Changes in competitiveness of the Czech Manufacturing in 1997 to 2001

Project description & mission:

1. EU financed project, Poland+Hungary+CZ, CZ entered last. Several working groups, mainly university employees.
2. Mission: Point out the most and the least competitive manufacturing industries in your country.
3. Industries in question: 103 manufacturing industries on the NACE3 scale, yearly data 1997-2001
4. Data source: Eurostat
5. Final goal: policy recommendation of an unspecified kind

The general method

- Industries are split into 4 groups according to 2 criteria (fx. market share at home grows/falls and market share in the EU grows/falls), so that one of them can be called "winners" in the sense of competitiveness and one can be called "losers" $\rightsquigarrow$ **three different distributions**, i.e. 3×4 groups
- For each of these groups we compute the following set of indicators for every year:
  - **RULC:** relative unit labour costs, i.e. $\frac{\mathrm{ULC}_{\mathrm{G,CZ}}}{\mathrm{ULC}_{\mathrm{G,EU}}}$
  - **RUIC:** relative intermediate costs
  - **RINVT:** relative share of investment on turnover,i.e.

$$\frac{\frac{\sum_{\mathrm{i}\in\mathrm{G}}\mathrm{INV}_{\mathrm{i}}^{\mathrm{CZ}}}{\sum_{\mathrm{i}\in\mathrm{G}}\mathrm{TURN}_{\mathrm{i}}^{\mathrm{CZ}}}}{\frac{\sum_{\mathrm{i}\in\mathrm{G}}\mathrm{INV}_{\mathrm{i}}^{\mathrm{EU}}}{\sum_{\mathrm{i}\in\mathrm{G}}\mathrm{TURN}_{\mathrm{i}}^{\mathrm{EU}}}}$$

  - **RGOR:** relative gross operating rate. $\mathrm{GOR}=\frac{\sum_{\mathrm{i}\in\mathrm{G}}\mathrm{PROFIT}_{\mathrm{i}}+\mathrm{DEPREC}_{\mathrm{i}}}{\sum_{\mathrm{i}\in\mathrm{G}}\mathrm{TURN}_{\mathrm{i}}}$
  - **RUEV:** relative unit export value. $\mathrm{UEV}=\frac{\sum_{\mathrm{i}\in\mathrm{G}}\mathrm{EXPORT}_{\mathrm{i},\epsilon}}{\sum_{\mathrm{i}\in\mathrm{G}}\mathrm{EXPORT}_{\mathrm{i,kg}}}$

- Differences in the indicators among the groups. What's typical for a(n in)competitive industry ?
- 3 different views on competitiveness $\rightsquigarrow$ synthesis. Which industries are winners/losers from many points of view ?

Three ways to distribute the industries

- **Turnover**:
  1. the turnover of the industry grows/declines
  2. the turnover of the industry grows faster/slower than the same industry in the EU
- **Market shares**:
  1. The share of Czech producers on the Czech market grows/declines
  2. The share of Czech producers on the EU market grows/declines
- **Trade shares:**
  1. The Czech share in the total EU15 imports from non-EU15 countries grows/declines
  2. The Czech unit export value grows faster/slower than the EU unit export value of the same product.

Problems in the methodology

- RULC, ...just for industries !!

$$\mathrm{MShare}_{\mathrm{CZ,i/c}} = \frac{\mathrm{TURN_i - EXP_c}}{\mathrm{TURN_i - EXP_c + IMP_c}}$$

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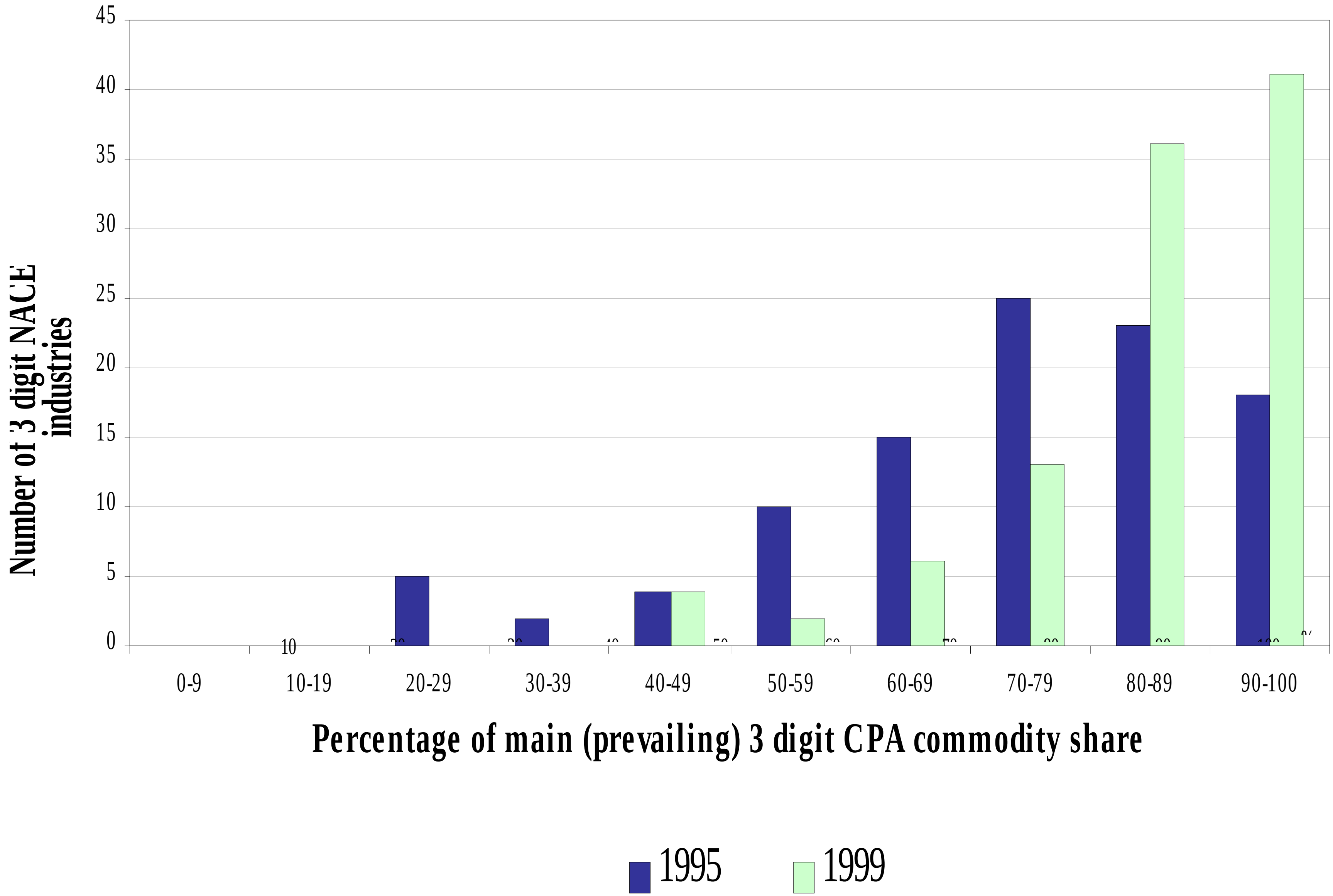
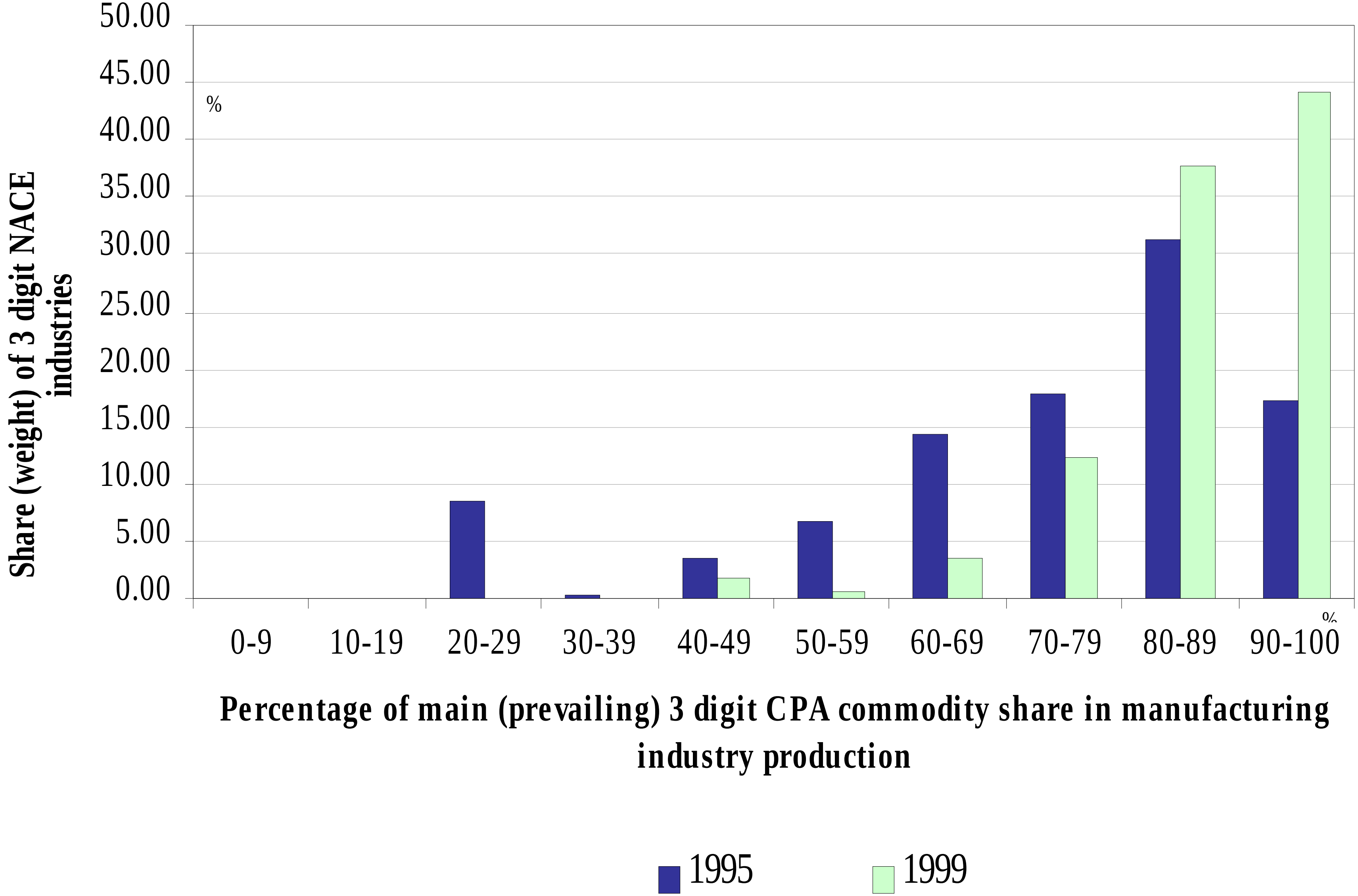
- **Mixing CPA and NACE classification** caused many negative market shares and market shares greater than 1. This is only the very visible part of the problem, in reality all numbers are influenced by this.
- The cause of the problem: Producers in NACE 171 do NOT produce only products CPA 171.
- What do we need to correct for this ? Reliable CPA3xNACE3 make matrices for every year.
- Results of make matrix analysis: In 1995 11 industries (12 % of manufacturing turnover) had less than 50 % share of their "own" commodities in their production basket. Till 1999 the situation improved considerably.

Necessity of CPA3xNACE3 io tables I.



Necessity of CPA3xNACE3 IO tables II.



Inward/outward processing

Business statistics	**For. trade statistics**
Material and energy for production not related to inward processing	Material and energy for production not related to inward processing
	Import for inward processing
Value added from production not related to inward processing	Value added from production not related to inward processing
Value added from inward processing (Exports after inward processing - import for inward processing)	Value added from inward processing (Exports after inward processing - import for inward processing)
Sales published in producers statistics	Turnover comparable to Eurostat definition

	Excavators		Strawberries	
	EXP(ϵ)	EXP(kg)	EXP(ϵ)	EXP(kg)
CZ	1	1	36	18
EU	9	18	2	2

$$\mathrm{RUEV}_{\mathrm{EXCAV}} = \frac{1}{0.5} = 2 \;\text{ and }\; \mathrm{RUEV}_{\mathrm{STRAW}} = \frac{2}{1} = 2$$

$$\mathrm{G}{:=}\{\text{ excavators , strawberries}\}$$

$$\mathrm{RUEV}_{\mathrm{G}} = \frac{\dfrac{1+36}{1+18}}{\dfrac{9+2}{18+2}} \approx 4$$

$$\mathrm{RGOR}_{\mathrm{G}} = \frac{\frac{\mathrm{profit}_{\mathrm{CZ}}+\mathrm{deprec}_{\mathrm{CZ}}}{\mathrm{TURN}_{\mathrm{CZ}}}}{\frac{\mathrm{profit}_{\mathrm{EU}}+\mathrm{deprec}_{\mathrm{EU}}}{\mathrm{TURN}_{\mathrm{EU}}}} = \frac{\mathrm{TURN}_{\mathrm{EU}}}{\mathrm{TURN}_{\mathrm{CZ}}} \cdot \frac{\mathrm{profit}_{\mathrm{CZ}}+\mathrm{deprec}_{\mathrm{CZ}}}{\mathrm{profit}_{\mathrm{EU}}+\mathrm{deprec}_{\mathrm{EU}}}$$

Gr.	**Turnover**	1997	1998	1999	2000	2001	97-99	99-01
1 (64)	Weight in total turnover of manuf.	69%	71%	73%	76%	76%	71%	75%
	Sh.of Cz dom. supplies in Cz cons.	55%	53%	51%	49%	49%	53%	50%
	Sh.of Eu dom. supplies in Eu cons.	87%	87%	87%	84%	85%	87%	85%
	Sh.of Cz exp.to Eu in the Eu cons.	0.31%	0.38%	0.40%	0.50%	0.55%	0.36%	0.48%
	Sh.of Eu exp.to Cz in the Cz cons.	34%	35%	37%	39%	38%	35%	38%
	Sh.of EU imp.from Cz in EU-15 imp	2.5%	2.9%	3.1%	3.2%	3.6%	2.8%	3.3%
3 (20)	Weight in total turnover of manuf.	24%	23%	21%	19%	18%	23%	19%
	Sh.of Cz dom. supplies in Cz cons.	66%	62%	59%	54%	52%	62%	55%
	Sh.of Eu dom. supplies in Eu cons.	92%	92%	92%	91%	91%	92%	91%
	Sh.of Cz exp.to Eu in the Eu cons.	0.19%	0.22%	0.24%	0.28%	0.33%	0.22%	0.28%
	Sh.of Eu exp.to Cz in the Cz cons.	25%	28%	30%	34%	35%	28%	33%
	Sh.of EU imp.from Cz in EU-15 imps	2.4%	2.8%	3.0%	3.1%	3.5%	2.7%	3.2%
4 (15)	Weight in total turnover of manuf.	5%	5%	4%	3%	3%	5%	3%
	Sh.of Cz dom. supplies in Cz cons.	60%	57%	55%	48%	43%	57%	49%
	Sh.of Eu dom. supplies in Eu cons.	82%	82%	82%	78%	79%	82%	80%
	Sh.of Cz exp.to Eu in the Eu cons.	0.31%	0.32%	0.30%	0.29%	0.30%	0.31%	0.30%
	Sh.of Eu exp.to Cz in the Cz cons.	25%	25%	27%	32%	35%	26%	31%
	Sh.of EU imp.from Cz in EU-15 imps	1.7%	1.8%	1.7%	1.3%	1.4%	1.7%	1.5%

	RULC		**Turnover**			RUIC				
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
Gr. 1	77.7%	79.7%	78.6%	73.9%	73.8%	88.6%	89.4%	87.1%	87.5%	87.1%
Gr. 3	71.1%	72.4%	73.9%	73.0%	74.2%	78.1%	83.8%	75.0%	77.0%	78.7%
Gr. 4	96.4%	101.8%	102.7%	106.2%	111.0%	80.2%	78.6%	77.5%	77.0%	75.9%
	RUTC					RGOR				
Gr. 1	86.2%	87.3%	85.3%	84.8%	84.5%	248.2%	239.5%	259.5%	241.1%	264.2%
Gr. 3	76.6%	81.3%	74.7%	76.1%	77.8%	298.9%	260.1%	310.9%	292.8%	283.6%
Gr. 4	83.4%	83.1%	82.6%	82.5%	82.6%	241.4%	235.6%	242.1%	235.4%	244.0%
	RINTV					RUEV				
Gr. 1	243.6%	176.7%	217.4%	158.7%	164.5%	64.8%	74.9%	77.0%	82.1%	94.5%
Gr. 3	195.3%	138.2%	145.6%	138.5%	144.7%	56.4%	44.9%	54.5%	55.7%	58.8%
Gr. 4	229.0%	310.1%	203.0%	155.1%	120.9%	54.6%	57.5%	62.1%	61.2%	70.9%

	List of industries	Sh. in turnover
Steadily competitive (32)	155, 159, 172, 175, 182, 201, 202, 212, 241, 242, 243, 247, 251, 261, 263, 268, 275, 284, 285, 294, 295, 297, 313, 314, 316, 321, 323, 334, 343, 353, 361, 365	32%
Worsened lately (4)	173, 204, 245, 283	2%
Great betterment (28)	152, 171, 174, 177, 181, 211, 222, 223, 231, 232, 252, 262, 266, 271, 274, 281, 282, 286, 311, 312, 315, 322, 331, 332, 335, 341, 342, 372	32%
On way to improvement (10)	191, 193, 264, 265, 293, 351, 354, 355, 362, 364	2,50%

Gr.	**Market shares**	1997	1998	1999	2000	2001	97-99	99-01
1 (21)	Weight in total turnover of manuf.	18%	19%	22%	25%	27%	20%	25%
	Sh.of Cz dom. Supplies in Cz cons.	55%	54%	54%	54%	55%	54%	54%
	Sh.of Eu dom. supplies in Eu cons.	84%	84%	83%	79%	80%	84%	81%
	Sh.of Cz exp.to Eu in the Eu cons.	0.27%	0.35%	0.39%	0.50%	0.60%	0.34%	0.50%
	Sh.of Eu exp.to Cz in the Cz cons.	34%	37%	39%	40%	37%	37%	39%
	Sh.of EU imp.from Cz in EU-15 imps	1.7%	2.1%	2.3%	2.3%	3.0%	2.0%	2.6%
2 (6)	Weight in total turnover of manuf.	1.0%	0.9%	1.0%	0.9%	0.9%	1.0%	0.9%
	Sh.of Cz dom. Supplies in Cz cons.	54%	52%	53%	51%	55%	53%	53%
	Sh.of Eu dom. supplies in Eu cons.	77%	77%	78%	72%	73%	77%	74%
	Sh.of Cz exp.to Eu in the Eu cons.	0.54%	0.49%	0.50%	0.50%	0.45%	0.51%	0.48%
	Sh.of Eu exp.to Cz in the Cz cons.	33%	32%	28%	29%	25%	31%	27%
	Sh.of EU imp.from Cz in EU-15 imps	2.4%	2.2%	2.3%	1.8%	1.6%	2.3%	1.9%
3 (66)	Weight in total turnover of manuf.	73%	72%	69%	66%	64%	72%	66%
	Sh.of Cz dom. supplies in Cz cons.	57%	54%	50%	46%	45%	54%	47%
	Sh.of Eu dom. supplies in Eu cons.	90%	89%	90%	88%	88%	90%	89%
	Sh.of Cz exp.to Eu in the Eu cons.	0.28%	0.34%	0.35%	0.42%	0.46%	0.32%	0.41%
	Sh.of Eu exp.to Cz in the Cz cons.	32%	33%	36%	39%	39%	34%	38%
	Sh.of EU imp.from Cz in EU-15 imps	2.7%	3.1%	3.3%	3.5%	3.8%	3.1%	3.6%
4 (10)	Weight in total turnover of manuf.	4%	3%	3%	3%	2%	3%	3%
	Sh.of Cz dom. supplies in Cz cons.	69%	66%	62%	58%	55%	66%	58%
	Sh.of Eu dom. supplies in Eu cons.	89%	89%	90%	88%	88%	89%	89%
	Sh.of Cz exp.to Eu in the Eu cons.	0.33%	0.32%	0.28%	0.28%	0.28%	0.31%	0.28%
	Sh.of Eu exp.to Cz in the Cz cons.	21%	22%	23%	25%	29%	22%	26%
	Sh.of EU imp.from Cz in EU-15 imps	3.0%	2.8%	2.6%	2.3%	2.4%	2.8%	2.4%

	RULC						**Market Shares**	RUIC		
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
Gr. 1	82.9%	85.0%	77.5%	69.2%	68.3%	95.6%	93.1%	93.1%	91.2%	88.9%
Gr. 2	80.5%	80.0%	73.0%	71.6%	66.9%	89.9%	91.2%	89.7%	89.5%	87.6%
Gr. 3	75.4%	77.4%	78.5%	75.8%	76.8%	83.1%	86.2%	81.5%	83.3%	84.0%
Gr. 4	89.2%	93.0%	95.5%	100.4%	101.3%	82.5%	80.6%	76.8%	76.6%	76.0%
	RUTC					RGOR				
Gr. 1	92.8%	91.3%	89.6%	86.8%	84.9%	242.8%	261.9%	251.6%	242.7%	286.9%
Gr. 2	88.0%	88.9%	86.4%	86.0%	83.6%	207.6%	185.5%	239.4%	247.0%	288.8%
Gr. 3	81.5%	84.3%	80.9%	81.8%	82.6%	268.3%	243.4%	281.7%	258.2%	265.2%
Gr. 4	83.8%	83.1%	80.8%	81.4%	80.9%	223.5%	234.6%	254.3%	238.0%	247.5%
	RINTV					RUEV				
Gr. 1	241.6%	187.8%	243.3%	191.6%	158.4%	87.3%	94.9%	97.4%	103.1%	128.9%
Gr. 2	152.9%	143.4%	211.7%	64.7%	140.2%	27.2%	32.9%	30.7%	25.5%	29.5%
Gr. 3	238.0%	166.6%	196.2%	147.1%	169.7%	65.0%	72.8%	76.7%	80.7%	86.6%
Gr. 4	172.2%	353.1%	181.9%	143.3%	121.1%	32.2%	37.8%	35.2%	40.4%	48.5%

	List of industries	Sh. in turnover
Steadily competitive (9)	232, 247, 266, 281, 282, 322, 323, 343, 353	13.0%
Worsened lately (3)	268, 283, 321	2.4%
Great betterment (6)	202, 251, 316, 332, 361, 365	6.9%
On way to improvement(8)	156, 191, 192, 203, 267, 293, 354, 364	2.2%

Gr.	**Trade shares**	1997	1998	1999	2000	2001	97-99	99-01
1 (56)	Weight in total turnover of manuf.	70%	72%	71%	72%	73%	71%	72%
	Sh.of Cz dom. Supplies in Cz cons.	56%	54%	50%	47%	47%	53%	48%
	Sh.of Eu dom. Supplies in Eu cons.	87%	87%	87%	85%	87%	87%	86%
	Sh.of Cz exp.to Eu in the Eu cons.	0.32%	0.39%	0.41%	0.51%	0.61%	0.37%	0.51%
	Sh.of Eu exp.to Cz in the Cz cons.	34%	35%	38%	41%	40%	36%	40%
	Sh.of EU imp.from Cz in EU-15 imps	2.5%	2.9%	3.1%	3.3%	4.0%	2.9%	3.5%
2 (11)	Weight in total turnover of manuf.	10.5%	8.8%	9.1%	9.7%	8.3%	9.5%	9.0%
	Sh.of Cz dom. Supplies in Cz cons.	72%	67%	68%	68%	65%	69%	67%
	Sh.of Eu dom. Supplies in Eu cons.	88%	88%	88%	84%	87%	88%	86%
	Sh.of Cz exp.to Eu in the Eu cons.	0.22%	0.23%	0.22%	0.27%	0.22%	0.22%	0.24%
	Sh.of Eu exp.to Cz in the Cz cons.	17%	21%	24%	25%	26%	20%	25%
	Sh.of EU imp.from Cz in EU-15 imps	2.0%	2.0%	1.8%	1.7%	1.7%	1.9%	1.7%
3 (6)	Weight in total turnover of manuf.	3%	3%	2%	2%	2%	3%	2%
	Sh.of Cz dom. Supplies in Cz cons.	24%	21%	11%	14%	13%	19%	13%
	Sh.of Eu dom. Supplies in Eu cons.	79%	77%	78%	75%	74%	78%	76%
	Sh.of Cz exp.to Eu in the Eu cons.	0.20%	0.20%	0.18%	0.19%	0.18%	0.19%	0.18%
	Sh.of Eu exp.to Cz in the Cz cons.	46%	46%	53%	52%	52%	48%	52%
	Sh.of EU imp.from Cz in EU-15 imps	0.9%	0.9%	0.9%	0.7%	0.7%	0.9%	0.8%
4 (22)	Weight in total turnover of manuf.	14%	13%	14%	14%	13%	14%	14%
	Sh.of Cz dom. Supplies in Cz cons.	59%	55%	52%	47%	44%	55%	48%
	Sh.of Eu dom. Supplies in Eu cons.	88%	88%	88%	85%	86%	88%	86%
	Sh.of Cz exp.to Eu in the Eu cons.	0.21%	0.26%	0.29%	0.34%	0.35%	0.25%	0.33%
	Sh.of Eu exp.to Cz in the Cz cons.	29%	32%	33%	37%	34%	32%	35%
	Sh.of EU imp.from Cz in EU-15 imps	1.8%	2.2%	2.5%	2.2%	2.5%	2.2%	2.4%

	RULC					Trade Shares RUIC				
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
Gr. 1	75.3%	76.4%	75.2%	72.1%	69.7%	84.4%	87.7%	83.2%	84.6%	87.4%
Gr. 2	73.3%	80.4%	82.0%	69.1%	78.3%	97.9%	96.5%	92.4%	92.7%	83.1%
Gr. 3	76.2%	80.1%	94.4%	87.7%	88.1%	90.8%	85.4%	81.2%	83.9%	82.0%
Gr. 4	84.4%	86.8%	86.7%	84.2%	82.4%	82.3%	81.4%	83.6%	84.1%	82.4%
	RUTC					RGOR				
Gr. 1	82.4%	85.2%	81.5%	82.0%	83.7%	274.2%	246.4%	295.6%	273.0%	276.3%
Gr. 2	94.8%	94.3%	91.0%	90.0%	82.6%	269.8%	286.1%	291.2%	226.4%	280.7%
Gr. 3	87.9%	84.3%	83.8%	84.6%	83.1%	182.3%	212.9%	212.5%	199.8%	217.0%
Gr. 4	82.8%	82.7%	84.3%	84.1%	82.4%	241.1%	243.7%	214.5%	215.3%	240.7%
	RINTV					RUEV				
Gr. 1	230.9%	162.4%	211.5%	158.7%	170.4%	46.2%	56.2%	57.2%	61.6%	72.5%
Gr. 2	276.9%	263.7%	198.7%	181.2%	186.0%	52.1%	52.7%	49.8%	51.1%	61.2%
Gr. 3	155.6%	155.1%	335.3%	164.7%	143.1%	78.3%	66.9%	54.5%	52.6%	51.5%
Gr. 4	237.9%	182.3%	156.0%	138.7%	125.5%	119.0%	114.1%	105.8%	96.0%	84.7%

	List of industries	Sh. in turnover
Steadily competitive (32)	155, 157, 158, 171, 174, 183, 246, 247, 251, 252, 261, 264, 266, 267, 268, 272, 281, 286, 287, 291, 292, 295, 297, 300, 312, 316, 323, 334, 341, 342, 343, 366	47,9%
Worsened lately (7)	201, 202, 273, 283, 311, 322, 361	6,8%
Great betterment (15)	151, 152, 154, 172, 175, 176, 211, 245, 262, 271, 315, 331, 332, 353, 364	15,4%
On way to improv. (5)	192, 204, 241, 293, 354	4,8%

Composite results

Method of work:

- we define the group of winners (gr. 1 according to all criteria) and the group of losers (group 4 in MS and Turnover and group 2 and 3 in TS).
- the groups are observed in 1997-2001,1997-1999 and 1999-2001, i.e. the ranking of an industry is considerd dynamically.
- using the dynamic ranking we subdivide the winners group into stable winners, recent improvement and recent worsening.

WINNERS

have the best rank acc. to all criteria in the main period

Period	Share in total turnover	Share in total export to EU15	NACE codes
1997-2001	17,7%	21,2%	152, 202, 247, 251, 266, 268, 281, 283, 316, 322, 323, 332, 343, 353, 361
1997-1999	7,0%	8,3%	212, 247, 268, 283, 297, 323, 334, 343
1999-2001	21,5%	23,8%	157, 171, 174, 205, 243, 247, 251, 252, 262, 266, 281, 315, 316, 323, 332, 342, 343, 353, 364

STABLE WINNERS

have the best rank in both subperiods with resp. to all criteria

	Share in total manuf. turnover				
NACE	1997	1998	1999	2000	2001
Man-made fibres	0,115%	0,121%	0,143%	0,205%	0,204%
TV& radio & sound & video and asoc.	0,285%	0,373%	0,68%	1,20%	1,58%
Parts for motor vehicles and motors	2,71%	3,16%	4,54%	5,75%	6,48%
Sum	3,11%	3,65%	5,36%	7,15%	8,26%

WINNERS - recent improvement

rank as winners in the whole period and subp. 1999-2001, but not in 1997-99

	Share in total manuf. turnover				
NACE	1997	1998	1999	2000	2001
Rubber products	1,39%	1,46%	1,72%	1,69%	2,12%
Concrete, plaster & cement prod.	1,08%	1,12%	1,17%	1,23%	1,14%
Structural metal prod.	1,15%	1,53%	1,37%	1,35%	1,31%
Electrical equipment	1,33%	1,54%	1,68%	1,86%	2,29%
Measuring & checking instruments	0,58%	0,69%	0,61%	0,83%	0,84%
Aircraft	0,29%	0,53%	0,53%	0,62%	0,79%
Sum	5,83%	6,88%	7,07%	7,58%	8,48%

WINNERS - recent fall

have the best ranks in 1997-2001 and 97-99, but not in 99-01

	Share in total manuf. turnover				
NACE	1997	1998	1999	2000	2001
Other non-metallic mineral pr.	0,24%	0,28%	0,41%	0,40%	0,37%
Steam generators	0,70%	1,10%	0,89%	0,47%	0,55%
Sum	0,94%	1,38%	1,30%	0,86%	0,92%

LOSERS

- **Losers during 1997-2001**

  The following industries are in this group: 191 (Leather), 192 (Luggage, handbags and the like; saddlery and harness), 265 (Cement, lime and plaster), 293 (Agricultural and forestry machinery), 354 (Motorcycles and bicycles). The total weight of these industries in whole manufacturing decreases from 2,2% in 1997 to 1,1% in 2001.

- **Losers during 1997-1999**

  This group consists of the following branches: 151 (Meat and meat products), 156 (Grain mill products, starches and starch products), 191 (Leather), 244 (Pharmaceuticals, medicinal chemicals and botanical products), 265 (Cement, lime and plaster), 293 (Agricultural and forestry machinery), 354 (Motorcycles and bicycles), 364 (Sports goods).

- **No losers in 1999-2001**

Losers 1997-2001	1997	1998	1999	2000	2001
Weight of losers in total manuf. turnover	2.2%	1.9%	1.6%	1.3%	1.1%
Weight of losers in total manuf. export to Eu	2.2%	1.7%	1.3%	1.1%	0.9%

Relative factors: Winners vs. Losers

RULC	**1997**	**1998**	**1999**	**2000**	**2001**
Stable winners	0,671	0,650	0,574	0,512	0,513
Generally increasing, recently with high intensity	0,849	0,856	0,762	0,693	0,645
Generally increasing, but recently fallen	0,539	0,423	0,474	0,720	0,560
Losers during 1997-2001	1,072	1,061	1,196	1,177	1,217
Whole Czech manufacturing	0,765	0,782	0,778	0,742	0,733
RUEV	**1997**	**1998**	**1999**	**2000**	**2001**
Stable winners	0,480	0,579	0,593	0,673	0,818
Generally increasing, recently with high intensity	0,256	0,328	0,333	0,329	0,364
Generally increasing, but recently fallen	0,269	0,268	0,355	0,458	0,410
Losers during 1997-2001	0,198	0,242	0,204	0,239	0,299
Whole Czech manufacturing	0,538	0,625	0,647	0,697	0,827
RINVT	**1997**	**1998**	**1999**	**2000**	**2001**
Stable winners	2,593	1,715	2,135	2,316	1,811
Generally increasing, recently with high intensity	2,565	2,180	2,291	2,156	1,844
Generally increasing, but recently fallen	1,457	0,927	1,950	1,370	1,601
Losers during 1997-2001	2,063	5,274	2,080	2,142	1,803
Whole Czech manufacturing	2,285	1,717	2,006	1,546	1,599

Conclusion

- During the recession mentioned above only 7 % of manufacturing was competitive with respect to all used criteria. During the boom of 1999-2001 the portion of unambiguously competitive tripled to more than 21%.
- The best performance was identified by vehicles (NACE 34), machinery (NACE 29) and of the food industry (NACE 15). The first two industries, which belong to strong exporters, more or less kept the good performance even during the recession period 1997-1999. Food industry was able to maintain the growing trade share, EU market share and quality, but the turnovers were a problem. Their growth fluctuated around 0 %. Machinery doubled its position in EU, which confirms the successfulness of the restructuring process. The manufacturing of vehicles continued its progressive development and kept the significantly low labor costs.
- The worst performance was identified by leather industry (NACE 19). It is in accordance with the ongoing decline of this branch. Anyway, the comparison to EU resulted in slightly encouraging conclusions related to NACE 193 (shoes).

- Relative unit labor costs (RULC) have an apparent relation to winners/losers classification: A decreasing value of RULC seems to be a necessary condition of competitiveness, an increasing one is a sign of problems. A value of RULC less not only than 1 but less than the RULC of the Czech manufacturing as well is typical for winners, losers have RULC greater than 1.
- Development (monotonous increase/decrease) of relative unit labor costs (RULC) plays a key role in competitiveness of Czech industries.
- The key problem of Czech losers is not in the price level, which is very low compared to the EU.
- Winners have higher relative intensity of investment (RINVT) than whole Czech manufacturing, but losers do not have a lower one.