. Investments in manufacturing sector were rising annually at the average rate of 53% while investments in agriculture, hunting, and forestry reported the increase of 35.8%. The lowest average annual growth rate was reported by the fishing sector (22%).

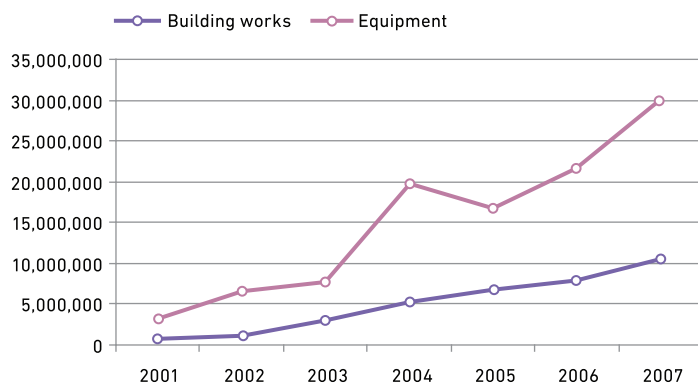
Analysed in a mass, the largest part of investments in the period from 2001-2007 was focused on manufacturing sector - 146 billion RSD (around 30% of total investments in Vojvodina). They are followed by investments in retail trade with 77 billion RSD or 16% of total investments, around 61 billion RSD that were invested in real-estate activities (12.6% of total investments in Vojvodina), around 42.7 billion RSD that were invested in the sector of agriculture, hunting and forestry (8.8%) and 41.3 billion RSD that were invested in transportation, storage and communications (8.5%). This shows that investments in these five sectors cover around 75% of total investments, so we will focus on them more further on.

#### 1.2.1.1 Manufacturing

**Chart 1.2.2.** Investments in manufacturing sector, total, absolute amounts expressed in thousands of RSD

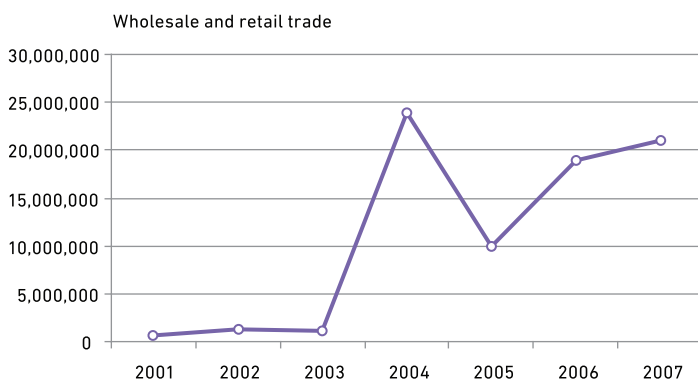
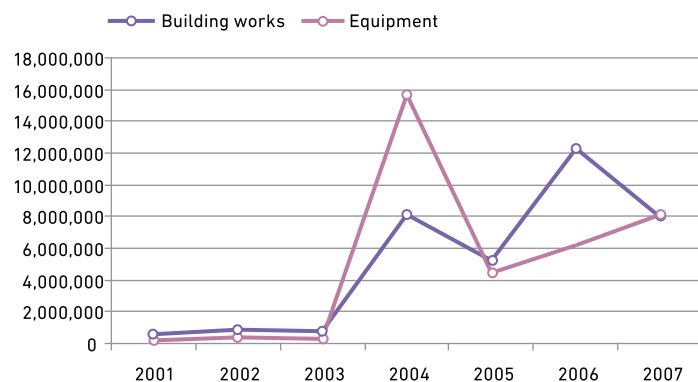


<sup>1</sup> See Annex A, Table 1.1

**Chart 1.2.3.** Investments in building works and equipment - manufacturing, total, absolute amounts expressed in thousands of RSD

The Chart 1.2.2 shows that investments in manufacturing sector were rising in the period from 2001 to 2007 and that there was an emphasised peak in the year 2004. The following Chart (Chart 1.2.3) shows clearly that more was invested in equipment than in building works, which was to be expected bearing in mind the uniqueness of this sector. It can also be seen that the investments in equipment have displayed a higher growth rate than the investments in building works. The peak in investments that happened in 2004, as we have mentioned earlier, is the result of increased investments in equipment that took place during that year.

### 1.2.1.2 Wholesale and retail trade The flow of investments in wholesale and retail trade went in a way presented in the Chart (figures are in 000).

**Chart 1.2.4** Investments in wholesale and retail trade, total, absolute amounts expressed in thousands of RSD**Chart 1.2.5.** Investments in building works and equipment - wholesale and retail trade, absolute amounts expressed in RSD

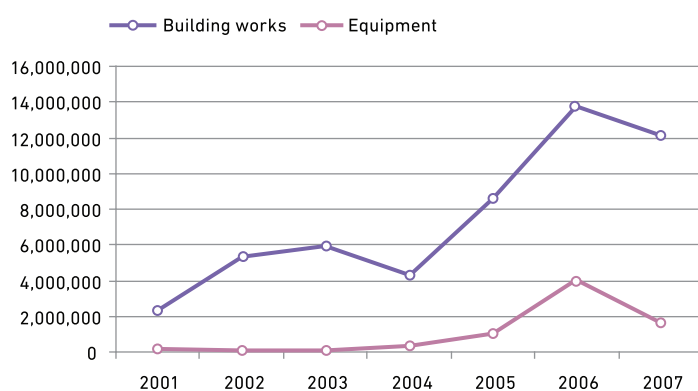
The Chart 1.2.4 shows that investments in this sector are displaying a constant growth, but that the highest peak was reached in 2004. To be able to analyse the structure of those investments in a more detailed way, we will look at Chart 1.2.5 which part of those investments was related to investments in building works and which to equipment. It can be clearly seen that growth of investments in equipment was for the most part "responsible" for the peak from 2004. We can also see that the investments almost stagnated up to that point, only to be followed by the growth after 2004, especially when investments in equipment are concerned.

### 1.2.1.3 Real-estate sector

**Chart 1.2.6.** Investments in real-estate sector, total, absolute amounts expressed in thousands of RSD



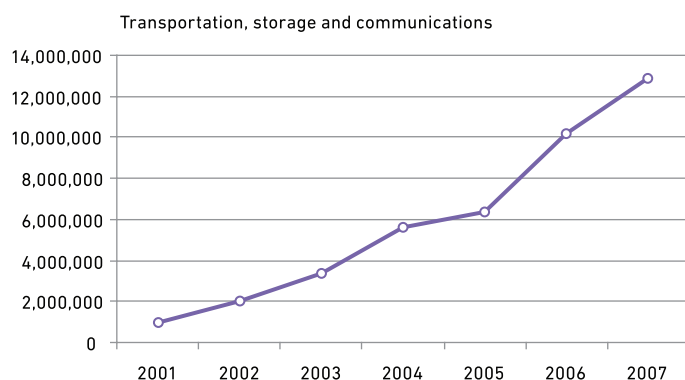
**Chart 1.2.7.** Investments in building works and equipment - real-estate sector, total, absolute amounts expressed in thousands of RSD

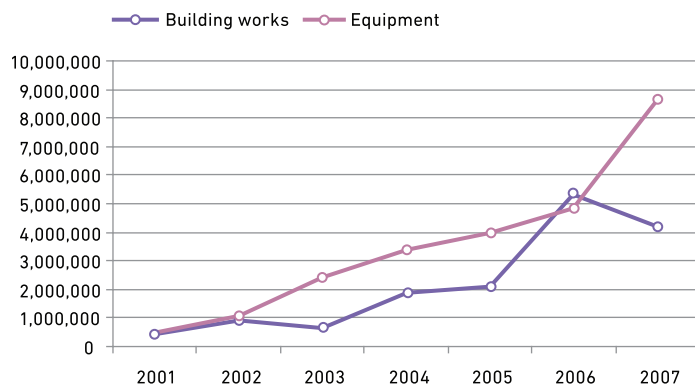


Due to the uniqueness of this sector, a large share of investments was focused on building works, up to 88.5% of total investments for the period from 2001 to 2007. The rest of investments (14.5%) were related to investments in equipment and other investments.

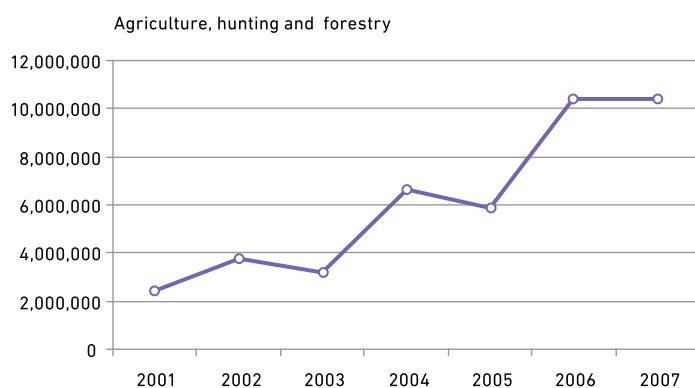
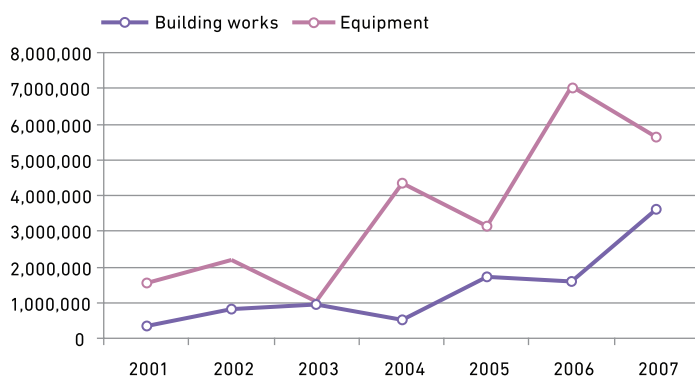
### 1.2.1.4 Transportation, storage and communications

**Chart 1.2.8.** Investments in transportation, storage and communication, total, absolute amounts expressed in thousands of RSD



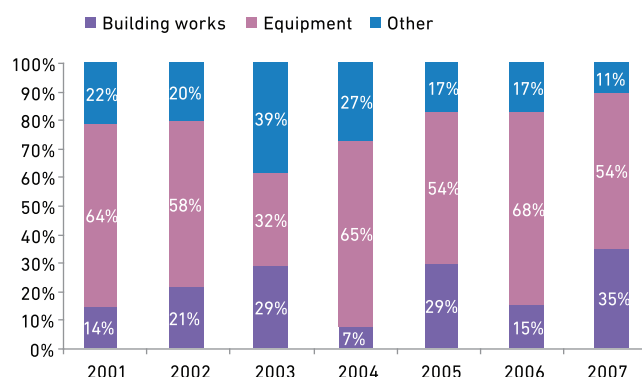
**Chart 1.2.9.** Investments in building works and equipment – transportation, storage, and communications, total, absolute amounts expressed in RSD

### 1.2.1.5 Agriculture, hunting and forestry

**Chart 1.2.10.** Investments in agriculture, hunting and forestry, total, absolute amounts expressed in thousands RSD**Chart 1.2.11.** Investments in building works and equipment - agriculture, hunting, and forestry, total, absolute amounts expressed in thousands of RSD

Investments in agriculture have shown an ascending trend since 2001. The large part of investments is focussed on equipment, although the share of building works has been on a rise only to reach 35% in total investments in 2007.



**Chart 1.2.12.** Share of certain investments in total investments in Vojvodina

## 1.2.2 Share of Vojvodina in industry of Serbia

Analysing industry of the Republic of Serbia per sectors, we can see that the largest part in total industrial production is taken up by Manufacture of food and beverages, in which Vojvodina participates with some 53%. Vojvodina participates in total manufacturing sector with 35.3%. The highest share (36%) in manufacturing sector of Vojvodina belongs to Manufacture of food and beverages, similar to the share of such production in total manufacturing sector in Serbia. This sector is followed by Manufacture of chemicals and chemical products participating with around 25% in total manufacturing sector of Serbia. Compared to the rest of Serbia, Vojvodina has the leading role in the following sectors of manufacturing:

**Table 1.3.1.** Share of Vojvodina in certain manufacturing sectors

Branches of industry	Share of Vojvodina
Extraction of crude petroleum and natural gas (1.29%)	98.50%
Manufacture of coke, refined petroleum products, and nuclear fuel (4.59%)	97.90%
Manufacture of chemicals and chemical products (12.64%)	70.19%
Tanning and dressing of leather, manufacture of luggage, handbags, sadolery, harness, and footwear (0.55%)	57.91%
Manufacture of textile yarns and fabrics (0.95%)	54.27%
Manufacture of food and beverages (23.13%)	53.36%

Note: The brackets contain the share of the sector in total manufacturing sector of the Republic of Serbia

The lowest share of Vojvodina in total Serbian manufacturing sector was realised in the following fields:

**Table 1.3.2.** Share of Vojvodina in certain manufacturing sectors

Industry branches	Share of Vojvodina
Manufacture of motor vehicles, trailers, and semi trailers (1.90%)	4.85%
Electricity, gas, steam, and hot water supply (12.18%)	2.38%
Mining and agglomeration of coal and lignite; extraction of peat (3.02%)	0.71%
Manufacture of radio, television and communication equipment and apparatus (0.10%)	-
Mining of metal ores (0.11%)	-

Note: The brackets contain the share of the sector in total manufacturing sector of the Republic of Serbia

Based on the data from the first Table we can see that when it comes to competitiveness compared with the rest of Serbia, the most competitive sector is that of extraction of crude petroleum and gas.

When it comes to sectors of industrial production, Vojvodina participates in the following way:

**Table 1.3.3.** Share of Vojvodina in industry sectors

Sector	Share of Vojvodina
Mining and quarrying (5.87%)	25.20%
Manufacturing (81.26%)	41.16%
Electricity, gas, and water supply (12.87%)	3.13%

Note: The brackets contain the share of the sector in total manufacturing sector of the Republic of Serbia

We can see that the share of Vojvodina is the highest in manufacturing sector, i.e. 41.16%. In the period from 2001 to 2007, the largest percentage of investments in Vojvodina was directed into manufacturing sector - around 30% of total investments. In this period, in the rest of Serbia, around 16% of total investments were directed in the manufacturing sector.

### 1.2.3 Investments according to activities

We will analyse the realised investments in new fixed assets in 2007.<sup>2</sup> Most of the money was invested in non-specialised retail trade – food (in 2007 in Vojvodina). Out of total investments in Serbia in this sector, around 45% was invested in Vojvodina. Most interesting are the activities with the highest investments (in terms of percentages), i.e. the activities in which investments in Vojvodina were dominant compared to the rest of Serbia. Thus, for example, the investments in manufacture of beer in Vojvodina took around 97% of total investments. This is understandable bearing in mind that the largest number of breweries is located in Vojvodina (Apatinska pivara - Apatin, Carlsberg - Čelarevo, Weifert - Pančevo, Pivara MB - Novi Sad). Looking at it in absolute values, manufacture of beer is at the fourth place according to the value of investments in Vojvodina in 2007. Manufacture of beer is preceded by the above-mentioned non-specialised retail trade – food that takes the first place according to the value of investments, growing of cereals and other crops takes the second place, and manufacture of parts and accessories for motor vehicles takes the third place.

The entire investments in manufacture of sugar in 2007 were directed to Vojvodina. Manufacture of sugar takes the seventh place in Vojvodina according to the value of investments (Bačka - Vrbas, Crvenka - Crvenka, Sugar factory Zrenjanin). Investments in manufacture of fertilizers and nitrogen compounds (Azotara Subotica, HIP Azotara - Pančevo) take the eleventh place in Vojvodina according to the value of investment and they were realised entirely in the territory of Vojvodina. It is also important to mention that manufacture of refined petroleum products, namely investments in this sector that were realised in the amount of 99% in Vojvodina in 2007 taking the thirteenth place.

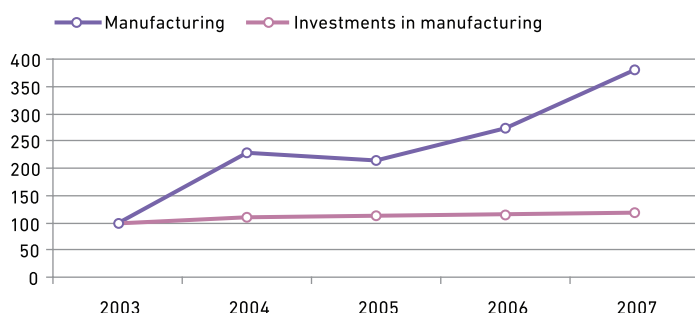
As far as investments in agricultural sector are concerned, Vojvodina holds the primacy when it comes to farming of swine (95.8% of total investments are realised in Vojvodina), growing of fruit (88.2%), growing of cereals and other crops (64.2%) as well as in farming of poultry (62.4%). However, out of all these listed agricultural activities only the investments in growing of cereals and other crops and farming of swine exceeded the amount of one billion RSD for the year 2007 in Vojvodina.

When it comes to manufacture of food products and beverages, Vojvodina participates largely in investments in manufacture of fruit and vegetable juices (Nektar - Bačka Palanka, Si&Si Group - Subotica) i.e. up to 83% as well as in manufacture of refined edible oils and fats - 67% (Dijamant - Zrenjanin, Vital - Vrbas, Sunce - Sombor). The share of Vojvodina in total investments in manufacture of grain mill products was around 87% in 2007, while the value of investments this sector took 34th place. It is interesting that the share of Vojvodina in investments in production and processing of animal meat was up to 75% while in the processing of animal and poultry meat this share was only 1%.

### 1.3 Harmonisation of investments with the growth of sectors and branches

Manufacturing sector represents the largest part of economy of both Serbia and Vojvodina. Chart 1.4.1 presents the trends in investments in manufacturing sector in Vojvodina as well as the trends in production of the manufacturing sector in the analysed period. Data from the Chart are given as base indexes (2003=100) in current prices.

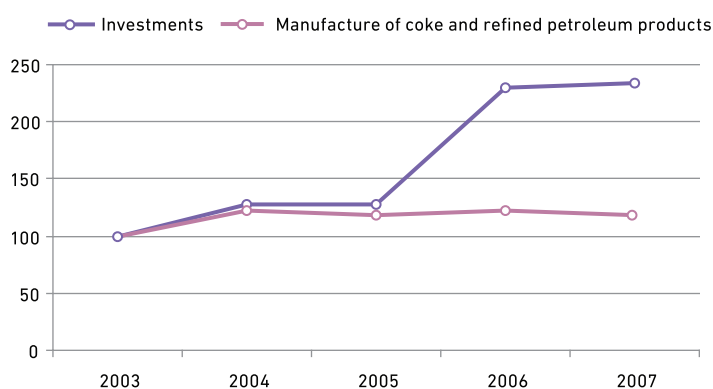
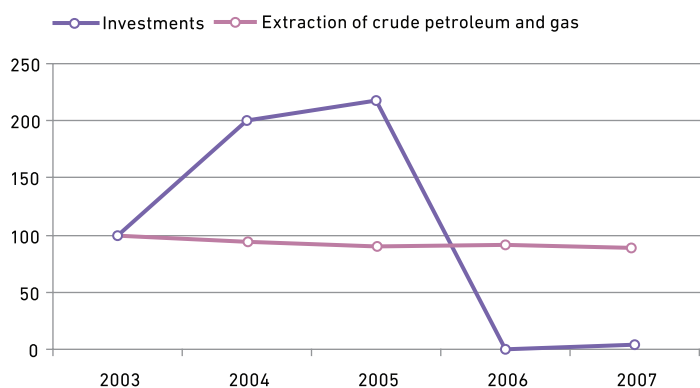
**Chart 1.4.1.** Base indexes of manufacturing sector production and investments in this sector (2003=100)

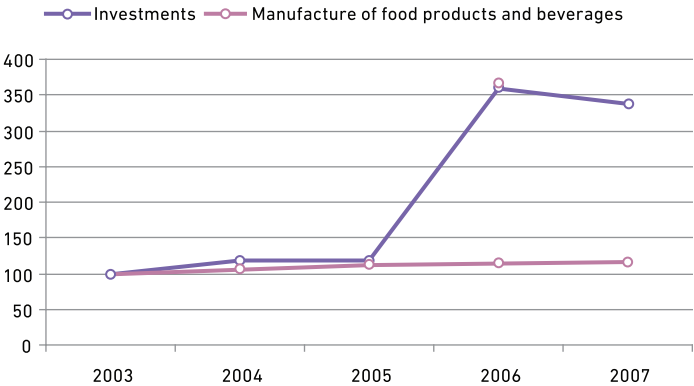
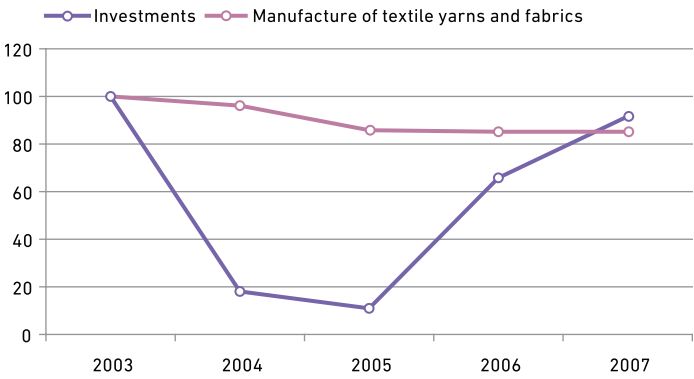
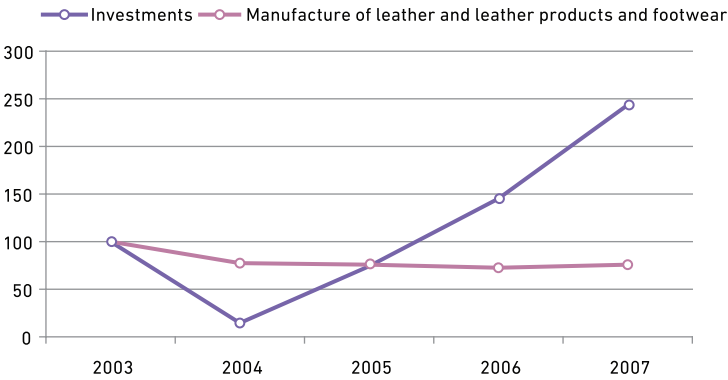
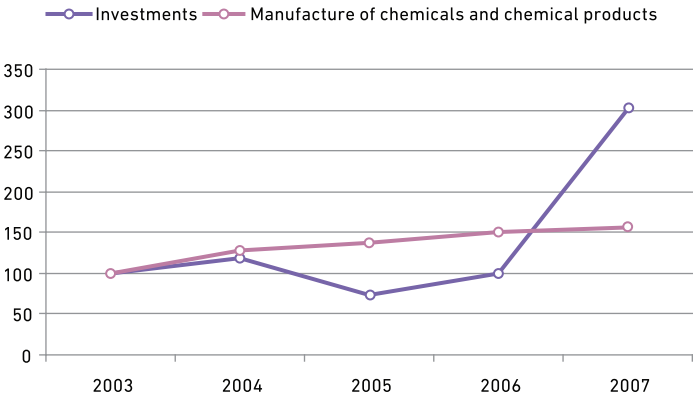


We will now look at the flow of investments by sectors that were previously listed as the ones in which the share of Vojvodina is the highest in economy of Serbia. We will also follow the growth/decline in those sectors during the subject period so that we could try to understand the effects of investments.

As it was mentioned before, Vojvodina participated the most in sectors that were related to extraction of crude petroleum and natural gas.

**Chart 1.4.2.** Harmonisation of investments and growth of certain sectors (base index 2003=100)

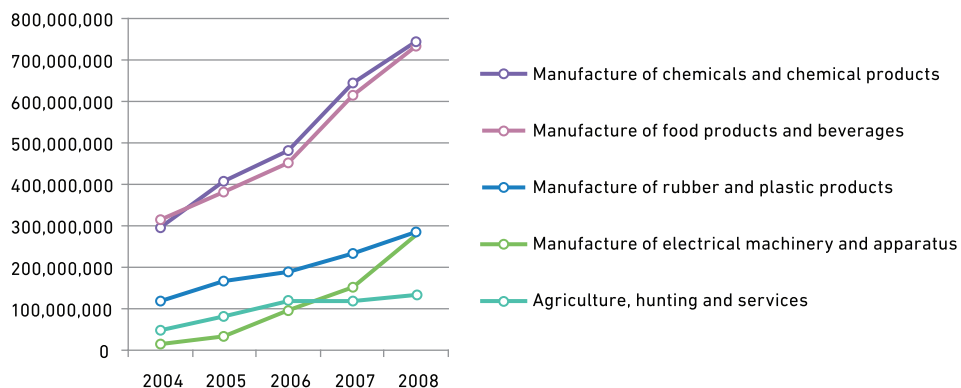




## 1.4 Investments and export

The highest rate of export in Vojvodina for the period from 2004 until the end of 2008 was realised in following sectors3: Manufacture of chemicals and chemical products, manufacture of food products and beverages, manufacture of rubber and plastic products, manufacture of other electrical machinery and apparatus, and agriculture, hunting and services. Trends in export for that period are presented in Chart 1.5.1.

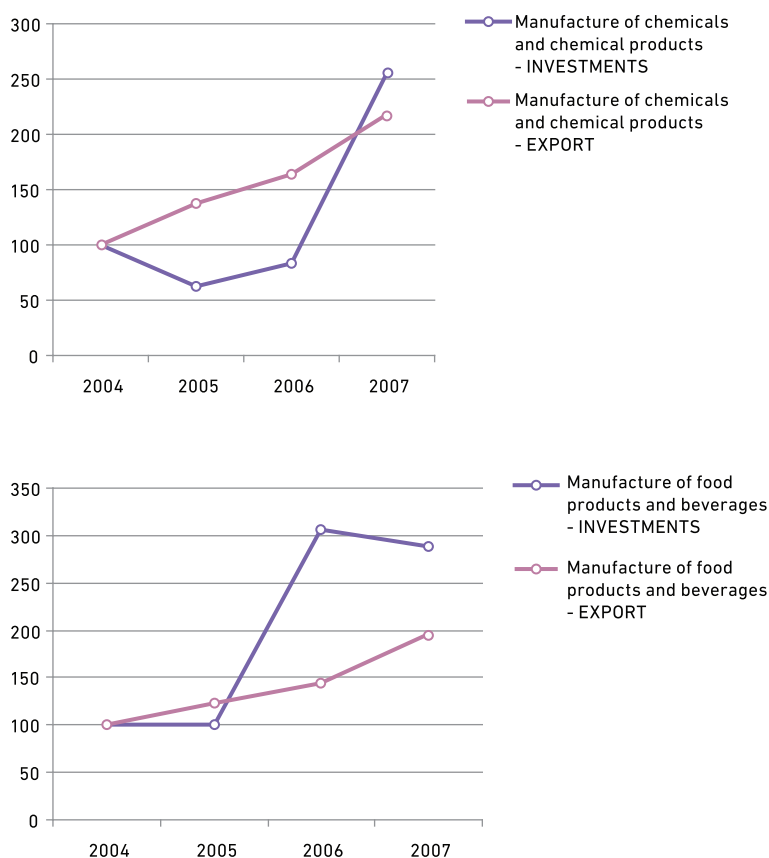
**Chart 1.5.1.** Trends in export for the period from 2004 to 2008 for five largest export branches



As it can be seen from Chart 1.5.1, the highest rate of export is recorded in manufacture of chemicals and chemical products, as well as in manufacture of food products and beverages.

Let us now look at flow of investments and export in the listed sectors.

**Chart 1.5.2.** Base indexes of export and investments (2004=100)



3 See Annex A, Table 1.3

When it comes to manufacture of chemicals and chemical products, the highest export rate in this sector was realised in Southern Banat District - nearly 70% of total export of chemicals and chemical products from Vojvodina for the period from 2004 to 2008. This District is followed by Northern Banat District the export of which is smaller for one third in compared to Southern Banat District. Let us remind ourselves that this sector participates with around 25% in total industry of Vojvodina. We can see that the export from this sector has been on a continuous rise in the period since 2004 while the investments in this sector decreased in 2005. The increase in investments began in 2006 (even though the level of investments was lower than in 2004), only to be realised at a multifold higher level in 2007 than it was in 2004 (Chart 1.5.2). We will now list sectors ranked according to export rates for the period from 2004 to 2007 while average ranks that these sectors realised for the analysed period in terms of the scope of investments is presented in the last column.

**Table 1.5.1.** Activities ranked according to the value of export, with average rank according to the value of investments in Vojvodina for the period from 2004 to 2007

Rank according to the value of export	Sector	Average rank according to the value of investments
1	Manufacture of chemicals and chemical products	4.5
2	Manufacture of food products and beverages	1.5
3	Manufacture of rubber and plastic products	10.5
4	Manufacture of electrical machinery and apparatus	8.5
5	Agriculture, hunting and services	1.5
6	Manufacture of other machinery and apparatus	15.5
7	Manufacture of basic metals	8
8	Manufacture of other minerals	5.25
9	Manufacture of wood and of products of wood and cork	16
10	Manufacture of textile yarns and fabrics	13.75
11	Manufacture of coke and refined petroleum products	9
12	Manufacture of motor vehicles and trailers	13.25
13	Manufacture of leather and leather products, footwear	17.75
14	Manufacture of fabricated metal products, except machinery and equipment	8.5
15	Manufacture of other transport equipment	19.75
16	Manufacture of clothes and fur	16.75
17	Manufacture of furniture; manufacturing n.s.e.	15.5
18	Recycling	19.5
19	Manufacture of precision and optical instruments	19.5
20	Manufacture of pulp, paper and paper products	10.25
21	Publishing, printing and reproduction of recorded media	9
22	Manufacture of tobacco products	9.25

It can be seen from the Table that manufacture of chemicals and chemical products as a sector recorded the highest export rate in a given period, and was placed between fourth and fifth place when it comes to the value of investments. Manufacture of food products and beverages was placed second when it comes to realised export, and placed somewhere between the first and second place when it comes to investments. It is interesting to see that a lot less was invested in manufacture of rubber and plastic products, which placed third according to the export, than in some other sectors placing it somewhere between tenth and eleventh place according to investments. It can also be noted that even though a lot more was invested in agriculture and hunting (average rank 1.5) export of this sector took only the fifth place.



