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(long form, provisional version)

"Vertical Market Power" in a Systemic Concept of Market Power

- The relevance of up-stream and down-stream concentration to the performance of industries with special regard to Austrian data[2]

The performance of an industry is influenced by a set of concentration measures reflecting market power. The horizontal concentration is mostly used but this horizontal concentration of the own industry (market) is only one (important) element of market power relations of industries. The vertical impact of concentration in up-stream and down-stream industries, and also the performance in these industries are often forgotten variables. So a systemic concept of market power is useful.

Actually we see an all-time-high in merger activities in Europe. Although "competition" plays an important role in political and economical discussions the issue of oligopoly and restricting oligopoly power nowadays is surprisingly small in public and economic discussions. On the contrary it looks almost old-fashioned to question big European players. Furthermore within the branch of industrial economics there was a shift to models on the micro levels, public monopolies, privatisation and so on. The "old" story of empirical industrial economics about existence and origins of oligopoly profits almost tapered off.

In the core of (former) standard industrial economics there are concepts of determining the performance of industries (empirically defined by some proxies for profit rates) by market power. The market power is measured usually by an index of (horizontal) concentration of the industry. In an more general (Marxian) framework with the focus on the capital-labour-relations this would be only one story and there are some critical points on this procedure - but it is a relevant story.

There is a great variety of empirical results on the correlation of market structure, competition conduct, and performance. This suggests that there are missing variables.
There are many discussed methodological problems looking at the industry level. The old crunch question there: "What is the relevant market?" Anyway the empirical results using market shares of firms instead of concentration ratios of industries show more precision.
So it does make sense to generalize these "classical" market structure – performances analyses.

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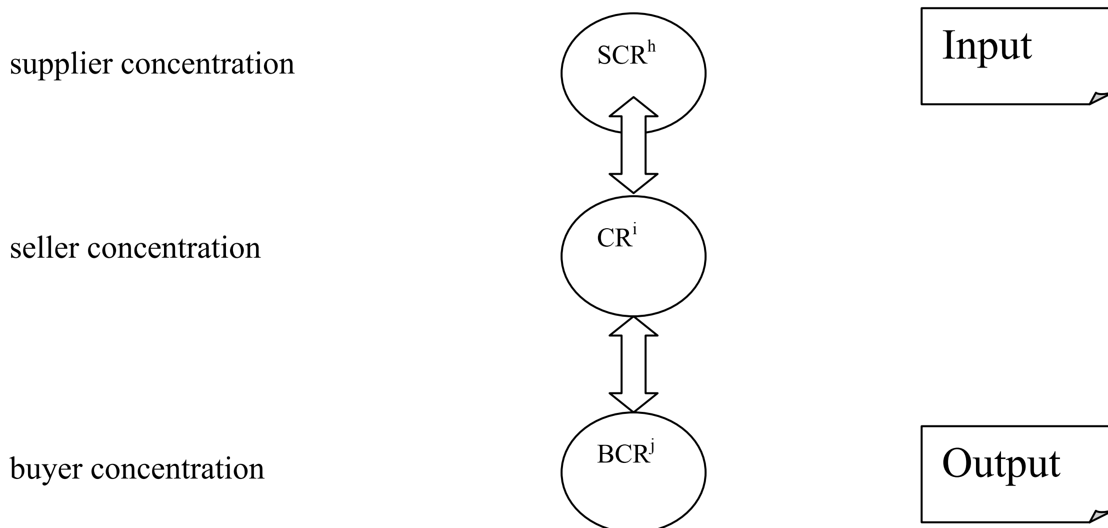
[2] Highlights of a dissertation* done at D. C. Mueller - University of Vienna (Baum J., 2004: Vertical Market Power - The relevance of up-stream and down-stream concentration to the performance of industries with special regard to Austrian data): Full text online in German: http://www.purkersdorf-online.at/lib/arbeiten/dissertation-oekonomie.doc

The ignoring of the power relations in the vertical axis is impressive:
Dobson (1999) stated "remarkably few empirical studies which have attempted to assess the impact of buyer power on prices, profits or any other measures of firm behaviour or 'performance'. In that sense, we tread more or less virgin territory."[3]
„What is surprising is that bilateral oligopoly, which would seem to be a more realistic case, has attracted little theoretical or empirical interest."[4]

Basic scheme vertical market power



Some Description: Actual shifts in value added chain of food

The prime example for buyer power used to be the relation between agriculture and food processing industries. The value added chain of food altogether is instructive for vertical impacts of concentration in up-stream and down-stream industries: from agricultural input industries (machines, seed, fertilizer…), agriculture, (wholesale retailing,) food processing, (wholesale retailing,) retailing to consumers.
In the last 1-2 decades there has been remarkable shifts of market power from food processing industries to food retailing being able to stress buying power. The domination of relations reversed: the producers now have to pay fees for listing products, they suffer fierce pressure on prices. The reasons therefore stem from information technologies an globalisation: (Scanner) information technologies give market information advantage to retail. Global procurement and
worldwide auctions and bidding changed the markets. New types of shopping facilities (hypermarkets, supercentres…) and increasing share of own labels reflect the trend to more concentration within retail.
We see the rise of giants like Wal-Mart (2001 world biggest enterprise - according to turnover). We see the "store war", and we see tight oligopolies in food retailing with strong market power and often high profit rates.

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[3] Dobson Consulting (1999): Buyer Power and its Impact on Competition in the Food Retail Distribution Sector of the European Union – Prepared for the European Commission – DG IV Study Contract No. IV/98/EDT/078, Nottingham, p. 32
[4] Azzam A. M. (1996a): Estimating the degree of dominance in a bilateral oligopoly, Applied Economics Letter, 1996, p. 209

So food retailing also has globalized – the globalization of capital in food processing industries already exists since longer times (Nestle, Unilever…). There are conflicts *and* cooperation between foodprocessing and retailing oligopolies. Anyway the food retail corporations now are the “captain of the food chain”.
But we have still different situations in Europe : We have still low concentration for example in Italy especially depending on strict regulation of new shopping facilities so we also see: Policy matters !

Also at this concrete level there is an ignoring of the power relations especially regarding the vertical axis:
„By and large economics has not seriously tried to understand the process by which goods move from manufacturers through the wholsale/retail channels of distribution to household consumers. Worse still, the discipline has tended to ignore these downstream markets entirely by the tacit assumption that they are inert and perfectly competitive, so their omission from economic models does not bias the results.“[5]
„Even though we do not know much about the economics of buyer power we must, because of the changes in the retail sector, still pay attention to it.“[6]

Towards a systemic concept of market power

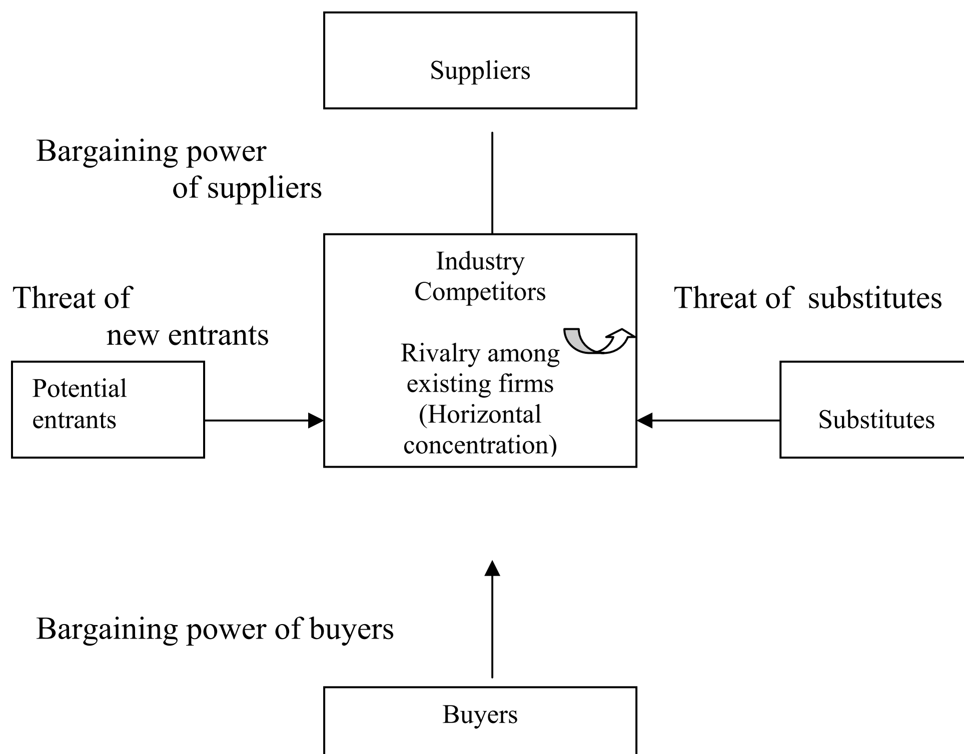
Here a systemic concept of market power is developed:
The measure of horizontal concentration of an industry is not the single variable controlling for the performance of the industry but also the concentration in up-stream and down-stream industries, and also the performance in these industries; and furthermore proxies for the potential of entrants and the possibilities of substitutions. So the horizontal concentration is only one (important) element of market power relations of industries.

Combining various elements of the set of concentration measures out of literature to a scheme for systemic market power including vertical market power is developed classifying horizontal concentration as an important special case of concentration.

A concept of Porter is a starting point: Porter[7] outlined a roughly variables of market concentration: the commonly used horizontal concentration is added by vertical concentration (bargaining power of suppliers on the one side and buyers on the other side), the potential of entrants, and the possibilities of substitutions:

[5] OECD 1999, p. 279
[6] OECD 1999, p. 279
[7] Porter, M. E. (1998,): Competitive Strategy - Techniques for Analyzing Industries and Competitors, The Free Press, New York

Diagram 1



(diagram of Porter modified)

Results of literature

In the traditional (older) theoretical-empirical literature – we find single elements of vertical market power – referred to as "buyer power", "buyer/seller/supplier concentration", and "vertical organization".

Table 1 Performance-determinants with special regard to vertical market power

	Author	year publication	data - year	Per-formance-variable	industries , firms F	input- *AND* outputside	buyer concentration	Supplier concentration	horizontal concentration
1	**Collins-Pr.**	1969	1963 u.1958	PCM					+
2	**Porter**	1974	1963 - 1965	ROE					~
3	**Buzzell-G.-S.**	1975	1970 - 1972	ROI	F		-		+
4	**Brooks**	1973	1963	ROA			-		+
5	**Lustgarten**	1975	1963	PCM			-		+
6	**Guth-Sch.-W.**	1976	1963	PCM			(-		(+)
7	**McGuckin-Ch.**	1976	1967(1963)	PCM			-		+
8	**Campbell-C.**	1977	1963 + 1967	ROA		yes	-	~	+
9	**LaFrance**	1979	1963	PCM			-		+
10	**Waterson**	1980	1963 u. 1968	PCM	F		-		+
11	**Gabel**	1983	49,'58,'63,'67	ROE			~		+
12	**Galbraith-St.**	1983		ROS	F	yes	-	+	+
13	**RavenscraftLB**	1983	1975 ('74,'76)	ROS	F)	yes	+	(-)	-
14	**Ravens.Branch**	1983	1975 ('74,'76)	ROS		yes	(-)	-	~
15	**Bradburd**	1982	1972	PCM					~
16	**Bradburd-C.**	1987	1972	Price					+)
17	**MacDonald**	1985	1977, IO 1972	Vert,Integr			+)		+)
18	**Farber**	1981	1958 u. 1963	RD			-)		-)
19	**Cowley**	1986	1973-1976	ROS	F		-		+
20	**Cowley**	1986a	1973-1976	PCM	F		-		+
21	**Cowley**	1988	1973-1976.	ROS	F		-		+
22	**Martin**	1979	1967 (1963)	several			(-)		~
23	**Martin**	1982	1967	PCM			~		+
24	**Martin**	1983	1972	PCM		yes	-		+
25	**Martin**	1986	1972 (.'67)	PCM					~
26	**Newmark**	1989	1963	PCM					+
27	**Boulding-St.**	1990	70er Jahre	P,C	F		~	~	
28	**Gaitanides-W.**	1990	-1988	ROS	F		-		
29	**Schumacher**	1991	1977, z.T.'82	PCM			-		+
30	**Messinger-N**.	1995	1961-1987	ROA			-	-	+
31	**Cool-Henderson**	1998	1993	ROE	F	yes	(-)	(-)	
	direction of impact - sum		***31 research results***				***15- 1***+	***2- 1***+	***18+ 1-***

Model

Basic Hypothesis for our model:
A negative impact of vertical market power (up-stream and down-stream concentration) on industry performance.

At a upswing phase:
(vertical) market power tends to be less effective due to a more dynamic demand.

Typical structure-performance models using price-cost-margins:

PCM = f (*COMP, BE, D*)

With
PCM ... price-cost-margin
C … vector for competition structures
BE … vector for barriers of entries
D …. vector for demand

(PCM = (P-C)/P)
P … price
C… cost

We use the Lerner equation

$$PCM = \frac{H}{-\eta}(1+\lambda)$$

With
H Herfindahl-Index
λ = 0 Cournot, linear
λ = F (H) strategic conduct; not linear

We get a generalization of the standard Cournot-model for homogenous goods:

$PCM_i = f(CR_i, \eta^d_i, \eta^s_i)$

PCM_i price-cost-margin industry i
CR_i concentration measure industry i
η^d_i elasticity of demand industry i
η^s_i elasticity of supply industry i (flexibility for production switch)

Because usually data for elasticities are not available we replace elasticities by dispersity-measures, and define them below.

So we get 3 types of indicators for vertical market power

3 concentration ratios in a narrow sense:
- horizontal concentration (=seller concentration) (Nr°4)

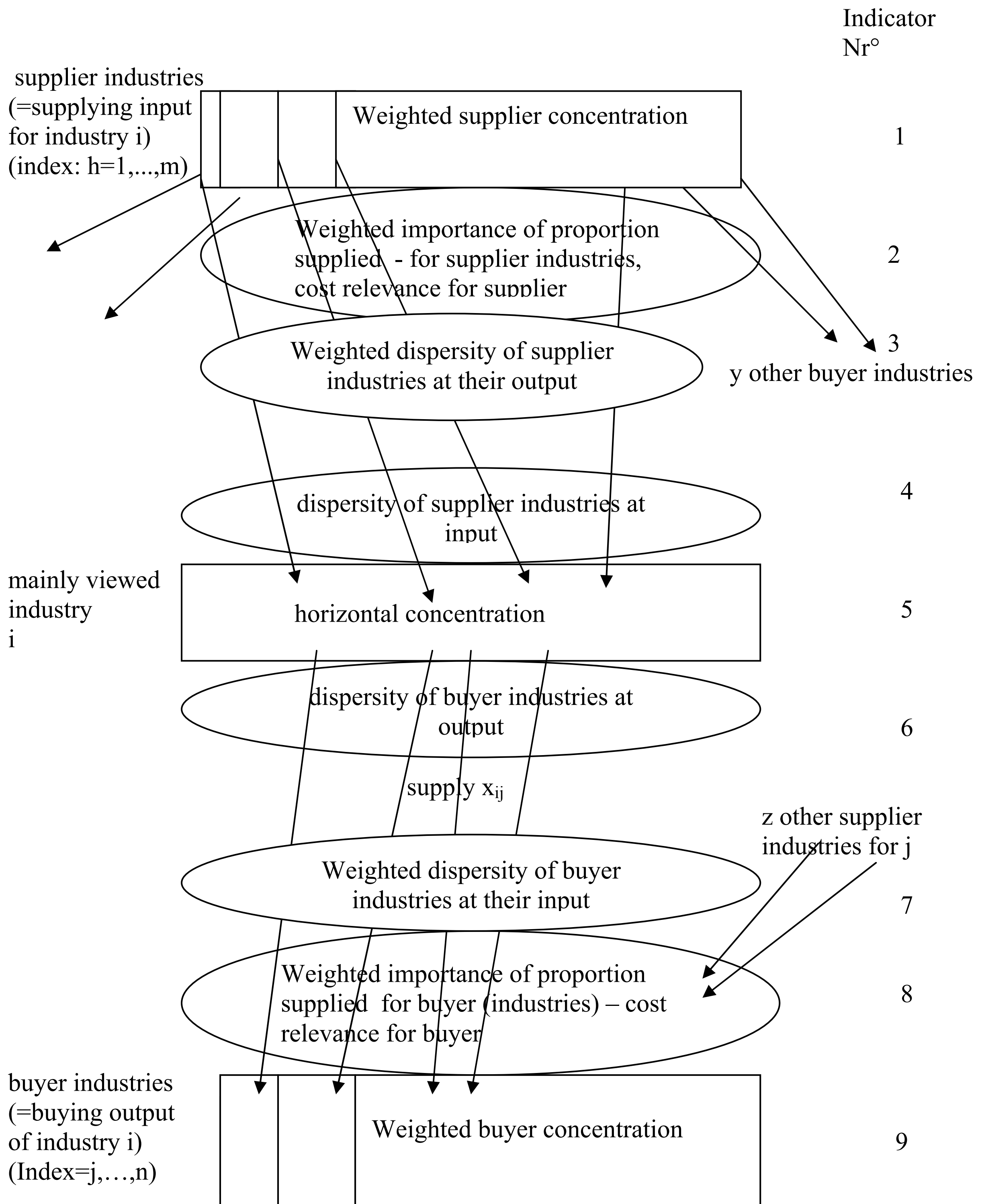
  vertical::
- supplier concentration (Nr°1)
- buyer concentration (Nr°9)

4 measures of dispersity:
- dispersity of supplier industries at their output
- dispersity of supplier industries at input
- dispersity of buyer industries at output

- dispersity of buyer industries at their input

2 indicators of cost relevance:
- cost relevance of supplies for supplier (Nr°2)
- cost relevance of supplies for buyer (Nr°8)

Indicators of vertical market power in systemic context



	indicator	abbreviation (h:upstream; i: mainly viewed industry; j:downstream)	expected direction of impact on performance of industry i	**evidence in literature: significant pro, not significant pro, not clear, insignificant con, significant con**
1.	supplier concentration	SCR^h	<0	**2:2:2:0:1**
2.	importance of proportion supplied - for supplier industries	REL^h	< >	**0:2:0:0:0**
3.	dispersity of supplier industries at their output	DPO^h	>0	**0**
4.	dispersity of supplier industries at input	DPI^i	<0	**3:0:0: 0:0**
5.	horizontal concentration	CR^i	>0	**18:1:5:0:1**
6.	dispersity of buyer industries at output	DPO^i	<0	**6:1:1:0:1**
7.	dispersity of supplier industries at their input	DPI^j	>0	**0**
8.	importance of proportion supplied for buyer (industries)	REL^j	< >	**3:2:0:0:0**
9.	buyer concentration	BCR^j	<0	**15:4:3:0:1**

definitions:

CR (CRx) measure for concentration (e. g. Herfindahl); or concentration ratio: share (of x-greatest companies) on output of industry

$\sum_{j=1}^{n} x_{ij}$ output industry i: sum of supplies of industries i to all industries j (j=1,…,n)

$\sum_{z=1}^{s} x_{zj}$ input industry j: sum of all supplies of industries z the industry j (z=1,…,i,…,s)

$\sum_{y=1}^{r} x_{hy}$ output industry h: sum of supplies of industry h to all industries y (y=1,..,i…,r)

$\sum_{h=1}^{m} x_{hi}$ input industry i: sum of supplies of input industries h (h=1,…,m) to industry i

$a^h_{hy} = x_{hy} / \sum_{y=1}^{r} x_{hy}$ share of supply of industry h to industry y in relation to total output in industry h

$a^i_{hi} = x_{hi} / \sum_{h=1}^{m} x_{hi}$ share of supply of industry h to industry i in relation to total input in industry i

$a^i_{ij} = x_{ij} / \sum_{j=1}^{n} x_{ij}$ share of supply of industry i to industry j in relation to total output in industry i

$a^j_{zj} = x_{zj} / \sum_{z=1}^{s} x_{zj}$ share of supply of industry z to industry j in relation to total output in industry j

so we can construct relevant indicators for vertical market power:

1. $SCR^h = \sum_{h=1}^{m} a^i_{hi} CR_h$
2. $REL^h = \sum_{h=1}^{m} (a^i_{hi} (x_{hi} / \sum_{y=1}^{r} x_{hy}))$
3. $DPO^h = \sum_{h=1}^{m} (a^i_{hi} (\sum_{y=1}^{r} a^{h\,2}_{hy}))$ (specified al la Herfindahl)
4. $DPI^i = \sum_{h=1}^{m} a^{i\,2}_{hi}$ (specified al la Herfindahl)
5. CR^i
6. $DPO^i = \sum_{j=1}^{n} a^{i\,2}_{ij}$ (specified al la Herfindahl)
7. $DPI^j = \sum_{j=1}^{n} (a^i_{ij} (\sum_{z=1}^{s} a^{j\,2}_{zj}))$ (specified al la Herfindahl)
8. $REL^j = \sum_{j=1}^{n} (a^i_{ij} (x_{ij} / \sum_{z=1}^{s} x_{zj}))$

$BCR^j = \sum_{j=1}^{n} a^i_{ij} CR_j$

Expected direction of impact of vertical market power to profit-performance	
1. ∂ performance / ∂SCR^h	<0
2. ∂ performance / ∂REL^h	><0
3. ∂ performance / ∂DPO^h	>0
4. ∂ performance / ∂DPI^i	<0
5. ∂ performance / ∂CR^i	>0
6. ∂ pPerformance / ∂DPO^i	<0
7. ∂ performance / ∂DPI^j	>0
8. ∂ performance / ∂REL^j	><0
9. ∂ performance / ∂BCR^j	<0

There are contradictory expectations for 2. und 8. depending on implicit assumptions on substitution elasticities

+ high relevance for the partners: dependence – partners will not resist
- considerations of transaction costs: switch of partner more useful if supplies become higher, partners will resist

Empirical work

This concept was used for the econometric analysis of industry performance using Austrian cross industry performance and input-output-data.

Additionally there were used indicators for the relevance of input and output industries (proxies for possibilities of substitution) and trade variables (export an import.

This basic systemic concept of market power is modified, operationalized and tested by econometric analyses using Austrian Austrian cross industry data from 1976 to 1988.

Extensive industry data in the form of industrial input-output-tables and "Bereichzaehlungen"(census) were processed, harmonised and selected. And so data on a 3-digit basis that had not existed in Austria in this compatible form before were compiled for the years 1976, 1983 and 1988. Identical samples of 88 relevant industries were formed using identical sets of variables for the three years in question in order to clarify earlier contradictory literature results (that had mainly focussed on a single year or years closely connected).

In a variation the performance (profitability) – together with and /or instead of concentration measures in the up-stream and down-stream industries are used as explanatory variables. Anyway the horizontal concentration shrinks to only one element of market power relations of industries.

Results

Evidence was found for a negative impact of vertical market power (up-stream and down-stream concentration) on industry performance. These results have still more weight, as available data originate from years of upswing when (vertical) market power tends to be less effective due to a more dynamic demand.

Stylized facts of the (performance) indicators show an atypical situation for 1976: Without consideration of calculatory "employer's salary" the price-cost-margins of the higher ranked firms within industries in this year were generally less than those of smaller firms. After 1976 this pattern reversed: coherently the gaps of the price-cost-margins of the four largest firms clearly increased in relation to the rest of the industry between 1976 and 1988.

Previous contradictions in the results using data of Austrian industries could be illuminated and partly clarified. In particular, often negative and varying signs of horizontal concentration in the results of former studies with Austrian data vanished when vertical market power was included, and when the industry profits were corrected by the calculatory "employer's salary",

which has to be calculated especially for small firms: A positive effect of horizontal concentration on performance can mostly be observed when the indicators for vertical market power are used also as explanatory variables and when the industry profits are corrected by calculatory “employer’s salary” (i.e. double wage for employers).

Finally it could be demonstrated that the gap of the price-cost-margins of the four largest firms in relation to the other firms can be explained by the level of industry profitability and by the horizontal concentration.

Literature

Adams, W. (1987): Countervailing Power. The New Palgrave, London 1987

Adelman M. A. (1949): The Large Firm and its Suppliers, Review of Economics and Statistics, 1948, pp.113-118

Aiginger K. (1990): Concentration and Profitability in Austria, Paper CEEA Workshop Lissabonn

Aiginger K. (1993): Collusion, Concentration and Profits – An Empirical Confrontation of an Old Story and a Supergame Implication, Empirica 1993, vol 29 (2), pp. 159-173

Aiginger K. (1994a): Testing Cournot models with firm and industry data. Paper presented to the Workshop on Small and Medium Sized Firms at the University of Rotterdam, Rotterdam 1994

Aiginger K. (1995): The Usefulness of Oligopoly Models for Explaining Firm Differences in Profitability, WIFO Working Papers, 1995, 79

Aiginger K. (1996): Confronting the Implications of the Cournot Model with Austrian data, Small Business Economics 8, pp. 365-378

Aiginger K. (1999): Do Industrial Structures converge? A Survey on the Empirical Literature on Specialization and Concentration of Industries, WIFO-Working Paper

Aiginger K., Brandner P., Wüger M. (1992): Measuring market power for some industrial sectors in Austria. Paper presented to the International Conference of Industrial Organization, Vienna, 1992;

Aiginger K., Tichy G. (1989): The Size of Firms and Economic Performance, WIFO Working Papers, 1989, 34. (entspricht: Small Business Economics 3, 1991, pp.83-101)

Aiginger K., Tichy G. (1991): „Small Firms and Merger-Mania“, Small Business Economics 3/1, pp. 83-101

Aiginger, K., Pfaffermayr, M. (1998): „Market Structure, Innovation and the Persistence of Cost Difference“, Paper EARIE Conference Copenhagen

Ailawadi K. L., Borin N., Farris P. W. (1995): Market Power and performance: A Cross-Industry Analysis of Manufactureres and Retailers?, Journal of Retailing 1995, pp. 211-248

Ailawadi K. L., Farris P. W. (1992): Retail Power: Monster or Mouse?, Journal of Retailing 1992, pp. 351-369

Azzam A. (1996): Testing the Monoposony - Inefficency Incentive for Backward Integration, American Agricultural Economics Association 1996, pp. 585-590

Azzam A. M. (1996a): Estimating the degree of dominance in a bilateral oligopoly, Applied Economics Letter, 1996, p. 209

Bartel, R., Schneider, F. (1987): Die Ursachen der Krise in der verstaatlichten Industrie. Einige theoretische Überlegungen, Wirtschaftspolitische Blätter 3/1987

Bartel, R., Schneider, F. (1989): Gemeinwirtschaft versus Privatwirtschaft – ein Effizienzvergleich, Manz, Wien

Bartel, R., Schneider, F. (1991): The “mess” of the public industrial production in Austria: A typical case of public sector inefficiency?, Public choice 68(1), 1991, p. 17-40

Blair R. D., Harrison J. L. (1993): Monopsony - Antitrust Law and Economics, Princeton, NJ

Bontrup H.-J.(1983): Nachfragemacht von Unternehmen - Ursachen und Wirkungen sowie Bekämpfungsmöglichkeiten der Nachfragemachtausübung von Handelsunternehmen auf den Wettbewerbsprozeß, Köln

Boulding W., Staelin R. (1990): Environment, Market Share, and Market Power, Management Science Vol. 36, pp. 1160-1177

Bradburd R. M. (1982): Price-Cost Margins in Producer Goods Industries and „The Importance of Being Unimportant“, Review of Economics and Statistics 1982, pp. 405-412

Bresnahan T. F. (1989): Emprical Studies of Industries with Market Power, in: Handbook of Industrial Organization, Vol. II, Ed. by R. Schmalensee and R. D. Willig, 1989, pp. 1011-1058

Brooks, D. G. (1973): „Buyer Concentration“, A Forgotten Element in Market Structure Models“, Industrial Organization Review 1 (1973), 151-163

Buzzell R. D., Gale B. T., Sultan R. G. M. (1975): Market share – a key to profitability, Harvard Business Review 1975, pp. 97-106
Campbell G. R., Clevenger T. S. (1977): Vertical Organization: A Neglected Element in Market Structure-Profit Models, Industrial Organization Review 1977, pp. 60-66
Caves R. E., Khalilzadeh-Shirazi J., Porter M. E. (1975): Scale Economies In Statistical Analyses Of Market Power, Review Of Economics And Statistics, 1975, p. 133 - 140
Clarke D. (1996): The limits to retail capital, in: Lowe M., Wrigley N. (1996) (Eds.): Retailing, Consumption and Capital, London
Collins N. R. , Preston L. E. (1969): Price-Cost Margins and Industry Structure, Review of Economics and Statistics 1969, pp. 271-286
Collins N. R., Preston L. E. (1966): Price-Cost Margins in Food Manufacturing Industries, Journal of Industrial Economics, pp. 226-242
Comanor W., Wilson T. (1967): Advertising, market Structure and performance, Review of Economics and Statistics, 1967, p. 423 – 440
Competition Commission (2000): Supermarkets – A report on the supply of groceries from multiple stores in the United Kingdom, 2000, www.Competition-Commission.org.uk
Connor J. M., Rogers R. T., Bhagavan V. (1996): Concentration Change and Countervailing Power in the U. S. Food Manufacturing Industries: Review of Industrial Organization 11, 1996, pp. 473-492
Connor J. M., Rogers R. T., Bhagavan V. (1996a): Concentration Change and Countervailing Power in the U. S. Food Manufacturing Industries, in: Gallizzi G., Venturini L. (1996) (Eds): The Economics of Innovation: The Case of The Food Industry. Heidelberg
Connor J. M., Rogers R. T., Marion B. W., Mueller W., F. (1985): The Food Manufacturing Industries, Lexington
Cool K., Henderson J. (1998): Power and Firm Profitability in Supply Chains: French Manufacturing Industry in 1993, Strategic Management Journal 1998, pp.909 -926
Cotterill R. W. (1986): Market Power in the Retail Food Industry: Evidence from Vermont. Reviews of Economics and Statistics, 1986, pp. 379-386
Cotterill R. W. (1997): The Food Distribution System of the Future: Convergence Towards the US or UK Model?, Agribusiness, pp. 123-135
Cotterill R. W. (1999a): Marketing Power and the Demsetz Quality Critique: An Evaluation. Agribusiness, 15(1), 1999, pp. 101-118
Cotterill R. W. (1999b): An antitrust economic analysis of the proposed acquisition of Supermarket General Holdings Corporation by Ahold Acquisition inc. Food Market Policy Center Research Report No. 46, Storrs, CT: dept. Of Agricultural & Resource Economics, University of Connecticut
Cotterill R.W. (1999): Continuing Concentration in Food Industries Globally: Strategic Challenges to an Unstable Status Quo, Food Marketing Policy Center Research Report No. 49, University of Connecticut
Cowley P. R. (1985): Modelling the effect of buyer and seller power on the margins of commodity plastics, Strategic Management Journal 1985, pp. 213-222
Cowley P. R. (1986): Business Margins and Buyer/Seller Power, Review of Economics and Statistics 1986, pp. 333-337
Cowley P. R. (1986a): Relating Buyer/Seller Power to Market Structure, Market Intelligence and Planning, 1986, pp.16-24
Cowley P. R. (1988): Market Structure and Business Performance: an Evaluation of Buyer/Seller power in the PIMS Database, Strategic Management Journal, pp. 271-278
Cowling K. (1976): On the Theoretical Specification of Industrial Structure-Performance Relationships. European Economic Review 8, 1976, pp. 1-14
Cowling K., Mueller D. C. (1978): The social cost of monopoly power. Economic Journal 88, 1978, pp. 727-748
Cowling K., Mueller D. C. (1981): The social cost of monopoly power revisited. Economic Journal 91, 1981, pp. 721-725
Cowling K., Waterson M. (1976): „Price-cost margins and market structure“, Economica, 43: pp. 267-274
Cowling, K., Waterson, M. (1976): „Price Cost Margins and Market Structure“, Economica 38, pp. 378-394
Davies S., Lyons B. (1996): Industrial Organization in the European Union – Structure, Strategy, and the Competitive Mechanism, Oxford
Dobson Consulting (1999): Buyer Power and its Impact on Competition in the Food Retail Distribution Sector of the European Union – Prepared for the European Commission – DG IV Study Contract No. IV/98/EDT/078, Nottingham
Dobson P. W., Waterson M. (1996): Vertical Restraints and Competition Policy, Office of Fair Trading, Research Paper 12
Dobson P. W., Waterson M. (1997): Countervailing Power and Consumer Prices. Southern Economic Journal, 1997, pp. 418-430
Dobson P. W., Waterson M., (1999): Retailer Power – How regulators should respond to greater concentration in retailing. Economic Policy pp. 135-164

Dobson P. W., Waterson M., Chu A. (1998): The Welfare Consequences of the Exercise of Buyer Power, Office of Fair Trading, Research Paper 16
Doel C. (1996): Market development and organizational change. The case of the food industry, in: Lowe M., Wrigley N. (1996) (Eds.): Retailing, Consumption and Capital, London
Egger P., Paffermayr M. (2003): Concentration in European manufacturing and its effect on price dispersion, productivity and profits, in: European Commission: European Economy: Special Report No. 2 – 2002, pp. 190-197 (Veugelers R. et al)
Egger, H., Egger, P. (2001): Market Concentration and International Outsourcing,WIFO Working Papers 166/2001
Ellison S. F., Snyder C. M. (2001) : Countervailing Power in Wholesale Pharmaceuticals, M.I.T. – Working Paper
Emerson R. M. (1962): Power Dependence Relations, American Sociological Review, pp. 31-41
European Commission (1997): „Green Paper on Vertical Restraints in EC Competition Policy", COM (96) 721 Final, Brussels
European Commission (1997a): Economics of Scale, SM-Study, Subseries V, Vol. 4, 1997
European Commission (1997b): Price Competition and Price Convergence, The Single Market Review Subseries V, Vol. 1
European Commission (2002): European Economy 2001, No. 5, The Efficiency Defence And The European System of Merger Control
European Commission (2003): European Economy: Special Report No. 2 – 2002 (Veugelers R. et al)
Farris P. W. and Ailawadi K. L. (1992), „Retail Power: Monster or Mouse?" Marketing Science Institute, Technical Working Paper, Report No. 92-129,
Fitzroy P. T. (1985): Effects of Buyer/Seller Concentration on Profitability, in: Thomas, H., Gardner, D. (Hrsg.), Strategic Marketing and Management, Chichester, pp. 151-166
Foord J., Bowlby S. and Tillsley C. (1996): The changing place of retailer-supplier relations in British retailing, in: Lowe M., Wrigley N. (1996) (Eds.): Retailing, Consumption and Capital, London
Franklin A. W. (2001): The Impact of Wal-Mart Supercenters on Supermarket Concentration in U. S. Metropolitan Areas, Agribusiness 2001, pp. 105-114
Fujita M. P., Krugman P. and Venables A. (1999): The Spatial Economy: Cities, Regions, and international Trade, Cambridge, MA
Gabel L. (1983): The Role of Buyer Power in Oligopoly Models: An Empirical Study, Journal of Economics and Business 1983, pp. 95-108
Gabrielsen T. S. , Sorgard L. (1999): Discount Chains and Brand Policy, Scandinavian Journal of Economics 101, pp. 127-142
Gaitanides M., Westphal J. (1990): Nachfragemacht und Erfolg, Zeitschrift für Betriebswirtschaft 1990, pp. 135-153
Galbraith C. S., Stiles C.H. (1983): Firm Profitability und Relative Firm Power, Strategic Management Journal Vol. 4, p.237-249
Galbraith J. K. (1954): „Countervailing power". American Economic Review, Papers and Proceedings, 44 (May 1954), pp. 1-6
Galbraith J.K.: American Capitalism: The Concept of Countervailing Power, 1952
Gallizzi G., Venturini L. (1999) (Eds): Vertical Relationships and Coordination in the Food System. New York
Gaski J.- F. (1984): The theory of power and conflict in channels of distribution, Journal of Marketing 1984, pp. 9-29
Guth L.A., Schwartz R. A., Whitcomb D.K. (1976): The Use of Buyer Concentration in Tests of Oligopoly Models, Review of Economics and Statistics, pp. 488-492
Guth L.A., Schwartz R. A., Whitcomb D.K. (1977): Buyer Concentration Ratios, Journal of Industrial Economics 25, pp. 241-258
Hahn F. (1990): „Kapitalproduktivität in der Österreichischen Industrie", WIFO-Working Paper, Wien

Hallsworth A. G., Taylor M. (1996): „Buying" Power – Interpreting Retail Change in a Circuits of Power Framework. Journal of Retailing 1996, pp. 2125-2137
Hay D., Morris D. (1979): Industrial Economics, Oxford University Press 1979
Hughes A. (1996): Forging new cultures of food retailer-manufacturer relations?, in: Lowe M., Wrigley N. (1996) (Eds.): Retailing, Consumption and Capital, London
Ijiri Y. (1971): Effects of Mergers and Acquisitions, on Business Firm Concentration, Journal of Political Economy 1971, pp. 314-322
Kaas K. P., Gegenmantel R. (1995): Ökonomische Determinanten der Macht auf dem Lebensmittelmarkt. Zeitschrift für Betriebswirtschaft, 1995, pp. 885-904
Kartte W. (1989): Konzepte des Bundeskartellamtes zur Erfassung von Nachfragemacht des Handels. In: Andrea C. – A., Kichhof J., Pfeifer G. (Hg): Wettbewerb als Herausforderung und Chance. Festschrift für Walter Benisch, Köln, 1989 pp. 59-82

Kartte, W. (1989): Die Konzentration im Lebensmittelhandel aus der Sicht des Bundeskartellamtes, zit. in: Gröner, H., Hrsg.(1989): Wettbewerb, Konzentration und Nachfragemacht im Lebensmittelhandel
Kaufer E. (1980): Industrieökonomik,
Krishnan T. V., Soni H. (1997): Guaranteed Profit Margins. A demonstration of Retailer Power. International Journal of Research in Marketing 14, 1997, pp. 35-56
Krugman, P. 1998: Whats´s New about New Economic Geography? – Oxford Review of Economic Policy 14: 7-17
Krugman, P. 2000: Where in the World is the „New Economic Geography"? – In: Clark, G.L., M.P. Feldman and M. S. Gertler (eds): The Oxford Handbook of Economic geography.-Oxford: 49-60
Lademann R. (1996): Marktstruktur und Wettbewerb in der Ernährungswirtschaft. Eine empirische Analyse der Konzentrationsentwicklung und Marktkräfte in Industrie und Handel. Bd. 44, Göttingen 1996
LaFrance V. A. (1979): The Impact of Buyer Concentration – an Extension. The Review of Economics and Statistics, pp. 475-476
Lal R., Narasimhan Ch. (1996): The Inverse Relationship Between Manufacturer and Retailer Margins: A Theory, Marketing Science Vol 15, No.2, 1996, pp. 132-151
Lev R., Narasimhan C. (1996): The Inverse Relationship between Manufacturer and Retailer Margins: A Theory, Marketing Science Vol 15, No. 2, 1996, pp. 132-151
Levy D. (1993): Comment on „Small Firms and Merger-Mania", Small Business Economics 5, 1993, pp. 319-322
Lewis P., Thomas H. (1990): The Linkage between Strategy, Strategic Groups, and Performance in the U. K. Retail Grocery Industry, 1990, pp. 385 - 397
Lowe M., Wrigley N. (1996) (Eds.): Retailing, Consumption and Capital, London
Lustgarten S. H. (1975): The Impact of Buyer Concentration in Manufacturing Industries, Review of Economics and Statistics 57, May 1975, pp125-132
Lustgarten S. H. (1976): The Use of Buyer Concentration Ratios in Tests of Oligopoly Models: Reply, Review of Economics and Statistics, 1976, pp.492-494
MacDonald J. M. (1985): Market Exchange or Vertical Integration: an Empirical Analysis, Review of Economics and Statistics, pp.327-331
Machlup F., Taber M. (1960): Bilateral Monopoly, Successive Monopoly, and Vertical Integration. Economica 1960, pp. 101-119
Marion B. W., Kim D. (1991): Concentration Change in Selected Food Manufacturing Industries: The Influence of Mergers vs. Internal Growth. Agribusiness 1991, pp. 415-433
Marion B. W., Mueller W. F., Cotterill R. W., Geithman F. E., Schmelzer J. R. (1997): The Price and Profit Performance of Leading Food Chains. The American Journal of Agricultural Economics, 1979, pp. 420-433
Marsden T., Wrigley N. (1996): Retailing, the food system and the regulatory state, in: Lowe M., Wrigley N. (1996) (Eds.): Retailing, Consumption and Capital, London
Martin S. (1979): Entry Barriers, Concentration and Profits, Southern Economic Journal 1979, pp. 471-488
Martin S. (1979a): Advertisting, concentration, and profitability: the simultaneity problem. Bell Journal of Economics, 10 (2), pp. 639-647
Martin S. (1982): Industry Demand Characteristics and the Structure-Performance Relationship, Journal of Economics and Business, 1982, pp. 59-65
Martin S. (1983): „Vertical Relationships and Industrial Performance", Quarterly Review of Economics and Business 1983, pp. 6-18
Martin S. (1986): Causes and effects of vertical integration, Applied Economics, 1986, 18, pp. 737-755
Martin S. (1988): Market Power and/or Efficiency. The Review of Economics and Statistics, 1988, pp. 331-335
Martin S. (1993): Advanced Industrial Economics, Cambridge, MA
Martin, S. and Ravenscraft, D. J. (1982): Aggregation and studies of industrial profitability. Economics Letter, 10, pp. 161-165
McGuckin R., Chen H. (1976): Interactions between Buyer and Seller Concentration and Industry Price-Cost Margins, Industrial Organization Review 1976, pp. 123-133
McLaren J. (2000): "Globalization" and Vertical Structure, The American Economic Review, pp. 1239-1253
Messinger P. R., Narasimhan C. (1995): Has Power shifted in the Grocery Channel?, Marketing Science Vol 14, No. 2, 1995, pp. 189-223
Miller R. A. (1967): Marginal Concentration Ratios and Industrial Profit Rates. Some empirical Results of Oligopoly Behaviour, Southern Economical Journal, 1967, pp. 259-267
Morrison Paul Catherine J. (2001): Cost Economies and Market Power: the Case of the U. S. Meat Packing Industry, Review of Economics and Statistics 2001 pp. 531-540
Mueller D. C. (1985): Mergers and Market Share. Review of Economics and Statistics 67, 1985, pp. 261-66
Mueller D. C. (1986): Profits in the Long Run. Cambridge University Press, Cambridge, England
Mueller D. C. (1990): The Dynamics of Company Profits. Cambridge: Cambridge University Press.
Mueller W. F. (1978): The Control of Agricultural Processing and Distribution. American Journal of Agricultural Economics 1978, pp. 848-855

Mueller W. F., Hamm L. (1974): Trends in Industrial Market Concentration. The Review of Economics and Statistics 1974, pp. 511-520
Munroe S. (2001): Retail Structural Dynamics and the Forces Behind Big-Box Retailing, The Annals of Regional Science, p. 357 ff
Newmark C. M. (1989): Administrative Control, Buyer Concentration, and Price-Cost Margins, Review of Economics and Statistics, 1989, pp. 74-79
Newmark C. M. (1990): A New Test of the Price-Concentation Relationship in Grocery Retailing, Economics Letters 1990, pp. 369-373
Nowotny E. (1979): Zur "Machtlosigkeit" der Wirtschaftswissenschaft. In: K. Laski, Matzner, E. Nowotny. Hsg.: Beiträge zur Diskussion und Kritik der neoklassischen Ökonomie. Festschrift für K. W. Rothschild und J. Steindl, Springer Verlag, Berlin 1979
OECD (1981): Buying Power: The exercise of market power by dominant buyers, Report of the committee of Experts on Restrictive Business Practices, OECD, Paris
OECD (1998): Roundtable on Buying power – background paper by the Secretariat, Paris, Internet
OECD (1999): Buying Power of Multiproduct Retailers, Paris, Internet
Perry M. K. (): Vertical Integration: Determinants and Effects; in: in: R. Schmalensee and R. D. Willig (eds.), Handbook of Industrial Organization, II, Amsterdam, New York
Poole R., Clarke G. P. and Clarke D. B. (2000): Growth, Concentration and Regulation in European Food Retailing, European Urban and Regional Studies, pp. 167-186
Porter M. (1974): Consumer Behavior, Retailer Power and Market Performance in Consumer Good Industries, Review of Economics and Statistics 56, November1974, pp. 419-435
Porter M. (1976): Interbrand Choice, Media Mix and Market Performance, AER 1976, pp. 398-406
Porter M. (1981): The Contributions of Industrial Organization to Strategic Management, Academy of Management Review, 1981, pp. 609-620
Porter M. (1979): The Structure within Industries and Companies' Performance, Review of Economics and Statistics 1979, pp. 214-227
Porter, M. E. (1980, Ausgabe 1998): Competitive Strategy - Techniques for Analyzing Industries and Competitors, The Free Press, New York
Ravenscraft D. J. (1983): Structure-Profit Relationships at the Line of Business and Industry Level, Review of Economics and Statistics 1983 pp. 21-31
Rogers R. T. (2001): Structural Change in U.S. Food Manufacturing, 1958-1997, Agribusiness, Vol. 17 (1) pp. 3-32 (2001)
Rothschild K.W. (2002): The absence of power in contemporary economic theory, Journal of Socio-Economics, pp. 433-442
Rudolph H. (2001a): Der Lebensmitteleinzelhandel als Treiber weltregionaler Warenketten, in: Rudolph H. (Hg.), (2001): Aldi oder Arkaden? – Unternehmen und Arbeit im europäischen Einzelhandel, Berlin
Scherer, F.M, Ross D. (1990): Industrial Market Structure and Economic Performance, 3rd ed., Boston
Schmalensee R. (1977): „Using the H index of concentration with published data", Review of Economics and statistics, 59: pp. 186-193
Schmalensee R. (1985): Do markets differ much? American Economic Review 1985, pp. 341-352
Schmalensee R., Willig R. D. (1989) (Eds.): Handbook of Industrial Organization, vol 2, 1989
Schneider, F. (1991): „Efficiency and Profitability – An Inverse Relationship according to the Size of Austrian Firms?,", Small Business Economics 3, pp. 287-296
Schneider, F. (1993): The Relationship between Efficiency and Profitability with Respect to the Size of Firms. An Empirical Investigation for Austria, Empirica 1993, pp. 245-264
Schumacher U. (1991): Buyer Structure and Seller Performance in U. S. Manufacturing Industries, Review of Economics and Statistics 1991, pp. 277-284
Shepherd W. G. (1997): The Economics of Industrial Organization, 4th ed.
Snyder C M. (1996): A dynamic theory of countervailing Power, RAND Journal of Economics, pp. 747-769
Snyder C M. (1998): Why do larger buyer pay lower prices? Intense supplier competition, Economics Letters pp. 205-209
Stigler G. J. (1954): The Economist Plays with Blocs. American Economic Review, Papers and Proceedings, 44, 1954, pp. 7-14
Stigler G. J. (1964): A Theory of Oligopoly. Journal of Political Economy, Feb. 1964, pp.44-61
Stocking G. W., Mueller W. F.(1957): Business Reciprocity an the Size of Firms, The Journal of Business, XXX, April 1957, pp. 73- 95
Sutton J. (1990): Explaining Everything, Explaining Nothing? Game Theoretic Models in Industrial Economics, European Economic Review 34, pp. 505-512
Sutton J. (1992): Sunk Costs and Market Structure. MIT Press, Cambridge
Tirole J., 2. Aufl., (1999): Industrieökonomik, München
Ungern-Sternberg T. (1996):"Countervailing power revisited". International Journal of Industrial Organization, 1958, 14:507-20

Utton M. A. (1986): Profits and Stability of Monopoly, 1986, Cambridge
Veendorp E. C. H. (1987): „Oligoemporistic Competition and the Countervailing Power Hypothesis“, Canadian Journal of Economics 1978, pp. 519-526
Vickers J., Waterson M. (1991): Vertical Relationships: an Introduction, The Journal of Industrial Economics 9/1991
Waldman D. E., Jensen El. (2001): Industrial Organization, Theory and Practice, Second Ed.
Waterson M. (1984): Economic Theory of the Industry. Cambridge
Waterson, M. (1980): „Price-cost margins and successive market power“. Quarterly Journal of Economics, vol. 94, pp. 135-150
Weiss Ch.. (1994): Market structure and Pricing Behaviour in Austrian Manufacturing, Empirica 1/94
Weiss, Ch. (1993): Price inertia and market structure - Empirical evidence from Austrian manufacturing, Applied Economics, 1993, 25, 1175-1186
Weizsäcker, C. F. (1993): The Division of Labour and Market Structure, Empirica 1993, pp. 241-244
Wrigley N. (1996): Sunk costs and corporate restructuring. British food retailing and the property crisis, in: Lowe M., Wrigley N. (1996) (Eds.): Retailing, Consumption and Capital, London
Wrigley N. (2000): The Globalization of Retail Capital: Themes for Economic Geography. In Clark G. L., Feldmann M., Gertler M. S. (Eds.), The Oxford Handbook of Economic Geography pp. 292 – 313. Oxford
Wrigley N. (2001): The Consolidation Wave in U. S Food Retailing: A European Perspective. Agribusiness Vol. 17, 2001, pp. 489-513
Wrigley N., (1997), Exporting the British Model of Food Retailing to the US: Implication for the EU-US Food Systems Convergence Debate, Agribusiness 1997/2 p 137-152
Zhiqi Chen (2001): Dominant Retailers and the Countervailing Power Hypothesis. Carleton Economic Papers CEP 01-05, Ottawa