



Preliminary Version

Perceived Price Fairness in the Airline Industry – A customer perspective

SiB Kongress –

Wirtschaftskongress der Hochschule Bremen

Aviation Student Research Workshop (G.A.R.S. e.V.)

June 9 – 10, 2005

Dipl.-Kfm. Mark Friesen

Institute for Public Services and Tourism (IDT-HSG)

University of St. Gallen

9000- St. Gallen

Switzerland

E-mail: mark.friesen@gmx.de



Universität St.Gallen

Perceived Price Fairness in the Airline Industry – A customer perspective

Dipl.-Kfm. Mark Friesen

Institute for Public Services
and Tourism (IDT-HSG)
Prof. Dr. Thomas Bieger
University of St. Gallen
CH-9000 St. Gallen

E-mail: mark.friesen@gmx.de

June 5, 2005

Abstract

The issue of transparency and plausibility that face customers when booking a flight raises the question of cognitive overburdening. As a response to a non-linear, discriminating airline pricing system customers perceive price fairness or unfairness if the price paid does not match their notion. The theoretical construct of perceived price fairness is not yet comprehensively studied in behavioural pricing research. In addition, traditional microeconomics seems to fall short in explaining consumer confusion and uncertainty due to airline revenue management systems. The Ph. D. thesis tries to close the scientific gap by introducing a research design that - based on demand-based pricing theory - is composed by a synthesis-model covering the whole purchasing process. The research design accounts for the compensatory and unstable character of perceived price fairness.

As a theoretical construct should be tested in a real-world setting qualitative and quantitative research methods are applied. The qualitative part is dominated by determining the antecedents of price fairness, while the following quantitative section is intended to validate the findings and illustrate possible consequences of perceived price fairness on a companies' level.

1. Introduction

In contrast to traditional microeconomic theory the price is considered to be the equivalent for customers' perceived utility in the eyes of demand-based pricing scientists. However, setting prices to create customer value requires some insights of how a service or product can create additional value for the customer. The *theory of behavioural pricing or value pricing* try to overcome the shortcomings of classical economic theory (price-demand function, homo oeconomicus) by introducing the price as the focal point of consideration from a customer perspective (Belz and Bieger (2004)).

Revenue Management or Yield Management (used synonymously in this paper) in the service industry can lead to a higher monetary and non-monetary burden for the customer due to the sometimes complex and less transparent price (= tariff) structure. Highly extensive revenue management in the airline industry can lead to confusion and uncertainty within the group of price-sensitive (high price elasticity) passengers. The emergence and success of *Low Cost Airlines (LCAs)* with an innovative business model (homogeneous service) and a straightforward fare structure underlined the importance of a fair pricing scheme (Bieger et al. (2005); Bieger et al. (2002)).

A rather *small body of empirical research* has been conducted in the past years to explore the antecedents and consequences of perceived price fairness. (e.g. Kahnemann et al. (1986)). However, the few studies which dealt with the topic of price fairness of revenue management (e.g. Kimes (2002)) have found that although customer show some behaviour of habituation (norm theory) price discrimination by and large still leads to perceptions of unfairness among customers, especially in the airline industry. As Xia/Monroe/Cox (2004) state that „Research in the area of price fairness has been sparse until recently.“, there is still need for additional research of the theoretical construct of perceived price fairness.

Based on the formulation of the problem the *Ph.D. thesis is aimed to come to realize* that first, the construct of perceived price fairness have to be operationalized in the context of new fare structures in the airline industry, second, contrary to the static and isolated view of previous research, perceived price fairness should be proven to be a dynamic construct of compensatory and changing nature during the whole purchasing process and finally, that the quantifiable consequences of perceived price fairness/unfairness are of high importance for a service company, like an airline.

Since the dynamic character of perceived price fairness from a customer perspective should be proven, a *synthesis-model* is applied. A three-step longitudinal model divided into a Pre-Purchase, Decision and Post-Purchase phase is combined with a decision making model (S-O-R or S-R) to capture the multi-attributive character of perceived price fairness. *Basic theorems of psychology and sociology*, i. e. psychophysics, adaption-level-theory, assimilation-contrast-

theory, equity theory, prospect theory and mental accounting are incorporated to serve as theoretical explanation.

In a first explorative step the construct of perceived price fairness within the three phases of the purchasing process is addressed by *qualitative research*, i. e. desk research, focus groups and interviews with experts. In a next step the generated items are tested on validity and reliability by conducting *quantitative research* (scenario based surveys, field surveys and experiments).

2. Theoretical Background

Besides the *particularities of services* (Uno Actu Principle, Intangibility, Perishability, Integration of the external factor; (cf. Bieger (1998)) the price as the vehicle of the marketing-mix to influence both, revenues/profits and customer behaviour significantly, is crucial in customer value research (Commercialization) (Belz/Bieger (2004)). As the purchase of a particular service, e.g. a flight from Bremen to Frankfurt, is made well in advance of the consumption of the service, a transparent communication based on the values of the service is inalienable to absorb the maximum willingness of payment.

Based on a *behavioural and demand-based research perspective* the price is seen as an equivalent for the perceived utility of a service and not seldomly as the key to customer satisfaction. Kahnemann et al. (1986) were among the first economists to explore the antecedents and consequences of price fairness (dual entitlement principle, prospect theory). Former philosophical and sociological approaches of fairness date back two centuries ago, when Aristoteles or Plato wrote down their paradigms. Price fairness as considered to be a part of marketing research though is a quite recent research stream, which - for a better understanding - should be defined in the following. The quotations are based on the few international and national publications in the field of price fairness research:

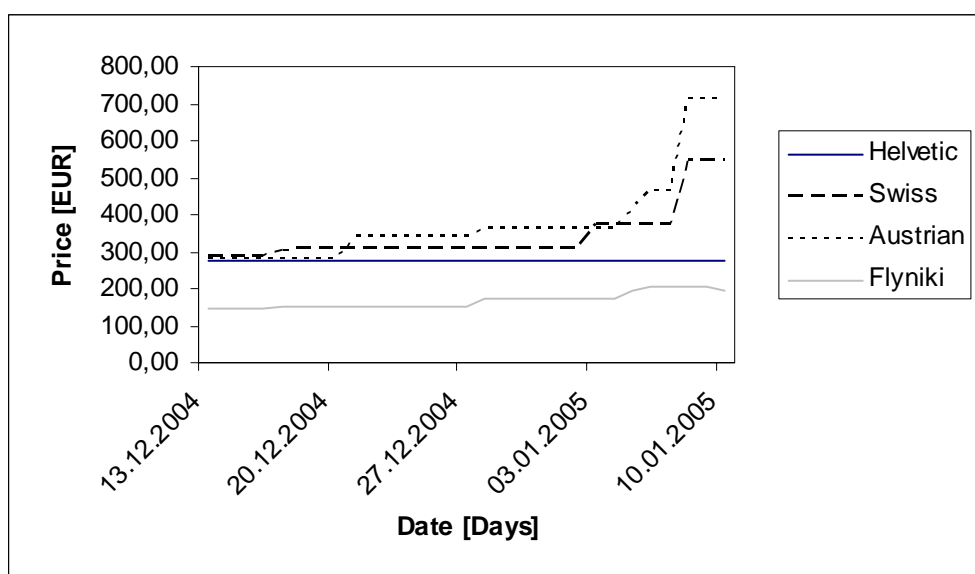
- *”[Price] Fairness has been defined as a judgement of whether an outcome and/or the process to reach an outcome are reasonable, acceptable or just.“ (Xia/Monroe/Cox, 2004, p. 1)*
- *”A customer who pays more for a similar service and cannot perceive a difference in the service may view this situation as unfair.“ (Kimes, 2002, p. 21)*
- *“Preisfairness, d. h. die bewusst oder unbewusst von Gerechtigkeitsüberlegungen geprägten Wahrnehmungen der Transaktionsbedingungen und Abläufe.“ (Diller, 2002, p. 165)*
- *“[...] als eine minimale Differenz zwischen erwartetem und tatsächlichem Produktpreis.“ (Herrmann/Wricke/Huber, 2000, p. 134)*
- *“d.h. Verzicht auf die Bevorteilung des Kunden“ (Diller, 1997, p. 760)*

All definitions have in common that in order to derive a fairness judgement a customer has to make a comparison between expected reference (referent) and the actual service level. In doing so the customer's cognitive process cannot be viewed on an isolated basis but as an interaction with other customers, other reference services experienced in the past or more recently and his own norms and values.

3. Problem

Since the beginning of the 80s airlines operate *revenue management systems* as a reaction to the deregulation in the US (and later also in the EU) as well as to the emergence of new entrants with much lower fares (Alderighi et al. (2004)). By applying revenue management airlines and other service industries make use of temporal, local and service-orientated price discrimination (see figure 1). It is beyond the scope of this paper to introduce the concept of price differentiation, inventory control and revenue management in more detail.

Figure 1 Itinerary for a return flight Zurich-Vienna-Zurich



Source: Own presentation (2005).

Revenue management in the transport sector is practiced by airlines as well as by hotels, rental car companies or cruise lines.

From a *customer perspective* this dynamic, non-linear pricing strategy enhances the complexity, as the customer is unable to understand when, how and why prices (or tariffs in the airline industry) change. Since such pricing systems are perceived to be less transparent, customers react by increased stress and risk perception because monetary and non-monetary consequences of a flight booking are not anticipatable (Bieger et al. (2005)).

Airlines are forced to promote prices for a ticket by aggressively advertising deep discount fares due to the extreme price sensitivity of airline customers. A distinction between highly price-sensitive, time-elastic leisure travellers and price-insensitive, time-inelastic business passengers is not valid anymore. As customers get accustomed to cheap/free fares their reference price as well as their reservation price begins to erode. Not getting a cheap fare, will

consequently lead to a feeling of injustice and unfairness. Moreover, the great dispersion of airline ticket prices (EUR 29.00 six weeks before departure and EUR 219.00 go-show fare) can cause consumer confusion, too.

In order to orientate the price to customer value, a company needs to know, how it can *create additional value for the customer*. The shortcomings of traditional economics have been addressed, so that behavioural pricing theory with its understanding of bounded rationality serves as the theoretical background for deriving the first explorative hypotheses:

- (i) *The construct of perceived price fairness have to be operationalized.*
- (ii) *Perceived price fairness is of compensatory and unstable nature during the whole purchasing process.*
- (iii) *A fair price structure has some quantifiable consequences for a service company.*

The fruitful lack of research in the area of perceived price fairness can be impressively demonstrated by the following quotes:

- *“Research in the area of price fairness has been sparse until recently.” (Xia/Monroe/Cox, 2004, p. 10)*
- *“The psychology of pricing has been neglected almost completely.” (Shapiro, 2000, p. 14)*
- *“Die Preisfairness ist bisher [...] wissenschaftlich wenig durchleuchtet.” (Diller, 2002, p. 183)*
- *“Auch die vor allem für die Wirkung von Preisverhandlungen wichtige Preisfairneß ist bisher wissenschaftlich wenig durchleuchtet und nur allgemein als Gerechtigkeitsempfinden tiefer analysiert.” (Diller, 1999, p. 42)*
- *“Unberücksichtigt bleiben dabei freilich Imageaspekte, etwa die von den Kunden empfundene (Un-)fairneß solcher Preissysteme“ (Diller, 1999, p. 47)*
- *“Eine Zusammenfassung der Literatur zur Preisfairness lässt erkennen, dass dieses Konstrukt für die Erklärung und Prognose des Kaufverhaltens eine zentrale Bedeutung besitzt.” (Herrmann/Wricke/Huber, 2000, p. 133)*

4. Research Question and Objective

Based on the problems described above and the need for further research the *main research question* of this Ph.D. project can be formulated as follows:

What consequences do airline revenue management pricing systems have on perceived price fairness during the whole purchasing process?

As *partial questions* of this overriding research question could be identified:

- (i) *Which attributes of a revenue management system does the customer/customer type perceive as being fair?*
- (ii) *Is there a difference in the perceived price fairness due to specific environmental conditions (booking channel, socio-demographic factors etc.)?*
- (iii) *Which price fairness attributes have a particularly great influence on the customer's reaction?*
- (iv) *How can a price discriminating fare structure create customer value throughout the whole purchasing cycle?*

Considering the particularities of the service “airline” the *objective* of the Ph. D. thesis is to derive a normative rule for the antecedents and consequences of a discriminating, but fair price system. This would lead to some fruitful theoretical and some interesting practical discoveries.

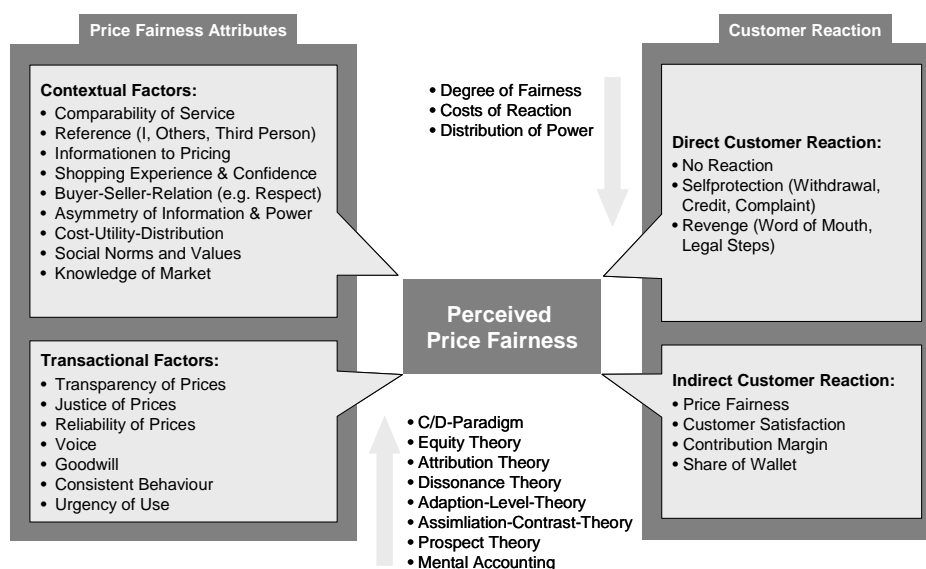
The *contribution to academia* is based on the synthesis-research model which covers the whole purchasing process of buying an airline ticket. By operationalizing the theoretical construct of perceived price fairness the determinants would be uncovered. In a second research step the consequences of a fair pricing model on the customer's reaction should be tested.

The investigation of the consequences of perceived price fairness during the purchasing cycle is one of the *practical contributions* of this thesis. Moreover, an awareness for the perceived fairness of a non-linear pricing system should be realized among business leaders of service companies. Finally, an optimum of perceived price fairness should be determined by running some simulations.

5. Method

For a preliminary explorative classification of the construct “perceived price fairness” a differentiation could be drawn between *contextual and transactional attributes of price fairness*. Based on previous research the latter regards the transparency of the transaction to be the most important item whereas the contextual attributes apply to the personal and emotional relation between demand and supply. For a better understanding of the cognitive digestion of price fairness *basic theorems of psychology and sociology*, i. e. psychophysics, adaption-level-theory, assimilation-contrast-theory, equity theory, prospect theory and mental accounting are incorporated. It is beyond the scope of this paper to introduce every theory in more detail (see figure 2).

Figure 2 Classification of the construct perceived price fairness



Source: Own presentation (2005).

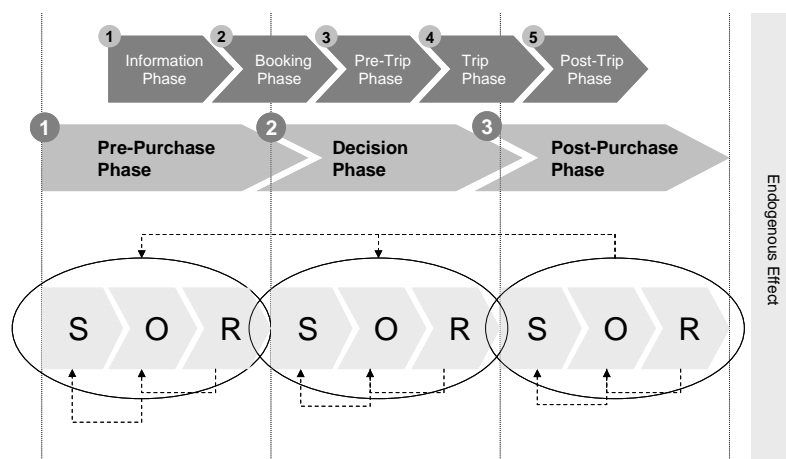
The degree of price fairness of a price-discriminating tariff system causes a customer reaction which could be divided into a *direct component* and an *indirect, more long-term reaction*.

Based on his own fairness perception, the costs of his reaction and the inherent distribution of power the consumer will show either a positive or a negative reaction. The indirect, long-term effect on the companies' level is not directly measurable (see figure 2).

The *model for explaining the formation of price fairness* is based on a five step procedural buying-decision-model of Engel et al. (1978) or a three step model by Pohl (2004), respectively. For examining the *reactions endogenous the purchasing process* it is imperative to understand the cognitive reception and formation process of the customer. Therefore a

stimulus-organism-response (S-O-R) model is applied. A price stimulus is caused either by an endogenous or exogenous factor, processed in the organism of the customer and finally causing a reaction. It has to be acknowledged that between the phases exist certain interdependences, for which have to be controlled during the research process (e.g. by iteration) (see figure 3).

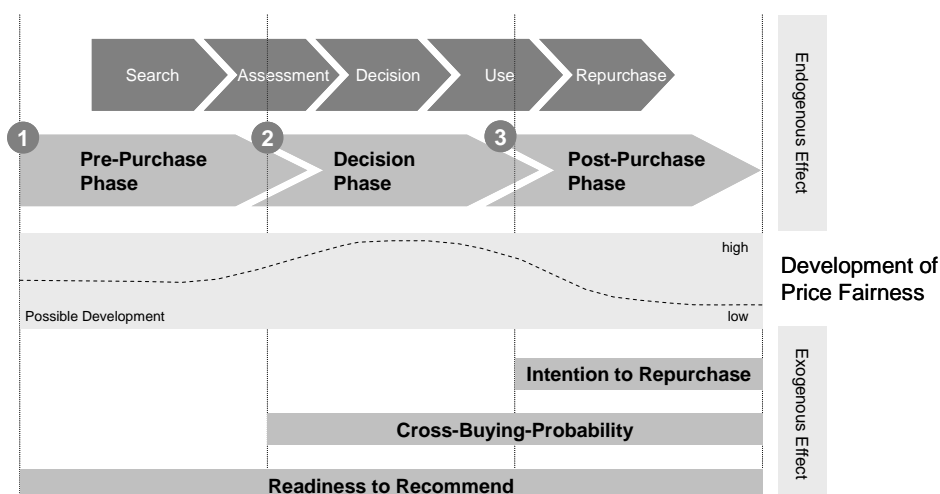
Figure 3 Formation of price fairness during the purchasing process



Source: Own presentation (2005).

Based on the three-step process model of Pohl (2004) and the hypothesis of a compensatory price fairness perception the effect of price fairness aims at the *reactions exogenous the purchasing process* (see figure 4).

Figure 4 Effect of price fairness during the purchasing process

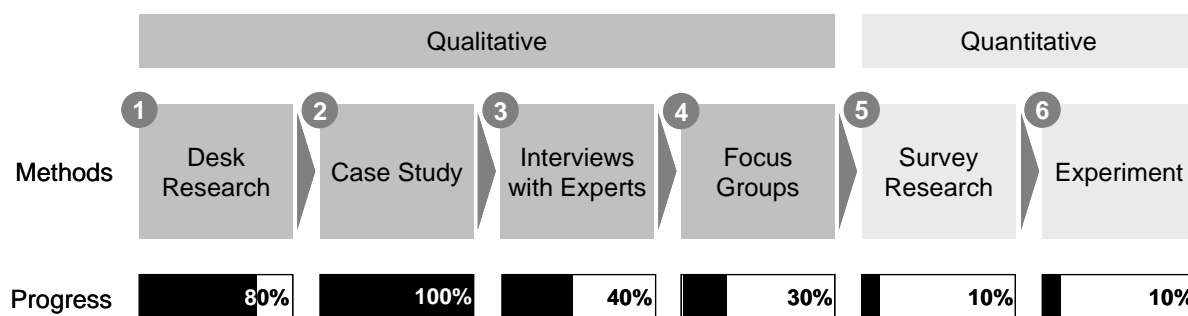


Source: Own presentation (2005).

With *exogenous effects* the more long-term, indirect causes of perceived price fairness are captured which - dependent on each purchasing phase - could be divided into intention to repurchase, cross-buying-probability and readiness to recommend. The proven objective of the effect model is therefore to derive quantifiable customer reactions on a fair pricing system in order to give recommendations to business executives.

The *research method of the dissertation* is based on methodical pluralism of *qualitative* and *quantitative* research. As desk research and a case study are meant to give a first glimpse of the topic of interest further interviews with airline executives, consultants and leading scientists in the field of price fairness research should enhance the understanding of the particularities of the research topic. Focus group interviews with different types of customers should validate the understanding of attributes of fair/unfair non-linear pricing systems. The purpose of the second *quantitative part* is to test the hypotheses derived in the first part of the thesis. Survey research is conducted to test under real-life conditions. Experiments are used to manipulate the independent variables. The main focus will be put on survey research (see Figure 5).

Figure 5 Course and progress of the research methods



Source: Own presentation (2005).

6. Conclusion

The issue of transparency and plausibility that face customers when booking a flight raises the question of cognitive overburdening. As a response to a non-linear, discriminating airline pricing system *customers perceive price fairness or unfairness* if the price paid does not match their notion. The theoretical construct of perceived price fairness is not yet comprehensively studied in behavioural pricing research. In addition, traditional microeconomics seems to fall short in explaining consumer confusion and uncertainty due to airline revenue management systems. The Ph. D. thesis tries to close the scientific gap by introducing a research design that - based on demand-based pricing theory - is composed by a synthesis-model covering the whole purchasing process. The research design accounts for the compensatory and unstable character of perceived price fairness.

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References

- Alderighi, Marco/Cento, Alessandro/Nijkamp, Peter/Rietveld, Piet (2004):** The Entry of Low-Cost Airlines, Tinbergen Institute Discussion Paper, Amsterdam/Rotterdam 2004, S. 1-27.
- Belz, Cristian/Bieger, Thomas (2004):** Customer Value: Kundenvorteile schaffen Unternehmensvorteile, Frankfurt 2004, S. 373 ff.
- Bieger, Thomas/Beritelli, Pietro/Weinert, Robert (2005):** Kundenwert durch neue Preissysteme im Tourismus – Ein neues Feld für Dienstleistungsinnovationen, in: Erfolg durch Innovation – Perspektiven für den Tourismus und Dienstleistungssektor. Festschrift für Klaus Weiermair zum 65. Geburtstag, Wiesbaden 2005, o. S.
- Bieger, Thomas (1998):** Dienstleistungsmanagement: Einführung in Strategien und Prozesse bei persönlichen Dienstleistungen mit Fallstudien verschiedener Praktiker, Bern 1998.
- Bieger, Thomas/Bickhoff, Nils/Casper, Rolf/Zu Knyphausen-Aufsess, Dodo/Reding, Kurt (2002):** Zukünftige Geschäftsmodelle, Berlin 2002.
- Diller, Hermann (1997):** Preis-Management im Zeichen des Beziehungsmarketing, in: Die Betriebswirtschaft, 57. Jg., Heft 6, S. 749-763.
- Diller, Hermann (1999):** Entwicklungslinien in Preistheorie und -management, in: Marketing ZFP, Heft 1, 1. Quartal 1999, S. 39-60.
- Diller, Hermann (2000):** Preispolitik, 3., überarbeitete Auflage, Stuttgart/Berlin/Köln 2000, S. 202-207.
- Diller, Hermann (2002):** Zum Preisverhalten bei Dienstleistungen: Die "Preiszufriedenheit" verdient mehr Aufmerksamkeit, in: Erfolg durch Dienen?: Beiträge zur wertsteigernden Führung von Dienstleistungsunternehmen, Hinterhuber, Hans H./Stahl, Heinz K. (Hrsg.), Renningen 2002, S. 162-185.
- Diller, Hermann/Herrmann, Andreas (Hrsg.) (2003):** Handbuch Preispolitik, Wiesbaden 2003, S. 124-125, 395-398, 700-702.
- Engel, James F./Blackwell, Roger D./Kollat, David T. (1978):** Consumer Behavior, Winston 1978.
- Herrmann, Andreas/Wricke, Martin/Huber, Frank (2000):** Kundenzufriedenheit durch Preisfairness, in: Marketing ZFP, 2. Quartal 2000, Heft 2, S. 131-143.

- Kahnemann, Daniel/Knetsch, Jack/Thaler, Richard (1986):** Fairness as a Constraint on Profit Seeking: Entitlements in the Market, *American Economic Review*, Vol. 76, S. 728-741.
- Kimes, Sheryl E. (2002):** Perceived Fairness of Yield Management, in: *Cornell Hotel & Restaurant Administration Quarterly*, Vol. 43, Issue 1, S. 21-30.
- Nieschlag, Robert/Dichtl, Erwin/Hörschgen, Hans (2002):** *Marketing*, 19., überarbeitete, ergänzte Auflage, Berlin 2002, S. 531 ff.
- Pohl, Alexander (2004):** Preiszufriedenheit bei Innovationen: Nachfrageorientierte Analyse am Beispiel der Tourismus- und Airlinebranche, *Habil.*, Wiesbaden 2004.
- Schmidt, Inga D. (2004):** Kunden in Mehrkanalsystemen – Eine prozessorientierte Analyse des Kanalwahlverhaltens von Kunden in der Reisebranche, *Dissertation*, St. Gallen 2004, S. 136-151.
- Xia, Lan lxia/Monroe, Kent B./Cox, Jennifer L. (2004):** The Price Is Unfair! A Conceptual Framework of Price Fairness Perceptions, in: *Journal of Marketing*, Vol 68, Issue 4, S. 1-16.