

Dynamic Pricing in Stationary Retail – Business Opportunity or Entrepreneurial Risk?

AG Sitzung "Pricing & Revenue Management" 2022 February 18, 2022 (digital)



Prof. Dr. Andreas Krämer **exeo** Strategic Consulting AG Wittelsbacherring 24, 53115 Bonn andreas.kraemer@exeo-consulting.com

Prof. Dr. Wolfgang Merkle University of Europe for Applied Sciences Iserlohn Berlin Hamburg Wolfgang.merkle@ue-germany.com





- 1. Competitive landscape in stationary retail
- 2. Framework to evaluate Dynamic Pricing (DP)
- 3. The consumer's view of the DP
- 4. Challenges for DP seen by industry experts
- 5. DP the right answer in a VUCA world?



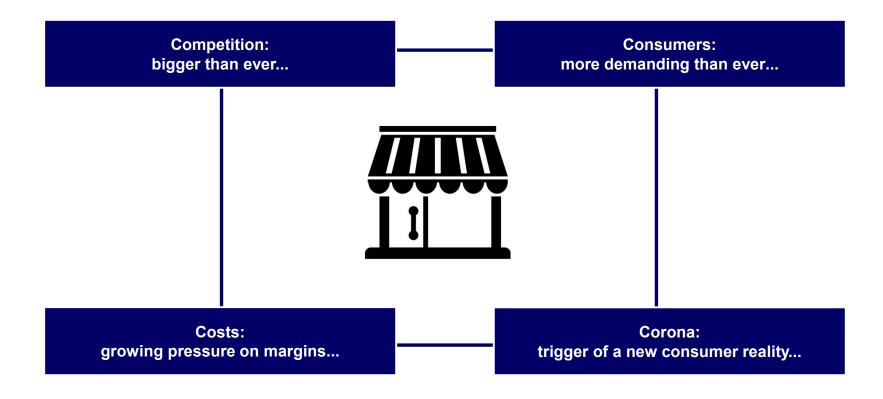
- 1. Competitive landscape in stationary retail
- 2. Framework to evaluate Dynamic Pricing (DP)
- 3. The consumer's view of the DP
- 4. Challenges for DP seen by industry experts
- 5. DP the right answer in a VUCA world?



Current situation of stationary retail: even higher challenges...



Important factors influencing the situation in stationary retail

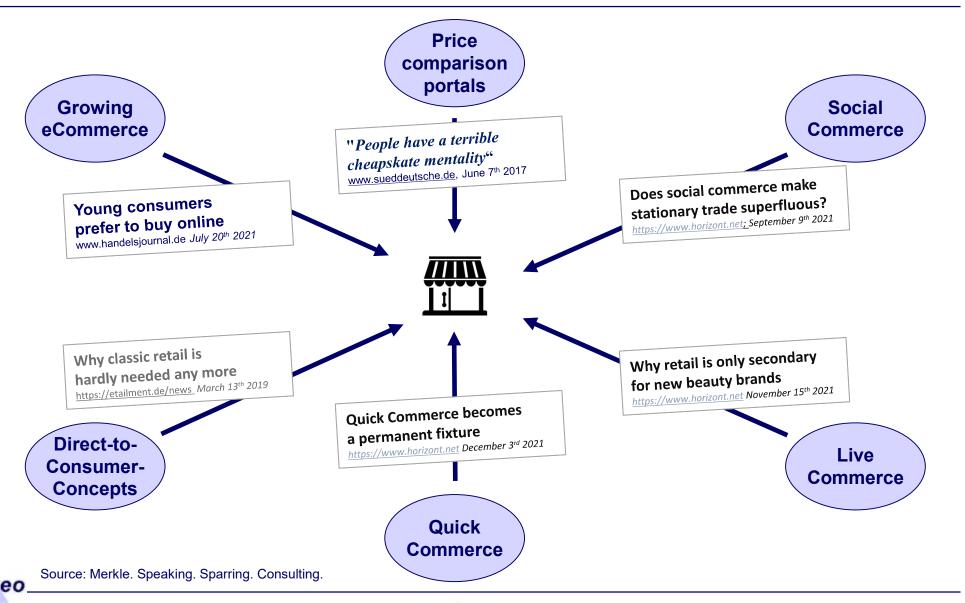




Source: Merkle. Speaking. Sparring. Consulting.

Competition – bigger than ever ...





Importance of price for the stationary retailers



Fast-acting instrument with direct influence in an increasingly competitive environment

"Pricing policy directly affects sales and profits - all other elements of marketing produce ... costs." Kaul, 2014

"Many companies have not yet realised that pricing is the most important profit driver in the company..."

Riekhof, 2015

"Digital Pricing - this is the key to better margins"

Huelson/Magnette/Moss/Prabhu, 2021



"What you have to achieve is that the customer gains the belief that he can't buy cheaper anywhere."

"Digital pricing - it's a growth engine; a real "pricing revolution"
Beutin/Kirchner/Demmelmair, 2020

"With targeted deployment, sales can be increased by five to seven percent ... profits by up to two percentage points"

Beutin/Kirchner/Demmelmair. 2020



Source: Merkle. Speaking. Sparring. Consulting.



- 1. Competitive landscape in stationary retail
- 2. Framework to evaluate Dynamic Pricing
- 3. The consumer's view of the DP
- 4. Challenges for DP seen by industry experts
- 5. DP the right answer in a VUCA world?



Digital Pricing as an established tool in digital business



Digital pricing - a competitive advantage for eCommere



Price willingness of consumers

Automated pricing

information



VERFÜGBARKEIT STORE 19 VERKAUFS-

> Algorithms / **Big Data**



Digital pricing transformations:

The key to better margins

McKinsey January 2021





Source: Merkle. Speaking. Sparring. Consulting.

Introduction of electronic price tags – opportunity for stationary retail?



Electronic price tags on the shelf – Possibility to dynamize prices...









Douglas looking good with price optimisation

www.retailtechnology.co.uk; August 2018

Schwarz-Gruppe

Lidl relies on electronic price tags

LebensmittelZeitung, October 2020

Retail invests in high-tech tags

www.stores-shops.de; 2020

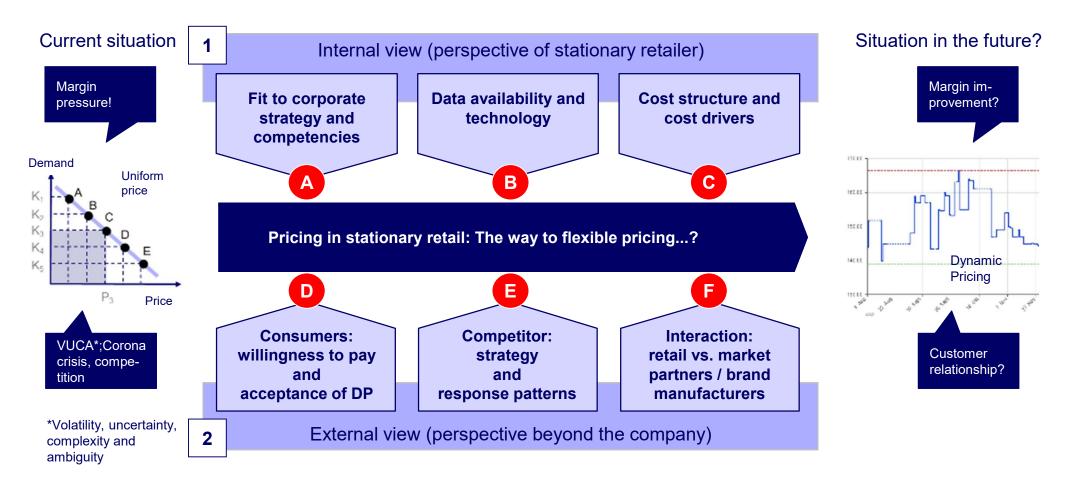


Source: Merkle. Speaking. Sparring. Consulting.

Different influencing factors for the implementation of a Dynamic Pricing (DP) approach



Influencing factors for the implementation of a Dynamic Pricing approach







- 1. Competitive landscape in stationary retail
- 2. Framework to evaluate Dynamic Pricing (DP)
- 3. The consumer's view of the DP
- 4. Challenges for DP seen by industry experts
- 5. DP the right answer in a VUCA world?



Consumer enthusiasm for dynamic pricing in retailing is rather limited – strongest rejection for pharmaceuticals



Study 1

Perceived Usefulness of dynamic pricing by product category (% of all respondents)¹⁾

| Product category | | Evaluation p | er category | Mean value | n=2,523 participants |
|-----------------------------------|-----|--------------|-------------|---------------|------------------------|
| Computers | 19% | 42% | 39% | 4,0 | (DACH + SWE). |
| Household appliances | 19% | 41% | 40% | 4,0 | Interviews via OAP |
| Watches and jewelry | 19% | 41% | 40% | 4,0 | 20.11.2020 to |
| Multimedia (movies, CD etc.) | 18% | 42% | 40% | 4,0 | 04.12.2020 |
| Clothing (textile) without sports | 19% | 39% | 42% | 4,1 | |
| Shoes | 19% | 38% | 43% | 4,1 | |
| Drugstore and perfumery goods | 18% | 39% | 42% | 4,1 | |
| Sports and camping goods | 16% | 43% | 41% | 4,1 | |
| Sportswear | 17% | 41% | 42% | 4,1 | Very useful |
| Furniture | 17% | 39% | 44% | 4,1 | (top-2) |
| Bicycles and accessories | 17% | 41% | 42% | 4,1 | Indifferent (medium-2) |
| Books, newspapers etc. | 16% | 41% | 43% | 4,2 | |
| Food | 18% | 34% | 47% | 4,2 | Not useful (low-2) |
| DIY articles | 16% | 39% | 45% | 4,2 | (10W-2) |
| Toys | 15% | 41% | 44% | 4,2 | |
| Stationery | 14% | 43% | 44% | 4,2 | |
| Gardening supplies | 14% | 41% | 45% | 4,2 | |
| Glasses and accessories etc. | 15% | 38% | 47% | 4,3 | |
| Zoo articles, animals | 15% | 37% | 48% | 4,3 | |
| Pharmaceuticals | 17% | 29% | 55% | 4,4 | |

¹⁾ In the retail industry, the topic of dynamic pricing is being discussed, in which product prices are adjusted more frequently. I.e. when demand increases, the price increases, when demand falls, the price falls. For which products would you find this useful? Please use a scale from 1 = "I think it makes a lot of sense" to 6 = "I don't think it makes sense".

Source: exeo Strategic Consulting AG / Rogator AG

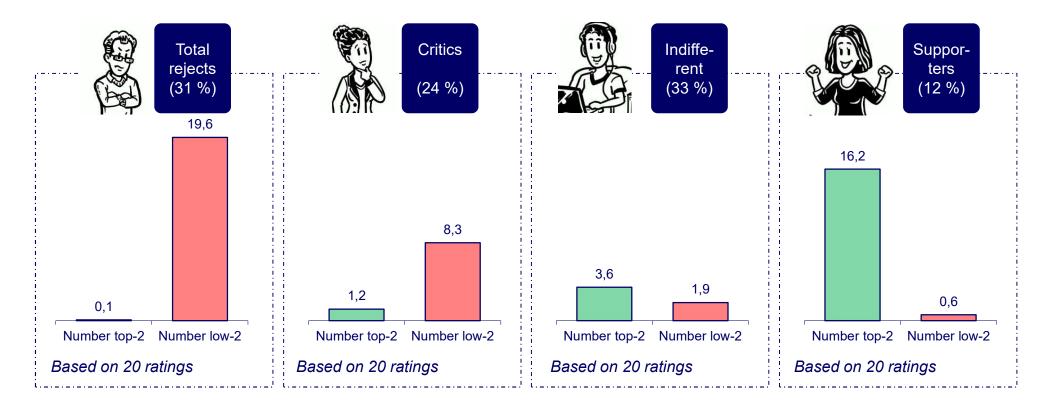


The consumer segment "total rejects" has a share of 31 % and oppose dynamic pricing in almost all 20 product categories



Study 1

Evaluation of dynamic pricing by product category (number of products with approval/disapproval)¹⁾



¹⁾ In the retail industry, the topic of dynamic pricing is being discussed, in which product prices are adjusted more frequently. I.e. when demand increases, the price increases, when demand falls, the price falls. For which products would you find this useful? Please use a scale from 1 = "I think it makes a lot of sense" to 6 = "I don't think it makes sense". Segmentation based on a K-Means clustering including the 20 individual ratings on the usefulness of dynamic pricing.



Source: exeo Strategic Consulting AG / Rogator AG



- 1. Competitive landscape in stationary retail
- 2. Framework to evaluate Dynamic Pricing (DP)
- 3. The consumer's view of the DP
- 4. Challenges for DP seen by industry experts
- 5. DP the right answer in a VUCA world?



Overall, retail experts see an increasing importance of dynamic pricing in stationary retailing (expert interviews, Apr. 2021)



Study 2

Current and future importance of dynamic pricing in stationary retail (% of all respondents)¹⁾

| Number of employees | n=91 experts |
|-------------------------|--------------|
| Up to 10 employees | 20 % |
| 11 bis 50 employees | 17 % |
| 51 bis <1.000 employees | 35 % |
| 1.000+ employees | 28 % |

| Business Unit | n=91 experts |
|---------------------------------|--------------|
| Marketing / Brand Management | 37 % |
| Management | 29 % |
| Others | 34 % |

| Evaluation | Currently | In the future (1-3 years) | | |
|---------------------|-----------|------------------------------|--|--|
| 1 = High importance | 5% | 15% | | |
| 2 | 7% | 32% | | |
| 3 | 11% | 26% | | |
| 4 | 16% | 8% | | |
| 5 | 40% | 14% | | |
| 6 = No importance | 21% | 4% | | |

¹⁾ In dynamic pricing, the product price is determined flexibly on the basis of market information (demand, competition, inventory, etc.). In your opinion, how important has dynamic pricing been (a) in stationary retailing to date and (b) how do you assess its importance in the next 1-3 years? Please use a scale from 1 = High importance to 6 = No importance for your answer; Interviews in Apr. 2021.



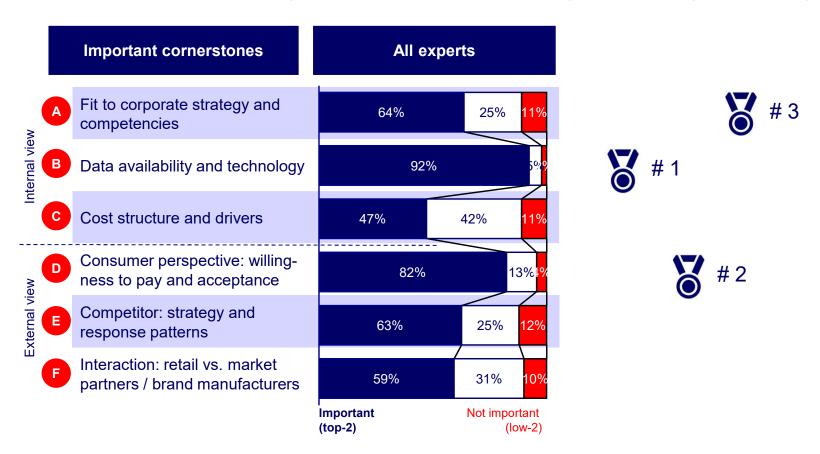


When introducing dynamic pricing, the most important aspects are data availability/technology and the consumer's point of view



Study 2

Retail experts – importance of key points in the introduction of dynamic pricing in stationary retailing¹⁾



1) Within the topic of dynamic pricing in stationary retailing, which of the following key points do you consider to be important or less important when introducing dynamic pricing? Scale from 1 = "High importance" to 6 = "No importance".

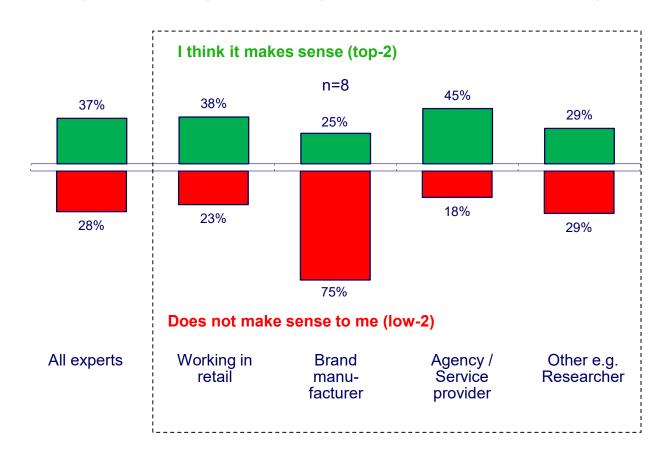


Manufacturers of branded goods tend to view the use of dynamic pricing critically



Study 2

Usefulness of Dynamic Pricing in stationary retail from the perspective of your own company¹⁾



¹⁾ In the retail industry, the topic of dynamic pricing is being discussed, in which product prices are adjusted more frequently. I.e. when demand rises, the price rises, when demand falls, the price falls. How useful do you think this is from your company's point of view?



The experts see improved technical conditions for DP, but also considerable risks



Study 2

Statements on Dynamic Pricing in stationary retailing (experts, top-2 agreement %)¹⁾

| With the use of digital price tags, the use of dynamic pricing will increase | 80% |
|---|-----|
| Most retailers currently do not have a strategy for dealing with the issue of dynamic pricing | 74% |
| Dynamic pricing leads to increased price competition in the retail sector | 58% |
| Dynamic pricing will lead to a decrease in customer loyalty | 43% |
| Dynamic pricing will become the standard in stationary retail in the next 3-5 years | 32% |

¹⁾ Please rate the following statements on dynamic pricing in stationary retail from 1 = "Strongly agree" to 6 = "Strongly disagree".

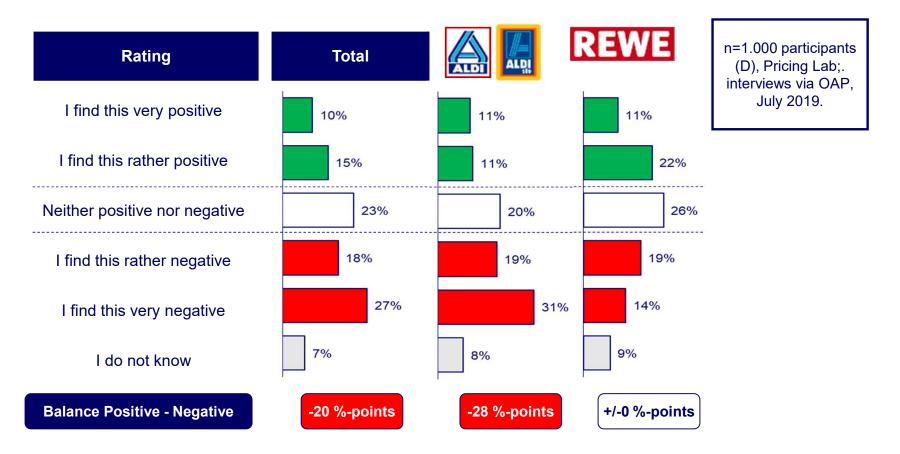
Source: Merkle and Krämer (2021)

The evaluation of dynamic pricing in food retailing depends on the company – in the case of Aldi, the evaluation is particularly critical



Study 3

Evaluation of dynamic pricing for vegetables and meat in food retailing (% of customers)¹⁾



¹⁾ Recently, it has been discussed that in the grocery business, prices are changed dynamically. Imagine that the company __ (insert Best in Class company), would flexibly adjust the prices for vegetables and meat according to demand: What do you think of this approach?







- 1. Competitive landscape in stationary retail
- 2. Framework to evaluate Dynamic Pricing (DP)
- 3. The consumer's view of the DP
- 4. Challenges for DP seen by industry experts
- 5. DP the right answer in a VUCA world?



Dynamic Pricing in stationary retail: business opportunity or entrepreneurial risk?



Some findings and aspects to be discussed

- There are things that can hardly be simplified. The use of DP in stationary retail is **more** complex than expected.
- The fields of application for Dynamic Pricing must be clearly structured always start with small steps and continue based on learnings (testing is crucial).
- The suggested and discussed **model**, consisting of an internal and an external perspective, can be used as a **checklist** for structuring.
- The application of DP should be examined on a **range- and situation-specific basis** in the context of sustainability, costs and customer benefits.
- Important for the implementation: Definition of **bandwidths for the variation of prices** in line with the positioning. ... and: manual check of the price automation...



Thank you for your attention!





Prof. Dr. Andreas Krämer **exeo** Strategic Consulting AG



Prof. Dr. Wolfgang Merkle Merkle. Speaking. Sparring.



Literature for further details (1)



Literature

- Adams, T. (2017). Surge Pricing comes to the supermarket. Abruf am 4. Juni 2017 unter https://www.theguardian.com/technology/2017/jun/04/surge-pricing-comes-to-the-supermarket-dynamic-personal-data.
- Adenso-Díaz, B., Lozano, S. & Palacio, A. (2017). Effects of dynamic pricing of perishable products on revenue and waste. Applied Mathematical Modelling, 45, 148-164.
- Adolphs, K. (2020). Erfolgreiches individuelles Pricing Kunden verstehen und die richtige Strategie entwickeln. Abruf am 10. November 2020 unter https://www.marktforschung.de/dossiers/themendossiers/pricing-und-preisforschung/dossier/erfolgreichesindividuelles-pricing-kunden-verstehen-und-die-richtige-strategie-entwickeln/.
- Ashworth, L. & McShane, L. (2012). Why do we care what others pay? The effect of other consumers' prices on inferences of seller (dis) respect and perceptions of deservingness violation. Journal of Retailing, 88(1), 145-155.
- Beutin, N., Kirchner, P. & Demmelmair, M. (2020). Die Pricing Revolution. Sales Excel-lence 29(12), 16-19.
- Bondi, S., Goldrick, M., Reasor, E., Sen, B. & Wilkie, J. (2021). The dos and don'ts of dy-namic pricing in retail, McKinsey April 2021.
- Chenavaz, R. & Paraschiv, C. (2018). Dynamic pricing for inventories with reference price effects. Economics:
 The Open-Access, Open-Assessment E-Journal, 12(2018-64), 1-16.
- Den Boer, A. V. (2015). Dynamic pricing and learning: historical origins, current research, and new directions.
 Surveys in operations research and management science, 20(1), 1-18.
- Faith, D. O. & Agwu, P. E. (2018). A review of the effect of pricing strategies on the pur-chase of consumer goods. International Journal of Research in Management, Science & Technology (E-ISSN: 2321-3264) Vol, 2.



Literature for further details (2)



Literature

- Fontes, F., Goodin, C., Logan, B. & Schmidt, J. (2018). Powerful pricing: The next frontier in apparel and fashion advanced analytics. Abruf am 13. Dezember 2018 unter https://www.mckinsey.com/industries/retail/our-insights/powerful-pricing-the-next-frontier-in-apparel-and-fashion-advanced-analytics.
- O Gupta, R., & Pathak, C. (2014). A machine learning framework for predicting purchase by online customers based on dynamic pricing. Procedia Computer Science, 36, 599-605.
- Hensel-Börner, S., Schmidt-Ross, I. & Merkle, W. (2018). Digitale Transformation Erweiterung der Zusammenarbeit zwischen Marketing und Sales um einen dritten Player. Marketing Review St. Gallen, 35(3), 20-26.
- Huelson, P., Magnette, N., Moss, S. & Prabhu, M. (2021). Digital pricing informations: The key to better margins. Abruf am 15. Januar 2021 unter https://www.mckinsey.com/~/media/McKinsey/Business%20Functions/Marketing%20and%20Sales/Our%20In sights/Digital%20pricing%20transformations%20The%20key%20to%20better%20margins/digital-pricing-transformations-the-key-to-better-margins.pdf?shouldIndex=false.
- o Krämer, A.: Flexibles Pricing (2016). Risiko für starke Marken? MARKENARTIKEL, (78)12, 62-65.
- Krämer, A. (2020a): Dynamische und individuelle Preise aus Unternehmens- und Verbrauchersicht. In: Kalka,
 R., Krämer A.: (Hrsg.): Preiskommunikation Strategische Heraus-forderungen und innovative
 Anwendungsfelder, Springer Gabler Verlag, Wiesbaden, 89-106.
- Krämer, A. (2020b): The Strategic Value of Price Communication. Archives of Business Research, 8(5), 96-111.
- Krämer, A. & Burgartz, T. (2020). Mehr Verhandlungserfolg in VUCA-Zeiten. Sales Excellence 29(12), 20-23.



Literature for further details (3)



Literature

- Krämer, A. & Kalka, R. (2020). Neue Perspektiven für die Preiskommunikation in einer digitalen Welt. In:
 Preiskommunikation (471-490). Springer Gabler, Wiesbaden.
- Krämer, A., Friesen, M. & Shelton, T. (2018). Are airline passengers ready for personalized dynamic pricing?
 A study of German consumers. Journal of Revenue and Pricing Management, 17(2), 115-120.
- Krämer, A., Kalka, R. & Ziehe, N. (2016). Personalisiertes und dynamisches Pricing aus Einzelhandels- und Verbrauchersicht. Marketing Review St. Gallen, 33 (6), 28-37.
- Krämer, A. & Merkle, W. (2021). Dynamisch oder nicht!? Welche Chancen und Risiken bietet der Einsatz von Dynamic Pricing im stationären Handel? Markenartikel 83 (11), 78-81.
- Lamprecht, S. (2018). Mit Dynamic Pricing werden Händlerwünsche wahr. Abruf am 12. September 2018 unter https://etailment.de/news/stories/KI-dynamic-pricing-21604?utm_source=%2Fmeta%2Fnewsletter%2Flongread&utm_medium=newsletter&utm_campaign=nl1827 &utm_term=5bd7ddf87f22021a5f5d682ce5f93ad.
- Merkle, W. (2020). Erfolgreich im stationären Einzelhandel. Wege zur Profilierung im digitalen Zeitalter.
 Wiesbaden: Springer Gabler.
- Reinartz, W., Haucap, J., Wiegand, N. & Hunold, M. (2017). Preisdifferenzierung und -dispersion im Handel.
 Ausgewählte Schriften der IFH-Förderer.
- o Rudolph, T., Scheidegger, G., Barth, E. & Linzmajer, M. (2019). The Dose makes the Poison. Dynamic Pricing Strategies and their influence on Consumers. Marketing Review St. Gallen, 36(5), 22-31.
- Schmutz, I., Paic, A. & Reinecke, S. (2020). Preiskommunikation im Marktsegment Luxus eine Frage der Konditionierung, nicht der Konditionen. In: Preiskommunikation (pp. 369-383). Springer Gabler, Wiesbaden.

