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Erik Strøjer Madsen

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Liberalization of trade has been high on the political agenda after the Second World War. First through the international corporation in GATT and WTO and later the creation of the internal market in Western Europe and the opening up of Eastern Europe and China. The breweries respond to these changes in institution by a global M&A strategy, and the following concentration of ownership among breweries increased the large breweries' global market share dramatically. Why does this concentration in ownership take place, and was there some pay off to the breweries of this strategy? We will examine the market power hypothesis, how the increasing concentration has affected the growth of global brands and the beer prices. First, we examine where the increasing global concentration is reflected in a concentration of ownership in local markets. Next, we examine the effects of ownership concentration on the level of beer prices. Finally, we examine the effects of the global ownership on the market share of the global beer brand.

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Liberalization of trade has been high on the political agenda after the Second World War. First through the international corporation in GATT and WTO and later the creation of the internal market in Western Europe and the opening up of Eastern Europe and China. The breweries respond to these changes in institution by a global M&A strategy and the following concentration of ownership among breweries increased the large breweries' global market share dramatically. Why does this concentration in ownership take place, and was there some pay off to the breweries of this strategy? We will examine the market power hypothesis, how the increasing concentration has affected the growth of global brands and the beer prices. First, we examine where the increasing global concentration is reflected in a concentration of ownership in local markets. Next, we examine the effects of ownership concentration on the level of beer prices. Finally, we examine the effects of the global ownership on the market share of the global beer brand.

Keywords: Branding, brewing industry, global market power

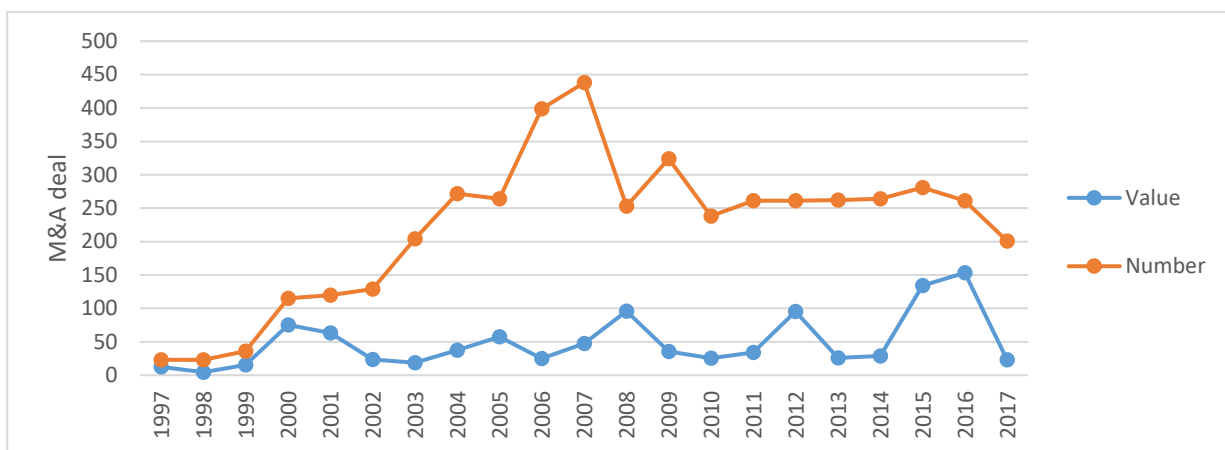
JEL classification: L11, L66, M37

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1. Introduction

The liberalization of trade has been high on the political agenda after the Second World War. First through the international corporation in GATT and WTO, and later through the creation of the internal market in Western Europe and the opening up of Eastern Europe and China. The breweries responded to these changes in institutions with a global growth strategy with which they went into the newly open markets, mainly by acquiring local breweries. Figure 1 shows how the number of acquisitions in the global beer industry took off at the turn of the century, reached a peak before the financial crisis in 2007 and subsequently settled at a high level.

Figure 1. Number and value of M&A in the brewing industry in the period 1997 to 2017.

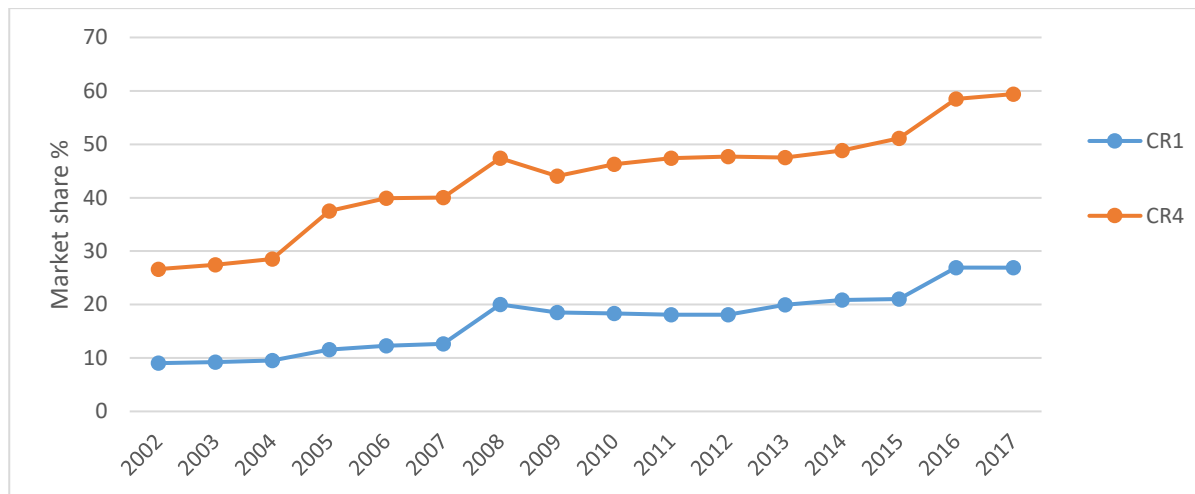


Note: Value of M&A measured in billion euros. Only deals with known value of the transaction amounting to 56 % of the deals over the period.

Source: Zephyr database of M&A deals 2019.

Following the M&A strategy, the concentration of ownership among breweries increased the CR4 of the global market share dramatically from less than 30% to about 60% in fifteen years, see figure 2. This restructuring of the global beer market was driven by the large breweries, and the largest brewery increased its market share from 9 to 27% of the world market in the period. The dynamic of this restructuring also switched the position of the large breweries. SABMiller was the largest brewer up to 2008, when InBev's acquisition of Anheuser-Busch made it the largest brewery; a position it consolidated eight years later with the acquisition of SABMiller in 2016.

Figure 2. Increasing concentration of ownership in the brewing industry in the period 2002 to 2017.



Source: Market Lines' Database - Market Data Analytic, 2002 to 2013. Passport Database, 2013 to 2017, Euromonitor International 2018.

The liberalization of trade opened the gate for cross border M&A, but why did the breweries choose this road and was there some pay-off for the breweries through this strategy? The literature on horizontal mergers often mentions three main reasons behind mergers and acquisitions. First, the market power hypothesis claims that less firms on the market facilitate collusion on a high price strategy, thereby benefitting the owner of the breweries. Less competition also facilitates collusion on a low-cost marketing strategy with less advertising. Section 2 looks into how the M&A strategy has affected the concentration of the industry and thereby their ability to exercise market power. Second, breweries can gain synergies through size and operation efficiency, and there is some evidence that the M&A strategy has increased the efficiencies in distribution and marketing, see Madsen and WU (2016). Finally, there could be some non-profit-maximizing or managerial motives behind expanding the companies. Both managers of the acquired brewery and the acquiring brewery can benefit from the merger through their compensation packages. However, there is no empirical evidence of this motive from the brewing industry.

As a product, beer is very heterogeneous with a large variation in quality or consumer perception of quality. At the low end of the scale, the consumer can choose cheap discount beer, and at the top end, they can choose expensive, branded premium beer. Because the large breweries own the large premium brands, they can benefit from acquisitions by introducing their beer brand in the acquired breweries' distribution network and thereby extend the market for their premium brand. Accessing

the local market with their own brand is therefore a motive behind the M&A strategy for the larger breweries as well. Section 2 takes a closer look at the global beer branding and the development of beer prices.

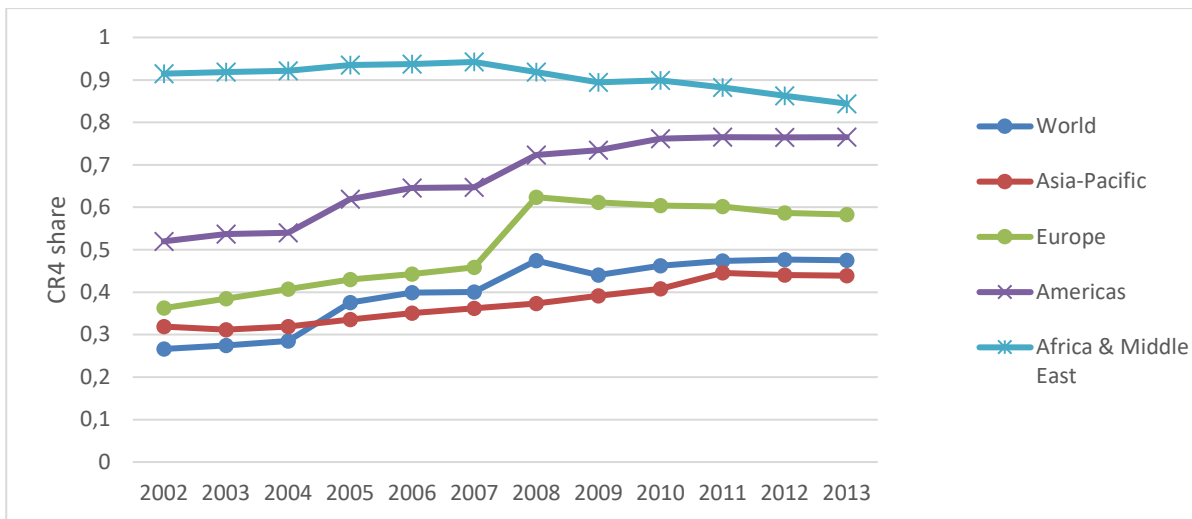
Besides the policy of market liberalization the economic growth and rising consumer income also contribute to changes in the global markets for alcoholic beverages. There has been a trend away from wine and spirits towards beer. This trend has caused the beer market to grow compared to the market for other alcoholic beverages in the last 50 years, see Piron and Poelmans (2016). The growth has been driven by an increase in consumption per capita, which has doubled in the period, mainly due to an increasing beer consumption in the new emerging countries, whereas the consumption in the developed countries has been stagnant or declining. The possibility of value extraction from premium brands is therefore strengthened further when acquiring breweries in emerging markets. By moving into the emerging markets, in which premium brands have a low market share but a very high growth rate, the breweries can reap a higher return through an acquisition, than what is possible through investment in matured markets.

Section 3 deals with these relationships in the global beer market, and points to push and pull effects behind the large breweries investment in emerging economies.

2. Global concentration of ownership and beer brand

The liberalization of trade and the opening up of foreign markets have triggered a wave of M&A in the brewing industry and increased the concentration of ownership on the global market. However, it is unclear how this affects the local competition, as the acquisition of a local brewery changes the ownership but not necessarily the number of local competitors, if the acquiring brewery is not present in the local market before the acquisitions. Figure 3 shows the development of concentration in four regional markets in the period up to 2013, in which the concentration has increased in all regions except Africa and the Middle East. The figure shows a low concentration in Asia and the Pacific, with a modest increase over the period. The increase in global concentration is therefore mainly driven by a higher concentration in the Americas and Europe.

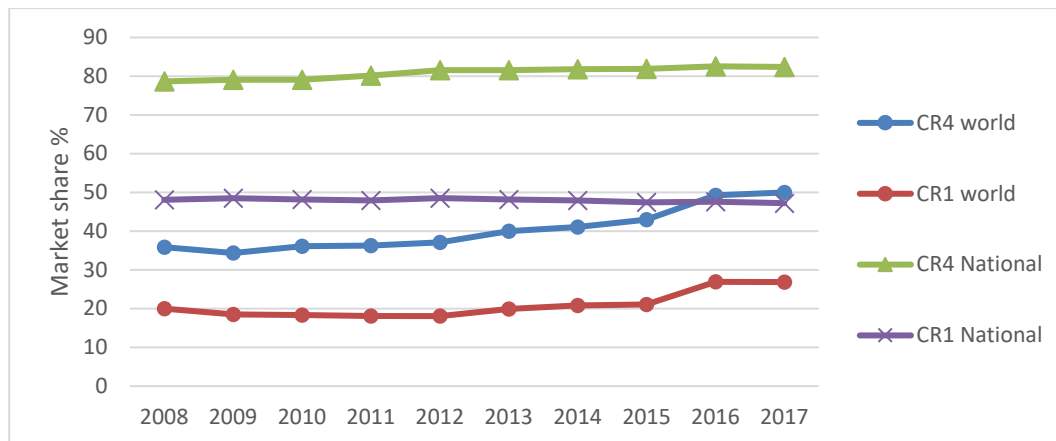
Figure 3. Regional development in concentration in the brewing industry in the period 2002 to 2013.



Source: Market Lines' Database - Market Data Analytic, 2002 to 2013.

The world regions in figure 3 are quite extensive and may be geographically too extensive for an analysis of the relevant competitors. Beer is a heavy-weight product with high transportation costs, which often results in breweries finding it more efficient to set up their own distribution network. This creates an important entry barrier to the local market in those cases where the local market is only big enough to accommodate a few large suppliers with their own distribution. The national beer market may therefore be more relevant when analyzing the level of competition, and figure 4 compares the development in owner concentration index at a global and national level in the period from 2008 to 2017. While the global concentration measured with CR1 and CR4 has increased in the period, the national concentration has not changed much, and the market share for the largest brewery, CR1 in the national market has even decreased.

Figure 4. National development in concentration in the brewing industry in the period 2008 to 2017.



Note: The calculation of the national concentration index is a simple average of the concentration index in the individual countries.

Source: Passport Database, Euromonitor International 2018.

One reason why the national concentration of ownership has not changed in the period may be that the concentration is already quite high with on average 80% of the market share belonging to the four largest breweries. The national competition authorities in the countries would probably not approve any merger between the large local breweries, as it impairs the local competition. However, a foreign purchaser not present in the market already can have an acquisition approved. Therefore, many of the acquisitions have taken place across the national border, leaving the national concentration unchanged, but increasing the global concentration. As the large breweries move into the national markets, they may even have been a threat to the largest local brewery, explaining the decrease in CR1.

For the globalization of ownership to pay off, it is important for the large breweries to roll out their main beer brand on a global scale, as this will increase the effect of their advertising. The sponsoring of sports activities at the highest level of football, tennis etc. allows them to reach out to a global audience of TV payers, which makes it necessary for the sponsored brand to be present on many regional markets in order to provide the beer demand and increase the value of the advertising.

Levitt (1983) was probably the first to write about the trend of globalization of consumer brands, and Porter (1990) talks about a global village where consumer preferences have converged due to the increasing communications across borders. Porter further puts emphasis on the concentration of production in local clusters, in which companies with critical local customers can develop world class

products with competitive advantages on the world market. This global village model fit well with a number of consumer products at the time, ranging from cars, electronic devices, fast food, personal care and soft drinks. If Coca Cola and Pepsi Cola could go global with their brands, why should breweries not do the same?

However, the beer market does not turn into a global village with global brands as table 1 verifies. The market share of the main beer brand from the large breweries seems quite stable, with a share around 13% of the world market in the period. In the same period, the four largest breweries doubled their share of the global beer market to around 50%, see figure 2. Following the acquisitions, they were not successful in promoting their own main brand in the acquired market, and in this period the global brands share of the largest breweries income dropped from above 50% to around 25%.

One reason for the missing globalization of large breweries' main beer brand is the fact that they miss the fast-growing Chinese market. The four main beer brands in China now sell more beer than the 12 global brands from the four large breweries listed in the table. M&A in China has not been an easy road to travel due to state regulation and state ownership in strategic industries, which surprisingly included the breweries. However, after AB InBev had to sell 49% ownership of Snow Beer for the approval of their takeover of SABMiller, Heineken managed to buy 40% ownership of Snow Beer in 2018.

Another reason for the missing globalization of the beer brands in the period, is a strong local beer culture in which the regional brands have a high reputation in local consumer preferences. When the wave of merger and acquisitions took off around the turn of the century, and the large breweries rolled out their main brand, it was not clear that the beer consumer would stick to their local beer brand, as many other consumer goods have succeeded with a global brand, as mentioned. Most notably is the soft drink market, in which Coca Cola and Pepsi Cola were introduced globally and conquered a high global market share¹. McDonald's and Kentucky Fried Chicken are examples from the fast food industry.

¹ Their main brands 'Coca Cola' and 'Pepsi' have an average market share of 26.6% and 10.2% across 98 countries. Passport Database, 2019.

Table 1. Market share of a selection of large beer brands in 2013 in the period 2002 to 2013.

Brands	2002	2005	2008	2010	2012	2013
AB InBev						
Bud Light	2.60%	2.60%	2.54%	2.82%	2.85%	2.88%
Budweiser	1.98%	1.91%	1.73%	1.80%	1.80%	1.81%
Stella Artois	0.60%	0.76%	0.66%	0.64%	0.64%	0.64%
Skol	1.77%	1.93%	1.87%	2.10%	2.25%	2.28%
SABMiller						
Carling Black Label	0.57%	0.53%	0.50%	0.51%	0.50%	0.50%
Aguila	0.68%	0.64%	0.61%	0.63%	0.66%	0.67%
Heineken						
Heineken	1.57%	1.44%	1.36%	1.24%	1.23%	1.20%
Superior	0.51%	0.53%	0.55%	0.56%	0.56%	0.56%
Carlsberg						
Carlsberg	0.98%	1.05%	1.19%	1.34%	1.49%	1.56%
Baltika	0.73%	0.82%	0.88%	0.76%	0.73%	0.74%
Tuborg	0.50%	0.57%	0.55%	0.52%	0.53%	0.55%
Kronenbourg	0.52%	0.49%	0.39%	0.36%	0.35%	0.35%
China						
Harbin	0.69%	0.91%	1.29%	1.48%	1.66%	1.75%
Snow beer	1.83%	2.80%	4.01%	5.07%	6.05%	6.25%
Tsingtao	3.28%	3.34%	3.34%	3.82%	3.94%	3.87%
Yanjing	1.62%	1.95%	2.66%	3.11%	3.41%	3.52%
All brand less China	13.1%	13.27%	12.83%	13.28%	13.59%	13.74%
All including China	20.43%	22.27%	24.13%	26.76%	28.65%	29.13%

Source: Market Lines' Database - Market Data Analytic, 2002 to 2013.

Note: Selection of brands with a global market share of at least ½% in 2002.

The missing globalization of the beer brands makes the concentration of ownership less profitable due to reduced payoff of global marketing. Interbrew was probably the first brewery to recognize the difficulties with creating a global brand in the beer market. Stella Artios never really took off, as table 1 verifies. Interbrew therefore changed its merger and acquisitions strategy and kept the local brand. They let the local management stay in place and introduced an upgrade of the production technology and enhanced the efficiency of their organization. Such decentralized management with independent national subsidiaries seems to have served Interbrew well in its reach for a global dominance of the market. Heineken and Carlsberg with their global brands were more exposed to global advertising and have looked for the advantages of using their acquisitions to grow their premium brand.

As the large breweries keep the acquired local brands in their brand portfolios, the result was a brand proliferation based on a regional segmentation of the market. Table 2 lists the number of brands for the four largest breweries in 2013, and the number of brands correlates positively with firm size.

However, looking at the number of brands per market share, Heineken and Carlsberg stand out with the highest degree of brand proliferation.

Table 2. Number of brands and market share for the largest breweries in 2013.

	Number of brand	World market share	Brand per share
AB InBev	57	20.05	2.84
SABMiller	52	11.98	4.84
Heineken	69	9.88	6.98
Carlsberg	36	5.53	6.51
Total	214	47.44	4.51

Source: Market Lines' Database - Market Data Analytic, 2013.

The local preferences for beer are strongest in Germany, where the beer market has stayed highly fragmented even when most national beer markets became concentrated due to economic of scale in production and marketing, when national broadcasting came into existence in the 60s and 70s, see Adam (2006). However, the strong consumer habits in favor of local beer brands in Germany seem to apply to the national level as well, where the national beer brands have resisted the globalization of beer branding, making Germany outstanding in beer consumption, with a strong regional beer preference. The national preference for beer seems to be very strong in other countries as well and this informal institution form the basis of the large breweries' proliferation of national brands.

Government or regional policies to protect or support local production have reinforced the strong consumer preferences for local beer. Restriction on advertising in magazines or television affect the consumer's perception of national or global brands and protect the local producers by reducing the return from economic of scale in marketing. Regulation of packing and production is also aiming to protect the local producer and the most known regulation is the German "purity" requirements, which also reduce the benefit of scale economics by increasing the cost of transportation and exclude competition from most foreign beers.

3. Globalization and market power

The global concentration of ownership in the brewing industry has not in general affected the national concentration of ownership and therefore the breweries market power at an aggregate level. Further, the concentration of brands seems also unaffected of the high M & A activity. However, even though the aggregate level of national concentration does not change over the period, there exist large national variations in concentration between the countries and the question is, where these differences in national market power are reflected in the prices of the branded beer.

Table 3 shows the development in CR4 and CR1 from 2008 to 2016 for a number of countries and the concentration of ownership varies a lot between countries, with Germany at the bottom with the most dispersed ownership. The simple average of the national concentration in ownership has not changed much in the period and CR1 even dropped. However, there is still significant changes in the national concentration with a large increase in China, Portugal and Singapore.

Analyzing how these differences in the size of and development in the national concentration affects the prices of beer, we focus on the prices of the branded lager beer and measure the price premium for branded lager relative to standard unbranded lager beer in percent. Equation (1) estimates the effects from concentration on the price premium for branded lager using OLS and fixed effects methods. P_{jt} is the percentage price premium in country j , $CR4_{jt}$ and $CR1_{jt}$ are a 4 and 1 firm concentration ratio and X_{jt} is a vector of covariance. The estimation uses a log transformation of the concentration and covariate variables making the interpretation of the coefficient easier.

$$P_{jt} = \alpha + \beta_1 CR4_{jt} + \beta_2 CR1_{jt} + \beta_3 X_{jt} + \mu_t \quad (1)$$

Table 4 shows the estimation results of three different models. Model 1 is a pooled OLS regression and model 2 and 3 correct for country heterogeneity by using fixed effects for countries. Further, the estimation control for the market size measured with the quantity of specialty beer, lager beer, and branded lager beer, which may be supposed to be covariates to the price premium.

Table 3. Development in market concentration in a number of countries from 2008 to 2016.

Isocode	CR 4			CR 1		
	2008	2016	Change	2008	2016	Change
AUS	85.6	80.5	-5.1	46.4	43.2	-3.2
AUT	74	77.1	3.1	53.7	56.5	2.8
BEL	68.4	72.3	3.9	52.2	52.2	0
BRA	96.6	96.6	0	64.3	63.4	-0.9
CAN	83.9	83.7	-0.2	43.1	45	1.9
CHN	53.5	68.9	15.4	17.8	25.7	7.9
CZE	77.2	77.3	0.1	46.1	46.1	0
DNK	77.5	78	0.5	62.3	52.7	-9.6
ESP	75.1	76.6	1.5	32.3	30.7	-1.6
FIN	90.8	80.5	-10.3	40.5	34.1	-6.4
FRA	70	76.5	6.5	32.8	32.6	-0.2
GBR	69.7	71.2	1.5	19.1	20.1	1
GER	34.6	34.9	0.3	12.2	12.8	0.6
HKG	36.2	63.2	27	16.8	30.3	13.5
HUN	83.3	82.6	-0.7	27.4	32.8	5.4
IRL	67.8	69.6	1.8	23.1	26.3	3.2
ITA	67.1	65.9	-1.2	29.8	28.3	-1.5
JPN	58.5	56.1	-2.4	36.7	35.9	-0.8
KOR	96.2	89.4	-6.8	56.7	52	-4.7
MEX	94.9	98.4	3.5	59.5	57.5	-2
NLD	76.9	76.3	-0.6	43.6	40.1	-3.5
NOR	81.7	75	-6.7	49.8	46.3	-3.5
NZL	75.8	89.6	13.8	43.3	41	-2.3
POL	88.9	84.6	-4.3	40.2	36.1	-4.1
PRT	48.9	87.7	38.8	36.7	43.4	6.7
RUS	76.8	69.1	-7.7	38	34.9	-3.1
SGP	34.8	74.3	39.5	19.5	42.9	23.4
SWE	70.5	70.6	0.1	30.4	29	-1.4
THA	93.9	97.9	4	50	51.2	1.2
TUR	98.3	98.6	0.3	86.1	58	-28.1
USA	71	82.7	11.7	50.6	44.1	-6.5
VNM	80.9	88.5	7.6	47.1	41.9	-5.2
ZAF	89.6	91.7	2.1	77.1	72.9	-4.2
All	78.66	82.55	3.89	48.09	47.6	-0.49

Note: The calculation of the national concentration index is a simple average of the concentration index in the individual countries.

Source: Passport Database, Euromonitor International 2018.

The market size of specialty beer has a significant negative influence on the price premium for branded lager beer, which verify that the new craft beer is a substitute to the branded lager beer and serve the same segment of beer consumers. The market size of lager beer has a positive effect on the

price premium in all three models and the market size of branded lager introduced in the last model has a negative effects. The effects of ownership concentration are mixed. The CR4 is not significant, but CR1 is highly significant with a negative effect on the price premium in model 1. However, looking at within-country estimation effects of concentration in models 2 and 3, both concentration measures are insignificant.

Table 4. Influence of national owner concentration on the price premium for branded lager

	Model 1	Model 2	Model 3
Dependent variable: Price premium			
Constant	0.1091	Fixed effect	Fixed effect
CR4	0.1006	-0.0293	-0.0056
CR1	-0.1600***	0.0443	0.0216
Market size of specialty	-0.0150***	-0.1142***	-0.1013***
Market size of lager	0.0802***	0.0797***	0.2755***
Market size of branded			-0.2030***
R square	0.1555	0.9824	0.9840
Observations	405	405	405

Note: Three stars for a coefficients indicate significant different from zero at $p < 0.001$.

Source: Passport Database, Euromonitor International 2018.

Interpreting this estimation is tricky and may be open for discussions. The negative market size effect for branded beer can be a result of more competition in a larger market where there is space for more brand. The positive market size effect for lager beer may pick up the potential advantages of a large lager market for branding of a premium beer. The significant negative effect of CR1 in the cross-country regression could be a result of potential competing entrants in a national market dominated by one large brewer. However, the within-country estimation shows no effects on the price premium in the countries of concentration measures in model 2 and 3.

The limited period available for the estimation may make it difficult to find a significant effect from concentration of ownership. Further, the question is where the national market is the right geographic market place for an analysis of the collusion among the large breweries. The cross border M&A has increased the global concentration of ownership with the implication that the large breweries meet

each other on several national markets. When the large breweries more often meet face to face in national markets with their national or local brands they have to consider the reaction of the other large breweries when they decide on their marketing strategy. This opens the possibility of spillover effects of competition strategy between the national markets, where the large breweries collude across the national borders. If you renounce from an aggressive marketing and price strategy in my main markets then I do the same in your main markets.

Bernheim and Whinston (1990) analyzed the effects of multimarket contact on the degree of cooperation between the firms. They examine the collusive behavior in a variety of formal models and find that the contact has real effects on the market outcome, as the firm accommodates the competitor's reaction in other markets, when they choose their marketing strategy. Hughes and Oughton (1993) examine multimarket contacts in the UK manufacturing industry in 1979 and estimate the effects on price-cost margin when diversified firms meet in several markets. They find the effects on profit from an index of the firms' product diversification to be more important than effects from the traditional measure of market concentration.

These collusion results from diversified firms may apply to the brewing industry as well when the large breweries meet in several national markets. Even though there is no effects on the price premium of branded lager from the national concentration of ownership, there can exist a price effect of the large breweries' price collusion following the M&A strategy and the resulting multimarket contact. Table 5 takes a closer look at the regional market for premium lager in 2016 and the development of the prices premium for branded lager since 2000.

Assuming the breweries have the same production costs from producing premium beer as from producing standard lager beer, we have made a rough calculation of the size of the price premiums in the regional markets in the period from 2000 to 2016. The main market for premium lager in 2000 is in Western Europe, followed by North America, Asia and Eastern Europe. However, conditions have been tough for the breweries in Western Europe with a low and decreasing price premium in the period. Part of the reason for the low premium is the high beer taxes in many of the Western European countries. The high excise tax on beer reduces the size of the relative price premium. Moreover, the excise tax also increases the price elasticity for the breweries, which makes a price increase less profitable. This makes a collusion among the breweries at a high price level less likely and can contribute to an explanation for the low and decreasing price premium in Western Europe.

Table 5. Development of the price premium for branded lager beer, 2000-2016

World regions	Market size 2000 Branded lager Billion USD	Price premium Percent		Change in premium Percent
		2000	2016	
Africa & M. E.	1.0	13,8	10.7	-22.6
Asia	18.7	106.6	116.1	8.9
South America	1.1	36.6	23.6	-35.6
North America	29.6	46.3	70.2	51.7
Western E.	42.0	47.4	36.9	-22.2
Eastern E.	6.7	57.2	84.4	47.5
All countries	99.1	75.6	95.3	26.1

Note: The prices are in USD per liter and calculated as market value divided by market volume. Price premium calculated as percentage price increases compared to the price of standard lager and market size measured with quantity sold.

Source: Market Lines' Database - Market Data Analytic.

However, the large increase in the price premium in North America and Eastern Europe making a 26 percent increase of the premium on average in the global markets. As the changes in national concentrations of ownership cannot explain the large global increase in the price premium of branded lager beer, then a possible explanation is the increase in the large breweries' global market power following the cross border M&A in the period. The large increase in the price premium also takes place in a market despite a growing competition from the microbreweries, which we find have a moderating effect on the price premium. Further, the existence of a global market power effect is supported by the fact that the large breweries collude on marketing expenses and reduce their investment in advertising in the period amounting to a decrease of 15% in marketing and sales costs for the eight largest breweries; see Madsen, E. S. and Y. Wu (2016).

The national competition authorities do not take account of market power arising from transnational collusion except for the members of the European Union, where the European Commission has to approve cross border M&A within the EU. This open a door to global market power for the largest breweries. By acquisition of breweries in their competitor's home market, they can manage to modify their competitor's price and marketing strategy.

4. Push and pull effects behind M&A

Beside the global market power effect of the cross border M&A strategy, the different market conditions in the countries affect the breweries' M&A strategy too. The most aggressive breweries behind the wave of merger and acquisitions in the period were breweries with headquarters and their main market in Western Europe, a stagnant market with tough competition and a low and decreasing price premium for the branded lager. These market conditions may have pushed or pulled the breweries into other and more profitable markets and/or markets with more growth opportunities for the branded lager beer. Table 6 shows the regional development in the demand for branded lager beer from 2000 to 2016, where the growth has been large in the emerging economies.

Table 6. Development in sales of branded lager beer, 2000-2016.

World regions	Market size 2000	Quantity sold		Change in
	Branded lager Billion USD	Thousand liters 2000	2016	quantity sold Percent
Africa & M. E.	1.0	520	674	29.7
Asia	18.7	4,111	7,324	78.2
South America	1.1	463	1,545	233.4
North America	29.6	8,118	7,861	-3.2
Western E.	42.0	6,892	6,852	-0.6
Eastern E.	6.7	3,126	6,370	103.8
All countries	99.1	23,230	30,625	31.8

Note: The prices are in USD per liter and calculated as market value divided by market volume. Price premium calculated as percentage price increases compared to the price of standard lager.

Source: Market Lines' Database - Market Data Analytic.

The large increase in consumption of branded lager beer in the emerging market represents strong pull forces and the large breweries rush to acquire local breweries in Asia and Eastern Europe. The increase in both the price premium and the consumption was based on a fast economic development with a growing middle class in these countries who want and can afford branded products. The emergence of the large western breweries in these countries with their marketing strategy probably also contributed to a higher income elasticity for branded beer.

The world market for branded lager beer grew from 99.1 billion USD to 143.8 billion USD in the period from 2000 to 2016 and the large breweries capture a large part of this market through their M&A strategy. If the production costs are the same for the branded lager and the standard lager then the total price premium earned on branded lager beer in the global market was of 70.4 billion USD in 2016. Of course, this premium comes with a cost for marketing and sales efforts to brand the premium beer. The marketing and sales expenses for the seven largest breweries were 12.4 billion USD in 2012 covering 49.5% of the world market. If the smaller breweries use the same amount on marketing and sales effort, the total expenses would amount to 24.8 billion USD, which would still leave the breweries with a high pay-off of marketing investment. However, the smaller breweries probably have a lower share of the premium market for lager beer and invest less in branding making the return of branding for the large breweries even larger.

The acquisition of local breweries also comes at a cost, as the acquirers have to pay a premium to the owner of the acquired breweries. The acquisitions therefore load the acquirer with goodwill capital on their balance sheet, and it has to be served by interest payment on the additional debt. For the largest breweries, the higher EBIT on their sales is matched by higher capital cost and leave the return on equity unchanged, see Madsen et al (2012). However, the acquisition strategy have placed a larger part of their business in a growing market and that may pay off in the long run for the shareholder too.

5. Conclusion

The wave of cross border M&A after the turn of the century has increased the concentration of ownership dramatically on the global beer market, where the four largest breweries now serve close to 60% of the market. The paper looks at the motivation behind this M&A strategy and the pay-off to the breweries.

Based on a database with prices and consumption of different types of beer, the paper studies the development in the global beer market after the turn of the century. While the ownership concentration increases dramatically on the global beer market the concentration in the national beer market was on average unchanged. The M&A strategy also left the concentration of the global beer brand unchanged revealing a strong consumer preference for local beer brands and the large breweries now have a large portfolio of local beer brands.

The study focuses on the branded premium lager beer, which is sold with a high price premium compared with the standard lager beer, but still produced in large-scaled plants at low cost. We estimate the price premium for branded beer and relate it to the rapid change in the ownership structure of the beer market and we find no effects on the price premium from changes in the national concentration of ownership. However, the price premium has increased in the period by 26%, and this left the increase in global ownership and the global market power as an explanation. The cross border acquisitions make the large breweries meet each other in several markets leading them to a multimarket collusion for less aggressive price competitions. This is further strengthened by the fact, that they have reduced their expenses on marketing and branding in the same periods.

The paper also points to push and pull effects as a motivation behind the large breweries' merger and acquisition strategy in the period. Due to a low price premium and low growth of premium lager in the home countries the breweries were pushed and pulled to invest in emerging economies with higher return prospects. The increase in concentration of global ownership and the resulting collusion among the large brewer have increased the price premium of premium beer and at the same time reduced the breweries' expenditure on branding of the premium beer. Part of this gain from the acquisitions can have been handed over to the owner of the acquired breweries.

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