

Heimeshoff, Ulrich; Klein, Gordon J.

Working Paper

Bargaining power and local heroes

DICE Discussion Paper, No. 87

Provided in Cooperation with:

Düsseldorf Institute for Competition Economics (DICE), Heinrich Heine University Düsseldorf

Suggested Citation: Heimeshoff, Ulrich; Klein, Gordon J. (2013) : Bargaining power and local heroes, DICE Discussion Paper, No. 87, ISBN 978-3-86304-086-4, Heinrich Heine University Düsseldorf, Düsseldorf Institute for Competition Economics (DICE), Düsseldorf

This Version is available at:

<https://hdl.handle.net/10419/70822>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

DISCUSSION PAPER

No 87

Bargaining Power and Local Heroes

Ulrich Heimeshoff,
Gordon J. Klein

March 2013

IMPRINT

DICE DISCUSSION PAPER

Published by

Heinrich-Heine-Universität Düsseldorf, Department of Economics, Düsseldorf Institute for Competition Economics (DICE), Universitätsstraße 1, 40225 Düsseldorf, Germany

Editor:

Prof. Dr. Hans-Theo Normann

Düsseldorf Institute for Competition Economics (DICE)

Phone: +49(0) 211-81-15125, e-mail: normann@dice.hhu.de

DICE DISCUSSION PAPER

All rights reserved. Düsseldorf, Germany, 2013

ISSN 2190-9938 (online) – ISBN 978-3-86304-086-4

The working papers published in the Series constitute work in progress circulated to stimulate discussion and critical comments. Views expressed represent exclusively the authors' own opinions and do not necessarily reflect those of the editor.

Bargaining Power and Local Heroes*

Ulrich Heimeshoff and Gordon Klein[†]
Heinrich-Heine-Universität Düsseldorf

March 18, 2013

Abstract

Bargaining Power of retailers is an important aspect of discourse in many industrialized countries, including Germany, Portugal, the UK, and the USA. In Germany the Federal Cartel Office argues that strong bargaining power of retailers presents danger for workable competition in the market. Furthermore, significant bargaining power on the retailer side is often assumed a priori without further investigation. Based on a treatment effect study using difference-in-differences techniques we show, that even small suppliers can have superior bargaining power against retailers depending on their shares on local markets. We do not argue that retailers have no bargaining power at all, but we want to show, that the division of bargaining power between the two sides of the markets varies from product to product and is also a dynamic phenomenon which changes over time. As a result, the a priori assumption of bargaining power of retailers can be very misleading.

*We are very grateful to Kaufland Stiftung & Co. KG, and especially Silvia Warth for providing the data for this study and for valuable comments. We thank participants of the Second International Annual Conference of the Leibniz ScienceCampus MaCCI, Mannheim and in particular the papers discussant Tore Nilssen. We also thank Ralf Dewenter and Vanessa von Schlippenbach for comments. All remaining errors are ours.

[†]Heinrich-Heine-Universität Düsseldorf, Düsseldorf Institute for Competition Economics (DICE), Universitätsstr. 1, 40225 Düsseldorf, Email: ulrich.heimeshoff@dice.uni-duesseldorf.de, gordon.klein@dice.uni-duesseldorf.de.

1 Introduction

The balance of bargaining power between upstream and downstream firms has been one of the most important topics of research in Industrial Organization in the last decade. An important application of the new framework developed to analyze such relationships is the retail industry (see, e.g., Inderst and Wey, 2011, von Schlippenbach and Wey, 2011). Due to increasing concentration in the retail sector, many researchers and competition authorities assume a shift in bargaining power from manufacturers to their buyers, the retail industry.¹ Recent sectoral investigations in the UK, Portugal, and Germany underline the importance of these tendencies from the viewpoint of competition authorities. Furthermore, existing retail regulations (e.g., shopping hours) have strengthened the dominant position of retailers even more, especially by preventing market entry and decreasing competitive pressure in retail markets (see Caprice and von Schlippenbach, 2008, Wenzel 2011). Competition between retailers is often seen as the only way to overcome the buyer power problem, because, due to increasing internationalization of the retail industry, there is a lack of global legislation, leading to a lack of other strategies to avoid inefficiencies through increased bargaining power of retailers (see Caprice and von Schlippenbach, 2008).

Under certain circumstances increasing buyer power results in lower intermediate prices, which may also result in lower retail prices (see, e.g., Inderst and Mazzarotto 2008). Generally, as it is textbook knowledge, lower intermediate prices tend to reduce retail prices, but the effect of buyer power on social welfare is ambiguous as several studies show. Lower prices for large customers can lead to higher prices for their smaller rivals, which is called the "waterbed effect". Inderst and Valletti (2011) show that these lower prices for large buyers may even increase average retail prices. In contrast Chen (2003) shows an anti-waterbed effect in a model with one dominant retailer and a competitive fringe, which results from the supplier's incentives to reduce the large buyer's outside option. In Chen's model retail prices do not decrease because a dominant retailer is able to obtain lower wholesale prices, instead the supplier lowers wholesale prices for the dominant retailer's competitors to counter its bargaining power. As a result, the theoretical predictions of the effects of buyer power and the waterbed effect are ambiguous.

¹See, e.g., Inderst and Mazzarotto (2008) discussing the findings regarding concentration.

Furthermore, buyer power may be related to reduced investment incentives of suppliers, which cause negative welfare effects.² Different effects have also been postulated in the literature. Suppliers may have incentives to invest in better product quality to increase their bargaining power against large buyers (see, Inderst and Wey, 2007/2011). Differently von Schlippenbach and Wey (2011) show using a theoretical framework that "One-stop shopping preferences" may lead to complementarities of purchases of independent products that may weaken the retailers' bargaining position. These studies show that the effect of buyer power on welfare measures is not easy to determine, but requires a careful investigation of specific cases.

Buyer-size effects are also identified in empirical studies using intra-industry data as in Chipty (1995). Another important finding is the fact that large buyers usually only get discount, compared to their smaller competitors, when the upstream market is characterized by sufficient competition. Ellison and Snyder (2011) show that large drugstores do not receive discounts when there is a monopolist supplier for antibiotics, but they receive small discounts from suppliers facing significant competitive pressure. Overall it is difficult to present any general statements about the distribution of bargaining power between wholesale companies and retailers.

Despite the ambiguous findings in theoretical and empirical studies, competition authorities, such as the German Bundeskartellamt or the Portuguese Competition Authority (see Bundeskartellamt, 2008 and Rodrigues, 2006) sometimes seem to assume that retailers per se have more bargaining power compared to their counterparts on the suppliers side. This proposition is difficult to hold, because on the one hand suppliers of retailers are often large multinational companies and on the other hand even small local companies can have significant bargaining power, depending on their market shares, against much larger retail companies. The bargaining power of retail chains can only be judged on an individual product or product group basis, which is exactly what our study is intended to show. Individual products can have significant effects on overall store revenues, because of the existence of so called "one-stop-shopping-behavior". One stop shopping describes the phenomenon that customers prefer to buy their whole purchase in one store. Johansen (2011) shows, that one-stop-shopping increases retailers' bargaining power against their suppliers. Empirical evidence for one-stop-shopping and also

²See, for a discussion of different innovation related effects of bargaining power, Chen (2007:25-26).

two-stop-shopping is reported in Smith and Thomassen (2012). Loosing a certain product with a large market share in local markets can harm overall store revenues significantly, because one-stop-shoppers switch to another store where they can find their preferred product.³ As a result, retailers' bargaining power is to a certain degree related to consumer behavior.

Based on data for a large German retailer, we study the effects of a boycott by a regional beer brewery, which has a large market share, on the revenues of individual stores. Given the unexpected break-down of the bargaining by the supplier, we can claim exogeneity of the boycott, which provides us with a natural experiment. Our difference-in-differences estimates clearly show that even with additional promotion for other beers, there is a significant loss in revenues for the stores in the treatment group. This difference in sales losses is interpreted as evidence for the existence of complementarities in the purchases of customers such that the specific beer brand can harm the retailer by overall losses that exceed the specific importance the beer brand has in the beer sales. The findings of our study shows that bargaining power is not always distributed towards retailers, even when suppliers are small compared to their buyers. We argue that regional beer is a specific specialty and therefore has a unique sale point, which may also apply to other kinds of products like special regional cheese, wines or similar products.⁴ This finding is important, for several reasons. First, it implies that investigations of buyer power by competition authorities requires more effort in each particular case and the particular circumstances beyond size. Second, it shows that product differentiation and specialization may allow smaller firms to improve their bargaining situation.

The next section briefly discusses major determinants of buyer power.

2 Determinants of Buyer Power

In the classical monopsony model buyer power primarily depends on the fragmented supplier structure (see Inderst and Mazzarotto, 2008). As in the classical textbook case, many small suppliers face one large buyer, which obviously results in significant buyer power. The monopsony model is clearly the theoretical basis of the European Commission's view of buyer power in

³For the effects of one stop shopping on retailing formats see for example Johansen and Nilssen (2013).

⁴We thank Tore Nilssen for this comment.

their merger guidelines, where buyer power is assumed to harm competition (EU 2004/C31/03 61).⁵ The judgment of buyer power in European Competition Law can be summarized according to Wey, 2012 in a nutshell: buyer power increases competition, when supply prices are reduced without decreasing quantities, no competitors are banned, and retail customers gain lower prices. On the other hand, as he discusses, buyer power harms competition when lower prices are realized via lower quantities, suppliers are forced to ban other customers, and lower prices are not transferred to retail customers.

Clearly, as it is widely acknowledged, in most real world markets the monopsony model does not characterize the relationship between suppliers and retailers very well, but should take bargaining into account (see, e.g., Inderst and Wey, 2008, Mazzarotto and Inderst, 2008). The sizes of suppliers vary from small regional organizations to large multinational companies and most retailers are not the small atomistic firms of the monopsony model. Bargaining power between suppliers and buyers varies from case to case and even the relative size of the supplier to the buyer is not always an important determinant. What matters in the bargaining power models is the "outside option" for each party, which is the profit that is gained if there is no bargaining solutions (see, e.g., Inderst and Mazzarotto, 2008). This, of course, can be determined by size, but does not have to.

In particular, consumer behavior can be an important determinant of the distribution of bargaining power between suppliers and retailers as well.⁶ Caprice and von Schlippenbach (2012) analyze how one-stop-shopping behavior may lead to complementarities between formerly independent products which may weaken the retailers' bargaining position. The effects of one-stop-shopping on buyer power are also analyzed by von Schlippenbach and Wey (2011) who describe the mechanisms leading to increased supplier bargaining power. When small local suppliers have large market shares, they gain significant bargaining power over their retail customers. This is an important finding that leads to a more differentiated view regarding bargaining power. However, this finding has - to the best of our knowledge- not been tested empirically.

This phenomenon will now be subject of our empirical analysis. It will be shown, how complementarities in purchases can lead to bargaining power

⁵The EU (EU 2004/C31/03) highlights the major threat "when upstream sellers are relatively fragmented" (article, 61).

⁶One-stop-shopping describes a form of consumer behavior, where consumers purchase all their weekly groceries from a single retailer (see Competition Commission, 2000: 30).

also of small buyers. In the following sections our dataset, the empirical approach, and our results are presented.

3 The Beer Market and the Supply Side Boycott

Our analysis takes advantage of the fact that two regional beer breweries stopped supplying a specific retailer within a relatively short period of time. This retailer offers a full assortment including for the drink category a range of different beer brands.

In our treatment group with a certain brand during our sample period. The suppliers' boycotts happened due to failed negotiations about conditions for further supply of beer. These boycotts, were unexpected to the retailer, such that this situation provides us with a natural experiment. In particular, there were two independent breweries each offering one beer brand (brand a from supplier a and brand b by supplier b). An important aspect of these two cases is that both suppliers are regional brands that only deliver beer to some stores of this supermarket chain. As a result, we are able to create a treatment group as well as a control group to apply difference-in-differences techniques.

The beer market is very well suited to this kind of analysis, because we have several national and international brands as well as many small regional or even local brands. In particular, the variety of breweries in the German market is high with 1.341 breweries in 2011, which is followed by the British market with 946 breweries and 442 breweries in France (Brewers of Europe 2012). Given information of the cooperating retailer, these brands often have significant market shares in their local markets and are serious competitors of the national and international brands within these markets.

4 Empirical Analysis

4.1 Dataset

Our dataset consists of information for 61 southwest branches of a large German supermarket chain, between January 2010 and April 2012. Segmenting

the German food retail sector broadly into discounter and full-line distributor, the observed supermarket chain can be claimed to be a full-line distributor.⁷

We observe revenues for the beer brand, where the supplier stopped delivery, store level beer revenues and overall revenues as well as the corresponding quantities. Furthermore, we know in which county (Landkreis) the branch is located and we also know the number of competing supermarkets in the area. Descriptive statistics for the dataset can be found in the following table.

Table 1: Descriptive Statistics

| Variable | Obs. | Mean | Std. Dev. | Min | Max |
|----------------------|-------|-----------|------------|------------|------------|
| store revenue | 7,672 | 1,555,512 | 650,114.40 | 139,977.10 | 4,548,499 |
| beer revenue | 1,672 | 42,946.85 | 22,900.01 | 2,214.67 | 210,018.60 |
| beer revenue brand a | 129 | 335.42 | 423.13 | 0.58 | 2,005.32 |
| beer revenue brand b | 1,306 | 2,201.13 | 3,337.04 | 0.54 | 18,760.80 |

In the first case the brewery stopped delivery of its brand (brand a) on June 1 2011. Our treatment group encompasses nine stores and our control group 22 stores. The second refusal of delivery was regarding to 53 branches and the control group includes seven stores (brand b). In the second case the brewery stopped supply on January 1 2012. Our sample comprises always all stores, therefore, the stores delivering brand a are also in the control group for brand b and vice versa.⁸

4.2 Empirical Strategy

To estimate the effects of losing a supplier on store level revenues, we apply the so called difference-in-differences (DiD) technique. Due to the fact that we observe the treatment group, which is in our case the group of branches loosing brand a or b, and the control group, which never had the brands

⁷However, one should note that the supermarkets can be characterized as large supermarkets or department stores as well.

⁸However, given that the boycott of brand b is later in time, we do not use the observations where brand b has a boycott treatment. Therefore estimates of brand a will be more precise and not subject of any treatment effects at brand b. Given our later results, however, the treatment of brand a in the sample may bias the estimates of brand b. However, for negative effects revealed this means that the estimated effects are biased downwards and represent lower bounds. The effects will probably be even stronger.

before or after the boycott. The idea of DiD can be formalized as follows (see Wooldridge, 2010: 147-149):

$$REV = \beta_0 + \beta_1 A + \beta_2 T + \beta_3 AxT + u.$$

REV is our dependent variable indicating either stores' overall revenues or stores' overall beer revenues. All measures of revenue are normalized, that is the REV describes the revenue in the particular period divided by the stores average revenue over time. This is done to make the different revenues comparable also in the cross section. A is a dummy variable taking the value one if a store belongs to our first treatment group, losing their supply of beer brand a and zero otherwise. This dummy variable measures differences between the two groups of supermarkets that possibly existed before the treatment. T is a dummy variable that indicates the treatment period, it equals one if the stores of the treatment group are not supplied with brand a in the respective time period and otherwise takes the value zero. Such time dummy variables capture aggregate economic factors changing even without the delivery boycott. The most important term of the regression equation is BT and the corresponding coefficient β_3 . This interaction term measures the treatment effect we are interested in. What is the difference in revenues per store between treatment group and control group caused by the loss of beer brand a? Additionally, the term u_t is the standard error term satisfying the usual assumptions (see Greene, 2008: 11-19). This dataset allows us to analyze the effects of a boycott as a quasi-natural experiment, because we are able to identify the effects of strategic behavior of the supply side and simultaneously control for general shocks, which are relevant for the treatment group as well as the control group.

The idea is to identify a treatment effect on either the beer sales and/or the overall sales. Given the difference between these two parts of sales, we can infer if the breweries can take advantage of complementarities in the purchases of customers. Given the difference, we can see whether the "outside option" -which defines, as stated above, the bargaining power- is larger than its impact on the beer market or if it is either smaller. The treatment effect is therefore the shift of the threat point.

We repeat all estimations for the case of beer brand b using treatment group b and control group b. The next sections present our main results and some robustness checks that take account of the typical potential biases of Diff-in-Diff methods due to possible autocorrelation (see Bertrand et al. 2004).

5 Results

5.1 Basic Results

We first start estimating the basic equation described in the empirical strategy section with heteroskedasticity-robust standard errors. The results can be found in the following table. The results show, that the boycott clearly has negative effects on beer sales as well as overall store sales.

Table 2: DiD Estimates of the Effects of Supply Boycott of Brand a on Beer Sales and Overall Sales

| | Revenues | Revenues | Beer Revenues |
|------------------|------------------|-------------------|------------------|
| Treatment Period | 0.306 (0.019)*** | 0.177 (0.034)*** | 0.296 (0.022)*** |
| Treatment Group | 0.011 (0.005)** | 0.004 (0.004) | 0.017 (0.006)*** |
| Period x Group | -0.037 (0.019)** | -0.024 (0.010)** | -0.31 (0.020) |
| Monthly Dummies | YES | YES | YES |
| Beer Revenues | - | 0.439 (0.081)*** | - |
| Constant | 0.964 (0.009)*** | 0.597 (0.068) *** | 0.836 (0.012)*** |
| Observations | 1,431 | 1,431 | 1,431 |
| R^2 | 0.76 | 0.85 | 0.82 |

Heteroskedasticity-robust standard errors in parenthesis. ***, **, * statistically significant on the 1, 5, and 10% level.

It is easy to see from the interaction term, that the boycott has a negative effect, which is statistically highly significant on overall store revenues. We find no significant effect on beer revenues, which may be mainly due to special promotions of other beer brands to compensate for lost beer sales as a result of the boycott of brand a. It is important to mention that we observe sales and not profits. This means that stabilizing sales does not mean stabilizing profits. Moreover, it can be assumed that stabilizing sales in the beer category is an expensive strategy. The rational for the investment into low prices (that may generate losses) into a specific category can be explained by so called "loss leader" products that are shown to work due to their low possibly loss generating price as an advertisement device, while the profit is gained by other products (see Lal Matutes, 1994). The overall loss in revenues may be explained by so called one-stop-shoppers (see Bencourt, 2004: 138-139), who choose to shop at other shops that still have

brand a in their stores. In such cases customer behavior affects the distribution of bargaining power between retailers and suppliers. Von Schlippenbach and Wey (2011) show the implications of one-stop-shopping behavior on the supplier-retailer-relationship. As a result of one-stop-shopping, the retailer's bargaining position can be weakened because of its decreased disagreement payoff (see von Schlippenbach and Wey, 2011). In the next step, we also estimate the standard DiD equation for brand b and the respective control group.

Table 3: DiD Estimates of the Effects of Supply Boycott of Brand b on Beer Sales and Overall Sales

| | Revenues | Revenues | Beer Revenues |
|------------------|-------------------|-------------------|------------------|
| Treatment Period | 0.086 (0.012)*** | 0.005 (0.019) | 0.195 (0.018)*** |
| Treatment Group | 0.003 (0.004) | 0.003 (0.003) | -0.0001 (0.004) |
| Period x Group | -0.020 (0.008)*** | -0.020 (0.008)*** | 0.0002 (0.012) |
| Monthly Dummies | YES | YES | YES |
| Beer Revenues | - | 0.417 (0.073)*** | - |
| Constant | 0.963 (0.009)*** | 0.613 (0.061)*** | 0.839 (0.012)*** |
| Observations | 1,672 | 1,672 | 1,672 |
| R^2 | 0.74 | 0.84 | 0.78 |

Heteroskedasticity-robust standard errors in parenthesis. ***, **, * statistically significant on the 1, 5, and 10% level.

The results for group b confirm our estimation results from group a in table 2. We find statistically significant negative effects of the boycott on store level revenues, but no significant effects on beer revenues. We interpret these findings as evidence for the so called "one-stop-shopping"-phenomenon. This indicates that Stores can compensate beer sales by putting some other brands on promotion, but loose the one-stop-shopper who buy at other stores, where they can find their preferred beer brand. These findings are important with regard to assumptions about the distribution of bargaining power between suppliers and retailers, because we can show that the absolute size of the supplier and the retailer is not always a dominant factor. Suppliers marketing strong local brands, despite their small size compared to the retailers, can have significant bargaining power and may sometimes be able to enforce their claims. These impact can be assumed to be gathered due to the complementarity in purchases of "one-stop shoppers" that allows breweries as a

specialty to gain influence of all purchases and to increase bargaining power over the point of the size of own sales. However, for the interpretation of the results, one has to consider that in the control group for brand b, there are also the stores that stocked brand a, which had a negative effect due to the treatment. This means, that the negative effects found are a lower bound and could be even stronger.

5.2 Robustness Checks

In this section we show several robustness check to account for well known problems related to DiD estimations, such as the biased estimation of standard errors due to autocorrelation (see Bertrand et al. 2004). Bertrand et al. (2004) propose clustered bootstrapped standard errors as well as the reduction of the time-series into a before and after treatment group. However, they also point out that these techniques may suffer from a sample size that is too small, in particular with regard to the cross sectional dimension.

We apply those two methods as a robustness check. Table (4) and (5) provides the estimates with bootstrapped clustered standard errors. We consider 1000 bootstrap repetitions and cluster along the market dimension.

Table 4: DiD Estimates of the Effects of Supply Boycott of Brand a on Beer Sales and Overall Sales, Bootstrapped Clustered Standard Errors

| | Revenues | Revenues | Beer Revenues |
|------------------|------------------|-------------------|------------------|
| Treatment Period | 0.306 (0.017)*** | 0.177 (0.036)*** | 0.296 (0.017)*** |
| Treatment Group | 0.011 (0.001)*** | 0.004 (0.007) | 0.017 (0.010)** |
| Period x Group | -0.037 (0.031) | -0.024 (0.017)* | -0.31 (0.035) |
| Monthly Dummies | YES | YES | YES |
| Beer Revenues | - | 0.439 (0.088) *** | - |
| Constant | 0.964 (0.009)*** | 0.597 (0.072) *** | 0.836 (0.012)*** |
| Observations | 1,431 | 1,431 | 1,431 |
| R^2 | 0.76 | 0.85 | 0.82 |

Heteroskedasticity-robust standard errors in parenthesis. ***, **, * statistically significant on the 1, 5, and 10% level.

The results are similar to the basic results. However, in the first specification, the Period x Group effect, the standard errors increase strongly, such that the t-value drops slightly beyond the 10% significance level. The second specification, controlling for beer revenues, however, adds explanatory power to the model and reveals a significant effect for the Period x Group variable (at the 10% level). The third specification does not reveal any effect on beer revenues, therefore, backing our hypothesis that the retailer was able to stabilize its beer revenues, but loses the valuable "one-stop-shoppers".

Table 5: DiD Estimates of the Effects of Supply Boycott of Brand b on Beer Sales and Overall Sales, Bootstrapped Clustered Standard Errors

| | Revenues | Revenues | Beer Revenues |
|------------------|------------------|------------------|------------------|
| Treatment Period | 0.086 (0.015)*** | 0.005 (0.019) | 0.195 (0.021)*** |
| Treatment Group | 0.003 (0.002) | 0.003 (0.003) | -0.0001 (0.003) |
| Period x Group | -0.020 (0.013)* | -0.020 (0.16)* | 0.0002 (0.018) |
| Monthly Dummies | YES | YES | YES |
| Beer Revenues | - | 0.417 (0.080)*** | - |
| Constant | 0.963 (0.009)*** | 0.613 (0.066)*** | 0.839 (0.011)*** |
| Observations | 1,671 | 1,671 | 1,671 |
| R^2 | 0.74 | 0.84 | 0.78 |

Heteroskedasticity-robust standard errors in parenthesis. ***, **, * statistically significant on the 1, 5, and 10% level.

Table (5) applies the same method, for the boycott of brand b. As expected the standard errors increase and, therefore, the level of significance is reduced. However, the Period x Group effect remains significant at the 10% level in the first two specifications. Specification three does not reveal any effect on the beer revenues.

Tables (6) and (7) provide estimates considering only the before and after treatment periods. Essentially these test provide the same results as tables (5) and (6) and therefore back the argument discussed above.

Table 6: DiD Estimates of the Effects of Supply Boycott of Brand a on Beer Sales and Overall Sales, Collapsed to before and after Period

| | Revenues | Revenues | Beer Revenues |
|------------------|------------------|-------------------|------------------|
| Treatment Period | 0.048 (0.006)*** | -0.007 (0.008) | 0.102 (0.009)*** |
| Treatment Group | 0.009 (0.011) | 0.004 (0.006) | 0.008 (0.017) |
| Period x Group | -0.038 (0.024) | -0.024 (0.011)** | -0.26 (0.031) |
| Beer Revenues | - | 0.543 (0.0633)*** | - |
| Constant | 0.984 (0.003)*** | 0.597 (0.072) *** | 0.984 (0.004)*** |
| Observations | 121 | 121 | 121 |
| R^2 | 0.30 | 0.70 | 0.51 |

Heteroskedasticity-robust standard errors in parenthesis. ***, **, * statistically significant on the 1, 5, and 10% level.

Table 7: DiD Estimates of the Effects of Supply Boycott of Brand b on Beer Sales and Overall Sales, Collapsed to before and after Period

| | Revenues | Revenues | Beer Revenues |
|------------------|------------------|-------------------|-------------------|
| Treatment Period | 0.035 (0.009)*** | 0.071 (0.014)*** | -0.094 (0.012)*** |
| Treatment Group | 0.006 (0.004) | 0.004 (0.002) | 0.006 (0.007) |
| Period x Group | -0.024 (0.012)** | -0.021 (0.013)* | -0.006 (0.016) |
| Beer Revenues | - | 0.384 (0.103)*** | - |
| Constant | 0.995 (0.001)*** | 0.6050 (0.105)*** | 1.01 (0.002)*** |
| Observations | 121 | 121 | 121 |
| R^2 | 0.35 | 0.41 | 0.45 |

Heteroskedasticity-robust standard errors in parenthesis. ***, **, * statistically significant on the 1, 5, and 10% level.

Summarizing the results of the robustness checks, the main conclusion remains valid. However, it is important to state that all methods are dependent on sample size. Given that the standard sample in DiD analysis comprises 50 states, we think that the bias should be smaller in our larger sample. Therefore, the boycott of the local beer brands did have a significant impact on overall store revenues, but not on the stores' beer revenues. This leads to the interpretation that managers were able to compensate the beer revenues, for instance by special offers and commercials in the beer segment, but different, lower spending customers were attracted by those offers. In particular, the loss of valuable "one-stop shoppers" harmed the retailer.

6 Conclusion

When buyer power is an issue in antitrust cases, most attention is usually devoted to the size of the buyer and its size is often compared to the size of the supplier. Taking advantage of two supply boycotts by strong regional beer brands, our local heroes, we can show that these strategies clearly have significant negative effects on the retailers revenues. The size of the supplier and the buyer may not always be the most important issue to evaluate buyer power. Even a relatively small supplier can have significant bargaining power, depending on its power on local markets. Our findings are particularly important when many customers are so called "one-stop-shoppers". If customers are "one-stop-shoppers" and they do not find a certain product in "their" store anymore, they may switch to another shop and buy everything at the other store. We observe that stores can compensate beer revenues through promotions, but they are not able to compensate overall revenues. So they might gain some "bargain hunters" but loose the "one-stop-shoppers" who usually buy everything at their branches. Therefore, due to the complementarities in purchasing the beer breweries have an impact on overall customers purchases, which they can take into account when bargaining with the retailer.

These findings lead us to the conclusion that a detailed analysis of each single case with regard to bargaining power is essential in order to obtain a reasonable impression of the distribution of bargaining power and the resulting buyer power of retailers in certain markets. A priori assumptions based on the size of suppliers and buyers may be very misleading, leading to the necessity of in depth analyses of bargaining power. In addition the findings

show that small suppliers of specific goods can take advantage of strategies of product differentiation to increase their bargaining power.

References

- [1] Bertrand, Marianne, Esther Duflo, and Sendhil Mullainathan (2004): How Much Should We Trust Differences-in-Differences Estimates?, in: *Quarterly Journal of Economics*, Vol. 119, 249-275.
- [2] Betancourt, Roger R. (2004): *The Economics of Retailing and Distribution*, Edward Elgar, Cheltenham.
- [3] Bundeskartellamt (2008): *Nachfragemacht im Kartellrecht - Stand und Perspektiven*, Bonn.
- [4] Brewers of Europe (2012): *Beer statistics 2012 edition*, Brussels, http://www.brewersofeurope.org/docs/publications/2012/stats2012_web.pdf [lastupdate 27/02/2012]
- [5] Caprice, Stephane and Vanessa von Schlippenbach (2008): Competition Policy in a Concentrated and Globalized Retail Industry, in: *Applied Economics Quarterly*, Vol. 54, 183-202.
- [6] Caprice, Stephane and Vanessa von Schlippenbach (2012): Consumer Shopping Costs as a Cause of Slotting Fees: A Rent-Shifting Mechanism, in: *Journal of Economics and Management Strategy*, forthcoming.
- [7] Chen, Zhiqi (2003): Dominant Retailers and the Countervailing-Power Hypothesis, in: *Rand Journal of Economics*, Vol. 34, 612-625.
- [8] Chen, Zhiqi (2007): Buyer Power: Economic Theory and Antitrust Policy, in: *Research in Law and Economics*, Vol. 22, 17-40.
- [9] Chipty, Tasneem (1995): Horizontal Integration for Bargaining Power: Evidence from the Cable Television Industry, in: *Journal of Economics and Management Strategy*, Vol. 4, 375-397.
- [10] Competition Commission (2000): *Supermarkets: A Report on the Supply of Groceries from Multiple Stores in the United Kingdom*, Inquiry Reports Series of the Competition Commission Cm4842 (10/1000), London.
- [11] Bertrand, Marianne, Esther Duflo and Sendhil Mullainathan (2004): How much should we trust Difference-in-Difference Estimates in: *The Quarterly Journal of Economics*, Vol.119(1), 249-275.

- [12] Ellison, Sarah F. and Christopher Snyder (2010): Countervailing Power in Wholesale Pharmaceuticals, in: *Journal of Industrial Economics*, Vol. 58, 32-53.
- [13] EU 2004/C31/03: Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, in: *Official Journal of the European Union*, C 31, 32-53.
- [14] Greene, William H. (2008): *Econometric Analysis*, Pearson Prentice Hall, Upper Saddle River: NJ, 6. Ed.
- [15] Inderst, Roman and Nicola Mazzarotto (2008): Buyer Power in Distribution, in: W.D. Collins [ED.], *ABA Antitrust Section Handbook, Issues in Competition Law*, 1611-1637, ABA Book Publishing, Chicago.
- [16] Inderst, Roman and Tomaso Valletti (2011): Buyer Power and the 'Waterbed Effect', in: *Journal of Industrial Economics*, Vol. 59, 1-20.
- [17] Inderst, Roman and Christian Wey (2007): Buyer Power and Supplier Incentives, in: *European Economic Review*, Vol. 51(3): 647-667.
- [18] Inderst, Roman and Christian Wey (2008): Die Wettbewerbsanalyse von Nachfragemacht aus verhandlungstheoretischer Sicht , in: *Perspektiven der Wirtschaftspolitik*, Vol. 9(4): 465-485.
- [19] Inderst, Roman and Christian Wey (2011): Countervailing Power and Dynamic Efficiency, in: *Journal of the European Economic Association*, Vol. 9(4): 702-720.
- [20] Johansen, Bjorn Olaf (2012): The Buyer Power of Multiproduct Retailers: Competition with One-Stop-Shopping, *Working Paper 03/12*, University of Bergen.
- [21] Johansen, Bjorn Olaf and Tore Nielsen (2013): The Economics of Retailing Formats: Competition versus Bargaining, *Working Paper*, University of Bergen.
- [22] Lal, Rajiv and Carmen Matutes (1994): Retail Pricing and Advertising Strategies, *Journal of Business*, Vol67(3): 345-370.

- [23] Rodrigues, Jorge (2006): *Buyer Power and Pass-Through of Large Retailing Groups in the Portuguese Food Sector*, Autoridade Da Concorrença, Lisboa.
- [24] Smith, Howard and Oyvind Thomassen (2012): Multi-Category Demand and Supermarket Pricing, in: *International Journal of Industrial Organization*, Vol. 30, 309-314.
- [25] von Schlippenbach, Vanessa and Christian Wey (2011): One-Stop Shopping Behavior, Buyer Power, and Upstream Merger Incentives, *DICE Discussion Paper No 27*, Duesseldorf.
- [26] Wenzel, Tobias (2011): Deregulation of Shopping Hours: The Impact on Independent Retailers and Chain Stores: *Scandinavian Journal of Economics*, Vol. 113(1), 145 - 166.
- [27] Wey, Christian (2011): Nachfragemacht im Handel, in: FIW (Hrsg.): *Schwerpunkte des Kartellrechts 2009/2010: Referate des 37. und 38. FIW-Seminars*, FIW-Schriftenreihe 236, Carl Heymanns Verlag, Köln, 149-160.
- [28] Wooldridge, Jeffrey M. (2010): *Econometric Analysis of Cross Section and Panel Data*, MIT Press, Cambridge: MA, 2. Ed.

PREVIOUS DISCUSSION PAPERS

- 87 Heimeshoff, Ulrich and Klein Gordon J., Bargaining Power and Local Heroes, March 2013.
- 86 Bertschek, Irene, Cerquera, Daniel and Klein, Gordon J., More Bits – More Bucks? Measuring the Impact of Broadband Internet on Firm Performance, February 2013. Forthcoming in: Information Economics and Policy.
- 85 Rasch, Alexander and Wenzel, Tobias, Piracy in a Two-Sided Software Market, February 2013. Forthcoming in: Journal of Economic Behavior & Organization.
- 84 Bataille, Marc and Steinmetz, Alexander, Intermodal Competition on Some Routes in Transportation Networks: The Case of Inter Urban Buses and Railways, January 2013.
- 83 Haucap, Justus and Heimeshoff, Ulrich, Google, Facebook, Amazon, eBay: Is the Internet Driving Competition or Market Monopolization?, January 2013. Forthcoming in: International Economics and Economic Policy.
- 82 Regner, Tobias and Riener, Gerhard, Voluntary Payments, Privacy and Social Pressure on the Internet: A Natural Field Experiment, December 2012.
- 81 Dertwinkel-Kalt, Markus and Wey, Christian, The Effects of Remedies on Merger Activity in Oligopoly, December 2012.
- 80 Baumann, Florian and Friehe, Tim, Optimal Damages Multipliers in Oligopolistic Markets, December 2012.
- 79 Duso, Tomaso, Röller, Lars-Hendrik and Seldeslachts, Jo, Collusion through Joint R&D: An Empirical Assessment, December 2012. Forthcoming in: The Review of Economics and Statistics.
- 78 Baumann, Florian and Heine, Klaus, Innovation, Tort Law, and Competition, December 2012.
- 77 Coenen, Michael and Jovanovic, Dragan, Investment Behavior in a Constrained Dictator Game, November 2012.
- 76 Gu, Yiquan and Wenzel, Tobias, Strategic Obfuscation and Consumer Protection Policy in Financial Markets: Theory and Experimental Evidence, November 2012.
- 75 Haucap, Justus, Heimeshoff, Ulrich and Jovanovic, Dragan, Competition in Germany's Minute Reserve Power Market: An Econometric Analysis, November 2012.
- 74 Normann, Hans-Theo, Rösch, Jürgen and Schultz, Luis Manuel, Do Buyer Groups Facilitate Collusion?, November 2012.
- 73 Riener, Gerhard and Wiederhold, Simon, Heterogeneous Treatment Effects in Groups, November 2012.
- 72 Berlemann, Michael and Haucap, Justus, Which Factors Drive the Decision to Boycott and Opt Out of Research Rankings? A Note, November 2012.
- 71 Muck, Johannes and Heimeshoff, Ulrich, First Mover Advantages in Mobile Telecommunications: Evidence from OECD Countries, October 2012.

- 70 Karaçuka, Mehmet, Çatik, A. Nazif and Haucap, Justus, Consumer Choice and Local Network Effects in Mobile Telecommunications in Turkey, October 2012.
Forthcoming in: Telecommunications Policy.
- 69 Clemens, Georg and Rau, Holger A., Rebels without a Clue? Experimental Evidence on Explicit Cartels, October 2012.
- 68 Regner, Tobias and Riener, Gerhard, Motivational Cherry Picking, September 2012.
- 67 Fonseca, Miguel A. and Normann, Hans-Theo, Excess Capacity and Pricing in Bertrand-Edgeworth Markets: Experimental Evidence, September 2012.
Forthcoming in: Journal of Institutional and Theoretical Economics.
- 66 Riener, Gerhard and Wiederhold, Simon, Team Building and Hidden Costs of Control, September 2012.
- 65 Fonseca, Miguel A. and Normann, Hans-Theo, Explicit vs. Tacit Collusion – The Impact of Communication in Oligopoly Experiments, August 2012.
Published in: European Economic Review, 56 (2012), pp. 1759-1772.
- 64 Jovanovic, Dragan and Wey, Christian, An Equilibrium Analysis of Efficiency Gains from Mergers, July 2012.
- 63 Dewenter, Ralf, Jaschinski, Thomas and Kuchinke, Björn A., Hospital Market Concentration and Discrimination of Patients, July 2012.
- 62 Von Schlippenbach, Vanessa and Teichmann, Isabel, The Strategic Use of Private Quality Standards in Food Supply Chains, May 2012.
Forthcoming in: American Journal of Agricultural Economics.
- 61 Sapi, Geza, Bargaining, Vertical Mergers and Entry, July 2012.
- 60 Jentzsch, Nicola, Sapi, Geza and Suleymanova, Irina, Targeted Pricing and Customer Data Sharing Among Rivals, July 2012.
Forthcoming in: International Journal of Industrial Organization.
- 59 Lambarraa, Fatima and Riener, Gerhard, On the Norms of Charitable Giving in Islam: A Field Experiment, June 2012.
- 58 Duso, Tomaso, Gugler, Klaus and Szücs, Florian, An Empirical Assessment of the 2004 EU Merger Policy Reform, June 2012.
- 57 Dewenter, Ralf and Heimeshoff, Ulrich, More Ads, More Revs? Is there a Media Bias in the Likelihood to be Reviewed?, June 2012.
- 56 Böckers, Veit, Heimeshoff, Ulrich and Müller Andrea, Pull-Forward Effects in the German Car Scrappage Scheme: A Time Series Approach, June 2012.
- 55 Kellner, Christian and Riener, Gerhard, The Effect of Ambiguity Aversion on Reward Scheme Choice, June 2012.
- 54 De Silva, Dakshina G., Kosmopoulou, Georgia, Pagel, Beatrice and Peeters, Ronald, The Impact of Timing on Bidding Behavior in Procurement Auctions of Contracts with Private Costs, June 2012.
Forthcoming in: Review of Industrial Organization.
- 53 Benndorf, Volker and Rau, Holger A., Competition in the Workplace: An Experimental Investigation, May 2012.

- 52 Haucap, Justus and Klein, Gordon J., How Regulation Affects Network and Service Quality in Related Markets, May 2012.
Published in: Economics Letters, 117 (2012), pp. 521-524.
- 51 Dewenter, Ralf and Heimeshoff, Ulrich, Less Pain at the Pump? The Effects of Regulatory Interventions in Retail Gasoline Markets, May 2012.
- 50 Böckers, Veit and Heimeshoff, Ulrich, The Extent of European Power Markets, April 2012.
- 49 Barth, Anne-Kathrin and Heimeshoff, Ulrich, How Large is the Magnitude of Fixed-Mobile Call Substitution? - Empirical Evidence from 16 European Countries, April 2012.
- 48 Herr, Annika and Suppliet, Moritz, Pharmaceutical Prices under Regulation: Tiered Co-payments and Reference Pricing in Germany, April 2012.
- 47 Haucap, Justus and Müller, Hans Christian, The Effects of Gasoline Price Regulations: Experimental Evidence, April 2012.
- 46 Stühmeier, Torben, Roaming and Investments in the Mobile Internet Market, March 2012.
Published in: Telecommunications Policy, 36 (2012), pp. 595-607.
- 45 Graf, Julia, The Effects of Rebate Contracts on the Health Care System, March 2012.
- 44 Pagel, Beatrice and Wey, Christian, Unionization Structures in International Oligopoly, February 2012.
Published in: Labour: Review of Labour Economics and Industrial Relations, 27 (2013), pp. 1-17.
- 43 Gu, Yiquan and Wenzel, Tobias, Price-Dependent Demand in Spatial Models, January 2012.
Published in: B. E. Journal of Economic Analysis & Policy, 12 (2012), Article 6.
- 42 Barth, Anne-Kathrin and Heimeshoff, Ulrich, Does the Growth of Mobile Markets Cause the Demise of Fixed Networks? – Evidence from the European Union, January 2012.
- 41 Stühmeier, Torben and Wenzel, Tobias, Regulating Advertising in the Presence of Public Service Broadcasting, January 2012.
Published in: Review of Network Economics, 11, 2 (2012), Article 1.
- 40 Müller, Hans Christian, Forecast Errors in Undisclosed Management Sales Forecasts: The Disappearance of the Overoptimism Bias, December 2011.
- 39 Gu, Yiquan and Wenzel, Tobias, Transparency, Entry, and Productivity, November 2011.
Published in: Economics Letters, 115 (2012), pp. 7-10.
- 38 Christin, Clémence, Entry Deterrence Through Cooperative R&D Over-Investment, November 2011.
Forthcoming in: Louvain Economic Review.
- 37 Haucap, Justus, Herr, Annika and Frank, Björn, In Vino Veritas: Theory and Evidence on Social Drinking, November 2011.
- 36 Barth, Anne-Kathrin and Graf, Julia, Irrationality Rings! – Experimental Evidence on Mobile Tariff Choices, November 2011.

- 35 Jeitschko, Thomas D. and Normann, Hans-Theo, Signaling in Deterministic and Stochastic Settings, November 2011.
Published in: Journal of Economic Behavior and Organization, 82 (2012), pp.39-55.
- 34 Christin, Cérence, Nicolai, Jean-Philippe and Pouyet, Jerome, The Role of Abatement Technologies for Allocating Free Allowances, October 2011.
- 33 Keser, Claudia, Suleymanova, Irina and Wey, Christian, Technology Adoption in Markets with Network Effects: Theory and Experimental Evidence, October 2011.
Published in: Information Economics and Policy, 24 (2012), pp. 262-276.
- 32 Çatik, A. Nazif and Karaçuka, Mehmet, The Bank Lending Channel in Turkey: Has it Changed after the Low Inflation Regime?, September 2011.
Published in: Applied Economics Letters, 19 (2012), pp. 1237-1242.
- 31 Hauck, Achim, Neyer, Ulrike and Vieten, Thomas, Reestablishing Stability and Avoiding a Credit Crunch: Comparing Different Bad Bank Schemes, August 2011.
- 30 Suleymanova, Irina and Wey, Christian, Bertrand Competition in Markets with Network Effects and Switching Costs, August 2011.
Published in: B. E. Journal of Economic Analysis & Policy, 11 (2011), Article 56.
- 29 Stühmeier, Torben, Access Regulation with Asymmetric Termination Costs, July 2011.
Published in: Journal of Regulatory Economics, 43 (2013), pp. 60-89.
- 28 Dewenter, Ralf, Haucap, Justus and Wenzel, Tobias, On File Sharing with Indirect Network Effects Between Concert Ticket Sales and Music Recordings, July 2011.
Published in: Journal of Media Economics, 25 (2012), pp. 168-178.
- 27 Von Schlippenbach, Vanessa and Wey, Christian, One-Stop Shopping Behavior, Buyer Power, and Upstream Merger Incentives, June 2011.
- 26 Balsmeier, Benjamin, Buchwald, Achim and Peters, Heiko, Outside Board Memberships of CEOs: Expertise or Entrenchment?, June 2011.
- 25 Clougherty, Joseph A. and Duso, Tomaso, Using Rival Effects to Identify Synergies and Improve Merger Typologies, June 2011.
Published in: Strategic Organization, 9 (2011), pp. 310-335.
- 24 Heinz, Matthias, Juranek, Steffen and Rau, Holger A., Do Women Behave More Reciprocally than Men? Gender Differences in Real Effort Dictator Games, June 2011.
Published in: Journal of Economic Behavior and Organization, 83 (2012), pp. 105-110.
- 23 Sapi, Geza and Suleymanova, Irina, Technology Licensing by Advertising Supported Media Platforms: An Application to Internet Search Engines, June 2011.
Published in: B. E. Journal of Economic Analysis & Policy, 11 (2011), Article 37.
- 22 Buccirosi, Paolo, Ciari, Lorenzo, Duso, Tomaso, Spagnolo Giancarlo and Vitale, Cristiana, Competition Policy and Productivity Growth: An Empirical Assessment, May 2011.
Forthcoming in: The Review of Economics and Statistics.
- 21 Karaçuka, Mehmet and Çatik, A. Nazif, A Spatial Approach to Measure Productivity Spillovers of Foreign Affiliated Firms in Turkish Manufacturing Industries, May 2011.
Published in: The Journal of Developing Areas, 46 (2012), pp. 65-83.

- 20 Çatik, A. Nazif and Karaçuka, Mehmet, A Comparative Analysis of Alternative Univariate Time Series Models in Forecasting Turkish Inflation, May 2011.
Published in: Journal of Business Economics and Management, 13 (2012), pp. 275-293.
- 19 Normann, Hans-Theo and Wallace, Brian, The Impact of the Termination Rule on Cooperation in a Prisoner's Dilemma Experiment, May 2011.
Published in: International Journal of Game Theory, 41 (2012), pp. 707-718.
- 18 Baake, Pio and von Schlippenbach, Vanessa, Distortions in Vertical Relations, April 2011.
Published in: Journal of Economics, 103 (2011), pp. 149-169.
- 17 Haucap, Justus and Schwalbe, Ulrich, Economic Principles of State Aid Control, April 2011.
Forthcoming in: F. Montag & F. J. Säcker (eds.), European State Aid Law: Article by Article Commentary, Beck: München 2012.
- 16 Haucap, Justus and Heimeshoff, Ulrich, Consumer Behavior towards On-net/Off-net Price Differentiation, January 2011.
Published in: Telecommunication Policy, 35 (2011), pp. 325-332.
- 15 Duso, Tomaso, Gugler, Klaus and Yurtoglu, Burcin B., How Effective is European Merger Control? January 2011.
Published in: European Economic Review, 55 (2011), pp. 980-1006.
- 14 Haigner, Stefan D., Jenewein, Stefan, Müller, Hans Christian and Wakolbinger, Florian, The First shall be Last: Serial Position Effects in the Case Contestants evaluate Each Other, December 2010.
Published in: Economics Bulletin, 30 (2010), pp. 3170-3176.
- 13 Suleymanova, Irina and Wey, Christian, On the Role of Consumer Expectations in Markets with Network Effects, November 2010.
Published in: Journal of Economics, 105 (2012), pp. 101-127.
- 12 Haucap, Justus, Heimeshoff, Ulrich and Karaçuka, Mehmet, Competition in the Turkish Mobile Telecommunications Market: Price Elasticities and Network Substitution, November 2010.
Published in: Telecommunications Policy, 35 (2011), pp. 202-210.
- 11 Dewenter, Ralf, Haucap, Justus and Wenzel, Tobias, Semi-Collusion in Media Markets, November 2010.
Published in: International Review of Law and Economics, 31 (2011), pp. 92-98.
- 10 Dewenter, Ralf and Kruse, Jörn, Calling Party Pays or Receiving Party Pays? The Diffusion of Mobile Telephony with Endogenous Regulation, October 2010.
Published in: Information Economics and Policy, 23 (2011), pp. 107-117.
- 09 Hauck, Achim and Neyer, Ulrike, The Euro Area Interbank Market and the Liquidity Management of the Eurosystem in the Financial Crisis, September 2010.
- 08 Haucap, Justus, Heimeshoff, Ulrich and Luis Manuel Schultz, Legal and Illegal Cartels in Germany between 1958 and 2004, September 2010.
Published in: H. J. Ramser & M. Stadler (eds.), Marktmacht. Wirtschaftswissenschaftliches Seminar Ottobeuren, Volume 39, Mohr Siebeck: Tübingen 2010, pp. 71-94.
- 07 Herr, Annika, Quality and Welfare in a Mixed Duopoly with Regulated Prices: The Case of a Public and a Private Hospital, September 2010.
Published in: German Economic Review, 12 (2011), pp. 422-437.

- 06 Blanco, Mariana, Engelmann, Dirk and Normann, Hans-Theo, A Within-Subject Analysis of Other-Regarding Preferences, September 2010.
Published in: Games and Economic Behavior, 72 (2011), pp. 321-338.
- 05 Normann, Hans-Theo, Vertical Mergers, Foreclosure and Raising Rivals' Costs – Experimental Evidence, September 2010.
Published in: The Journal of Industrial Economics, 59 (2011), pp. 506-527.
- 04 Gu, Yiquan and Wenzel, Tobias, Transparency, Price-Dependent Demand and Product Variety, September 2010.
Published in: Economics Letters, 110 (2011), pp. 216-219.
- 03 Wenzel, Tobias, Deregulation of Shopping Hours: The Impact on Independent Retailers and Chain Stores, September 2010.
Published in: Scandinavian Journal of Economics, 113 (2011), pp. 145-166.
- 02 Stühmeier, Torben and Wenzel, Tobias, Getting Beer During Commercials: Adverse Effects of Ad-Avoidance, September 2010.
Published in: Information Economics and Policy, 23 (2011), pp. 98-106.
- 01 Inderst, Roman and Wey, Christian, Countervailing Power and Dynamic Efficiency, September 2010.
Published in: Journal of the European Economic Association, 9 (2011), pp. 702-720.

Heinrich-Heine-University of Düsseldorf

**Düsseldorf Institute for
Competition Economics (DICE)**

Universitätsstraße 1 _ 40225 Düsseldorf
www.dice.hhu.de