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Competitor-oriented objectives: the myth of market share

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Competitor-oriented Objectives: The Myth of Market Share

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Abstract

Competitor-oriented objectives, such as market-share targets, are promoted by academics and are commonly used by firms. A 1996 review of the evidence, summarized in this paper, indicated that competitor-oriented objectives reduce profitability. However, we found that this evidence has been ignored by managers. We then describe evidence from 12 new studies, one of which is introduced in this paper. This evidence supports the conclusion that competitor-oriented objectives are harmful, especially when managers receive information about market shares of competitors. Unfortunately, we expect that many firms will continue to use competitor-oriented objectives to the detriment of their profitability.

Key words: competition, market share, objectives, profitability.

JEL CLASSIFICATION: L21, M21, M31.

Many managers have a natural inclination to want to beat their competitors. Our concern in this paper is the relationship between competitor orientation and performance. We show that competitor-oriented objectives are detrimental to firms' profitability and that the use of information and decision aids to support such an orientation exacerbates the harm.

The pursuit of competitor-oriented objectives is consistent with the long-held belief that business is like warfare. In the late 19th century, it was popular for executives to strive for revenue maximization. To see how well they were doing, they compared themselves to their competitors in the industry. Judging from Lanzillotti (1958), competitor-oriented objectives, typically expressed in terms of market share, were commonly utilized by large firms well before the 1950s. Oxenfeldt (1959) lamented the common use of market-share objectives and discussed the logical and practical flaws of pursuing such objectives.

Economists frown on competitor-oriented objectives (Mueller 1992). They consider the proper objective of business to be profits, not market share. Business school academics, however, have rushed to support market share objectives, noting that higher market shares are correlated with higher profitability. Influential support came from two *Harvard Business Review* papers: Buzzell, Gale, and Sultan (1975) and Porter (1979). Other articles and books, such as Porter (1980), agreed with these claims. These writings gave credence to the already popular view that business is like war and that the goal is to win by defeating competitors. Porter (1979) went further by referring to customers and suppliers as competitors. Henderson, founder of Boston Consulting Group, claimed, in a 1989 *Harvard Business Review* article, that it is all about survival: " … Darwin is probably a better guide to business competition than economists are."

Market share *is* positively correlated to profits. A meta-analysis of the relationship between market share and profitability by Szymanski *et al*. (1993) identified 48 studies that reported 276 elasticities from econometric models. The elasticities ranged from -0.16 to 0.84 with the unweighted mean elasticity equal to 0.20. However, it does not follow logically that seeking higher market share will improve profits. Rather the correlation between market share and profitability is more logically interpreted as showing that firms with better offerings tend to achieve higher market shares.

Advocates of competitor-oriented objectives do not provide evidence relevant to their claims. However, much evidence has been published that show such objectives to be commonly used-

Evidence up through 1996

Much of the evidence on the prevalence and effect of competitor orientation was presented in Armstrong and Collopy (1996). We briefly summarize that evidence here.

Prevalence of market-oriented objectives

Armstrong and Collopy (1996), henceforth noted as A&C, summarized laboratory studies on the prevalence of competitor-oriented objectives. Here are some of the key studies:

- Scodel *et al*. (1959), Messick and Thorngate (1967), and Messick and McClintock (1968) modified a prisoner's dilemma matrix to test the effect of providing information to subjects on their cumulative score relative to the other player's. When playing the game for many trials and given feedback about their *relative* score, almost 90% of these subjects' choices were competitive (low-profit) rather than cooperative (profit maximizing).

> • Kuhlman and Marshello (1975) summarized research from three similar studies. The percentage of people that selected competitor-oriented responses ranged from 21% to 49%, depending on game instructions and payoffs. Liebrand and van Run (l985) found similar results across cultures.

Between 1989 and 1994, A&C asked 170 MBA students whether "the primary purpose of the firm is (a) to do better than its competitors, or (b) to do the best that it can." One-third of the students believed that firms should try to do better than their competitors. About the same percentage agreed with the statement that "the best way to judge the success of a firm is by how well it does relative to its competitors." In early 1995, the same questions were asked of 54 students at a university in Korea; about 40% agreed with each statement.

Many managers justify their competitor-oriented objectives as a way to increase long-term profits. In l992, A&C asked marketing faculty and students: "What do you believe would be the effects on *long-term profitability* if a firm has as its primary goal to achieve higher market share?" Of the l02 respondents, 57% believed that profits would be higher, 27% believed that they would be lower, and l6% were undecided.

In 1993, A&C surveyed 72 managers attending seminars in the US, Argentina and Chile. Half of them considered that "the primary purpose of our firm is to be better than its competitors" and 39% agreed that "the best way to judge the success of our firm is by how well it does relative to our competitors."

To further assess what marketing experts believed, A&C (1996) posed the following question to convenience samples of marketing faculty and managers in New Zealand, the United States, and Argentina:

> What if we ran the following study: (l) select 20 firms from different industries; (2) assess the extent to which their goals are competitor oriented (market share); and (3) examine their profits over the next three decades. Assuming that the 20 firms would differ greatly with respect to competitor orientation, what would you predict?

Of the 108 respondents, 52% said that profits for firms with competitor-oriented goals would be more or much more than those of other firms, while only 26% thought they would be less or much less.

In the A&C survey of 21 senior executives from Japanese companies, 29% said that the primary purpose of their firms is to be better than their competitors, and 48% judged their success by how well they do relative to their competitors.

Leeflang and Wittink (1996), in a study of seven popular brands of a nondurable, nonfood product sold in the Netherlands concluded that managers overreacted to each other's promotional activities. In a replication in New Zealand of the Leeflang and Wittink (1996) study, Brodie, Bonfrer and Cutler (1996) found even stronger evidence that managers were too competitor oriented.

Effects of competitor-oriented objectives

Kohn's (1986) review of competition contains 388 references drawn from a variety of areas including sports, education, and the performing arts (but not from business). He concluded that, in general, competitor-oriented objectives harm performance. In the rest of this section, we review studies related to business.

Laboratory studies

In general, managerial objectives affect the performance of a firm (Keil *et al*. 2001, Locke and Latham 2002). A&C described prior evidence on the effects of competitor-oriented objectives on performance:

> • In Deutsch's (1958, 1960) laboratory experiments, two hypothetical trucking companies had to share a road. Both parties were less profitable when told they were told to do better than their opponents than when told do the best they could for themselves.
>
> • Corfman and Lehmann (1994) asked 57 subjects to make "advertising spending decisions as marketing managers of a medium-sized manufacturer selling in mature markets." The advertising decision involved high (competitive) or low (cooperative) budgets. Although the profits were much higher for the cooperative budget, 78% of the subjects chose the competitive budget.

A&C conducted laboratory experiments where subjects were asked to assume the role of a marketing manager for their firm. Subjects in the control group were given information only on their own firm's profits while the subjects in the experimental groups were also given information on their competitor's profits. The situation was described to them, and they were told to choose a "high" or "low" price for a new product. Their expected profit figures were the same in each treatment and are explained below:

Group	**Information Provided**	**Expected Profits Over 5 Years**	
		High Price	**Low Price**
Control	Subject Firm	$40 M	$80 M
Harm	Subject Firm	$40 M	$80 M
	Other Firm	- $100 M	$40M
Beat	Subject Firm	$40 M	$80 M
	Other Firm	$20 M	$160 M

- The control treatment made no mention of competitors.
- In the harm treatment, subjects were able to harm their competitors.
- In the beat treatment, subjects were able to do better than their competitors without causing the competitor to lose money.

When no information was provided about the performance of competitors, 14% of subjects chose the less profitable decision. Subjects in the harm treatment chose the less profitable decision at more than twice that rate (34%) and in the beat treatment as many as 60% of subjects selected the low price.

In some versions, A&C described the situation as involving a "new, highly technical product" to assess whether the type of product made a difference. Variations in the product description did not change the results. A&C also tested other threats to validity by changing key aspects of the problem, as follows:

> *Longer time horizon.* With a 5-year time horizon, subjects in the harm and beat treatments who decided on the low price might have believed their firm would suffer short-term losses in exchange for long-term gains. To address this possibility, A&C tested a *20-year* time horizon. This had only modest effects on the decisions. Many subjects continued to harm and beat subjects despite the substantial forgone profits.

Ex post pricing decision. Despite the instructions, subjects might have made different assumptions about profits beyond the stated planning horizon. To control for this, the problem was changed to refer to the past. A&C asked subjects to decide which of two divisional brand managers should be promoted: one who had used a high-price strategy which resulted in high profits, or another whose low-price strategy had led to low profits. In one treatment the profit figures were identical to those used in the original harm treatment, and 40% of subjects promoted the low-profit marketing manager. In the *ex post* beat treatment, 51% promoted the low-profit marketing manager.

Equalizing final market values. In a further version of the *ex post* pricing treatments, A&C added information that the two divisions were valued equally (both initially and currently), but the manager who used the higher price achieved much higher profits during the elapsing period. Among subjects receiving the equal–market-value harm treatment, 52% promoted the manager who had the lower profits while 34% did so in the equal-market-value beat treatment.

Table 1 summarizes the findings:

Table 1

Percentage of Subjects who Selected the Less Profitable Decision
(Number of subjects)

	Information about competitors		
Treatment	*None*	*Harm*	*Beat*
Pricing:			
5 years (benchmark)	14 (65)	34 (139)**	60 (60)**
20 years	12 (42)	45 (40)**	30 (40)*
Ex Post Pricing:			
5 years	n.a.†	40 (76)	51 (69)
20 years	n.a.	25 (24)	30 (30)
5 years: equal value	n.a.	52 (87)	34 (80)

* Significant at $p < 0.05$ with one-tail t-tests (compared with results from “none” column).
**Significant at $p < 0.01$.
†No tests could be conducted for the *ex post* treatments because it was impossible to construct a “no information” version.

In follow-up questionnaires, subjects were asked, “Why did you make this decision?” In general, once subjects took account of the competitor’s performance, they were less likely to pay attention to their own profits: 83% of the 107 subjects who mentioned competitors selected the less profitable decision.

Field studies

Anterasian and Graham (l989) examined the performance of a sample of 42 businesses drawn from the Federal Trade Commission's Line of Business Program. The lines of business were selected from eight manufacturing industries that had experienced a boom-bust cycle from 1974 to 1977. Those lines of business that achieved stability in sales by giving up market share during the 1974 boom in their industry achieved higher returns on sales during the subsequent bust period.

A&C used the performance of American firms to determine the extent to which a competitor orientation can affect profitability. Information on pricing objectives of 20 large U.S. companies had been collected by Lanzillotti (1958) and Kaplan, Dirlam, and Lanzillotti (1958). These sample companies were selected from among the largest corporations on the basis of the willingness of management to cooperate by permitting extensive interviews with company officials. Lanzilloti *et al.* conducted week-long interviews with company officials between 1948 and 1951 and then again between 1956 and 1957. The companies' objectives were the same in the follow-up interviews as in the initial interviews. In some firms, these objectives were based on long-standing policies. For example, as far back as 1937, A&P had stated that their primary aim in pricing was to achieve a larger market share.

A&C inferred the competitor orientation of the firms' objectives from Lanzillotti's description of their stated pricing policies. An 11-point scale (1 = to do well for themselves; 11 = to do well relative to competitors) was developed to assess firms' objectives. The objective of doing well for a person's own firm was identified by the presence of an explicitly stated pricing goal to maximize or increase profits. At the other end of the scale, goals of increasing or maximizing market share were classified as highly competitor oriented (Table 2).

Table 2

Objectives scale and number of firms at each level
(MS = Market Share)

Competitor Orientation	*Pricing Objectives*		*Number of Firms*
	Primary	*Secondary*	
1 = low	High Profit	None stated	3
2	Profit	None stated	1
3	Stability	None stated	1
4	High Profit	Maintain MS	2
5	High Profit	Increase MS	0
6	Profit	Maintain MS	4
7	Profit	Increase MS	0
8	Maintain MS	Profit	2
9	Increase MS	Profit	1
10	Maintain MS	None stated	4
11 = high	Increase MS	None stated	2

Two raters coded firms' orientations with a high inter-rater reliability (r = .96). The median firm orientation was 6, the scale's midpoint. Competitor-oriented objectives were used by 30% of firms, and an additional 45% used a combination of profit- and competitor-oriented objectives.

Lanzillotti (1958) reported average after-tax return-on-investment (ROI) data for nine years (1947-1955). Competitor-oriented objectives were negatively correlated with ROI for these data (Spearman correlation was -.43 and p = .03 using a one-tail test). Because many other factors also influence a firm's ROI, these results suggested a strong relationship. A&C also analyzed the nine-year periods before and after this. Table 3 shows the ROI for each firm for 1938 – 1982. The Spearman correlation between competitor-orientation and ROI was negative and statistically significant (p = .05) for each nine-year period.

A&C also found that all four companies whose only goal was profit (those coded as 1 or 2 in Tables 2 and 3) survived. This compares with the failure of four of the six companies whose only goal was market share (those coded as 10 or 11 in Tables 2 and 3)

Table 3

Competitor orientation of firms and ROI for nine-year periods

	Competitor Orientation	*ROI* (*After Taxes*)				
Firm	1=low 11= high	1938-1946	1947-1955	1956-1964	1965-1973	1974-1982
DuPont	1	9.1	15.4	15.5	8.0	6.9
General Electric	1	8.1	10.9	9.4	6.7	7.9
Union Carbide	1	9.8	11.0	9.1	6.3	6.6
Alcoa	2	8.5	6.4	4.2	4.2	5.5
Kennecott	3	8.6	13.3	8.9	8.2	3.2
General Motors	4	8.8	16.6	13.2	12.0	6.3
Johns Manville	4	6.8	11.2	4.6	7.6	4.9
Standard Oil New Jersey (Exxon [c])	6	5.4	13.0	7.8	7.6	8.0
General Foods	6	11.9	8.2	11.4	8.9	7.4
US Steel (USX [d])	6	3.4	6.5	6.0	3.5	3.4
International Harvester [e]	6	4.7	6.7	4.6	4.0	-3.4
Kroger	8	7.2	8.0	6.1	4.9	4.6
Standard Oil of Indiana [f]	8	5.3	7.1	5.4	6.4	8.3
Sears	9	8.8	12.4	8.5	6.4	4.2
Goodyear	10	5.8	6.4	7.0	5.7	4.0
Gulf [g]	10	5.0	9.7	8.9	7.1	6.3
American Can [h]	10	6.8	7.8	5.2	4.8	3.8
Swift	10	3.9	4.6	2.4	3.3	n.a.
Great Atlantic & Pacific	11	6.8	8.4	7.8	4.2	-2.9
National Steel	11	5.2	9.6	6.0	5.1	1.1
Correlation with Competitor Orientation		-.54	-.43	-.37	-.43	-.45

Acceptance of evidence

Despite some mass media coverage (e.g., *Wall Street Journal*) in the U.S, New Zealand, and Argentina the initial response by managers to the A&C paper was apathetic. A&C also encountered resistance from the academic community.

Extensive evidence on peer review shows that papers with findings that contradict important viewpoints are nearly always rejected by reviewers (Armstrong 1997). For example, a survey by Armstrong and Hubbard (1991) found that "Editors of 16 psychology journals reported that reviewers dealt harshly with papers that contained controversial findings". The first author found that none of what he considers his twenty most important papers received full acceptance by reviewers; fortunately, editors stepped in to over-rule the reviewers.

At a talk in 1992, the first author asked twenty-three academics whether empirical evidence would affect their opinions about the use of market share as an objective: 35% said it would not. The first author has also challenged colleagues to provide evidence favoring the use of market share as an objective; they replied only with examples, such as "What about General Electric?" While the use of anecdotes is a weak form of argument, even the GE story is suspect: GE's ROI was lower in the decade after it espoused a goal of market share than it was in the preceding decade (cf. appendix of Franke *et al*. 2005 in this special issue).

A&C obtained prior peer review from other researchers – 28 of whom provided useful suggestions. In addition, seven editorial assistants worked on the paper. The formal process of journal submission began in 1989 and continued through 1995. The paper went through reviews initially at the *Journal of Marketing* then at the *Journal of Marketing Research.* This involved four editors and about ten reviewers over the six-year period.

Reviewers raised alternative explanations for the findings from A&C's laboratory experiments. For example, one reviewer stated: "… the fact that people selected the low price did not surprise me. The logic would be that hirting competition would force them out yielding higher returns in the future." [They undoubtedly meant "hurting competitors" instead of "hirting competition" yet the sentence shows the sloppy effort that went into many of the reviews.] A&C ran additional experiments to test the reviewers' proposed explanations. When the results refuted their objections, the reviewers found other explanations. Eventually, the authors and others ran 23 treatments in 43 administrations using 1,016 subjects over a nine-year period. Given the failure to find support for alternative explanations, some reviewers then stated that laboratory experiments were not convincing to them. This led A&C to their field study.

The field study also proved unconvincing to reviewers. One reviewer stated: "the nature of competition has changed substantially and what worked then would not work now."

One reviewer wrote that the paper lacked "a theoretical explanation of the findings." This reviewer proceeded to use game theory to explain why there is no "theory of profit maximization." The reviewer found the shortcomings in theory to be so serious he wrote that "…I am hard pressed to specify a particular direction [to] address this shortcoming."

In general, the stronger our evidence became, the harsher the reviewers' reports.

Evidence since the 1996 review

We searched for evidence in the decade since 1996. Our search procedures are described in an appendix to this article. We looked for evidence on the prevalence of competitor-oriented objectives and on their impact on performance.

Laboratory studies

Griffith and Rust (1997) compared the performance of subjects (MBA students) with that of computerized normative pricing strategies in a version of a prisoner's dilemma game. Each game involved three players. The subjects were unaware that in two out of three games the third player was one of the computerized strategies. The game was designed to represent the market for mature, frequently purchased consumer-goods. It was possible for cooperative players to make a profit of $20 if they all charged $1.50 per unit. Subjects playing the roles of managers were instructed to maximize their profits and were told that their compensation would be partly based on their profitability. Despite these instructions, subjects tended to charge close to the "envious price" of $1.36 – the price that maximized the gap between their own profit and that of the other subjects. When subjects played against other subjects, the average profit was $7.19, well below the potentially achievable cooperative profit of $20.

Arnett and Hunt (2002) conducted an extension of the A&C laboratory studies. The subjects were 365 MBA and executive MBA students with three or more years of business experience. The subjects were instructed to assume that they were the owners (rather than marketing managers as in A&C) of a firm and must decide the price of a new product. The description of the situation was similar to that of A&C except that four price points (rather than two) were provided. In the description provided to the subjects, expected profits increased as the price increased. Arnett and Hunt found that an even higher proportion of their subjects (56%) chose to harm their competitor and sacrifice profits than was the case with A&C's subjects.

Field studies

Franke, Armstrong and Vaclavik (1998) analyzed additional data on the A&C twenty firm study. This extended through 1997, at which time there were 11 survivors. In addition, they introduced two new criteria: "real return on equity" and "percent of after-tax return on sales." Finally, they covered the 1955 through 1997 time period using ten-year time intervals up to 1984 then a six- and a four-year interval. All of the correlations between competitor-oriented objectives and profits were negative, ranging from -.28 to -.73.

Shrader (2001) studied the performance of 176 foreign market entries by 70 US high-technology manufacturing firms. The firms were less than seven years old at the time of their initial public offering (IPO) and the IPOs all occurred between 1983 and 1988. To measure the firms' competitor orientation, two researchers independently examined the firms' IPO prospectuses and coded them on a five-point scale depending on whether the firm's objective was to be a "minor player", "industry leader" or in between with an inter-rater reliability of r = .81. Shrader examined two measures of performance: profitability and sales growth. Profitability was measured as the average return on sales in a single foreign market over a three-year period. In addition to competitor orientation, Shrader used foreign market sales

growth, firm-level sales growth, age of the firm at foreign entry, and number of employees to estimate a regression model for profitability. Competitor orientation was negatively related to profits ($p < 0.01$).

Those advocating larger market share as a goal often profess that the added share will contribute to the appeal of their brand. Hellofs and Jacobson (1999) analyzed five years of data from surveys of consumer attitudes for 85 firms' offerings in 28 product categories. On average, achieving higher market share led consumers to believe a firm's offering had declined in quality. As a consequence they were prepared to pay less.

A series of studies have been done using a competitor-orientation scale developed by Narver and Slater (1990, p.24). This scale includes: 1) salespeople share information about competitors, 2) respond rapidly to competitors' actions, 3) top managers discuss competitors' strategies, and 4) target opportunities for competitive advantage. Only the last item relates directly to competitor-oriented objectives, whereas the first three items seem like reasonable strategies for all businesses. As a result, it was unclear whether the net effects of their competitor-orientation scale would be positive. Four studies evaluated the effect of the Narver/Slater competitor orientation on performance. Although this is a confounded measure of competitor-oriented objectives, it was negatively related to performance in three of the four studies:

- Hardley and Mavondo (2000) surveyed 145 retail pharmacists in Australia about their businesses. Profitability was measured as an aggregate of previous, current, and future profit. They found that competitor orientation was negatively related to profitability ($p < 0.05$).

- Lukas and Ferrell (2000) surveyed 194 manufacturing companies. The authors did not examine profitability, but they found companies with high competitor-orientation scores were less likely than other firms to produce line-extensions and new-to-the-world products and more likely to produce me-too products.

- Matanda and Mavondo (2001), in a study of 276 horticultural retailing establishments in Zimbabwe, found that competitor orientation was negatively related to performance.

- Dawes (2000), using a scale adapted from Narver and Slater's, found a positive relationship between self-reported performance and his measure of competitor orientation. Like Narver and Slater's, however, Dawes's scale measured more than whether a business was concerned with beating an opponent.

Management games

During the reviewing process for A&C's paper, reviewers insisted that the authors remove evidence from a management game. A reviewer said, "I strongly disagree with your position on the relevance of performance in a simulation to performance in the 'Real world'." Our position is that all relevant findings should be reported, so we report on the previously deleted study here.

Unpublished study using a game

Armstrong and Collopy had used a management simulation to examine industry-wide effects of competitor-oriented objectives. The task was part of a semester-long course organized around a computer simulation. Participants were divided into four identical industries. Each industry had five or six firms, and each firm was comprised of two to five students. The study had advantages over a field study in that all firms were initially of equal value and decision makers faced an identical market.

Subjects made decisions about advertising, product mix, product development, pricing, and debt level, while competing for employees, customers, and capital. The goal of each firm was to maximize its stock market value by the end of year seven. Market values reflect not only historical performance, but also the market's perception of how firms will do in the future. The stock of each firm was traded on an exchange where mergers, acquisitions, and leveraged buy-outs were possible. Each firm had access to financial and market data on the performance of all other firms in its industry.

The fifty-one participants were enrolled in an elective management course at the Wharton School in spring of 1991. The participants' effort and emotional involvement were high. They reported that they often discussed their team's performance outside class and made bets about the final market value of the firms.

Armstrong and Collopy designed a self-administered questionnaire to assess orientation. The student-managers gave their opinions on each of the following questions using the scale 1 = strongly disagree; 2 = disagree; 3 = neither agree nor disagree; 4 = agree; 5 = strongly agree:

1. I would try to harm my competitor, even if it did not provide my firm with a competitive advantage, as long as it cost my firm nothing.
2. Even if my firm were somewhat harmed in the process, I would try to substantially harm my competitor.
3. The best way to judge the success of a firm is by how well it does relative to its competitors.
4. To be successful today, a company must be competitor oriented. It must look for weak points in the positions of competitors and then launch marketing attacks against these weak points.

This self-administered questionnaire was given to participants two weeks before the end of their simulation.

Responses were summarized for each of the four industries, averaging about 13 responses per industry. The average response for managers in the least competitor-oriented industry was 2.52, while that in the most competitor-oriented was 3.14. Table 4 presents average competitor orientation by industry in the next to last column. A substantial portion of managers were motivated by competitor-oriented objectives.

Table 4

Competitor-Oriented Goals versus Market Value

Number of firms in industry	Subjects	Strategic planning course (%)	Competitor orientation (1 = low 5 = high)	Average market value ($ mil)
6	17	53	2.52	33.5
5	12	50	2.67	33.8
5	9	44	2.89	31.6

5	13	77	3.14	21.7

All firms began the simulation with a market value of $15 million. The average market value of firms at the end of the simulation was calculated by multiplying the number of shares by the share price for each firm, summing across all firms in the industry, and then dividing by the number of firms (first column of Table 4). The competitor-orientation of managers (4^{th} column of Table 4) was inversely related to the market value of firms at the end of the simulation (last column) ($p < 0.05$ using one-tail Wilcoxon signed ranks test). The scale for competitor-orientation was crude, which reduces the power of the test. The fact that results were significant with a weak test and a small sample suggests that the effects of competitor orientation were strong.

The simulation had a known time horizon of seven years. This lack of a continuing relationship among firms might have encouraged an excess of competitor-oriented behavior. Since the assessment of competitor orientation was conducted late in the game, managers of teams that were doing poorly might have focused more on market share. Their poorer showing could have been due to earlier performance, rather than to competitor-oriented objectives; thus, poor performance might have caused a competitor orientation. We tested this explanation in a convenience sample of 101 faculty members. By the margin of 55% to 22%, the experts said that they would be more likely to use market share as a goal when the firm was doing well than when it was doing poorly.

Armstrong & Collopy examined the percentages of participants in each industry who reported having completed at least one strategic planning course prior to the simulation. As shown in Table 4, the percentages ranged from 44 to 77%. 38% of the low-education, 46% of the intermediate education, and 55% of the high education group chose the less profitable decision. In effect, then, those with more management education made *less* profitable decisions ($p < 0.05$ using one-tailed Wilcoxon signed-ranks test).

Other studies involving management games

In simulations using executive MBA students, Abramson *et al*. (2005) told subjects to maximize their aggregate profit and that this would contribute to their course grade. Each of the five firms in each simulation was managed by an individual subject. While all firms were in the business of providing health care plans, each had different plans and cost structures and started with different customer profiles. Simulations were conducted over eight rounds with a week between each round. A model, based on an actual situation, was used to generate the results of each round. In simulations where information on competitors' profits was provided, subjects set lower prices than in simulations where profit information was private. When competitors' market-share figures were also made available to subjects in six further simulations, participants set their firms' prices even lower than when competitor profits were provided. Abramson *et al.* concluded that "information on market share leads to lower profits."

Keil *et al*. (2001) used a business simulation to test the effect of different objectives. Their subjects were 54 employees of multi-national companies participating in a US university's executive education program. They were given historical data on prices, sales, profits, and market shares for three products, one of which was to be the responsibility of the subject. The subjects made decisions on the price of their product and, after a delay, were given data on their performance. The subjects were led to believe that decisions for the other products were being made by anonymous classmates, but they were in fact being made by a software model. Subjects who were given a profit maximization objective earned greater profits than managers who, under the broad instruction to "do the best you can", selected their own

objectives. Those subjects who were not instructed to maximize profit sought instead to boost their market share by pricing aggressively relative to competing products.

Marks and Albers (2001) asked 240 senior marketing students to play the roles of managers in a management game. On their own volition, subjects were concerned with their performance relative to competitors and consequently made decisions that resulted in below optimal profits (as determined by the model used in the simulations) had all subjects attempted to maximize their own firms' profits. In particular, subjects chose to compete for market share selling similar products rather than take advantage of profitable opportunities to differentiate their products.

Changes since 1996

We have not found a single paper that challenges the finding that competitor-orientated objectives harm profitability. While advocates of market-share objectives have provided no evidence to support their contention, their writings seem to have had a big impact. Ramos-Rodríguez and Ruíz-Navarro (2004) identified the 50 works that have had the greatest impact on strategic management research by counting citations in the *Strategic Management Journal*. Porter's (1980) competitor-oriented work was ranked first, having been cited 266 times between 1980 and 2000.

With 44 citations, Buzzell *et al*. (1975) was also included among the 50 most influential works and was the eighth most cited work from 1980 to 1986. We searched the *Social Sciences Citation Index* (SSCI) for recent citations of Buzzell *et al*. – for the period 2004 to May 15 2005 – and found six. Buzzell (2004) restated his conclusion on market share and profitability from his 1975 PIMS analysis. He did not cite A&C.

Management textbooks repeat the claim that increasing market share will improve profitability. For example, the authors of Europe's best-selling strategy text, wrote: "Since companies with higher market share have more cumulative experience, it is clearly important to gain and hold market share" (Johnson and Scholes 2002, p. 168). The authors suggested that following their recommendation would lead to improved profitability: "The link between performance and relative market share, which is emphasized by the experience curve work, is supported by the findings of the PIMS database…" (p. 365). Readers were also told that "these benefits of market share can be even more important in global markets" (p. 370).

Future Prospects

We like to think that the market share myth can be defeated in the minds of managers when teaching and textbooks, decision aides, popular books, and investors' decisions reflect the scientific evidence on the effects of business objectives.

- *Do not advocate competitor-oriented objectives in classes and textbooks.*

  Economics textbooks already have things right about the theory of the firm. For example, Besanko, Dranove and Shanley (2000, pp. 98-100) in their textbook, *Economics of Strategy*, clarify early confusion about the relationship between market share and profitability: "The observed correlation between market share and profitability should not be taken to imply that any strategy designed to boost market share will increase a firm's profitability … There is no causal mechanism whereby market share leadership automatically translates to profits." Unfortunately, many business school professors do not adopt this viewpoint. They advise students to strive for market share and they develop techniques to gain market share.

• *Develop profit-oriented decision aids*

Some decision aids for managers are based on competitor-oriented objectives. For example, portfolio planning methods examine performance relative to the competitors.

In laboratory experiments with over one thousand subjects, Armstrong and Brodie (1994) found that use of the Boston Consulting Group matrix as a decision aid substantially reduced the profitability of subjects' decisions. Slater and Zwirlein (1992) concluded from a study of 129 firms that those whose strategies are consistent with portfolio planning models had lower returns to shareholders. Capon, Farley, and Hulbert (1987, pp. 316-17) found that firms that used the Boston Consulting Group portfolio matrix methods reported a lower return on capital than those not using them.

The experience curve strategy is another competitor-oriented technique. To adopt the strategy requires that firms cut prices to build volume in order to propel the firm down its cost curve faster than competitors can move down theirs. In other words, they should price to prevent competitors from catching up. Lieberman (l987, p. 451) concluded that the experience curve produces incentives that "often intensify competition and reduce profits." To assess the impact of exposure to the experience curve concept some subjects in A&C received a description from Kiechel (1981, pp. 139-l40) advocating its use. The decisions of those 97 subjects were compared with those from 137 control subjects in the same administrations who received no information about the experience curve. More experience-curve subjects selected the less profitable decision than did control subjects (59% versus 45%; $p < 0.05$ using chi-square).

• *Disseminate findings through books*

Companies still pursue competitor-oriented objectives and business schools continue to promote competitor-oriented objectives. For example, in April 2005 the Wharton School invited Jack Welch to talk about his most recent book, *Winning* (Welch and Welch 2005). In the book, Welch reveals that he has no knowledge of the research on this issue. Moreover, he advises readers to follow their gut instincts and implies that research findings are harmful to one's thinking.

Rather than giving support to such views, business schools should emphasize evidence-based books and give evidence-based advice. For example, Kotler's *Marketing Management* text included the BCG matrix from the 1980 edition on. Anterasian, *et al*. (1996, p. 74) wrote "…we suggest you find the portfolio models section and rip those pages out." Students are now saved that trouble: Kotler and Keller removed mention of the BCG matrix, the market share-profitability correlation, and references to Robert Buzzell's work from their 2006 edition.

Two books (Miniter 2002 and Slywotzky *et al.* 2001) argue against market share as an objective. However, as with the pro-market share publications, the authors present no evidence on performance. Nevertheless, both books have received much attention judging from the results of our 3 August 2005 Google search for references to each of the books. We searched for Miniter and his book title, *The Myth of Market Share*, and for Slywotzky and his, *The Profit Zone*. The searches identified 979 and 4,800 sites, respectively.

• *Encourage improved investment decisions*

One way to gain acceptance of these findings would be to show how they might be used to make more profitable investments. We conducted an unpublished analysis of the twenty companies in Lanzillotti's studies and found that the firms that cared most about profits yielded higher stock market returns than did the firms that cared most about market share. The sample size was small and the variance was large, so the first author attempted to expand the sample size by classifying firms according to their objectives. Unfortunately, hardly any firms reveal their objectives in annual reports, so it would be necessary to conduct interviewers such as those done by Lanzillotti.

Conclusions

The pursuit of competitor-oriented objectives is contrary to economic theory and lacks empirical support. Nevertheless, such objectives have been adopted by businesses. Miniter (2002), a former *Wall Street Journal* reporter, observed that market share was a common mantra used among business leaders and wrote that this was a contributing factor to the dot.com bubble.

Despite evidence from diverse laboratory and field studies demonstrating that competitor-oriented objectives harm performance, the myth of market share lives on among business leaders who prefer to follow their gut instincts. We expect economic losses to continue at least until textbooks, business school courses, decision aids, and investors' decisions reflect the evidence that pursuing profit, rather than defeating competitors, is the proper objective of businesses.

Appendix: Literature search procedures

In May 2005, we used the terms "market share objectives" and ["market share" and "profit"] in a *Social Sciences Citation Index (SSCI)* search of titles, abstracts and keywords in articles published between 1995 and 2005. Aside from A&C, we found no relevant papers. We found no articles using the term "competitor-oriented objectives." Using JSTOR, we found only A&C and a review using both sets of search terms. We used Google Scholar to look for occurrences of the phrase "competitor-oriented objectives" and found none. Using the terms ["market share objectives" plus "profitability"] and "competitor orientation" with Google Scholar, we found 52 potentially relevant articles, of which two proved to be relevant.

An *SSCI* search for papers that cited A&C revealed 24 papers (excluding self-citations) that cited A&C. Three were germane to the question of what effect competitor-oriented objectives have on outcomes. A JSTOR search for citations of A&C did not find any additional articles. A Google Scholar search for A&C citations found 32 papers, of which 19 had not been found by the SSCI search; three of these were germane to our topic. Most authors who cited A&C accepted their findings.

We looked for the term "market share" in *Harvard Business Review*, *Strategic Management Journal*, and *Journal of Marketing*. These searches identified 9, 12, and 13 articles respectively. Only one was relevant.

We identified other relevant articles from citations. Following our search, we sent email messages to 27 researchers who had done research on our topic asking them to identify recent research that we might have missed in our search for evidence. We received helpful responses from nine researchers, but learned of no new research that was relevant to this paper.

Finally, we sent requests to email lists for additional studies. To aid in this, we posted a draft of our paper at http://conflictforecasting.com and requested additional peer review.

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