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THE IMPORTANCE OF FOCUS TO MARKET ENTRANTS: A STUDY OF MICROBREWERY PERFORMANCE

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EXECUTIVE SUMMARY

One of the most difficult questions facing entrepreneurs is how broadly to serve a heterogeneous market. That is, whether it is better to serve a narrow segment of the market, hoping to flourish by gaining a relatively high and increasing market share within that segment, or whether it is better to attempt to appeal to a broader cross-section of the market, thereby allowing the firm to succeed with a lower market share among the customers whom it is targeting. A narrower focus permits more concentrated use of fixed resources, facilitates the building of customer loyalty, and lowers the threat of retaliation from generalist incumbents but requires a much higher market share within the firms' target market to succeed.

Porter (1980) has identified three generic strategies available to firms: low cost, differentiation, and focus. By focus he means that the firm should develop the ability to serve a particular target customer group very well (often at the expense of other potential customer groups). Implicit in the firm's choice to adopt a focus strategy is that it must address the question of how broadly to focus in terms of any given product attribute, given its resources and opportunities. A fundamental element of the firm's choice of focus is that it is affected by and in turn affects that of its rivals. That is, focus is a strategic variable in the sense of the word "strategic" meant by game theorists—each firm's optimal choice of action depends on the actions taken by other firms.

The literature on the optimal degree of focus for new ventures has reached very mixed conclusions.

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The early authors looking at the question were fairly consistent in their recommendation that a highly focused or niche strategy was generally most appropriate. Later authors recommended that new ventures should enter markets aggressively, facing larger incumbents head on. The latest studies develop what we describe as a contingency approach, arguing that the best approach depends on industry conditions.

We think that this literature is now at a point where we can advance our understanding by looking at specific industries in some detail. As our understanding expands, broader empirical work is becoming increasingly difficult because of the number of factors that must be built into any cross-sectional model of new venture performance. We hope, then, to develop an understanding of one industry that is generally similar in nature to many other industries. From this understanding, conclusions of interest to both researchers and practitioners can be drawn. Future studies of other industries with different fundamental structures will provide similar benefits.

More specifically, this paper is an empirical inquiry into the microbrewery segment of the U.S. brewing industry, designed to investigate the relative merits of specialist firms' different degrees of focus. The question addressed is whether focus affects specialist firms' short-run performance in an industry where there are entrenched generalists as well as many new, entrpreneurial specialist entrants.

The analysis confirms several widely held beliefs of industry participants and observers: that microbreweries are far more likely to attempt to serve too broad a market segment than to focus too narrowly; that microbreweries are in direct competition with imports; and that microbreweries benefit from having many microbrewery rivals within the same state. Furthermore, there appear to be some small learning and/or reputation effects in the operation of microbreweries as well as a minor novelty factor that benefits recently opened establishments.

We must note, however, that the majority of the variation in the performance of microbreweries stems from differences in the management, organization, or market of individual breweries not captured explicitly by other variables included in the study. This finding, perhaps, should not be surprising, given the huge variation in the backgrounds, skills, and outlooks of microbrewery owners during the segment's early days.

The lessons learned from this research are of obvious importance to entrepreneurs in many industries. It is a very common situation for an entrepreneur to enter a stable industry in which established firms are already in place, serving a broad cross section of the market. Our findings show that in such circumstances a narrowly focused approach to the market is best.

We can think of numerous examples of where entrepreneurs have either succeeded by focussing on a particular segment of the market or failed by not doing so. In fact, there are many cases in which firms have done first one and then the other. For example, and People Express Airlines at first flourished by focussing on the needs of budget-conscious leisure travellers and then collapsed, in part because it began to try to serve business travelers and others who are less price sensitive on certain routes.

One of the hallmarks of an entrepreneurial business is that it suffers severe resource constraints. Because the entrepreneur's choice of breadth of focus will have profound effects on the resource requirements of the business, it is clear that the choice of which segment or segments of the market on which to focus is a fundamental decision made by all entrepreneurs. This paper serves to illustrate the importance of this focus decision and to provide some guidance for entrepreneurs concerning the appropriate degree of focus to adopt in entering an established market.

INTRODUCTION

One of the most difficult questions facing entrepreneurs is how broadly to serve a heterogeneous market. That is, whether it is better to serve a narrow segment of the market, hoping to flourish by gaining a relatively high and increasing market share within that narrow segment, or whether it is better to attempt to appeal to a broader cross section of the market, thereby allowing the firm to succeed with a lower market share among the customers whom it is targeting. There is a long tradition of research on new venture strategy, dating back to at least Hosmer (1957), that has addressed this question.

The current study contributes to this stream in three significant ways. First, it looks at both how and why the question as to what is the optimal strategic breadth for new entrants can be answered for one specific industry and generalizes this finding to address the question for a much larger group of similar industries. Second, it provides a specific empirical test for some theories developed elsewhere in the literature. Finally, it applies some of the current thinking in the industrial organization branch of economics, particularly with regard to strategic interaction, to the question of optimal breadth of entry by an entrepreneurial firm.

Firms face two focus-related sets of decisions when entering a market and/or confronting contextual changes in competitive conditions (e.g., shifts in consumer tastes, introduction of new technologies, or changes in international trade regulations). The first is the decision of whether to be a generalist or a specialist. If the firm chooses to be a specialist, i.e., to pursue a focus strategy, it then faces the decision of how and how narrowly to specialize.

The entrepreneurship, economics, marketing, and strategy literatures have each explored this question of focus from diverse sets of assumptions, sometimes reaching dissimilar conclusions. Even within each of theses disciplines, differing conclusions have been reached concerning the optimal degree of focus for new ventures to adopt. We will look at an emerging consensus that seems to be developing around this issue in the entrepreneurship literature and attempt to test and further refine at least one aspect of it (see, for example, Cooper, Willard, and Woo 1986; Stearns et al. 1995; and McDougall et al. 1994). We will also draw quite heavily on the economics literature regarding product differentiation including Lancaster (1966, 1971, 1979) and Hendal and Neiva de Figueiredo (1997).

Focus in the context we refer to here can be along any one of a number of dimensions, ranging from the very concrete (e.g., price) to the much more abstract (e.g., brand image). In this paper we look at geographic focus in the U.S. microbrewery industry. We have chosen to look at geographic focus because it is readily observable and measurable. Additionally, in the microbrewery segment, a firm's geographic focus is determined by discrete strategic choice.

The specific question addressed in this paper is whether focus affects specialist firms' short-run performance in an industry where there are entrenched generalists as well as many new, entrepreneurial specialist entrants. A narrower focus is expected to permit more concentrated use of fixed resources, to facilitate building customer loyalty, and to lower the threat of retaliation from generalist incumbents.[1] The main hypothesis of this paper is that geographic focus—the breadth of geographic coverage—helps to determine microbrewery performance. We hypothesize that greater geographic focus is a predictor of greater success in the microbrewery sector of the beer industry. Our findings can be generalized to help entrepreneurs in similar industries to determine the appropriate degree of focus with which to enter the market. As we will discuss below, microbreweries are particularly suited to test our hypotheses because of their unique characteristics.

Porter (1980) has identified three generic strategies available to firms: low cost, differentiation, and focus. The term differentiation means something that is perceived industry-wide as being unique and of higher quality, while the term focus means the

[1] By creating situations in which incumbents may harm themselves more by retaliating than by doing nothing. Gelman and Salop (1993) label such strategies judo economics strategies.

ability to serve a particular target customer group very well. Implicit in the firm's choice of focus is the question of how broadly to go to market on any dimension of the product attribute spectrum[2] given the firm's resources and its opportunity set. As exemplified below, a firm's choice of focus is affected by and in turn affects that of its rivals. Focus is therefore a strategic variable, both in the common sense of "strategic" and in the meaning applied to the word by game theorists—that one firm's decision will effect the decision of others.

The microbrewery sector not only provides a very good laboratory for examining the strategic choices made by entrants but also permits the exploration of firm-specific success factors. There has been enormous variability in the performance of microbreweries, and the large number of microbreweries in operation permits the statistical testing of hypotheses. In many ways microbreweries represent the revival of a fragmentation last seen in immediate post-Prohibition years and are a response to demand shocks (shifts in tastes) rather than to supply-side shocks such as technological innovation.

The paper is organized as follows. The second section provides an outline of the existing literature on the question of the optimal choice of strategic focus for new ventures. The third section gives a very brief history of the American beer industry and a description of microbrewery development and proliferation in the last decade. Three cases of microbreweries that made focus-related decisions that affected their performance are then summarized.

The fourth section defines competitive focus in more detail, relating it to the concept of horizontal differentiation. The last part of the section presents a review of the relevant literature on product differentiation and product positioning, followed by theoretical support for the product line focus hypothesis.

The fifth section lays out the main assumptions of the research and the hypothesis to be tested. It then describes the empirical model developed. The sixth section describes the data used for this study and presents the results of the empirical analysis. The seventh section discusses the results of the data analysis. The last section summarizes the findings of the study, stating managerial implications and suggesting directions for future research.

NEW VENTURE STRATEGY

As stated above, a fundamental question faced by all new ventures is how broadly they should serve the market they are entering. This question is especially salient for entrepreneurial start-ups, that is, start-ups by firms facing severe resource constraints. For entrepreneurial firms, the issue is less likely to be merely one of profit maximization but rather one of survival. Given the fundamental nature and the general importance of this question, it is not surprising that it has been the recipient of much attention in the literature. What is perhaps surprising is that only fairly recently can it be said that any kind of consensus has emerged around this issue. As we will see, this study can be thought of as an empirical test and elaboration on part of this emerging consensus.

The earliest authors addressing the issue of new venture strategy were fairly consistent in their recommendation that new ventures should pursue niche strategies whereby they avoided direct conflict with larger incumbents. Various authors recommended that this general strategy be implemented through more specific actions such as focussing

[2] The term "product attribute" is used here in the meaning pioneered by Lancaster (1971, 1979).

on segments that value high levels of customer service (Cohn and Lindberg 1972), specialized products (Hosmer 1957), or simply niches either too small to interest larger incumbents or too small and distinct to let larger incumbents realize any scale advantage (Broom and Longenecker 1979).

Developing somewhat later than this niche-oriented body of literature was an alternate stream of literature that came to the opposite conclusion—that successful new ventures set aggressive market share targets and invested accordingly. One of the first to recommend aggressive entry by new ventures was Biggadike (1979). Biggadike's conclusions were supported by many authors including MacMillan and Day (1987), Miller and Camp (1985), and Cooper, Willard and Woo (1986).

The marked differences in results concerning the optimal level of focus for new ventures can be attributed to several factors. First, an important limitation of many of the studies recommending aggressive entry, including Biggadike (1979), Miller and Camp (1985), and MacMillan and Day (1987), is that in their empirical research they used a database developed as part of the PIMS (Profit Impact of Market Strategy) research program, which looked exclusively at new ventures within larger corporations. It is not clear that results based on the study of new ventures with the strength and support of a large corporation behind them are generalizable across all new ventures, especially those facing severe financial or other resource constraints.

Second, many authors looking at this question have looked at only one industry or related group of industries (e.g., McCann 1991; McDougall, Robinson, and DeNisi 1992) Thus, the differences in strategic recommendations for new ventures could be attributable to differences in industry conditions or at least differences in the interaction between firm strategy and industry conditions. Of course, given that the current study is a single-industry study, we cannot argue that single-industry studies are unsound per se. However, we would argue that in the case of several past studies of new entrant strategy, the authors have attempted to overgeneralize their findings.

Additionally, various studies have used many different methodological approaches and therefore different definitions of various strategies and even of success itself. Some of the earliest work on new venture strategy was based only on personal observations and anecdotal evidence. Later, statistical methods were employed, but often not very sophisticated ones. Finally, most studies in the 1980s and 1990s employed more complex multivariate statistical methods.

Different methods and means of gathering data resulted in fundamental differences in the operationalization of key concepts. For example, in some studies that looked at larger new ventures, ventures that did not survive the start-up stage were automatically screened out (e.g., Siegel, Siegel, and MacMillan 1993). In other retrospective studies of only highly successful firms, all nonsurvivors were screened out (e.g., Terpstra and Olsen 1993). Finally, some studies relied on survey data in which there may have been an inherent bias on the part of managers to see and describe a fit between their firm's strategy and its environment (e.g., Covin, Slevin, and Covin 1990).[3]

Given the contradictions in the earlier literature, it is perhaps not surprising to find that the current thinking in the area of new venture performance can be thought of as

[3] Of course, to speak of new venture strategy in terms of only a dichotomy between aggressive and niche strategies is an over simplification. Through an extensive survey of CEOs in the information technology sector, McDougall and Robinson (1992) identify eight strategic "archetypes"—five that can be broadly characterized as niche strategies and three that can be broadly characterized as aggressive strategies. As we will see below, an advantage of the focus measure used in the current study is that it is a continuous variable.

taking a contingency view. What strategy is best for a new venture depends on several factors. Unfortunately, it is difficult, if not impossible, to build all of these factors into a single model. The model simply becomes too complex. Most authors, then, have looked at the effects of the interaction between industry conditions measured along a single dimension and the breadth of new venture strategy on new venture performance.

Cooper, Willard, and Woo (1986) were actually among the first to develop such a contingency view, although they advocated that new ventures adopt aggressive and direct strategies against larger incumbents, positioning their paper as "examining firms that competed directly with much larger competitors" (p. 259). They used multiple case studies of firms that had successfully employed such a strategy to illustrate their point. However, they also developed a set of criteria where such strategies on the part of new ventures might not be successful. Among the industries where the authors contend that a direct attack upon incumbents is less likely to succeed are those where scale and experience curve effects are important and those where product differentiation is difficult. In brewing, scale and experience effects are obviously important and one could argue that although the industry produces products that are differentiated, they are differentiated in terms of market position and image only, not physical product attributes (Allison and Uhl 1964; Jocoby et al. 1971). Thus, it is very difficult for small new ventures to differentiate their product against the entrenched market leaders in the brewing industry.

One set of authors who attempt to incorporate a broad range of factors into a model of new firm survival is Stearns et al. (1995). They look at the effects of three factors—industry, strategy and location—on new firm survival. They look at the effects of these factors both individually and in interaction with one another. However, here we see one of the limitations inherent in this type of work. The authors define industry in terms of a firm's vertical position in the value chain. Firms are classified into manufacturing, distribution, retail, or service. The authors employ factor analysis to develop six strategic archetypes that they can then place on a continuum from broad to narrow. Finally, they describe a firm's location as urban, metro, or rural. What the authors develop, therefore, is a logit model of firm survival with potentially 13 primary effects (the firms' score on each of the six strategy archetypes, the four industry types, and the three locational variables), 54 two-way interaction effects, and 72 three-way interaction effects.

Not surprisingly, the authors get mixed results. They find some evidence that in rural settings broader strategies work best. They also find that in metro settings narrow strategies are more effective. In urban settings they find no significant effect of strategy on survival. Looking at interindustry differences, they find that firm strategy is the key determinant of survival in upstream industries, while strategy and location were not important in manufacturing or distribution. Clearly, these results are somewhat difficult to rectify with one another. Perhaps some of these difficulties would be alleviated by building an even more complex model that included, for example, richer industry information. However, clearly the added complexity of such a model would make it even more difficult to implement and interpret. For example, simply dividing industries into two groups in terms of technological complexity would result in a model with 144 four-way interaction terms.

McDougall et al. (1994) provided an important step in developing the contingency view of new venture strategy. They looked at the effects of industry growth and strategic breadth on new venture survival. They address two basic research questions. First, they examine whether different combinations of industry growth and strategic breadth pro-

duce significantly better performance than others. Second, they ask whether the optimal strategies of a new venture vary significantly across various combinations of industry growth and strategic breadth. Among the more specific hypotheses they find support for are that new ventures in high-growth industries will enter at a greater, more aggressive scale than those in low-growth industries, that new ventures pursuing a focus strategy will be more likely to emphasise specialty products and will place less emphasis on cost control than other new ventures. As we will see below, each of these supported hypotheses tends to fit the microbrewery segment where we see new entrants in the slow-growth brewing industry enter at a very small scale, produce very specialized products, and steadfastly avoid price/cost competition.

The new venture performance literature is now at a point where broad studies have supported a number of interesting hypotheses concerning the effect on new venture performance of the interaction between a new venture's strategic breadth and such industry characteristics as industry growth, industry position in the value chain, and the importance of scale in the industry. Unfortunately, in the type of broad models in which these hypotheses were developed and tested, it is very difficult to capture the full richness of a particular industry. We now know that there is no one best strategy for new ventures—easy pieces of advice like "find your niche to avoid competition" or "enter aggressively to foreclose competitive reaction" are not useful. A contingency view is appropriate. We also know considerably more about which new venture strategies are best suited to certain industry conditions. What we now must do is solidify and expand our knowledge of specific industry structure/new venture strategy fits and also address the underlying question of why certain strategies seem to work best under certain conditions.

The paper by Stearns et al. (1995) shows the limitations of multi-industry studies as our understanding of the factors that influence the optimal scope of new ventures becomes more complex. Attempts to richly describe industry conditions within an empirical model lead to analytically intractable models. Thus, our approach in this study is of carefully describing a single industry, performing statistical analyses of data from that single industry and carefully generalizing the findings of the analysis based on our understanding of the industry in question.

We look at the question of the optimal degree of focus for new entrants in a particular industry, the brewing industry. This industry can be characterized as being a mature, slow-growth industry producing a differentiated product. Additionally, the industry has a number of very large and highly entrenched generalist incumbents with significant cost advantages over smaller new entrants. The industry produces a product for which consumer tastes vary both across individual consumers and over time. One can easily argue that in these characteristics the brewing industry epitomizes many mature consumer product industries.

The brewing industry is also particularly well suited for this study because a shift in tastes that was occurring in this industry during the period covered by our data provided a unique research opportunity in that the taste shift created many entries in what had previously been a very stable industry. This shift in tastes was largely driven by demographic factors. Future studies of other entrants in industries with structures that differ in significant ways from that of the brewing industry will add to our understanding of optimal firm focus.

One other paper in the entrepreneurship literature that is of interest for the current study is Williams, Tsai, and Day (1991). Rather than focussing on the relationship be-

tween industry structure and optimal entry strategy, these authors look at the interaction between firm characteristics and strategy on performance. They hypothesize that firms with low levels of intangible assets will gain less from aggressive entry strategies into new markets than firms with high levels of intangible assets. Their empirical work not only supports this hypothesis but actually finds that firms with weak images will perform worse the more aggressively they enter a new market. Because the microbreweries in our sample can all be considered to have weak images vis-à-viz their established competitors, this finding would seem to suggest that aggressive entry by microbreweries will not be rewarded in the marketplace.

As mentioned above, the marketing literature has also extensively addressed the issue of positio, although not necessarily as it relates to small entrpreneurial entrants. The marketing literature on positioning and product line management supports the assertion that, other things being equal, a product should be positioned where the competition is weakest (see, for example, Urban and Hauser 1980; Hauser 1983; Hauser and Gaskin 1984; and Schmalensee and Thisse 1988) but does not fully explore the interactive nature of product positioning and choice of focus in the face of rivalry. These are among the contributions of the current paper.

To summarize, the current study develops an understanding of one industry that is generally similar in nature to many other industries. From this understanding, conclusions of interest to both researchers and practitioners regarding the optimal scope of market entry for entrepreneurial firms are drawn. Additionally, we apply new concepts from the industrial organization literature to the issue and empirically test the conclusions of several earlier authors. We will now look in more detail at the industry under study.

MICROBREWERIES AND THE BEER INDUSTRY

In the last decade, and particularly in the late 1980s and early 1990s, the beer industry in North America has seen small-scale, entrepreneurial breweries initiate operations in every region, taking advantage of consumers' increased desire for differentiated tastes (Swaminathan 1998). These small brewers are an example of specialization and are a reaction to the uniform taste offered by national brewers who have committed themselves to generalist strategies. The 88 microbreweries[4] in existence in the United States in 1991 accounted for only about 0.2% of the total beer market. There is certainly no arguing, therefore, with the idea that these firms are specialized in that they serve only a very narrow segment of the market.

The number of microbreweries operating in the United States grew phenomenally in the late 1980s and early 1990s. According to the Institute for Brewing Studies (IBS), there were 21 microbreweries in the United States in 1985, 54 in 1988, and 88 in 1991, with combined taxable production growing from 26,000 barrels (bbls) in 1985 to 134,000 bbls in 1988, and to 362,000 bbls in 1991.

These aggregate growth numbers hide huge variability in microbrewery performance levels. Throughout the decade, there were many failures as well as success stories: between 1985 and 1991, 25 producers terminated operation, while at least 7 microbreweries grew to surpass 15,000 bbls in annual production (Institute for Fermentation and Brewing Studies 1992). This section describes the beer industry in historical perspective,

[4] Defined as breweries that produce less than 15,000 barrels per annum.

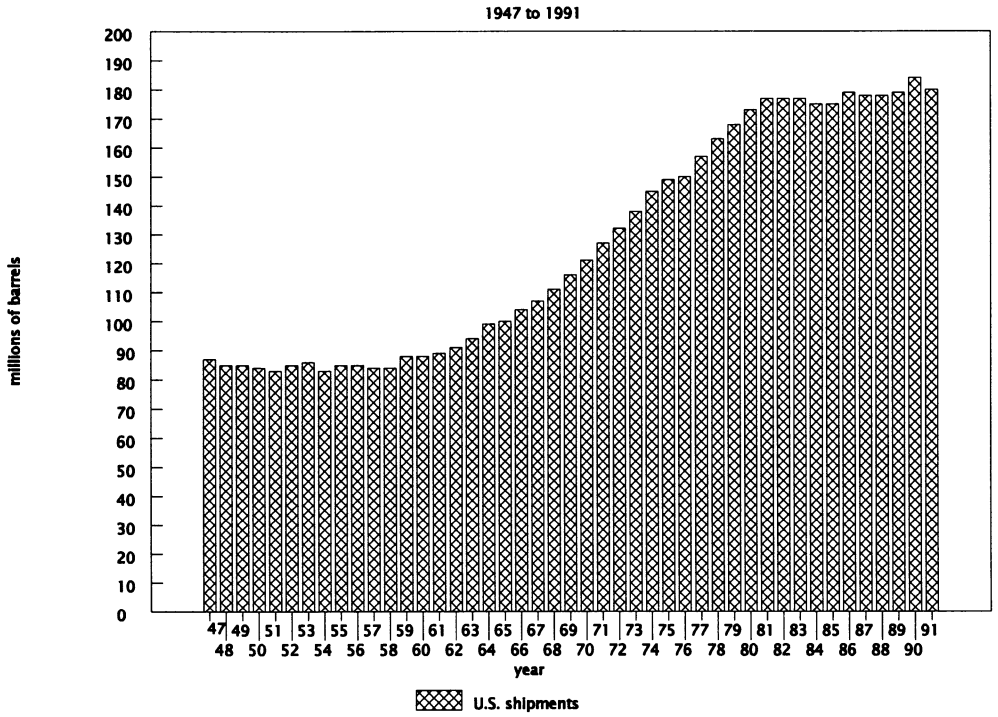

FIGURE 1 Annual US shipments of beer.

describes microbrewery production and distribution, and identifies through case analyses some possible explanations for the observed differences in microbrewery performance.

The beer industry in the United States went through a process of consolidation from 1880 when there were 2,474 breweries to 1980, when there were only 45 (Tremblay and Tremblay 1988). The four-firm concentration level increased from 11% in 1935 to 26% in 1958 and to 66% in 1978. While before World War II technological innovation had already permitted the production of multiple batches of beer with consistent taste and transportation improvements enabled broad distribution, it was only in the late 1940s and early 1950s that true nationwide distribution took hold.

As consolidation continued, with regional breweries continuing to acquire small ones and with production and distribution economies of scale levelling off, the stage was set for the establishment of national beer brands as we know them today. Economies of scale in countrywide advertising (in part due to the advent of television) permitted message uniformity, and as a few major players began competing nationally for share, taste differences among major brands became more and more subtle. In fact, two separate studies found that even regular consumers of a given brand could not discriminate between mass producers' products in blind taste tests and that awareness of the brand name did influence the perception of quality (Allison and Uhl 1964; Jacoby et al. 1971). As the industry consolidated, the major beer companies had become generalists, with products available nationwide at similar prices and with very similar characteristics. Differentiation among nationally distributed brews slowly became less a function of taste

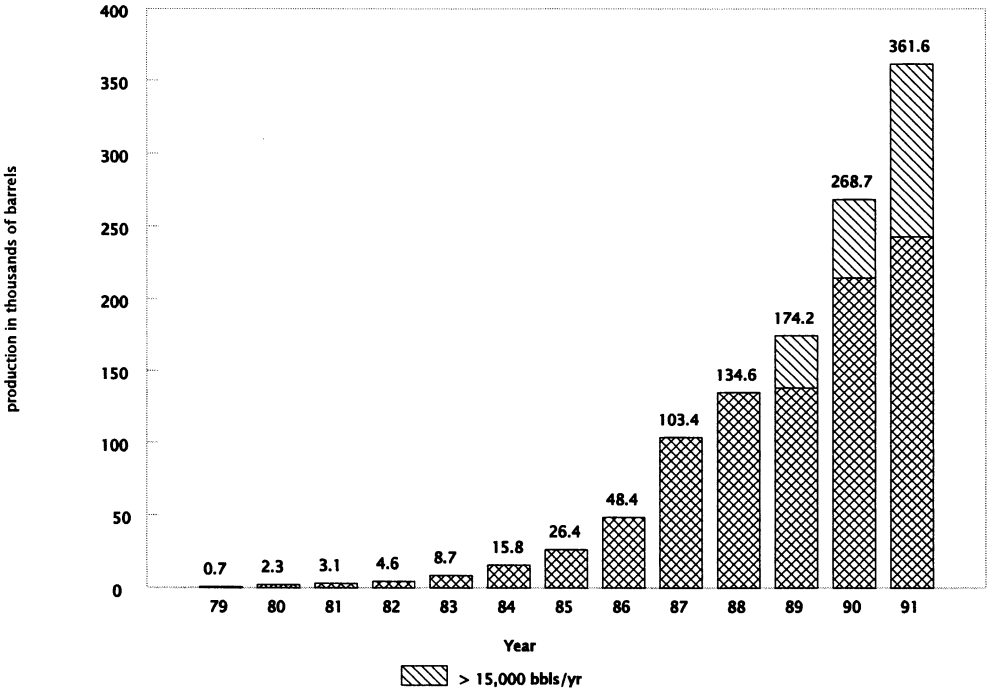

FIGURE 2 Production of US microbreweries. Production of US breweries with annual production of >15,000 bbls/yr but previously classified as microbreweries.

than of brand image—homogenization occurred along taste–product attribute dimensions, with differentiation being related to each brand's marketing message and brand positioning—as major producers hesitated to experiment with innovative taste ingredients for fear of alienating loyal consumers.

After a period of stability during the fifties, beer production in the United States exploded during the sixties and seventies, as shown in Figure 1.

By the early 1980s the industry began to observe a steady increase in import penetration, suggesting that there indeed was demand for different tasting beers.[5] As a result of this taste trend and of changes in regulatory restrictions, two new beer producer organizational forms began operating in the early 1980s: brewpubs and microbreweries. Brewpubs, as defined by the IBS, are brewery-restaurants, where the beer is brewed for sale only in the adjacent restaurant or bar (in fact, the beer is often dispensed directly from the brewery's storage tanks). Microbreweries, according to the same institute, are facilities that produce beer and sell it in any of three ways: through a wholesaler to retailers and then to consumers; acting as a wholesaler, to retailers, and then to consumers; or directly to the consumer through carry-outs or on-site taproom sales. Microbreweries generally produce less than 15,000 bbls per year.[6] The proliferation of these new organi-

[5] The import share of the high end (approximately one-twelfth of the total beer market) grew from 30% in 1981 to 60% in 1988, declining since then due in part to the advances of microbreweries in this segment.

[6] For this study, breweries that were until 1989 under the production limit of 15,000 bbl per year but subsequently producing more are considered to be microbreweries. This was done to avoid introducing sample bias by eliminating the largest and most successful firms from the sample.

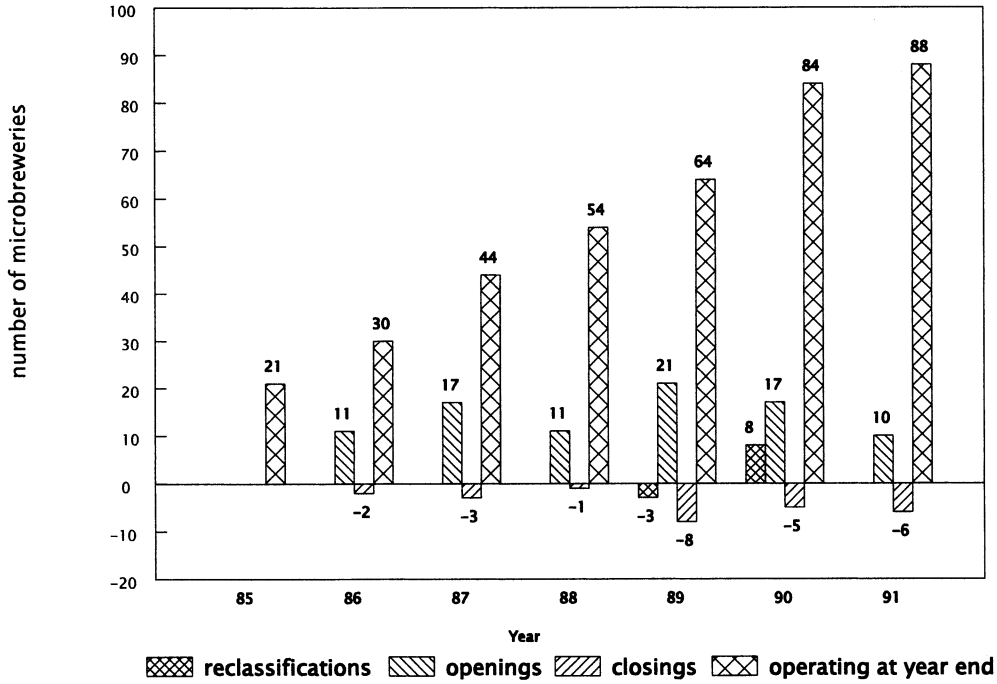

FIGURE 3 Number of US microbreweries operating at year end. Number of US microbreweries closing during the year. Number of US microbreweries opening during the year. Number of US microbreweries reclassified as regular breweries during the year.

zational forms contributed to increased consumer awareness of the potential for variety in beer making while confirming customers' willingness to try noncustomary beer recipes. Figures 2 and 3 illustrate the increase of production by microbreweries and their proliferation.

There are many different choices of ingredients and techniques in beer production.[7] Microbrewers have concentrated on using more expensive ingredients, special brewing techniques, and careful distribution with the objective of producing beer with more intense flavour (20 to 60 International Bitterness Units [IBUs]) than the standard domestic beer, which has become increasingly less bitter over the years (16 IBUs is now typical) and in an effort to reach the appropriate consumer base for their products. Roughly 40% of net revenues go towards raw materials costs, with up to three quarters of that accounted for by packaging, while another 20% go towards ongoing production costs. Independent wholesalers and retailers each command about the same gross margin for microbrewers as for imports, roughly 5% more than for large national producers' brands.

Microbrewers do not consider themselves in direct competition with mass producers; they view imports as their main rivals.[8] In terms of market segments, the mass producers are going after the broadest possible segment of consumers in order to maximize

[7] The remainder of this sub-section is based on the authors' previous industry knowledge and interviews with IBS staff and industry participants.

[8] This belief is corroborated by the regression results below.

their scale advantages in production and advertising. The microbreweries and imports are both focusing on the high end of the market.

There is considerable potential for free publicity in the microbrewing strategic group because there are usually strong local ties of some sort. Traditional advertising is rarely used, with microbreweries resorting to word-of-mouth, to taste festivals, and to personal selling to spread the word on their brands. These promotion methods imply a high cost per message (that increases substantially with the distance the message travels), but also imply a very high percentage of nonredundant messages.

Case Studies of Microbreweries and Focus

This subsection summarizes cases of three microbreweries for which focussed-related decisions greatly affected performance. The three were selected because they were early entrants and therefore had time to get through the initial start-up phase and develop a long-term strategy by the time period covered by our data set. All three are included in the data set used in the statistical analysis below.

The Sierra Nevada Brewing Company of Chico, California was considered a microbrewery from its founding in 1981 until it surpassed the 15,000-barrel production threshold in 1989. Although production rose steadily throughout that period, it had always been based on a local presence. In the words of one of its founders, being regional was a key part of the beer's charm, and serving it closer to home meant serving it in prime condition. Marketing consisted of visiting local bars to sell T-shirts emblazoned with the company's logo and letting news of the quality of the beer spread by word of mouth. The concern was not only the limited shelf life but also the desire to build a faithful following by concentrating on local and regional motives (the name of the beer itself had a regional flavour), reinforcing the indigenous nature of the product. Sierra Nevada management only started distributing their beer more broadly after they had grown beyond microbrewery capacity.

Redhook Ale Brewery, Inc. was founded in 1982 in Seattle, Washington, and was considered a microbrewery until 1990 when it sold 23,500 bbls, up from 15,600 in 1989 and 10,000 in 1987. Although it produced 33,000 bbls by 1991, word of mouth was still the primary promotional vehicle, and sales were concentrated in Washington, Oregon, and Northern California. The company consistently showed a profit starting in 1985. Like Sierra Nevada, Redhook had a strategy with geographic as well as product line focus and only went into new markets when they could guarantee quality, making for a very gradual geographic expansion. Although their production in 1992 was expected to reach 45,000 bbls, they only distributed their beer in seven western states. Through its strong local presence, Redhook benefited from (but also helped create) the specialty beer popularity in Seattle, where in 1991, microbreweries had 2% of the entire beer market.

The Boulder Brewing Company was founded in 1979, and for five years was a very small brewery (less than 500 bbls per year in output) operating on a goat farm in the foothills of the Rocky Mountains 25 miles from Boulder, Colorado. In 1985, the Boulder Brewing Company moved to a new facility in Boulder. With an annual capacity of 9,000 bbls it won the "Best Beer in America" award at the American Beer Festival and abandoned the strategy of focussing on local sales. It produced 4,800 bbls in 1986, a tenfold increase from the previous year, and branched out from its local market to eight Western

states and New England. It overextended itself, was not able to meet competition in all these markets simultaneously, and posted huge losses because of little control over distributors. In 1987 Boulder Beer initiated production of a lager-fermented light beer called Boulder Sport and sold this very pale brew in clear bottles. Because its capacity was being used for ales, and lagers need at least twice the storage time for fermentation, the production of this beer was contracted to Spoetzl Brewing Co. in Sheiner, Texas. Unable to sell the beer locally because of its perceived lack of body (pale beer in a light bottle) and its lack of identity with Colorado, and unable to place it in other states again because of its perceived lightness as well as distribution problems, the beer failed. Over the next year, the company continued to struggle because of the lack of a clear identity in its products and saw performance deteriorate even more. After declines in production in 1989 and 1990, with the brewery teetering on the verge of bankruptcy, new management took over Boulder Beer. The new management decided that Boulder should return to its previous strategy and again concentrate on the local market, while simultaneously altering its product mix to feature more draft beer and fewer varieties of beer. This more focussed approach initiated a turnaround for the company, with the IBS naming it the most improved brewery in 1991. In 1991, production increased 80% from 3,400 to 6,100 bbls.

The three cases above illustrate the importance of focus for microbrewery performance. Both Redhook and Sierra Nevada had narrow geographic focus in their beers' conception and distribution. Not only did the brand names have a clear local identity, but also distribution was carefully controlled and limited to neighbouring states even after higher production levels had been achieved. This served the dual purpose of controlling for quality levels and creating a faithful following for their products. One might expect that by focussing on a small area these breweries would have set themselves up for local reaction from imports, but price cuts by their rivals would be an only partially effective form of retaliation because of the strong local flavour these microbeers had. Although Boulder Beer had a clearly local name, it attempted to expand too quickly, both geographically and in terms of its product line, with the result that it was impossible to create a consistent following. Besides, brewing the Sport Beer in Texas seemed to contradict (in consumers' eyes) the local Rocky Mountain aura.

Thus, these three brief case studies suggest that geographic focus might be a factor contributing to microbrewery success. This hypothesis was supported in interviews with both microbrewery managers and staff at the IBS. Furthermore, industry interviews and casual observation of the sector suggest that microbreweries tend to choose too broad a geographic and/or product line focus. We can find, perhaps, some indication of the cause for this relationship in Terpstra and Olsen (1993). These authors find that sales and marketing problems are the most common problems encountered by new ventures in both the start-up and growth phases. Because distribution is a crucial element of sales and marketing in the brewing industry, it would seem logical that by maintaining a relatively narrow range of distribution, microbreweries could better monitor and control their distribution channels and avoid some of the common problems encountered by new ventures. Boulder Brewing's problems with distribution illustrate the risks of adopting too broad a distribution area.

The statistical analysis below seeks to establish a relationship between a geographically focussed niche and individual firm performance. Theoretical backing for these hypotheses is presented in the following section.

THEORY

The section begins by providing a definition of focus, then a simple two-stage strategic game is presented in which new entrants to an established industry must choose their degree of focus before they enter the market. Finally the section refers to models from the literature on product differentiation that provide insights into the product-line focus hypothesis.

In this research, focus is defined as the degree to which a microbrewery's sales are concentrated in its home geographic region. It is the firm's choice of how widely to introduce and maintain a product or product line on a given horizontally differentiated product attribute spectrum (i.e., geographic distribution). Focus is thus the choice of how broad a market segment to target and of how many segments to pursue.[9]

A model of strategic interaction[10] that provides support for the geographic focus hypothesis is described in Hendal and Neiva de Figueiredo (1997). This is an address model of horizontal differentiation in the Hotelling (1929) tradition in which rivals engage in a two-stage noncooperative game, selecting in the first and second stages the degree of focus and price, respectively. Degree of focus is characterized in the model by a variable that represents the level of discomfort each consumer located on a product attribute spectrum suffers by not having the product located exactly where (s)he is. Because of this level of discomfort (s)he will suffer a discernible cost, labelled disutility or transportation cost. The consumer's disutility or transportation cost is relevant to the firm because it will affect profit levels, but it becomes an especially important strategic variable if the firm is able to control or at least affect it. If so, this cost becomes a policy instrument because through it the firm can influence its own breadth of coverage in going to market—a low transportation or disutility cost corresponds to broad focus, and vice-versa. In the theoretical formulation, when firms pick the value of their focus variable sequentially in the first stage of competition, and then pick prices simultaneously in the second stage, the first firm (the incumbent) will pick as broad a focus level as possible; the second one, however (in this case, the entrant), will choose a more concentrated focus level. The intuition behind this result is that the entrant wishes to avoid profit erosion through price competition, and thus chooses to concentrate its focus and avoid retaliation in a judo effect (Gelman and Salop 1993). The result relies on the fact that firms must set a single price to different customers, a strong but valid assumption in the beer industry because national brands and imports have nationwide pricing policies, and national distributorships impose significant constraints on differential pricing. Implicit in the formulation of this two-stage game is the presumption that in the first stage firms choose variables that involve some degree of commitment and are not easily reversible (e.g., focus variables such as extent of distribution) and that in the second stage firms pick prices (which are assumed to be easily changeable).

A new microbrewery's decision of how widely to distribute its product can be represented as a two-stage game like the one described above; the choice variable in the first

[9] In economic terms, the choice of focus involves tradeoffs between heterogeneous valuations of a product by a nonuniform consumer base. The strategic question is faced by the entrepreneur is as follows: is it better for a firm to have a product that perfectly fits the needs of few consumers but has no fit with the remainder, or is it better for a firm to have a product that only partially fits the needs of many consumers? In the first case the firm follows a specialist strategy, attempting to appropriate surplus through a higher margin; in the second case the firm follows a generalist strategy, attempting to appropriate surplus through greater volume.

[10] Here, again, we use strategic as it is used in game theory, indicating that one player's optimal strategy will depend on the moves that other players make.

stage is geographic distance (i.e., availability of a beer brand near the consumer). The incumbents are the major imports and the U.S. mass producers whose brands are widely distributed (every consumer has easy access to these products—their transportation cost is close to zero). Given that a microbrewery has decided to enter the market and has chosen a capacity level, the next decision it faces is how broadly to distribute its own product. This is a geographic focus decision and is not immediately reversible, involving sunk costs and reputation effects. The model predicts that the entrant's profit-maximizing choice of focus is relatively narrow, i.e., the entrant should opt not to have broad market coverage and should focus sales near its location.

This model is particularly useful, because it leads to a theoretically rigorous prediction of firm behaviour, which can be empirically tested. The following section describes the test that we apply.

EMPIRICAL MODEL

The objective of this analysis is to test the hypothesis that microbreweries that have high degrees of geographic focus outperform those with broader distribution networks. The rationale behind this hypothesis has been explored above.

The percentage of local sales is assumed to be a valid indicator of geographic focus (a reasonable assumption because microbreweries are small, single-plant organizations). It is expected that microbreweries that have low degrees of focus will have lower sales and profitability for the reasons described above: higher vulnerability to retaliation (less ability to differentiate themselves from the established national incumbents), more costly transportation, resources spread more thinly, and so on.

Two performance measures were regressed on control variables in an attempt to allow for differences in the underlying structural opportunity of each microbrewery. After that, a measure of geographic focus was added to each regression. Data for testing were obtained from annual surveys conducted by the Institute for Fermentation and Brewing Studies (various years).

Performance Variables

We test two measures of performance as dependent variables: total revenues (REV) and production levels (PROD). Although in the IBS survey microbreweries did not report their annual revenues, they did provide their annual taxable production and their prices. We assume that the product of production levels and prices were an adequate and unbiased estimate of revenue. REV is a valid measure of overall performance because all microbrewers have very similar cost structures. Cost structures are similar because microbreweries have access to relatively homogeneous supplies of materials and labour, and they all operate at a scale that is far, far below minimum efficient scale for the brewing industry. As James Koch of the Boston Brewing Company (quoted in Emmons 1994, p. 40) has put it, "The megabreweries spill twice as much in a year as we sell." Swaminathan (1998) finds that over the period 1939–1995 microbreweries have an average annual output of 9,871 bbls, while mass producers have an average annual output of 930,517. Recall also that throughout this period the mass producers have grown and consolidated continuously, meaning that current average output for this group is probably significantly higher than this historical average. Furthermore, in the regressions below we control for production capacity, and in general the breweries in our sample are

not capacity constrained.[11] Thus, it is reasonable to assume that variable production costs differ only randomly in the cross section and therefore that total revenues are correlated with gross margins.

Our assumption about costs was also confirmed in interviews with industry participants and is useful for the present study because of the unavailability of individual firm profit and cost data. Because variable costs are similar across firms, the better performers are those that obtain higher revenues (controlling for capacity). The choice variables available to each microbrewery to achieve this objective are more demand-related (e.g., degree of focus) than supply-related. Choices are made in an attempt to steepen and/or shift outward the demand curve facing the firm. Microbreweries have similar cost structures, and therefore they compete by having different demand structures. The efficacy of their policy decisions depends on their effects on demand.

In fact, one could argue that more conventional measures of performance such as return on assets and return on equity would be very misleading in this industry. Because of the nature of production equipment in the brewing industry—it is "lumpy" and is difficult to use for any other purpose—and because there is excess capacity in the industry as a whole, there is great variation in the asset base of microbreweries, particularly as measured in accounting data. Some microbreweries bought new equipment; some were able to obtain used equipment, often acquiring far more capacity than they actually needed; some took over the plant of another failed microbrewery; a few such as the highly successful Boston Brewing Company even avoided any significant investment in plant and equipment by contracting out production to larger brewers with excess capacity. It is also the case that most of the microbreweries in the data set are in the early stages of growth and their owners/managers might well be more concerned with growth than profitability in the short run. This is especially likely to be the case, given that microbrewery industry participants are often motivated by a love of brewing as much as by profits.

REV has one major drawback as a performance variable: it is sensitive to microbreweries' pricing decisions. If these pricing decisions are in some way correlated to the geographic focus variable being tested, the results of the regressions may be impacted. For example, if microbreweries charge lower prices for their products in distant markets, as a price discriminating seller might do, a positive effect of the LOCAL variable (defined later in this section) would not necessarily mean that narrower geographic focus leads to better performance. Although there is no significant correlation between prices and our measure of geographic focus, to cover all the possibilities we also ran regressions with PROD as the dependant variable, with the sole objective of offering a control for price swings in the calculation of REV.

Control Variables

These are variables that are not focus related and that help explain microbrewery performance by picking up differences in the firms' opportunity sets. Microbreweries do not confront perfectly identical nor homogeneous conditions, and the demand structures they individually face will be different. The control variables used are listed below with possible effects on demand curves and/or on cost structure.

[11] This prediction is confirmed by the data. Average capacity utilization is near 63%, and microbreweries were operating at full capacity in less than fifteen percent of the observations.

MBPC is the annual percentage change in total microbrewery taxable production (bbls). It is an aggregate economic indicator for the microbrewery sector (controls for general short-run swings in sectoral demand). Aggregate microbrewery growth is expected to shift the demand curve facing each brand outward over time due to increased information on the sector's products, and individual performance is expected to be better. The coefficient on this variable should be positive.

PERCAP refers to the per capita beer consumption in state in gallons per year (controls for state-related variations in demand). If national producers' products and microbeers face the same demand structure but are clearly differentiated (are not seen as substitutes), greater consumption will shift outward the demand curves facing each brand. Individual performance will improve, and the coefficient will be positive. However, if consumers in states with high beer consumption prefer homogeneous brands or if they don't readily differentiate between microbeers and national producers (they are seen as close substitutes), the demand curve facing each microbrewery will be flatter, i.e., more elastic, and microbrewery performance will be worse because microbeers sell at a higher price. If this is the case, the coefficient will be negative.

RIV is the number of microbrewery rivals in state. Industry participants don't consider themselves in competition with each other, seeing imports as their main rivals and stating that the more microbreweries the better because this increases aggregate demand by helping raise consumer awareness of higher quality beer. If this is the case, the increased number of rivals will shift the demand curve facing each microbrewery outward because it will be raising overall demand, and therefore will boost each firm's performance level. The coefficient will be positive. If, however, microbreweries are in direct competition with each other, then a higher number of rivals will cause the demand curve facing each brand to be shifted inward, and less differentiation among products will cause the demand curve to become flatter. These two effects will lead to lower performance levels, and the coefficient will be negative.

IMPORT refers to the import penetration in state (import beer consumption as a percentage of total state beer market). According to industry conventional wisdom, microbrews substitute imports in the super-premium category. If this is the case, they are in direct competition; higher import penetration will make microbrewery performance worse, and the coefficient will be negative. If, however, the effect of higher imports is to raise consumer awareness of beer quality (or if increased import consumption is an indicator of such awareness), aggregate demand in the super-premium segment will be enhanced, and microbrewery performance will be better. In this case, the coefficient will be positive. Microbrewers themselves do not view imports as a very close substitutes for microbrewed beer in terms of taste, quality, or freshness.

YSOP refers to years of operation of the microbrewery. We might expect that the older the microbrewery, the better the expected performance due to learning and reputation effects. If YSOP captures these effects, it will have a positive coefficient.

Firm dummy variables (FIRMDs) are introduced to capture individual firm effects. In effect, they allow the intercept of the regression line to differ for each firm in the study. Heterogeneity is expected because of the large difference in business capabilities and motivations of microbrewery owners and managers. The use of firm dummies is the accepted econometric technique for controlling for firm effects in panel data (see, for example, Mundlak 1961; Chamberlain 1984; Hsiao 1986; and Griffiths, Hill, and Judge 1993). The firm dummies control for omitted variable fixed effects—that is, the effects of firm level variables that are not included in the model and that do not vary

significantly over the three-year period under study. Recalling that the vast majority of microbreweries are owner managed, it is clear that such factors as management capabilities and motivations would fall into the category of fixed effects.

CAP refers to the microbrewery capacity level in bbls. This variable controls for investment/capacity levels in the regressions. Its coefficient should be positive—larger breweries should have higher sales volumes and revenues.

NEW means the dummy variable is equal to one if this is the first year of operation of the brewery, and zero if not. The coefficient on NEW will be positive if there is a novelty effect that helps new breweries, negative if new breweries are at an added disadvantage, beyond that captured by YSOP, because of a lack of brand awareness or managerial inexperience.

Geographic Focus Variables

The geographic focus variable that we tested (LOCAL) is defined as the percentage of a brewery's sales that are made within the nearest metropolitan area. The higher the percentage of local sales, the greater the geographic focus.

The models have the following general structure:

$$\text{Performance} = f(C, \text{FIRMDs}, \text{CONTV}, \text{GEOGF}),$$

or

$$\ln(\text{Performance}) = C + \Sigma_i \alpha_i \ln(\text{CONTV}_i) + \Sigma_j \beta_j \text{FIRMD}_j + \gamma \text{LOCAL}$$

where CONTV are control variables, FIRMDs are firm dummy variables, and LOCAL is the geographic focus variable. Each of the control variables is assumed to affect performance in a multiplicative way. It seems logical, for example, to assume that a microbrewery's sales would be effected multiplicitively by the level of overall in-state consumption of microbrewed beer or the number of rivals it has in state. The estimation technique used was ordinary least squares. The geographic focus variable cannot be multiplicative in its effect, since the dominator of LOCAL is REV. Table 1 presents a summary of statistics for the variables described in this section, and Table 2 presents a correlation matrix for the variables.

DATA AND RESULTS

Microbrewery-specific data, which are the core of this study, were obtained from the IBS annual surveys of all microbreweries in the United States for 1989, 1990, and 1991. These contained data on sales, marketing, and operations practices for each firm. Financial data such as revenues, cost levels, investment levels, and profits were unavailable. These early years in the growth of microbreweries were chosen because they represent the period in the history of the industry in which there was a large number of new entrants into the industry, which were clearly differentiated from mainstream brewers.[12]

Other data on microbreweries, including capacity levels, were obtained from the annual Brewer's Resource Directory (1987–1992). Data on annual per capita beer consumption and import penetration by state were obtained from The Beer Institute (1992), Beer Marketer's Insights (1992), and from Beer Industry Marketing (1992).

[12] Survey results for 1988 (the year of the first survey) were not available.

TABLE 1 Descriptive Statistics

Variable	Code	Mean	Standard Deviation	Maximum Value	Minimum Value
Production (bbls)	PROD	5,427	7,592	45,000	100
Price (1/2 barrel)	PRICE	76.84	14.42	110	54
Revenues ($)	REV	888,614	1,406,408	8,100,000	11,000
Capacity (bbls)	CAP	9,320	11,817	50,000	150
Years of operation	YSOP	4.512	2.501	13	1
Total microbrewery production growth	MBPC	0.401	0.109	0.542	0.294
State per capita beer consumption	PERCAP	23.94	2.66	30.50	18.30
State import penetration	IMPORT	0.0411	0.0242	0.085	0.009
Number of micro-breweries in state	RIV	8.256	7.670	22.00	1.00
New microbrewery (dummy)	NEW	0.058	0.235	1	0
% sales local	LOCAL	0.607	0.354	1.00	0.01

There were 84 microbreweries in the United States operating during at least two of the three years between 1989 and 1991. Forty-two of these microbreweries responded to the IBS survey in at least two of the three years. Of the 42, three did not supply pricing data[13], and five did not supply data on local sales, so the sample for this study is composed of 34 of the 84 possible microbrewery respondents (40.5%). Of these 34, 18 responded to the survey in all three years, and 16 in only two years, giving us a total of 86 observations.

RESULTS

Tables 3 and 4 report the regression results. Table 3—regressions (1) through (4)—reports results when REV is the dependent variable measuring performance; Table 4—regressions (5) through (8)—reports results when PROD is the dependent variable measuring performance. The first three regressions in each table show results with control variables alone, while the last two regressions in each include geographic focus variables. For each dependent variable, the first regression only includes firm effect dummy variables; the second regression includes only the control variables which are demand shifters; the third regression includes all the control variables described above; and the fourth regression includes LOCAL. Because the results using REV and PROD as dependant variables are so similar, we will focus our discussion on Table 3, regressions (1) through (4).[14]

Before analysing the effect of LOCAL, it is useful to examine the results of the regressions with control variables alone. The introduction of firm dummy variables follows from the expectation of firm effects, given the managerial diversity across micro-

[13] These three microbreweries supplied no pricing data for any year. When a microbrewery supplied pricing data for two of the three years, interpolation or extrapolation were used to estimate prices for the missing year.

[14] It is not surprising that these results are almost identical for the two dependent variables, given the high correlation between them (0.981). It is also important to note that there is essentially no correlation between LOCAL and PRICE (0.082), and it was the possibility of such a correlation that prompted us to run regressions (5) through (8) in the first place.

TABLE 2 Correlation Matrix

	PROD	PRICE	REV	CAP	YSOP	MBPC	PERCAP	IMPORT	RIV	NEW	LOCAL
PROD	1.000										
PRICE	0.169	1.000									
REV	0.981	0.302	1.000								
CAP	0.681	−0.147	0.607	1.000							
YSOP	0.545	0.285	0.565	0.233	1.000						
MBPC	−0.090	0.073	−0.841	−0.174	−0.057	1.000					
PERCAP	−0.166	−0.216	−0.164	−0.141	−0.054	0.060	1.000				
IMPORT	−0.037	0.381	0.024	0.004	0.022	0.089	−0.176	1.000			
RIV	0.087	0.440	0.149	−0.068	0.197	0.122	−0.131	0.645	1.000		
NEW	−0.146	−0.044	−0.128	−0.132	−0.313	−0.221	−0.084	−0.035	−0.025	1.000	
LOCAL	−0.415	0.082	−0.359	−0.414	−0.075	−0.055	0.249	−0.210	0.005	0.191	1.000

TABLE 3 Dependent Variable REV

	Regression Number			
Variable	(1)	(2)	(3)	(4)
FIRM DUMMIES	Yes	Yes	Yes	Yes
MBPC		0.192	0.269**	0.213*
		(0.134)	(0.120)	(0.113)
PERCAP		−3.96*	−2.96	−2.57
		(2.06)	(1.84)	(1.72)
IMPORT		−2.02***	−1.57***	−1.69***
		(0.461)	(0.486)	(0.454)
RIV		1.83***	1.12***	0.986**
		(0.484)	(0.386)	(0.363)
YSOP			0.311**	0.363**
			(0.139)	(0.131)
CAP			0.447***	0.464***
			(0.086)	(0.080)
NEW			0.331**	0.366**
			(0.155)	(0.145)
LOCAL				0.958***
				(0.340)
Adjusted R^2	0.935	0.965	0.980	0.983
F-statistic	38.06	64.42	105.8	119.2
ESS	5.758	2.859	1.524	1.292
Degrees of freedom	53	49	46	45

Note: Numbers in parentheses under coefficient estimates are standard errors of the estimate.
*** indicates coefficient significant at $p < 0.01$; ** indicates coefficient significant at $p < 0.05$; * indicates coefficient significant at $p < 0.10$. All tests of significance are two-tailed.

breweries and the belief that there are other sources of heterogeneity besides the ones picked up with the control variables available. Regression (1) includes firm dummy variables only.

Examining the results of regressions (2) in Table 2, we see that the adjusted *R*-squared increases from 0.935 in regression (1) to 0.965 when demand-related control variables are added. Regression (3) shows the results with all control variables, all of which have expected signs. PERCAP is negative but is the only control variable that is not significant at least at the 10% level. CAP, which is a control for capacity levels, is positive and is significant at the 1% level. IMPORT is negative, and RIV is positive (both are also significant at the 1% level).

When the variable LOCAL is added to the regression (4), it has a positive sign as expected and its level of significance is better than 1%, the adjusted R-squared goes up to 0.983, and six of the seven control variables are significant. The only control variable that is not significant at least at the 10% level is PERCAP, which is negative.

The sensitivity of the dependent variable REV to LOCAL is worth noting. If the value for LOCAL is one standard deviation above (below) its mean, the expected value of the dependent variable, ln REV, increases (decreases) by 3%, which represents a 4% increase (decrease) in REV. Of course, a 4% change in revenue can have a far more significant effect on profit levels, especially because our regressions control for capacity.

DISCUSSION

The empirical results outlined above confirm the basic hypothesis of this paper: that a new entrant's choice of degree of focus (in this case geographic focus) will have a

TABLE 4 Dependent Variable PROD

	Regression Number			
Variable	(5)	(6)	(7)	(8)
FIRM DUM.	Yes	Yes	Yes	Yes
MBPC		0.103	0.168	0.116
		(0.129)	(0.113)	(0.107)
PERCAP		−2.75	−1.63	−1.277
		(1.99)	(1.74)	(1.63)
IMPORT		−1.92***	−1.45**	−1.56***
		(0.445)	(0.460)	(0.432)
RIV		1.84***	1.15**	1.03**
		(0.467)	(0.366)	(0.345)
YSOP			0.217*	0.265**
			(0.132)	(0.124)
CAP			0.480***	0.495***
			(0.082)	(0.076)
NEW			0.196	0.229*
			(0.147)	(0.138)
LOCAL				0.883**
				(0.324)
Adjusted R^2	0.938	0.966	0.981	0.984
F-statistic	40.04	65.74	112.0	125.0
ESS	5.201	2.658	1.366	1.169
Degrees of freedom	53	49	46	45

Note: Numbers in parentheses under coefficient estimates are standard errors of the estimate.
*** indicates coefficient significant at $p < 0.01$; ** indicates coefficient significant at $p < 0.05$; * indicates coefficient significant at $p < 0.10$. All tests of significance are two-tailed.

significant effect on the entrant's performance. More specifically, we confirmed the belief of industry participants and observers that microbreweries are far more likely to attempt to serve too broad a market segment than to focus too narrowly.[15]

The data confirmed some other widely held beliefs of industry participants. Our results show that microbreweries' sales are negatively affected by higher in-state import penetration, suggesting that consumers view imports and microbrews as substitutes. However, at least at the early stage in the segment's growth captured in our data set, microbreweries gained from having many microbrewery rivals within the same state, possibly because of the increase in overall demand for microbrewery products. There appear to be some small learning and/or reputation effects in the operation of microbreweries as well as a minor novelty factor that benefits newly opened establishments. There was also evidence in our data that microbreweries have excess capacity. The values of the regression coefficients indicate that in general microbreweries' production and revenue grow disproportionately with additions in their production capacity (that is, if a brewery has twice the capacity of a particular rival, all else being equal, its production and revenue will be more than twice those of the rival). Microbreweries, especially smaller ones, must be operating below capacity to allow this pattern to occur. Finally, although the variable PERCAP did not have a significant coefficient in any of the regressions, its consistent negative coefficient did provide some evidence that heavy beer

[15] We did look for evidence that there is an optimal value for LOCAL below 100%. However, in regressions that included the variable LOCALSQUARED, this new variable was not significant, although it did have the expected negative sign.

drinkers tend to value quantity of beer consumed over the quality that microbrewed beer represents. The lack of significance may result from a partially offsetting effect whereby some groups who are heavy consumers of beer care much about product quality.

Given the nature of our data set, there is some possibility that there is survivor bias in our results. Of course, given the support that is found for our basic hypothesis in the data that we do have, it is quite possible that if we could eliminate any survivor bias that may exist from the data we would find even stronger support for our hypothesis—those microbreweries excluded from the analysis because they had exited may very well have been the least focused and least successful of the total population. We have done all that we could to eliminate survivor bias by choosing the earliest years of the IBS survey of the microbrewery industry for our study. Only 14 microbreweries were eliminated from possible inclusion in the study because they exited before 1990. These represented 14% of the possible sample population, given that 84 microbreweries were eligible for inclusion.

It is interesting to speculate why the relationship we find between geographic focus and microbrewery performance exists. In the beer industry, as in any other industry, firms can either compete on the basis of product differentiation or cost (Porter 1980). The microbreweries have no hope at all of competing with either the large domestic incumbents or even the imports on the basis of cost. Therefore, they must compete on differentiation. However, even here their choices are limited. The large breweries (domestic and import) spend so much money on advertising and promotion that there is no way that the microbreweries can compete here in terms of differentiation across a broad market.

How then can they compete? One alternative would seem to be by offering customers a brew with a local appeal. This is one area where the majors and imports cannot beat them. Anecdotal evidence for this hypothesis is found in our case studies and even in the names of successful microbrewed beers. Among the most successful microbrewed beers are: Samuel Adams' Boston Lager, Sierra Nevada, and New Amsterdam.

We must note again, however, that the majority of the variation in the performance of microbreweries stems from differences in the management, organization or market of individual breweries not captured explicitly by other variables included in the study. These firm-specific factors were captured statistically in the firm dummy variables. This finding, perhaps, should not be surprising, given the huge variation in the backgrounds, skills, and outlooks of microbrewery owners during the segment's early days.

We can also look at how our results relate to earlier work on scope of entry in the entrepreneurship literature. Broom and Longenecker (1979) suggested the entrants should choose segments of the markets either too small to interest incumbents or too small and distinct to allow incumbents to take advantage of their scale advantages. Clearly, in the period 1989 to 1991, successful microbreweries served a segment that fell into both of these categories.

We also find support for Williams, Tsai, and Day's (1991) finding that firms with low intangible assets (market images) perform worse the more aggressively they enter a market. Our results show clearly that microbreweries, which begin life with no intangible assets, are penalized for aggressive entry.

Finally, we find statistical support for two findings of McDougall et al. (1994). First, these authors argued that new ventures in low growth industries should enter at a smaller scale than those in high growth industries. Our findings that geographically fo-

cussed, and hence less aggressive, microbreweries were more successful provides at least indirect support for this finding, given the slow growth of the American beer market. Second, they found that entrants pursuing focus strategies were more likely to emphasize specialty products and place relatively little emphasis on cost control. Again we find support for this conclusion in that successful microbreweries are geographically focused, often producing specialized products with a strong local flavour. When microbreweries try to enter the mainstream market (e.g., Boulder Sport), they are far less successful.

CONCLUSION

This paper used empirical analyses to test the importance of geographic focus as a policy instrument for microbreweries. The research design included the description of game-theoretic models of strategic interaction where degree of focus is a choice variable, the selection and investigation of cases to generate industry-specific hypotheses on desired focus levels, and empirical testing of these hypotheses for the population as a whole.

In a monopolistically competitive industry in which suppliers are relatively homogeneous, firms compete by manipulating the residual demand curve through the specification of product attributes (e.g., extent of distribution, breadth of product line). They compete in degree of focus. The microbrewery strategic group offers an opportunity to examine the relative merits of different focus strategies at the firm level because in the period covered by this study microbreweries proliferated in number, shared focus as a common generic strategy in their reaction to generalist incumbents (national producers and imports) yet varied significantly in their degree of focus.

This paper used statistical tests to determine whether annual performance in the microbrewery strategic group was related to extent of geographic focus. The hypothesis that geographic focus is a positive predictor of performance is confirmed. The variable that represents percentage of local sales was positive, large in magnitude, and statistically significant in the regressions, implying that the higher the percentage of sales that are local, the better the microbrewer's performance. Thus, in the microbrewery industry entrants are better off to serve only a small, well-focussed segment of the market.

The lessons learned from this research of are obvious importance to entrepreneurs in many industries, particularly those where small, differentiated entrants are competing with themselves and with large, undifferentiated incumbents. It is a common situation for an entrepreneur to enter an industry in which established firms are already in place, serving a broad cross section of the market. It is also common for such entrepreneurs to succeed by serving a relatively narrow section of the market particularly well while not expending any major effort serving the remainder.

We can think of many examples where entrepreneurs have either succeeded by focussing on a particular segment or failed by not doing so, including the three microbreweries discussed in the Microbreweries and the Beer Industry section above. In fact, there are even cases in which firms have done first one and then the other. For example, when it first took to the air, People Express Airlines had much success by serving the leisure travel very efficiently but purposely not providing many of the features that would appeal to business travellers (service to downtown airports, flights scheduled at the start and end of the business day, food and beverage service, reserved seating, baggage handling, etc.). People Express got into trouble when it tried to expand too quickly by adding flights and features designed to appeal to the business traveller. This loss of

focus had two negative effects. It called upon resources that People lacked (e.g., sophisticated reservation and seat assignment systems), and it brought People Express into direct competition with the major airlines and forced the major airlines to respond to People (e.g., by cutting fares to match People Express at least for a limited number of seats on each flight).

It has been argued that making resource allocation decisions is the essence of a manager's job. If this is true of managers in general, it is even more true in an entrepreneurial firm where severe resource constraints are a defining characteristic of the business environment. Because the entrepreneur's choice of breadth of focus will have profound effects on the resource requirements of the business, it is clear that the choice of which segment or segments of the market on which to focus is a fundamental decision to be made by all entrepreneurs. This paper has attempted to illustrate the importance of the focus decision and to provide some guidance for entrepreneurs concerning the appropriate degree of focus to adopt in entering an established market.

A possible limitation of the paper is its generalizability. In particular, although there are many elements of the brewing industry that are similar to many other mature consumer product industries, there are also many things that make this industry unique. First, in part because taxes and the shape of the industry production function reduce the price disadvantage of very small-scaled firms in the industry,[16] the new ventures we studied were very small relative to industry incumbents. They were also all independent, that is, not part of larger firms. Finally, many of them were motivated not just by financial concerns but had a deep passion for the industry when they entered. To summarize, microbreweries competing with the likes of Anheuser-Busch or Miller can truly be compared with David fighting Goliath.

Nonetheless, the essential elements of the industry structure that we argue drive our results—a differentiated product in which several large incumbents are fighting for the vast middle of the market, a significant group of consumers who are not well served by the mass producers' current offerings, and the inability of the mass producers to serve these consumers well even if pushed to by the entrance of new firms who serve these customers well—are common to many industries. Thus, we argue that our findings are generalizable to a significant degree.

This study combines concepts from the fields of entrepreneurial studies, industrial organization economics, and strategic management to empirically identify factors that contribute to microbrewers' annual performance levels. It is the first study to specifically apply the latest developments in the industrial organization literature regarding focus to the study of entry by entrepreneurial firms. It opens several avenues for further research. The most obvious one is how survival and mortality (long-run equilibrium) is affected by the geographic and product line focus variables considered in this paper.

The study builds upon our previous understanding of new venture performance in several ways. The prevailing view of the determinants of new venture success can best be termed a contingency view. The best strategy for a new venture depends critically on its environment—there are no universal rules of thumb. This paper looks at one type business environment in detail and begins to identify the factors that lead to success for new ventures. We find that the most successful microbreweries are highly focused geographically. We generalize our findings regarding microbreweries to include the fol-

[16] That is, a very small firm is not a significantly worse position in the industry than a small or medium sized firm.

lowing: when entering markets in which there are large, differentiated incumbents and high economies of scale, new entrants are best advised to enter using what Porter (1980) would term a differentiation focus strategy with a very high degree of focus.

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