

## **The Evaluation of the Competitiveness State of Manufacturing Companies in Romania – an Approach According to Mereuță Model\***

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**Abstract.** *The objective of this work is the evaluation of the competitiveness state of companies operating within the manufacturing industry in Romania, 2001-2007. Since 1990, Romania has begun a long process of non - industrialization, which resulted in a significant reduction of the population occupancy in the industry, a reduction of the industrial production and hence exports, which came from this industry. It is therefore necessary to make such a study to identify industries with growth potential, especially since in the current context, it is necessary to adopt viable solutions to overcome the economic crisis. Following this analysis, the findings reveal that four of the 11 sectors analyzed are characterized, in 2001-2007, with a relative lack of competitiveness, and the other ones are positioned in the V area of the evaluation matrix, which means that, in the analyzed period, the static and dynamic economic situation of them was neutral, whichever showing a real growth potential.*

**Keywords:** competitiveness; system companies; manufacturing; internal efficiency; external efficiency.

**JEL Codes:** D21, D22, D24, D92.

**REL Codes:** 14K, 17G.

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\* Ideas in this article were presented at the Symposium „The global crisis and reconstruction of economics?”, 5-6 November 2010, Faculty of Economics, Bucharest Academy of Economic Studies.

By using the components which it involves, the system analysis of companies is a rather complex approach, but also attractive. As for the manufacturing industry in Romania, the branch determines the overall economic growth mainly because it has a 78.6% share in the total industrial production, according to statistics provided by The National Institute of Statistics for 2009, and a 92.3% share in the total exports. The objective of this article is to achieve an evaluation on the state of competitiveness of companies operating in manufacturing industry. To this end, we applied Mereuță's assessment model (Niculescu, Mereuță, 2007, pp. 667-669), which was developed in 2006 in the project "Economic growth, employment and competitiveness in the knowledge economy" and which takes into account several diagnostic variables of the companies' situation, which includes the value added, the labor productivity, the gross result of the exercise and gross operating surplus.

Following the analysis of these indicators there is drawn an individual sheet for each branch of the manufacturing industry which, in the present study, includes three parts: the economic indicators values, strengths, weaknesses and indifference and dynamic state diagram. The statistical data used in the model were taken from reports published by the National Institute of Statistics on the results and performance of businesses, as well as on the ones regarding Romania's foreign trade. Although the 2010 edition appeared on the results and performance of enterprises in industry and construction, which includes statistical data for the year 2008, in the present study, the last year of analysis is 2007, because since 2008 the statistical data are drawn differently. As far as the strengths, weaknesses and indifference, they are established according to the baseline indicators of the six variables as follows: the relatively strong points will be represented by indicators with positive values in relation to the reference system and we will note that with +1, the relatively weak points will be represented by indicators with unfavorable values in relation to the reference system and we will note that with -1, and the points of indifference will be represented by indicators with values within  $\pm 5\%$  compared to the reference system and we will note that with 0. This used scale allows prioritizing each of the manufacturing sub-branches in five classes, according to the table below:

Table 1

Evaluation scale			
No.	Class	Significance	Total points
1	A+	Significantly favorable condition	4÷6
2	A	Favorable condition	1÷3
3	B	Neutral state	0
4	C	Unfavorable condition	-1÷-3
5	C-	Significantly unfavorable condition	-4÷-6

Source: Nicolescu, Mereuță, 2007, p. 668.

The Es static evaluation takes into consideration the state class of 2007 of the analyzed sub-branch, and the Eg overall assessment is defined by its classification into five classes, dynamic and static. All the results thus obtained will be summarized in an evaluation matrix structured in five areas: the first area – disadvantaged static and dynamic economic state, the second area – economic static state significantly favorable in relation tot the dynamic economic state, the III<sup>th</sup> area – favorable static and dynamic economic, the IV<sup>th</sup> area – stare dynamic economic significantly favorable to the static economic status, the V area – neutral static and/or dynamic economic status.

In this study I focused my attention on 11 sub-branches of the manufacturing industry: food and beverage industry, tobacco industry, textile and textile products industry, clothing industry, leather and footwear, wood processing industry, paper and paperboard industry, publishing industry, printing and reproduction of recorded media industry, rubber processing and plastic industry, metallurgy and road transport industry. These industrial sub-branches cumulated in 2007 according to the National Institute of Statistics, over 50% of the gross value added (57.95%) created in the manufacturing industry, 54.74% of employees and 51.5% of total exports of this industrial branch.

The assessments includes considering the following economic indicators: the gross value at factor cost of an industry branch in value added at factor cost in the industry ( $VA_i/VA$ ), labor productivity ( $VA_i/NS_i$ ), gross operating surplus ratio ( $EBE/CA$ ), general profitability rate ( $Rb/CA$ ), the share of export industry in the export of the industries ( $Ex_i/Ex$ ) and the degree of coverage of imports by exports ( $Ga$ ). The reference values of economic indicators related to the manufacturing industry are described in the following table:

Table 2

References 2001-2007(1)							
Economic indicators	2001	2002	2003	2004	2005	2006	2007
VA <sub>i</sub> /VA	0.043	0.043	0.043	0.043	0.043	0.043	0.043
VA <sub>i</sub> /NS <sub>i</sub> (thousands lei/employee)	16.43	20.97	7.65	10.17	12.26	14.13	16.47
Rb/CA (%)	-2.16	-1.80	0.08	4.15	3.98	5.79	7.13
EBE/CA (%)	2.81	5.75	6.28	11.31	10.96	11.08	11.55
Ex <sub>i</sub> /Ex	0.045	0.045	0.045	0.045	0.045	0.045	0.045
Ga	0.9020	0.864	0.822	0.809	0.787	0.721	0.640

**Source:** Results and performances of businesses in industry and commerce 2003-2009, Romania's foreign trade Yearbook 2003-2009, author' calculations.

By comparing the economic indicators of each manufacturing sub-branches of the benchmarks we have achieved strengths, weaknesses and indifference, as can be seen in the individual descriptions below and on the strengths, weaknesses and indifference have developed dynamic charts status for each sub-branch in hand.

#### Food and beverage industry: Economic indicators values

Economic indicators	2001	2002	2003	2004	2005	2006	2007
VA <sub>i</sub> /VA	0.122	0.290	0.295	0.288	0.283	0.271	0.250
VA <sub>i</sub> /NS <sub>i</sub> (thousands lei/employee)	16.44	23	17.45	19.47	23.85	27.70	33.59
Rb/CA (%)	-0.22	2.11	1.45	2.67	4.13	6.57	5.53
EBE/CA (%)	10.59	11.9	9.45	8.40	9.97	10.17	10.9
Ex <sub>i</sub> /Ex	0.0165	0.0165	0.012	0.014	0.013	0.013	0.014
Ga	0.243	0.202	0.230	0.252	0.204	0.184	0.178

**Source:** Results and performances of businesses in industry and commerce 2003-2009, Romania's foreign trade Yearbook 2003-2009, author' calculations.

#### Strengths, weaknesses and indifference

	VA	P	Pg	EBE	Ex	Ga	Total	Class
2001	+1	0	+1	+1	-1	-1	1	A
2002	+1	+1	+1	+1	-1	-1	2	A
2003	+1	+1	+1	+1	-1	-1	2	A
2004	+1	+1	-1	-1	-1	-1	-2	C
2005	+1	+1	0	-1	-1	-1	-1	C
2006	+1	+1	+1	-1	-1	-1	0	B
2007	+1	+1	-1	-1	-1	-1	-2	C

**Dynamic state diagram**

	A+	A	B	C	C-
2001					
2002					
2003					
2004					
2005					
2006					
2007					

**Tobacco industry: Economic indicators values**

Economic indicators	2001	2002	2003	2004	2005	2006	2007
VA <sub>i</sub> /VA	0.006	0.006	0.005	0.004	0.003	0.0035	0.0035
VA <sub>i</sub> /NS <sub>i</sub> (thousands lei/employee)	158.15	210.25	45.69	61.25	84.65	85.48	95.29
Rb/CA (%)	-6.28	-14.77	-2.28	2.52	3.32	1.55	5.29
EBE/CA (%)	2.30	0.78	3.58	3.86	5.26	2.94	2.72
Ex <sub>i</sub> /Ex	0.0007	0.0007	0.001	0.0001	0.0001	0.0004	0.0047
Ga	0.099	0.165	0.065	0.013	0.016	0.045	2.25

**Source:** Results and performances of businesses in industry and commerce 2003-2009, Romania's foreign trade Yearbook 2003-2009, author' calculations.

**Strengths, weaknesses and indifference**

	VA	P	Pg	EBE	Ex	Ga	Total	Class
2001	-1	+1	-1	-1	-1	-1	-4	C-
2002	-1	+1	-1	-1	-1	-1	-4	C-
2003	-1	+1	-1	-1	-1	-1	-4	C-
2004	-1	+1	-1	-1	-1	-1	-4	C-
2005	-1	+1	-1	-1	-1	-1	-4	C-
2006	-1	+1	-1	-1	-1	-1	-4	C-
2007	-1	+1	-1	-1	-1	+1	-2	C

**Dynamic state diagram**

	A+	A	B	C	C-
2001					
2002					
2003					
2004					
2005					
2006					
2007					

**Textile and textile products industry: Economic indicators values**

Economic indicators	2001	2002	2003	2004	2005	2006	2007
VA <sub>i</sub> /VA	0.046	0.034	0.035	0.033	0.031	0.029	0.029
VA <sub>i</sub> /NS <sub>i</sub> (thousands lei/employee)	7.07	9.56	11.35	13.33	13.71	16.26	17.66
Rb/CA (%)	0.81	2.96	3.97	2.01	3.93	5.70	2.37
EBE/CA (%)	12.79	14.69	13.54	11.15	9.48	9.78	6.97
Ex <sub>i</sub> /Ex	0.046	0.046	0.047	0.046	0.042	0.041	0.037
Ga	0.248	0.264	0.213	0.305	0.330	0.368	0.369

**Source:** Results and performances of businesses in industry and commerce 2003-2009, Romania's foreign trade Yearbook 2003-2009, author' calculations.

**Strengths, weaknesses and indifference**

	VA	P	Pg	EBE	Ex	Ga	Total	Class
2001	+1	-1	+1	+1	0	-1	1	A
2002	-1	-1	+1	+1	0	-1	-1	C
2003	-1	+1	+1	+1	0	-1	1	A
2004	-1	+1	-1	0	0	-1	-2	C
2005	-1	+1	0	-1	-1	-1	-3	C
2006	-1	+1	0	-1	-1	-1	-3	C
2007	-1	+1	-1	-1	-1	-1	-4	C-

**Dynamic state diagram**

	A+	A	B	C	C-
2001					
2002					
2003					
2004					
2005					
2006					
2007					

**Clothing industry: Economic indicators**

Economic indicators	2001	2002	2003	2004	2005	2006	2007
VA <sub>i</sub> /VA	0.114	0.067	0.067	0.063	0.054	0.048	0.040
VA <sub>i</sub> /NS <sub>i</sub> (thousands lei/employee)	6.09	7.32	8.86	10.45	11.02	12.32	14.03
Rb/CA (%)	10.47	9.61	30.66	6.79	4.96	5.36	34.69
EBE/CA (%)	16.42	15.86	14.48	11.89	9.71	8.61	6.15
Ex <sub>i</sub> /Ex	0.2269	0.2270	0.2168	0.1850	0.1542	0.1270	0.1003
Ga	7.1281	6.7969	7.8879	7.8730	6.9603	6.2333	4.4104

**Source:** Results and performances of businesses in industry and commerce 2003-2009, Romania's foreign trade Yearbook 2003-2009, author' calculations.

**Strengths, weaknesses and indifference**

	VA	P	Pg	EBE	Ex	Ga	Total	Class
2001	+1	-1	+1	+1	+1	+1	4	A+
2002	+1	-1	+1	+1	+1	+1	4	A+
2003	+1	+1	+1	+1	+1	+1	6	A+
2004	+1	0	+1	+1	+1	+1	5	A+
2005	+1	-1	+1	-1	+1	+1	2	A
2006	+1	-1	-1	-1	+1	+1	0	B
2007	-1	-1	+1	-1	+1	+1	0	B

**Dynamic state diagram**

	A+	A	B	C	C-
2001					
2002					
2003					
2004					
2005					
2006					
2007					

**Leather and footwear: Economic indicators values**

Economic indicators	2001	2002	2003	2004	2005	2006	2007
VA <sub>i</sub> /VA	0.037	0.024	0.026	0.024	0.021	0.021	0.018
VA <sub>i</sub> /NS <sub>i</sub> (thousands lei/employee)	5.64	7.16	9.25	10.36	11.37	12.94	15.28
Rb/CA (%)	6.20	7.35	7.60	5.74	3.52	6.52	3.49
EBE/CA (%)	11.62	13.08	12.79	10.16	8.24	8.08	7.55
Ex <sub>i</sub> /Ex	0.0957	0.0958	0.0945	0.0742	0.0660	0.0609	0.0523
Ga	1.4158	1.4410	1.4730	1.4553	1.4087	1.3820	1.2485

**Source:** Results and performances of businesses in industry and commerce 2003-2009, Romania's foreign trade Yearbook 2003-2009, author' calculations.

**Strengths, weaknesses and indifference**

	VA	P	Pg	EBE	Ex	Ga	Total	Class
2001	-1	-1	+1	+1	+1	+1	2	A
2002	-1	-1	+1	+1	+1	+1	2	A
2003	-1	0	+1	+1	+1	+1	3	A
2004	-1	0	+1	-1	+1	+1	1	A
2005	-1	-1	-1	-1	+1	+1	-2	C
2006	-1	-1	+1	-1	+1	+1	0	B
2007	-1	-1	-1	-1	+1	+1	-2	C

**Dynamic state diagram**

	A+	A	B	C	C-
2001					
2002					
2003					
2004					
2005					
2006					
2007					

**Wood processing industry: Economic indicators values**

Economic indicators	2001	2002	2003	2004	2005	2006	2007
VA <sub>i</sub> /VA	0.037	0.044	0.043	0.046	0.043	0.041	0.040
VA <sub>i</sub> /NS <sub>i</sub> (thousands lei/employee)	7.23	9.87	11.72	14.13	13.85	16.93	20.66
Rb/CA (%)	-2.52	8.91	1.46	4.68	2.56	4.95	1.43
EBE/CA (%)	10.74	12.40	12.18	11.49	8.71	9.09	9.85
Ex <sub>i</sub> /Ex	0.048	0.048	0.047	0.046	0.040	0.038	0.035
Ga	4.9257	4.376	4.000	3.635	2.813	2.645	1.799

**Source:** Results and performances of businesses in industry and commerce 2003-2009, Romania's foreign trade Yearbook 2003-2009, author' calculations.

**Strengths, weaknesses and indifference**

	VA	P	Pg	EBE	Ex	Ga	Total	Class
2001	-1	-1	-1	+1	+1	+1	0	B
2002	0	-1	+1	+1	+1	+1	3	A
2003	0	+1	+1	+1	0	+1	4	A+
2004	+1	+1	+1	0	0	+1	4	A+
2005	0	+1	-1	-1	-1	+1	-1	C
2006	0	+1	-1	-1	-1	+1	-1	C
2007	-1	+1	-1	-1	-1	+1	-2	C

**Dynamic state diagram**

	A+	A	B	C	C-
2001					
2002					
2003					
2004					
2005					
2006					
2007					



**Paper and paperboard industry: Economic indicators values**

Economic indicators	2001	2002	2003	2004	2005	2006	2007
VA <sub>i</sub> /VA	0.016	0.02	0.018	0.015	0.013	0.012	0.017
VA <sub>i</sub> /NS <sub>i</sub> (thousands lei/employee)	14.20	19.77	19.79	22.47	20.05	23.87	26.55
Rb/CA (%)	0.32	-1.2	-9.14	4.41	2	3.77	-3.29
EBE/CA (%)	12.95	11.64	9.62	9.16	7.01	7.30	5.94
Ex <sub>i</sub> /Ex	0.0080	0.0080	0.0084	0.0070	0.0047	0.0042	0.0050
Ga	0.3011	0.3132	0.2752	0.2688	0.1860	0.1654	0.1962

**Source:** Results and performances of businesses in industry and commerce 2003-2009, Romania's foreign trade Yearbook 2003-2009, author' calculations.

**Strengths, weaknesses and indifference**

	VA	P	Pg	EBE	Ex	Ga	Total	Class
2001	-1	-1	+1	+1	-1	-1	-2	C
2002	-1	-1	+1	+1	-1	-1	-2	C
2003	-1	+1	-1	+1	-1	-1	-2	C
2004	-1	+1	-1	-1	-1	-1	-4	C-
2005	-1	+1	-1	-1	-1	-1	-4	C-
2006	-1	+1	-1	-1	-1	-1	-4	C-
2007	-1	+1	-1	-1	-1	-1	-4	C

**Dynamic state diagram**

	A+	A	B	C	C-
2001					
2002					
2003					
2004					
2005					
2006					
2007					

**Publishing industry, printing and reproduction of recorded media industry:****Economic indicators values**

Economic indicators	2001	2002	2003	2004	2005	2006	2007
VA <sub>i</sub> /VA	0.031	0.023	0.023	0.022	0.027	0.027	0.025
VA <sub>i</sub> /NS <sub>i</sub> (thousands lei/employee)	26.32	34.05	25.60	29.28	34.14	35.21	37.11
Rb/CA (%)	23.6	24.76	12.18	14.33	15.89	13.2	7.44
EBE/CA (%)	24.35	26.97	19.18	17.95	19.57	17.61	14.52
Ex <sub>i</sub> /Ex	0.0016	0.0016	0.0011	0.0013	0.0012	0.0012	0.0014
Ga	0.3295	0.2239	0.2239	0.2892	0.27	0.2101	0.2367

**Source:** Results and performances of businesses in industry and commerce 2003-2009, Romania's foreign trade Yearbook 2003-2009, author' calculations.

**Strengths, weaknesses and indifference**

	VA	P	Pg	EBE	Ex	Ga	Total	Class
2001	-1	+1	+1	+1	-1	-1	0	B
2002	-1	+1	+1	+1	-1	-1	0	B
2003	-1	+1	+1	+1	-1	-1	0	B
2004	-1	+1	+1	+1	-1	-1	0	B
2005	-1	+1	+1	+1	-1	-1	0	B
2006	-1	+1	+1	+1	-1	-1	0	B
2007	-1	+1	0	+1	-1	-1	-1	A

**Dynamic state diagram**

	A+	A	B	C	C-
2001					
2002					
2003					
2004					
2005					
2006					
2007					

**Rubber processing and plastic industry: Economic indicators values**

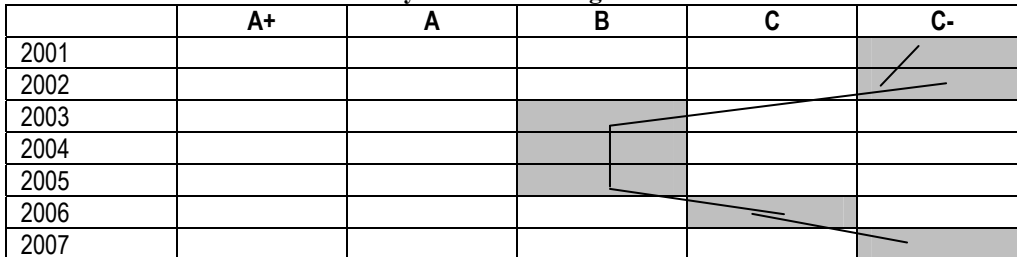
Economic indicators	2001	2002	2003	2004	2005	2006	2007
VA <sub>i</sub> /VA	0.028	0.027	0.032	0.033	0.032	0.035	0.037
VA <sub>i</sub> /NS <sub>i</sub> (thousands lei/employee)	11.77	16.83	22.72	26.59	27.29	30.38	35.94
Rb/CA (%)	-3.15	-5.27	4.15	8.5	5.79	6.02	3.13
EBE/CA (%)	8.52	10.54	13.10	13.86	11.88	10.39	10.40
Ex <sub>i</sub> /Ex	0.010	0.010	0.015	0.024	0.026	0.028	0.034
Ga	0.1855	0.2497	0.3266	0.3444	0.3522	0.3608	0.4135

**Source:** Results and performances of businesses in industry and commerce 2003-2009, Romania's foreign trade Yearbook 2003-2009, author' calculations.

**Strengths, weaknesses and indifference**

	VA	P	Pg	EBE	Ex	Ga	Total	Class
2001	-1	-1	-1	+1	-1	-1	-4	C-
2002	-1	-1	-1	+1	-1	-1	-4	C-
2003	-1	+1	+1	+1	-1	-1	0	B
2004	-1	+1	+1	+1	-1	-1	0	B
2005	-1	+1	+1	+1	-1	-1	0	B
2006	-1	+1	0	-1	-1	-1	-3	C
2007	-1	+1	-1	-1	-1	-1	-4	C-

**Dynamic state diagram**



**Metallurgy: Economic indicators values**

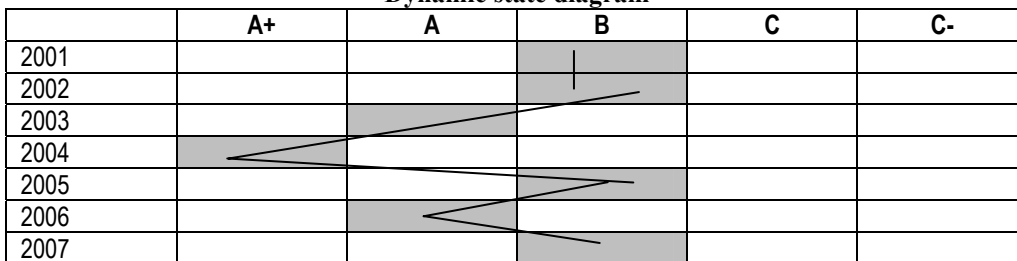
Economic indicators	2001	2002	2003	2004	2005	2006	2007
VA <sub>i</sub> /VA	0.068	0.040	0.034	0.040	0.035	0.034	0.036
VA <sub>i</sub> /NS <sub>i</sub> (thousands lei/employee)	11.17	19.23	24.80	51.11	35.51	56.31	64.58
Rb/CA (%)	-21.28	-6.37	-3.25	13.56	-3.25	4.60	4.57
EBE/CA (%)	-0.048	6.95	9.02	15.03	6.47	10.72	10.06
Ex <sub>i</sub> /Ex	0.1272	0.1180	0.1202	0.1436	0.1352	0.1327	0.1388
Ga	1.8671	2.0205	1.9258	1.999	1.755	1.3838	1.0933

**Source:** Results and performances of businesses in industry and commerce 2003-2009, Romania's foreign trade Yearbook 2003-2009, author' calculations.

**Strengths, weaknesses and indifference**

	VA	P	Pg	EBE	Ex	Ga	Total	Clasa
2001	+1	-1	-1	-1	+1	+1	0	B
2002	-1	-1	-1	+1	+1	+1	0	B
2003	-1	+1	-1	+1	+1	+1	2	A
2004	-1	+1	+1	+1	+1	+1	4	A+
2005	-1	+1	-1	-1	+1	+1	0	B
2006	-1	+1	-1	0	+1	+1	1	A
2007	-1	+1	-1	-1	+1	+1	0	B

**Dynamic state diagram**



**Road transport industry: Economic indicators values**

Economic indicators	2001	2002	2003	2004	2005	2006	2007
VA <sub>i</sub> /VA	0.044	0.048	0.055	0.065	0.077	0.085	0.084
VA <sub>i</sub> /NS <sub>i</sub> (thousands lei/employee)	9.91	12.5	18.47	22.39	28.48	42.97	64.26
Rb/CA (%)	-23.31	-18.16	-2.21	4.87	0.62	-2.97	26.73
EBE/CA (%)	5.59	5.28	8.78	7.58	7.58	11.73	16.97
Ex <sub>i</sub> /Ex	0.024	0.024	0.026	0.035	0.052	0.070	0.092
Ga	0.3604	0.3962	0.3908	0.2966	0.3567	0.3897	0.3861

**Source:** Results and performances of businesses in industry and commerce 2003-2009, Romania's foreign trade Yearbook 2003-2009, author' calculations.

**Strengths, weaknesses and indifference**

	VA	P	Pg	EBE	Ex	Ga	Total	Class
2001	0	-1	-1	+1	-1	-1	-3	C
2002	+1	-1	-1	-1	-1	-1	-4	C-
2003	+1	+1	-1	+1	-1	-1	0	B
2004	+1	+1	+1	-1	-1	-1	0	B
2005	+1	+1	-1	-1	+1	-1	0	B
2006	+1	+1	-1	+1	+1	-1	2	A
2007	+1	+1	+1	+1	+1	-1	4	A+

**Dynamic state diagram**

	A+	A	B	C	C-
2001					
2002					
2003					
2004					
2005					
2006					
2007					

Dynamic state diagrams allow us to deduce the following conclusions on the seven sub-branches of industry analysis:

Table 3

Static and dynamic evaluation		
Sub-branches	Dynamic evaluation	Static evaluation
Food and beverage industry(CAEN 15)	Ed=3→Bd	Cs→stare defavorabilă
Tobacco industry(CAEN 16)	Ed=1.14→C-d	Cs→stare defavorabilă
Textile and textile products industry(CAEN 17)	Ed=2.43→Cd	Cs→stare defavorabilă
Clothing industry(CAEN 18)	Ed=4.29→Ad	Bs→stare neutră
Leather and footwear(CAEN 19)	Ed=3.28→Bd	Cs→stare defavorabilă
Wood processing industry(CAEN20)	Ed=3.29→Bd	Cs→stare defavorabilă
Paper and paperboard industry(CAEN 21)	Ed=1.57→Cd	C's→stare semnificativ defavorabilă
Publishing industry, printing and reproduction of recorded media industry(CAEN 22)	Ed=3.14→Bd	As→stare favorabilă
Rubber processing and plastic industry(CAEN 25)	Ed=2→Cd	C's→stare semnificativ defavorabilă
Metallurgy(CAEN 27)	Ed=3.57→Ad	Bs→stare neutră
Road transport industry(CAEN34)	Ed=3→Bd	A*s→stare semnificativ favorabilă

The analysis of the eleven sub-branches of the manufacturing industry following matrix results of evaluation:

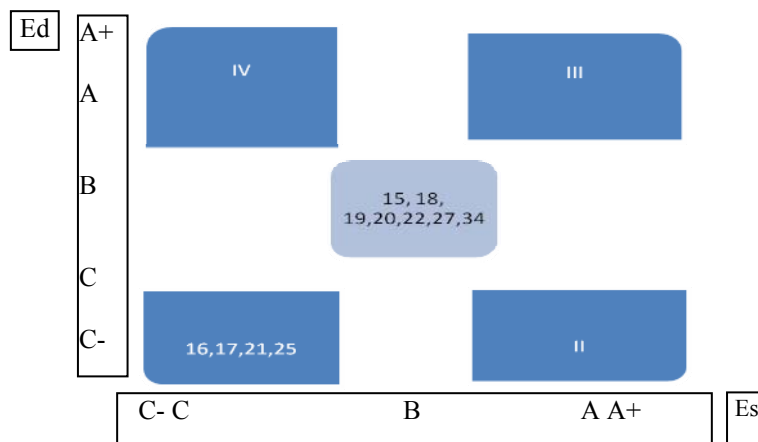


Figure 1. The evaluation matrix

As seen from the evaluation matrix, from the 11 analyzed branches, four are positioned in the zone I, i.e. it is characterized by unfavorable static and dynamic economic state, and all the other branches are found in the V<sup>th</sup> area, which means that their static and/or dynamic economic status is neutral. The branches that are located in the area I of the representation matrix is characterized by a relative lack of competitiveness. In this case, from the 11 industries analyzed, only four are located in the area I, i.e.: tobacco industry,

textiles and textile products industry, paper and cardboard industry and rubber processing and plastic industry. These branches cumulated in 2007, 8.65% of the total gross added value, and 8.06% of the manufacturing industry exports and provided jobs for 131,009 employees. All four branches registered in 2007 an above national productivity average, and in terms of coverage of imports by exports, three branches were deficient, while only tobacco industry was in surplus, with a coverage of imports by exports with 225%.

In the V<sup>th</sup> area of the matrix representation we find the seven branches of the manufacturing industry, namely food and beverage industry, clothing industry, leather and footwear industry, wood processing industry, publishing industry, printing and reproduction of recorded media industry, metallurgy and transport industry. In 2007, the seven branches cumulated 49.3% of the gross value added, 43.43% of exports and import coverage by deficit exports of 81.03%. Also, five branches registered in 2007 a labor productivity average higher than the national one: food and beverage industry, wood processing industry, publishing industry, printing and reproduction of recorded media, metallurgy and road transport industry, while only two branches had a lower average value and more specific clothing and footwear and leather industry. However, it is noted that while food and beverage industry is also the branch with the largest share of gross value added, it shows a very low share of exports, and import coverage by exports significantly deficient. In the year 2008, there were active in this field the most enterprises in the manufacturing industry (8,717 companies), i.e. 15.57% of companies.

Meanwhile, the sectors of the clothing, leather and footwear industry, wood processing industry and metallurgical industry, in 2007, registered a degree of coverage of imports by exports surplus, while only three branches were significantly deficient. *The wood processing industry - the companies that operate in this sector have a competitive advantage on the one hand, of the existence of natural resources, and on the other hand, of a high degree of coverage of imports by exports.* However, in terms of sustainable economic growth, this branch cannot be a significant vector due to the low productivity and to the low level of raw material processing. *Publishing, printing and reproduction of recorded media - the companies that operate within this industry are characterized by a favorable trend in economic performance throughout the period analyzed.* In these circumstances, the opportunity for development of the companies is obvious, especially since this sector also requires the use of technology for recording media. *Metallurgy – the companies in this sector are characterized by a high efficiency due to the constant exceptional results that, on both the productivity and overall profitability, and on the gross operating surplus.* In terms of exports, this sector has the largest share in the total manufacturing exports of all the branches analyzed. Through these

performances, it is clear that this industry is another significant development vector. *Clothing industry - the companies in this sector, although characterized by a degree of coverage of imports by exports significant surplus, their economic performance is very low.* In 2008, 5,867 companies operated in this sector, i.e. approximately 10.48% of companies in the manufacturing industry.

Following this analysis, we can identify the following features of the company system in the manufacturing industry: most companies are experiencing low economic performance, both in terms of internal and external efficiency; analyzing the gross operating surplus, we find that in the analyzed period, many companies faced debt problems regarding the payment of the investors, notable it is also the low potential capacity of companies in Romania of self-financing the investments; there are sectors showing development opportunities, such as publishing, printing and reproduction of recorded media and metallurgy. Among the branches that have reduced their economic performance in the last analyzed year there are: food and beverage industry, clothing industry, leather and footwear industry, wood processing industry. Noteworthy is the road transport industry, which throughout the period of analysis had a neutral dynamic development, and in the last analyzed year it had a favorable positive static evolution; the companies' productivity has improved significantly throughout the period analyzed, increasing almost five times in 2007 compared to 2001, while exports increased 10 times, this branch thereby constituting another vector for the development.

### **Aknowledgements**

This work was supported by CNCISIS – UEFISCSU, project number PNII – IDEI 1801/2008.

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### **Note**

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- (1) The reference values were calculated as follows: the average share of the added value at factor cost has been determined for all branches of the manufacturing (1/23), productivity, general profitability and overall gross operating surplus are consolidated values, throughout the eleven branches of the industry, the average share of the export of manufacturing has been determined for 22 branches (for waste recovery industry there is no statistics), and the degree of coverage of imports by exports of manufacturing refers to FOB exports and CIF imports. Overall profitability and rate of gross operating surplus for reference values is calculated in the industry because of the lack of statistical data.

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