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MULTINATIONALITY AND FINANCIAL PERFORMANCE: FINDINGS FROM A SET OF LISTED BREWING GROUPS

*Oliver Ebneht und Ludwig Theuvsen**

Abstract

In this paper we analyze how the extent of internationalization of world-wide leading stock-listed brewing groups evolved from the end-1990s until 2004 and what relationships exist between the firms' degree of internationalization and their respective corporate financial performance. Results show that the link between internationalization through mergers & acquisitions and firm performance is weak. The discussion of results leads to the hypothesis that internationalization does not contribute to short-term profitability but may guarantee future independence and growth perspectives for companies in the world brewing industry.

Keywords

Brewing industry; internationalization; mergers & acquisitions; performance

1 Problem Statement and Objectives

The relationship between the internationalization and the performance of corporations has triggered extensive interdisciplinary research throughout the last three decades. Researchers have examined the link between performance and the degree of internationalization (DOI), attempting to prove empirically the theoretical argument that international expansion represents a precondition for superior financial success (ANNAVARJULA and BELDONA, 2000; RUIGROK and WAGNER, 2003). In the field of research about internationalization-performance links, researchers have studied the relationship between the degree of internationalization and performance from different perspectives, such as portfolio investment theory (MARKOWITZ, 1952), the resource-based perspective (WERNERFELT, 1984), and the foreign direct investment (FDI) theories (RUGMAN, 1982). Indeed, findings based on these streams of research have been equivocal (HSU and BOGGS, 2003). From a corporate business policy perspective, the degree of a multinational company's (MNC) internationalization derives its importance as a corporate strategy from its potential to co-exist with higher or lower corporate financial performance. The general tenet held by many industry executives and consultants is that more extensive international business operations coincide with above-average financial success. This view is hotly discussed in the academic community of international business researchers as clear conclusions concerning the internationalization-performance relationship could not be drawn from earlier work (ANNAVARJULA and BELDONA, 2000; GERPOTT and JAKOPIN, 2005).

In recent years the brewing industry has been undergoing an unprecedented drive for consolidation primarily effected through a series of high profile mergers and acquisitions. Thus, leading listed brewing groups (LBG) account for increasingly larger shares of world wide beer output¹. The international impetus of LBGs, parallel to that experienced by other MNCs, raises the question that has guided the present study: Has this process created value

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¹ The aggregate volume of the world's top ten brewers has grown at more than four times the pace of total industry volume since the mid-1990s. Subsequently, the concentration ratio (CR10) increased remarkably from 37% in 1998 to 57% in 2004.

for the enterprises involved? The aim of this research is to contribute to a better understanding of the problem through an analysis of the performance implications of the different internationalization modes in a sample of LBGs, which consists of the 18 largest publicly listed brewing groups around the globe. It is important to ascertain, whether firms which have mainly focused on domestic markets show different profitability levels than firms with a broader geographic scope. The answer to this question could enable us to highlight the consequences of the choice between a proximity and a global approach for the profitability of LBGs (ZUCHELLA, 2001; MAJOCCHI and ZUCHELLA, 2003). In summary, this paper addresses the following two research questions related to FDI-based multinational expansion processes of stock-listed brewing groups: (1) How has the extent of internationalization of world-wide leading LBGs evolved from the end-1990s until 2004? (2) What relationships exist between LBGs' degree of internationalization and their respective corporate financial performance?

2 Methodology

Over a research period of six financial years (1999-2004) LBG business activities outside their domestic markets are highlighted by measuring the firms' degrees of internationalization. The second research question, on relationships between internationalization degrees and LBG profitability, entails the measurement of two categories of additional variables: performance variables and control variables. To shed light on potential relationships between internationalization and financial performance several regression analyses were run.

2.1 Measuring the Degree of Internationalization

The most common ways of measuring the degree of internationalization are the ratio of foreign to total sales, the share of foreign assets to total assets (REEB et al, 1998), the ratio of foreign pre-tax income to total pre-tax income (CHEN et al, 1997), the number of countries with foreign operations and the shares of foreign employees, profits, value added or shareholders (FISCH and OESTERLE, 2003). All these measures tend to capture the depth of internationalization. There has also been some research that investigates the scope or breadth of internationalization by examining the geographical dispersion of operations across countries (KOGUT, 1985; HSU and BOGGS, 2003). The so called Network Spread Index (NSI), for instance, covers the international dispersion of subsidiaries. It is calculated by the number of countries in which an enterprise maintains subsidiaries (n), divided by the total number of countries that received foreign direct investments (n^*) (IETTO-GILLIES, 1998)². Although the NSI does not take into account the different size of countries in, for instance, North America and Europe, the following internationalization measures are applied in this paper:

1. *Foreign Sales Index (FSI)*: Ratio of foreign sales (exports and subsidiaries) to total sales.
2. *Network Spread Index (NSI)* with $n^* = 167$: $NSI = \frac{n}{n^*} = \frac{n}{167}$.

2.2 Measuring Financial Performance – Balance Sheet Analysis

In most previous empirical studies, authors used traditional financial ratios as dependent variables. Properly interpreted, these ratios provide keen insight into the sources and adequacy of profits, the efficiency of assets committed to the firm, solvency risk, and liquidity risk. Individually they tell only little about the whole but, taken together, the entire picture of fi-

² The number of countries which received FDI in 2004 was 191. But we decided to adjust the NSI in this examination, as not all of these 191 countries play a significant role in the brewing scene context. We took 167 countries as n^* . These 167 countries, that show a production volume of at least 4,000 hl (Cayman Islands), are listed in the 2005 Barth Report (JOH.BARTH & SOHN, 2005).

nancial performance comes into focus (HSU and BOGGS, 2003). They are only as good as the timeliness and accuracy of the financial data that gets fed into them, and analyzing them also depends on a consideration of the company's industry and position in the business cycle (MCCLURE, 2004). To evaluate the sample firms' performance, we calculated four financial indicators:

1. *EBITDA-margin*: EBITDA as a percentage of sales measures the extent to which cash operating expenses use up revenue and can be used to find companies that are the most efficient operators in an industry. The average EBITDA-margin across the 18 LBGs and the six study years amounted to 20.68 % (s.d. = 6.71 %; n = 102; see variable 3 in table 2).
2. *Return on Sales (ROS)*: Comparing EBIT to sales (= EBIT-margin) shows how successful a company's management has been in generating income from the operation of the business. High operating profits can mean the company has effective control of costs, or that sales are increasing faster than operating costs. The total ROS mean value across all firms and study years was 13.40 % (s.d. = 6.62 %; n = 102; see variable 4 in table 2).
3. *Return on Equity (ROE)*: ROE, which is calculated by dividing annual net income through average shareholders' equity, offers a useful signal of financial success. ROE mean value across the whole sample within the study period was 12.25 % with a standard deviation of 14.20 % (n = 101; see variable 5 in table 2).
4. *Return on Net Assets (RONA)*: RONA reveals how much profit a company earns for every € of its assets. It is calculated as follows: Net income / (fixed assets + net working capital). The total samples' RONA mean value from 1999 to 2004 was 8.79 % with a standard deviation of 4.23 % (n = 101; see variable 6 in table 2).

2.3 Control Variables

According to GERPOTT and JAKOPIN (2005) and based on a review of relevant literature on potential factors that should be neutralized before asking whether there are true internationalization-performance relationships for LBGs, we controlled for six major control factors when running regression analyses. The control variables were calculated as follows:

1. *LBG size*: Firm size, a common variable related to firm performance, was used to control for economies and diseconomies of scale at the corporate level (HSU and BOGGS, 2003). It was measured through net sales. Average net sales of the 18 brewing groups included in the sample over the period from 1999-2004 was € 4.506 bn (s.d. = € 3.604 bn, n = 102).
2. *Year of observation*: This variable was included as a 'black-box parameter' to ensure that internationalization-performance relationships were distorted as little as possible by general time-related environmental changes (e.g. increasing competitive intensity or market saturation).
3. *Domestic market share*: The domestic market share was measured by the production volume of an LBG in its home country. The average domestic market share of the 18 brewing groups included in the sample over the study period was 52.2 % (s.d. = 27.7 %, n = 108).
4. *Leverage*: This ratio stands for the level of net debts to total assets and measures the capital structure of the LBG (MAJOCCHI and ZUCHELLA, 2003; MAYER and WHITTINGTON, 2003). In previous work leverage was found to be negatively related with performance measures of firms operating internationally (GERPOTT and JAKOPIN, 2005).

5. *Speed of international expansion*: This rate was computed by dividing an LBG's foreign sales to total sales (FSTS) share in a given year by its FSTS share in the preceding year for each of the six observation periods from 1999 to 2004. The overall sample average of the speed indicator amounted to 21.7 % (s.d. = 76.6 %, n = 108). Early studies present evidence that a high speed of foreign business expansion coincides with lower corporate performance (GERPOTT and JAKOPIN, 2005).
6. *Five-firm concentration ratio*: In our investigation we use the five-firm concentration ratio (CR5) to measure the concentration in the total world brewing industry. The average CR5 in the brewing industry between 1999 and 2004 was 34.3 % (s.d. = 7.1 %) and enhanced remarkably from 25.1 % in 1999 to 43.3 % in 2004.

3 Results: Progress in LBGs' Degrees of Internationalization

The first research question concerns changes in the extent of internationalization of leading brewing groups since the end-1990s. To shed light on this issue, the LBGs' FSI and NSI were computed starting in the year 1999. FDI data have not been published in brewers' annual reports but were carefully calculated by analyzing company publications.

The FSI grew at a compound annual growth rate (CAGR) of 8.2 % from 28.1 % in 1999 to 41.7 % in 2004 (see table 1). The NSI increased at a CAGR of 8.0 % from 6.0 % in 1999 to 8.8 % at year-end 2004. The degrees of internationalization (DOI) among leading brewing groups became slightly more inhomogeneous during the 5-year-period, proving different paths as well as different speeds of international investment. In 2004, there were still strong differences in the DOI in the sample with FSI figures (NSI figures) ranging from 97.0 % (45.6 %) for InBev to 3.8 % (0.6 %) for Chinese Tsingtao.

Table 1: Development of the FSI and the NSI for the 18 Brewing Groups from 1999-2004

Company	Country of Incorporation	1999		2000		2001		2002		2003		2004		countries (d)	
		FSI (%)	NSI (%)	FSI (%)	NSI (%)	FSI (%)	NSI (%)	FSI (%)	NSI (%)	FSI (%)	NSI (%)	FSI (%)	NSI (%)	MA	MI
		2004													
Anheuser Busch	USA	5.2	1.2	5.0	1.2	5.1	1.2	5.1	1.8	12.9	2.4	13.9	3.0	2	3
Coors	USA	2.6	1.2	3.4	1.2	17.4	1.2	54.1	1.8	57.5	1.8	59.0	3.0	2	1
Molson	Canada	9.8	1.8	11.3	1.8	10.9	1.8	11.0	1.8	25.5	1.8	23.4	3.0	2	2
Heineken	Netherlands	90.0	27.5	91.0	30.5	92.2	36.5	94.0	38.3	94.5	39.5	94.9	35.9	33	27
InBev	Belgium	89.1	23.4	91.2	25.7	92.6	28.1	93.4	31.7	96.9	40.1	97.0	41.9	37	33
SABMiller	UK	57.4	8.4	61.5	9.0	81.6	9.6	82.7	12.0	83.2	12.6	85.7	13.8	8	12
Carlsberg	Denmark	89.2	15.0	91.7	15.6	92.3	15.6	92.9	16.2	94.1	17.4	94.7	18.0	19	13
Scottish&Newcastle	UK	6.8	5.4	48.0	6.0	63.6	7.2	65.7	7.8	66.7	9.0	68.1	9.6	11	8
Kirin	(a) Japan	9.5	6.0	14.0	6.6	13.9	7.2	15.7	7.2	17.1	7.8	17.5	8.4	4	10
Asahi	Japan	0.2	2.4	0.4	2.4	0.5	2.4	0.6	2.4	0.9	3.0	2.2	3.0	3	5
Sapporo	(b) Japan	8.0	0.6	8.5	0.6	8.8	0.6	9.2	0.6	9.4	0.6	9.1	0.6	1	1
Lion Nathan	Australia	39.6	4.2	37.7	4.8	32.0	4.8	29.0	4.8	39.1	4.8	38.3	4.8	4	8
Modelo	Mexico	24.0	0.6	22.6	0.6	23.3	0.6	24.9	0.6	26.7	0.6	28.4	0.6	1	1
San Miguel	Philippines	16.9	1.2	18.2	1.2	14.3	1.2	10.5	1.8	10.2	1.8	13.2	1.8	3	3
Bavaria	(c) Colombia	22.4	1.8	22.8	2.4	23.5	2.4	24.7	2.4	47.0	2.4	42.7	2.4	4	1
Anadolun Efes	Turkey	19.3	4.8	26.1	5.4	34.7	6.0	39.2	6.0	43.3	6.6	48.1	6.6	7	9
Tsingtao	China	0.0	0.6	0.0	0.6	0.0	0.6	0.0	0.6	0.0	0.6	3.8	0.6	1	1
CCU	Chile	15.6	1.2	14.9	1.2	14.9	1.2	7.2	1.2	8.2	1.2	11.0	1.2	2	2
Max		90.0	27.5	91.7	30.5	92.6	36.5	94.0	38.3	96.9	40.1	97.0	41.9	37	33
Mean		28.1	6.0	31.6	6.5	34.5	7.1	36.7	7.7	40.7	8.5	41.7	8.8	8.0	7.8
S.d.		31.6	8.0	31.9	8.8	33.7	10.1	34.6	10.9	34.0	12.3	33.8	12.0	3.5	4.0
Min		0.0	0.6	0.0	0.6	0.0	0.6	0.0	0.6	0.0	0.6	2.2	0.6	1	1

(a) No geographical analysis disclosed in annual report 1999, overseas business less than 10%, 1999 estimated.

(b) No geographical analysis disclosed in annual reports, overseas business less than 10%, figures estimated.

(c) 1999, 2000, 2001 figures estimated.

(d) Number of countries in which an LBG held majority (MA > 50%) and minority (MI < 50%) ownership stakes in currently active brewing companies at year-end 2004.

Source: Own data

Having a glance at the NSI figures, the column to the extreme right in table 1 reveals that in 2004 the total number of foreign majority- and minority-owned subsidiaries varied between

70 (InBev) and 2 (Sapporo, Modelo, Tsingtao) with an average of 15.8 subsidiaries outside the companies' home markets.

4 Results: Internationalization-Performance Relationships

A methodological prerequisite of the possibility to find significant internationalization-performance linkages is that the brewing groups under investigation differ perceptibly regarding their internationalization and financial performance indicator values (GERPOTT and JAKOPIN, 2005). Throwing a glance at the standard deviations (s.d.) in table 2 discloses that the value dispersions of both types of variables were so large that it makes sense to conduct correlational analysis seeking for significant internationalization-performance relationships.

We based our statistical approach on ANOVA technique on averaged data, drawing (mean) performance comparisons over firms at different levels or ranges of internationalization (n = 108; 18 companies x 6 financial years). Two analytical steps were taken to shed light on potential links between each of the four performance criteria selected for this investigation and the FSI and NSI shares as the two measures of an LBG's degrees of internationalization. According to the approach of GERPOTT and JAKOPIN (2005) we first calculated a multiple linear regression analysis (simple bivariate Pearson correlations) for each of the eight possible internationalization-performance measure combinations. Second, for each LBG performance criterion, two ordinary least-squares (OLS) multiple regressions were run in which standardized beta-weights for the complete set of six control variables and either the FSI share or the NSI share internationalization indicators were obtained.

Table 2: Descriptive Statistics (Means, Standard Deviations and Correlations)

Measures of internationalization	Mean (%)	S.d. (%)	n	1	2				
1. FSI	35.54	33.52	108	- (a)					
2. NSI	7.42	10.32	108	0.68 **	-				
Performance indicators	Mean (%)	S.d. (%)	n	3	4	5	6		
3. EBITDA-Margin	20.68	6.71	102	-					
4. ROS	13.40	6.63	102	0.94 **	-				
5. ROE	12.25	14.20	101	0.34 **	0.39 **	-			
6. RONA	8.79	4.23	101	0.62 **	0.62 **	0.70 **	-		
Control variables	Mean	S.d.	n	7	8	9	10	11	12
7. Year				-					
8. Net Sales (€mm)	4,506	3,604	102	0.04	-				
9. CR5 (%)	34.27	7.13	108	0.98 **	0.03	-			
10. Market Share (%)	52.21	27.74	108	0.05	-0.13	0.05	-		
11. Leverage (%)	76.32	81.09	101	0.04	0.24 *	0.04	-0.34 **	-	
12. Speed (%)	21.73	76.61	108	-0.02	0.02	-0.02	-0.18	0.05	-

* p < 0.10, ** p < 0.05, *** p < 0.01 (two-tailed-tests).

(a) Coefficients below the diagonal are Pearson correlations.

Source: Own data

In the multivariate regression analyses (see models 1a and 1b in table 3) several control variables displayed statistically significant beta-weights. Moreover, the FSI as well as the NSI internationalization measure saw statistically significant beta-weights (p < 0.10) in predicting two of the four LBG financial performance criteria. All the results of our models show at least satisfactory explanatory power (R² in all models ranges between 0.21 and 0.33).

Table 3: Multiple Regression Analyses of LBG Performance-Internationalization Indicators

Variables	(B) Performance indicators (a)							
	EBITDA-margin		ROS		ROE		RONA	
(A) Degree of internationalization	1a	1b	1a	1b	1a	1b	1a	1b
Foreign sales to total sales (FSI)	-0.08		-0.14		-0.21 *		-0.09	
Network spread index (NSI)		-0.12		-0.20 *		-0.13		-0.08
<i>(C) Control variables</i>								
Year	0.02	0.01	-0.01	-0.01	-0.16	-0.16	-0.05	-0.05
Net sales	0.06	0.09	0.11	0.16	0.46 ***	0.47 ***	0.43 ***	0.45 ***
CR5 (world brewing industry)	0.08	0.09	0.12	0.12	0.28	0.26	0.13	0.13
Market share in country of origin	0.59 ***	0.58 ***	0.48 ***	0.48 ***	0.28 **	0.26 **	0.46 ***	0.45 ***
Leverage (net debt/total assets)	-0.07	-0.09	-0.06	-0.09	0.19 *	0.17	-0.17	-0.18
Speed of international expansion	0.06	0.05	0.06	0.05	0.08	0.07	0.07	0.06
Adjusted R ²	0.32 ***	0.33 ***	0.19 ***	0.21 ***	0.26 ***	0.23 ***	0.33 ***	0.33 ***
F	7.76	7.93	4.44	4.84	5.97	5.29	7.99	7.93

* p < 0.10, ** p < 0.05, *** p < 0.01 (two-tailed-tests).

(a) Due to the correlations reported in table 2, additional tests for multicollinearity were run with variance inflation factors.

(b) Figures are standardized beta-values.

Source: Own data

In detail, the multivariate regression analyses (see models 1a and 1b) in table 3 show:

1. After taking into account several control variables, the negative bivariate EBITDA-margin-internationalization degree (FSI and NSI) relationships achieved no statistical significance.
2. The ROS criterion was negatively and slightly significant ($p < 0.10$) related to the NSI internationalization degree measure.
3. The ROE was negatively related to the FSI share at the 10 % significance level.
4. A negative relationship between degree of internationalization and performance (RONA) is confirmed but was not significantly correlated.
5. The business performance measures ROE and RONA but not the EBITDA-margin and ROS were strongly ($p < 0.01$) influenced by the net sales control variable.
6. Market share in country of origin has a strong influence on all measures of firm performance.

The study's results contributed to our understanding of multinational enterprises by extending research in this domain to a sample of LBGs. In summary, the present investigation of a sample of 18 world-wide leading LBG did not detect any evidence that higher degrees of internationalization coincided together with higher profitability levels in the period from 1999 to 2004 (GERPOTT and JAKOPIN, 2005). These findings are not in line with popular opinions on performance enhancing effects of internationalization in the brewing industry but are in line with the outcomes of many previous studies (GERINGER et al., 1989; GOMES and RAMASWAMY, 1999; AGRAWAL and JAFFE, 2000; CAPAR and KOTABE, 2003; CONTRACTOR et al., 2003).

5 Discussion of Results

Results and empirical evidence on the internationalization degree-performance relationships are mixed. Arguments related to lower business risk/revenue volatility, better exploitation of market imperfections, leveraging superior management skills reflected in above average home market performance, better capacity usage, and higher market power through economies of

scale, scope, and learning are put forward as reasons for expecting significantly positive internationalization-performance links (CAPAR and KOTABE, 2003; HSU and BOGGS, 2003; RUIGROK and WAGNER, 2003). But apart from these positive linkages there is a bulk of reasons for a negative relationship. Causes for negative internationalization-performance relationships include foreign entry investments/costs as well as higher transaction and complexity costs resulting from running businesses in economically and culturally heterogeneous countries.

Concepts that are dealing with the costs of raising internationalization are integrated into transaction cost and agency theory. Increasing degrees of internationalization and concomitant organizational and environmental complexity may eventually exhaust managerial capacity. Additionally, communication, coordination, and motivation problems stemming from cultural diversity in the firm cause further costs. As international expansion increases, governance and transaction costs increase exponentially due to the geographical and cultural dispersion of the various principals and agents in the multinational firm. Addressing external costs of internationalization, researchers further emphasize the financial and political risks accompanying foreign expansion (HOFSTEDE and SPANGENBERG, 1989; REEB et al, 1998; RUIGROK and WAGNER, 2003). Our results partly confirm these findings, as companies with the highest performance ratios like Anheuser Busch (2004 ROS 22.5 %), Modelo (2004 ROS 29.3 %) or Bavaria (2004 ROS 32.3 %) are hardly internationalized but are characterized by high domestic market shares (table 3) that are their basis for extraordinary financial performance results. On the other side, LBGs that are most internationalized (e.g. the European peer group) do not per se face the highest financial performances. Glancing at the ROE figures in our dataset, e.g., we can detect some outliers that are related to the business expansion track requiring large extraordinary investments (i.e. InBev's takeover of British brewer Bass in 2000 (ROE 30.5 %) or Scottish&Newcastle's acquisition of French Kronenbourg in 2001 (ROE 12.7 %)). These extraordinary costs negatively influence brewers' profit and loss account. Nevertheless, these investments are often considered of paramount strategic importance for sustained future growth by internationalizing LBGs. Indeed, these multinational European brewing groups are not the most successful brewers in terms of performance ratios but have become the largest brewers in terms of production volume and sales through intensive M&A activities in the course of the last years (EBNETH and THEUVSEN, 2007). In opposite, highly profitable brewers like AmBev or Bavaria could not hold up their independence due to a lack of market capitalization, consequently became M&A targets and were acquired by European groups. Thus, we can hypothesize that internationalization does not contribute to short-term profitability but may guarantee future independence and growth perspectives in a globalizing business environment.

Obviously, LBGs encounter both the benefits and the costs of internationalization. Hence, internationalization per se is not a sufficient condition for superior performance. This argument is best exemplified by the theoretical framework and the assumption of incremental internationalization (JOHANSON and VAHLNE, 1977). Brewing firms are said to internationalize on an evolutionary path, starting in geographically and culturally close markets, then successively progressing toward culturally, cognitively and physically more distant environments. However, as soon as corporations enter unfamiliar territories that require major reconfiguration of internal processes, structures, and mechanisms, the costs of internationalization dramatically increase and eventually exceed the benefits (RUIGROK and WAGNER, 2003). For LBGs, our results provide scientific support for the common sense notion that higher degrees of multinationality are not per se accompanied by higher corporate financial success. Consequently, fast business internationalization is not a cure-all to counter profit and revenue growth erosions in domestic markets (GERPOTT and JAKOPIN, 2005).

6 Conclusions, Managerial Implications and Future Research

This paper contributes to the existing literature in two ways. First of all, it broadens the regional scope of the literature on the link between corporate success and internationalization by going beyond the United States as most studies are focused on industries based in the U.S. Secondly, most of the existing literature focused on the manufacturing, automotive or financial services industry (JENSEN, 1992; AGRAWAL and JAFFE, 2000; PUTLITZ, 2001; BEITEL, 2002; HARRISON et al, 2005), whereas this paper specifically addresses the impact of the internationalization impetus within the food and beverages industry on brewing firms' accounting performance. Moreover, this investigation represents the first study on the linkage between degree of internationalization and corporate success that covers a real global sample with LBGs from all continents, representing about 70 % of the total world beer industry. The outcome of the study is generally consistent with findings in previous studies in the finance literature.

A main contribution of this study is that not only the DOI of the sample firms was computed but also each of the brewing groups' financial performance criterion. We did not rely on database sources but carefully accounted all financial ratios in the same manner, taking care of differences in the firms' accounting and valuation standards which significantly differ around the globe. Moreover, as opposed to many previous studies which relied on only one or two years of financial data, we pooled our data across different years. This did not only increase the degree of freedom, but also allowed an examination of variations among cross-section units and within individual units over time (MAJOCCHI and ZUCHELLA, 2003).

For LBG executives who face a substandard financial performance and/or low degrees of internationalization it seems not to be sufficient to ensure that their companies' overall DOI at least matches that of their industry peers. Rather, a more differentiated internationalization management approach appears to be useful, which entails the set-up of various strategies and processes that support the identification of structurally attractive foreign markets (e.g. growing population, growing beer consumption, absence of cutthroat competition etc.). Furthermore, much attention should be paid towards the appropriate mode of foreign market entry and the speed of the international expansion (GERPOTT and JAKOPIN, 2005). Finally, brewing executives ought to be aware of the correct way of transforming value creation potentials stemming from foreign market opportunities and their fit with an LBG's idiosyncratic resource profile into actual improvements (PERLMUTTER, 1969; GLAUM and LINDEMANN, 2002).

Future research should not only apply additional regression models, for instance seemingly unrelated regressions, but also broaden the scientific scope of internationalization-performance relationships and should include capital-market-based criteria to assess internationalization-performance-linkages. The event study methodology is a research method that is appearing frequently in industry studies to measure the impact of changes in corporate policy (EBNETH and THEUVSEN, 2007). Thus, further research could look at whether specific modes of internationalization, like mergers and acquisitions, coincide with negative or zero DOI-performance relationships, whereas other modes come along with positive associations. Besides, future research should consider alternative conceptualization and operationalization techniques for the DOI variable. Researchers who can select from a wide range of measures could also choose indicators that more purely reflect cultural dissimilarity or are less biased by different sizes of countries. Such replication would allow to directly assess the validity of our presumption that different forms of the DOI-performance link can be explained by country-specific types of expansion (culturally related versus unrelated). Admittedly, gathering this information is hardly possible, caused by the very limited availability of data that go beyond FDI figures. In our investigation, e.g., the foreign assets index (foreign employees

index) were available for only 11 (19) out of 108 (= 18 companies x 6 financial years) potential data points.

In conclusion, this study has shed some empirical light on (1) the degree to which 18 major LBGs have internationalized their businesses since the end-1990s and (2) the relationship between the degree of internationalization and financial performance for the sample. Furthermore, it shows that the leading brewing groups around the globe have undergone a rapid international expansion in the 1999-2004 period but that there were still large variations with regard to DOI between the brewers until 2004. Even though this research represents only a small step into the analysis of patterns of internationalization, it highlights some large variations between different brewers around the globe in their international involvement and corporate success.

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