

ASSESSING THE STATE OF COMPETITION IN INDIAN MANUFACTURING SECTOR: PAINT AND TYRE INDUSTRY

PROJECT DIRECTOR – PROF. MANOJ PANT

CENTRE FOR INTERNATIONAL TRADE AND DEVELOPMENT
SCHOOL OF INTERNATIONAL STUDIES
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI

Draft Report

International Scenario

Industry Structure:

- **Paint:** There are few big companies and many small and medium size companies in the world paint industry resulting in low concentration, but the scenario is changing due to mega mergers in the industry.
- **Tyre:** This is a highly concentrated sector. The top six companies now control 73% of world tyre markets and the top three companies - Bridgestone, Goodyear and Michelin control 53%.

Anti Competitive Cases



Paint:

- 1. Aniline Dyes (1969) - European Commission fined 10 producers of colouring matter after finding that there had been simultaneous price increases which were applied on identical conditions within the common market.**
- 2. Commission fines five companies in sodium gluconate cartel (2002) - The European Commission fined Archer Daniels Midland Company Inc., Akzo Nobel N.V, Avebe B.A., Fujisawa Pharmaceutical Company Ltd. and Roquette Frères S.A. a total of € 37.13 million for fixing the price and sharing the market for sodium gluconate. The decision comes after a thorough investigation, which established that the five companies, which together accounted for the quasi totality of the production worldwide, operated a secret cartel from 1987 until 1995.**
- 3. Commission approves proposed acquisition of Saurer by Oerlikon (2006) - The European Commission has cleared under the EU Merger Regulation the proposed acquisition by Oerlikon Corporation AG of the Swiss-based company Saurer AG. The Commission concluded that the proposed transaction would not significantly impede competition in the European Economic Area (EEA) or any substantial part of it.**

Anti Competitive Cases



Tyre:

1. **Commission Clears Takeover of Viborg Tyre Distribution And Retreading Business By Euromaster (Michelin) [2003]** - The European Commission has granted regulatory approval to the acquisition of Denmark's Viborg tyre distribution and retreading business by Euromaster, a French company owned by tyre manufacturer Michelin. Since it does not give rise to serious competition concerns given the significant presence of other large replacement tyre distributors and retreaders, as well as unaffiliated retailers.
2. **MICHELIN II (2003)** - In 2001 the Commission fined Michelin [It was fined before for abusing its dominant position in the Netherlands (European Court of Justice; 1983)] for its abusive practice, with respect to its commercial arrangement with tyre dealers over the period 1990-1998, but this time with respect to the market for replacement truck tyres in France.
3. **Commission fines 5 group of producers and traders of synthetic rubber € 519 million for price fixing cartel (2006)** - The cartel Decision is based on numerous documents, corporate statements and witness interviews provided by the leniency applicants, together with meetings notes discovered by the Commission during the on-site inspection.

Summary of Anti-Competitive Behaviour

- Study of anti-competitive cases indicate that the main actionable issues in the Paints industry are price fixing and market sharing.
- Cases in Tyre industry involve M&A, cartelization and abusive practices in commercial policies.
 - **What made the commission take up the case: The commissions relied on evidence provided by firms under immunity clauses.**
 - **Bases of Action: Price fixing, Market Allocation and control of distribution channels.**

National Scenario

■ Industry Structure:

● Paint:

- **The Indian Paint industry consists of few big companies controlling most of the market and some small companies.**
- The unorganized sector controls around 35% of the paint market, with the organized sector accounting for the balance. In the unorganized segment, there are about 2,000 units having small and medium sized paints manufacturing plants.
- Top organized players include Asian Paints (43% market share), Kansai Nerolac (17% market share), Berger Paints (17% market share) and ICI (17% market share).
- The paint industry in India produced 704534 tonnes of paint in 2005-06. 95% of the total production consists of Paints, Enamels & Varnishes, 1% Organic Pigments and 4% Titanium Dioxide.

■ Industry Structure:

● Tyre:

- **The Indian Tyre industry consists of MNC subsidiaries, Large and medium public limited companies, and large private limited companies.**
- The scenario in India stands in sharp contrast to that in the world tyre market, where car tyres (including light trucks) have the major share (app. 88%) followed by truck tyres (app. 12%). In India, however, passenger car tyres have 20.6% share of tyre market.
- Some of the major players in the Indian tyre industry are MRF, Ceat, JK Industries, Apollo Tyres, Bridgestone India, Goodyear India, Falcon Tyres and TVS Srichakra. Share of sale of top four tyre companies in 2005 is MRF (25 %), Apollo (22 %), JK Industries (19 %), and Ceat (15 %) that is combined sale of top four companies is more than 80 % of the market sale.

State of Competition in India

Methodology:

- ⊕ Entry – Exit Behavior
- ⊕ Simple Analysis of Mergers & Acquisitions
- ⊕ The Missing Middle Problem
- ⊕ Concentration Indices
- ⊕ Regression Study of Profitability
- ⊕ Cost – Audit Data for Select Units

We study these issues under 3 benchmark years i.e., 1989, 1996 and 2005. We define 1995 as the break year and see pre and post 1996 scenarios.

Entry – Exit Behavior

Definition:

Entry – Year of Incorporation

Exit – We have taken 2005 as the last year. If a firm does not produce for consecutive 2 years, then the firm is said to have exited from the industry in the first consecutive year.

Table 1: Entry Exit in Paint and Tyre Industry

	Year	Entry	Cumulative Entry	Exit	Cumulative Exit	Firms Operating
Paint	till 1989	21	21	0	0	21
	1989-96	3	24	0	0	24
	1996-05	1	25	6	6	19
Tyre	till 1989	22	22	0	0	22
	1989-96	3	25	0	0	25
	1996-05	0	25	3	3	22

Table 2: Mergers and Acquisitions in Paints Industry

(Source: CMIE/PROWEES database)

Company Name	Year of Merger	Sale (Rs Crore)		Total Asset (Rs Crore)		Average Total Cost		Profitability (PAT/Sale) (%)		Market Share (%)	
		Before merger	After merger	Before merger	After merger	Before merger	After merger	Before merger	After merger	Before merger	After merger
GNP (Madras) Ltd. [Merged]	October, 2002	6.08 (Mar 2001)	(Mar 2003)	8.47		1.03		2.14		0.13	
Goodlass Nerolac Paints		685.54	790.71	394.41	463.15	0.98	0.96	3.29	5.04	14.78	16.3
Rajdoot Paints Ltd. [Merged]	August, 1999	59.61 (Mar 1998)	(Mar 2000)	57.39		0.99		1.46		1.82	
Berger Paints India Ltd.		348.87	505.35	180.25	276.72	0.96	0.96	5.23	4.69	10.65	12.23
Saurashtra Paints Ltd. [Merged]	October, 2002	6.1 (Mar 2001)	(Mar 2003)	6.04		1.04		1.97		0.13	
Goodlass Nerolac Paints		685.54	790.71	394.41	463.15	0.98	0.96	3.29	5.04	14.78	16.3

Table 3: Mergers and Acquisitions in Tyre Industry

(Source: CMIE/PROWEES database)

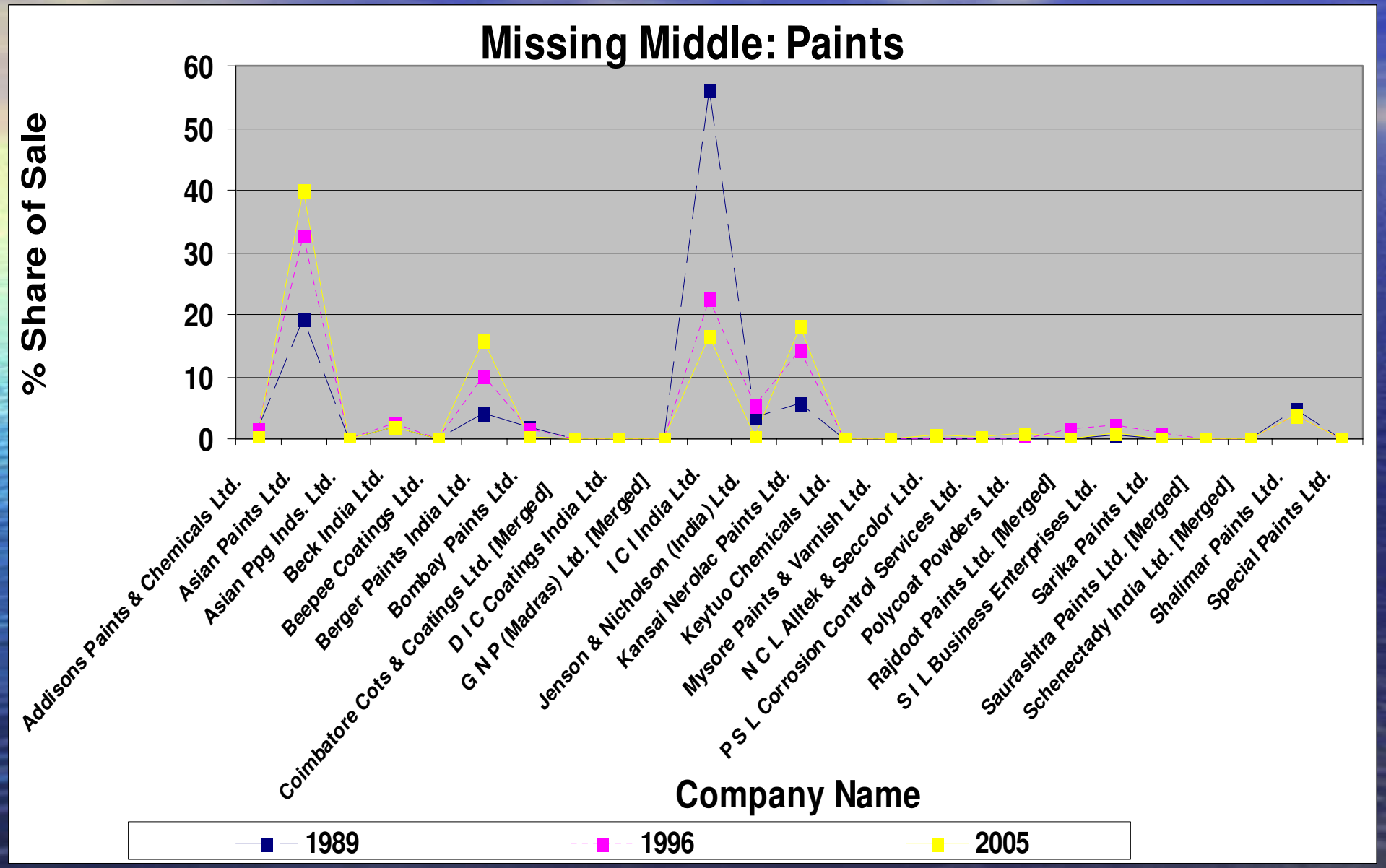
Company Name	Year of Merger	Sale (Rs Crore)		Total Asset (Rs Crore)		Average total cost		Profitability (PAT/Sale) (%)		Market Share (%)	
		Before merger	After merger	Before merger	After merger	Before merger	After merger	Before merger	After merger	Before merger	After merger
Vikrant Tyres Ltd. [Merged]	September, 2003	536.06 (Mar, 2002)		482.66		1.04		-2.23		6.55	
J.K. Industries Ltd.		2361.17 (Mar, 2003)	2060.07 (Mar, 2004)	2318.15	2330.65	1.004	0.995	0.89	1.13	23.13	19.07

Comments on M&As

- Only M&A in Tyre industry comes under Sec. 5 (Combinations) of Comp. Act. – and acquirer and the company acquired have very similar AC before merger indicating some anticompetitive behavior.
- No M&As in Paint industry comes under merger provisions. However, all the three merged firms have positive profitability ratio indicating that efficiency is not the only objective for the merger.

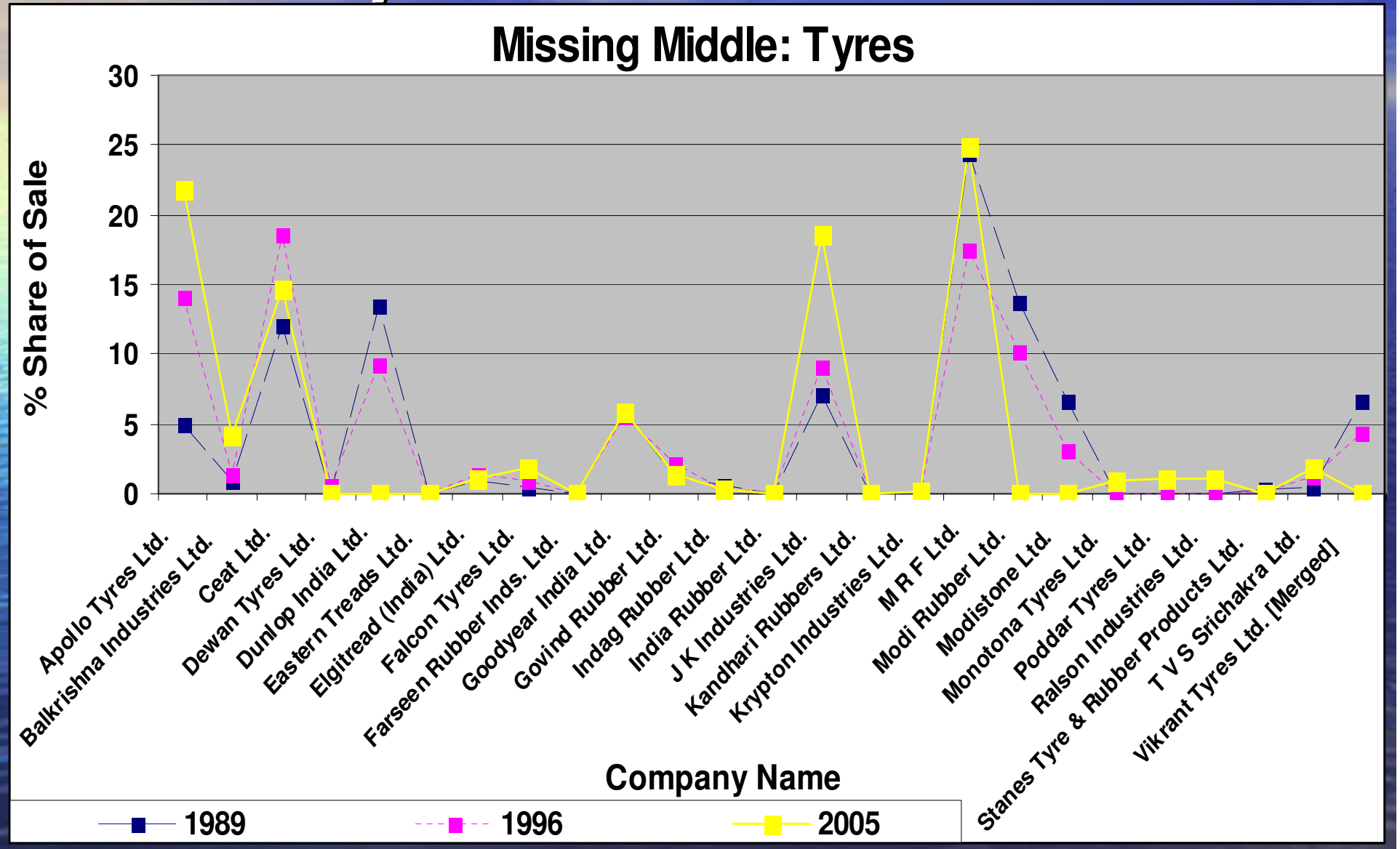
The Missing Middle Problem

Chart 1: Paints



The Missing Middle Problem

Chart 2: Tyres



Comment on Missing Middle

➤ There is clear trend in the paint industry of market dominance by four firm over the study period, out of which except ICI India Ltd. whose share is declining other firms are raising their market share over the years. Also leaving Shalimar Paints Ltd. (except 4 big firms) no other firm has more than 5% market share, which clearly indicate the missing middle size firms in the industry.

➤ The situation is almost same in the tyre industry: four major companies dominate the market, although Goodyear as a new entrant is increasing its market share. Except these five firms there is no other firm with more than five percent market share, implying the problem of missing middle in the industry.

Concentration Indices

Table 4:

Year	Paints		Tyre	
	HHI	CR4	HHI	CR4
1989	0.36	0.36	0.13	0.11
1996	0.2	0.19	0.12	0.09
2005	0.25	0.24	0.17	0.17

Comment of Concentration

- **Decreasing concentration in Paint industry but increasing concentration in Tyre Industry.**

Regression Study of Profitability

Table 5: Paints

Dependent Variable: MarkupPAT						
	Unbalance Panel		Balance Panel		Balance Panel	
	25 Firms		9 Firms		11 Firms	
	1989-2005		1995-2005		2000-05	
	1	2	3	4	5	6
HHI	-1.41	-1.4	-6.7*	-6.77**	-4.7	-4.8
Openness	0.048	0.05	1.5*	1.79*	2.4**	2.35*
Realwage_sale	-80	-87	1152.04	-6.08	447.7	-401.36
Dum1	0.087		0.38**		0.401	
Dum2		0.06		0.103		0.14
Wald						
	2.59	2.34	20.44	14.72	13.82	12.42
R² (Between)						
	0.03	0.04	0.48	0.02	0.1	0.0002
R² (Within)						
	0.01	0.001	0.2	0.2	0.22	0.23
R² (Overall)						
	0.01	0.009	0.2	0.12	0.2	0.1
N						
	283	283	100	100	67	67
Type						
	re	re	re	re	re	Re

** 1% level

* 5 % level

Regression Study of Profitability

Table 6: Tyre

Dependent Variable: MarkupPAT						
	Unbalance Panel		Balance Panel		Balance Panel	
	25 Firms		12 Firms		17 Firms	
	1989-2005		1995-2005		2000-05	
	1	2	3	4	5	6
HHI	0.25	0.25	0.58	0.58	1.94	1.94
Openness	-0.14	-0.14	0.52*	0.52*	0.41**	0.41**
Realwage_sale	-218.9**	-218.9**	-212.0**	-212.0**	-200.3**	-200.3**
Dum1	0.062		-0.051		0.039	
Dum2		0.06		-0.051		0.039
Wald						
	128.28	128.28	94.3	94.3	101.29	101.29
R² (Between)						
	0.74	0.74	0.91	0.91	0.91	0.91
R² (Within)						
	0.22	0.22	0.24	0.24	0.41	0.41
R² (Overall)						
	0.32	0.32	0.43	0.43	0.51	0.51
N						
	276	276	132	132	102	102
Type						
	re	re	re	re	re	Re
** 1% level						
* 5 % level						

Comments on Regression Analysis

- In the Paint industry profitability (markupPAT) goes up with greater openness and profitability goes down with higher concentration, which is contrary to our a priori expectations (9 firm Balance Panel).
- For tyre industry, in case of balance panels we get results contrary to our a priori. Concentration as well as foreign ownership seems to have little statistically significant impact on the profitability ratios.

Table 7: Paints—Average Margin per Unit Cost

Company Code	State (Plant Location)	Category	sub Category	Average Margin Per Unit Cost			Sale Realisation per Unit (RS)
				2005-06	2004-05	2003-04	2005-06
1	Maharashtra	Synthetic Resins	Binders	0.05	0.13	0.20	41.71
1	Gujarat	Synthetic Resins	Binders	0.98	0.29	0.36	89.52
1	Gujarat	Synthetic Resins	Kondicryl	0.13	0.18	0.14	175.99
1	Gujarat	Synthetic Resins	Kondieryl/Pidieryl	0.44	0.21	0.19	92.39
1	Gujarat	Paints	Paints	0.24			79.40
2	Jammu & Kashmir	Paints	Paints	0.30			165.25
2	Jammu & Kashmir	Paints	Paints	0.30			165.25
1	Maharashtra	Synthetic Resins	Pidicryls	0.22	0.03	0.09	50.84
1	Gujarat	Synthetic Resins	Pidiyls	0.31	0.14	0.27	34.15
1	Maharashtra	Synthetic Resins	Pidiyls	0.26	0.13	0.12	59.09
1	Maharashtra	Synthetic Resins	Pidiyls	0.29	0.15	0.24	35.37
1	Maharashtra	Synthetic Resins	Pidiyls	0.33	0.02		34.11
2	Uttar Pradesh	Synthetic Resins	Resin	-0.01			
2	Uttar Pradesh	Paints	Solvent Based Paints	-0.06			
2	Jammu & Kashmir	Paints	Solvent Based Paints	0.08			55.33
2	Uttar Pradesh	Paints	Water Based Paints	-0.05			
2	Jammu & Kashmir	Paints	Water Based Paints	0.44			32.96

Source: Computed from MCA data

Table 8: Tyre —Average Margin per Unit Cost

Company Code	State (Plant Location)	Category	sub Category	Average Margin Per Unit Cost			Sale Realisation Per Unit (Rs)
				2004-05	2003-04	2002-03	2004-05
1	Punjab	Tube	Auto Tubes	-0.03	0.00	0.08	32.6
8	Punjab	Tube	Auto Tubes	0.04	0.09	0.03	60.7
1	Punjab	Tube	Cycle Tubes	-0.04	-0.05	-0.08	18.1
8	Punjab	Tube	Cycle Tubes	-0.19	-0.20	-0.19	17.1
4	Punjab	Tube	Jointed	-0.03	-0.03		20.9
4	Punjab	Tube	Moped	-0.32	-0.28		52.3
4	Punjab	Tube	Moulded	-0.07	-0.05		22.2
6	Punjab	Tube	Moulded	-0.003	-1.00		21.4
7	Kerala, Gujarat, Maharashtra	Tube	Rear Tractor				
6	Punjab	Tube	Regural	-0.01	-1.01		18.3
4	Punjab	Tube	Scooter	0.30	0.33		65.7
4	Punjab	Tube	Scooter/MC/Moped	0.67	0.27		86.6
7	Kerala, Gujarat, Maharashtra	Tube	Truck	0.01	-0.06		501.0
9	Haryana	Tube	Tubes	0.04	0.09	-0.03	320.0
5	Tamil Nadu	Tube	Tubes	0.11	0.04		148.6
1	Punjab	Tyre	Auto Tyres	-0.21	-0.09	0.08	99.2
8	Punjab	Tyre	Auto Tyres	0.28	0.31	0.17	442.9
4	Punjab	Tyre	Cotton Rick	-0.03	0.00		96.0
1	Punjab	Tyre	Cycle Tyres	-0.003	0.01	0.03	53.0
4	Punjab	Tyre	Cycle Tyres	0.02	0.01		57.5
8	Punjab	Tyre	Cycle Tyres	0.09	0.07	0.11	50.5
6	Punjab	Tyre	Cycle Tyres	-0.10	-1.11		47.8
9	Haryana	Tyre	Front Farm	-0.03	-0.05	-0.06	1166.0
6	Punjab	Tyre	H.Duty	-0.07	-1.07		82.2
2	Orissa	Tyre	Jeep	0.07	0.14	0.06	1231.2
2	Orissa	Tyre	L.C.V	0.05	0.08	0.07	2151.8
9	Haryana	Tyre	Large Truck	-0.01	-0.03	-0.08	5451.0
3	Maharashtra	Tyre	Light Truck	-0.0001	-0.02		2255.9
9	Haryana	Tyre	Light Truck	-0.06	-0.06	-0.09	2274.0
7	Kerala, Gujarat, Maharashtra	Tyre	Light Truck	0.04	0.12		2432.0

Table 8: Tyre -Average Margin per Unit Cost cont...

Company Code	State (Plant Location)	Category	sub Category	Average Margin Per Unit Cost			Sale Realisation Per Unit (Rs)
				2004-05	2003-04	2002-03	2004-05
4	Punjab	Tyre	Moped	0.61	0.24		157.7
6	Punjab	Tyre	Nylon	-0.03	-1.03		74.4
4	Punjab	Tyre	Nylon Rick	0.03	0.02		127.5
9	Haryana	Tyre	Pass Bias	-0.01	-0.03	-0.04	867.0
3	Maharashtra	Tyre	Passenger	0.11	0.08		816.1
7	Kerala, Gujarat, Maharashtra	Tyre	Passenger	-0.02	-0.08		1098.9
2	Orissa	Tyre	Passenger Nylon	-0.004	0.01	-0.03	638.6
2	Orissa	Tyre	Passenger Rayon Radial	-0.02	0.02	-0.48	750.8
7	Kerala, Gujarat, Maharashtra	Tyre	Radial Passenger	0.04	0.20		825.8
9	Haryana	Tyre	Rear Farm	0.09	0.04	-0.03	5642.0
4	Punjab	Tyre	Scooter	-0.16	-0.13		333.9
6	Punjab	Tyre	Semi H. Duty	-0.12	-1.14		58.2
4	Punjab	Tyre	Semi Rick	0.08	0.04		60.7
6	Punjab	Tyre	Small	-0.06	-1.06		50.4
2	Orissa	Tyre	Steel Radial	0.14	0.24	0.13	1299.7
3	Maharashtra	Tyre	Tractor	-0.04	-0.05		3069.4
2	Orissa	Tyre	Tractor Front	0.41	0.05	-0.06	1638.0
7	Kerala, Gujarat, Maharashtra	Tyre	Tractor Front	-0.08	0.26		1004.0
2	Orissa	Tyre	Tractor Rear	-0.11	-0.16	-0.10	4066.8
7	Kerala, Gujarat, Maharashtra	Tyres	Tractor Rear	0.03	-0.08		5038.0
7	Kerala, Gujarat, Maharashtra	Tyre	Tractor Trailor	0.04	0.12		3498.0
4	Punjab	Tyre	Tractor/ Jeep	-0.08	-0.07		1139.1
3	Maharashtra	Tyre	Truck	0.02	-0.01		5310.8
7	Kerala, Gujarat, Maharashtra	Tyre	Truck	0.08	0.10		5538.7
2	Orissa	Tyre	Truck	0.04	0.09	0.08	5385.3
5	Tamil Nadu	Tyre	Tyres	0.02	0.05		1304.7

Source: Computed from MCA data

Comments on MCA data:

- For Paints industry, there is a clear difference between margins per unit cost for plant in different regions and between different companies. For example, in case of synthetic resins company 1 has 0.05 margin in plant situated in Maharashtra and 0.98 (Binders) for plant in Gujarat.
- For Tyre industry, in case of passenger tyre, Company 1 with higher per unit sales realisation (Rs 1098.9) has negative margin per unit cost, whereas, Company 3 with a lower sales realisation (Rs 816.1) has positive margin per unit cost.

Conclusion

- There is increase in concentration indices implying decrease in level of competition in the paint industry. Our regression analysis however, does not give us any plausible explanatory model of anti-competitive behaviour in the paint industry. Analysis of cost-audit data of MCA shows that there is difference between margins per unit cost for plant in different regions and between different companies. However, data does not provide any firm conclusion on anticompetitive behaviour.
- Increased concentration indices shows that there is decrease in competition in the tyre industry. Our analysis of cost-audit data shows that companies with similar sales realization appear to have widely differing profit rates. This may indicate price fixing arrangements. However, given the limited data availability further investigation is merited.

The background of the slide is a photograph of a sunset over the ocean. The sky is a deep blue with wispy white clouds, and the sun is partially visible on the left side, creating a bright glow and reflecting on the water's surface. A solid teal rectangular box is positioned in the upper middle of the image, containing the text "Thank You".

Thank You

Rabi Ranjan

Email: raviranjan11009@gmail.com