Responding to Increased Environmental Hostility: A Study of the Competitive Behavior of Small Retailers

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Abstract

This article presents the results of a study designed to examine how small retailers responded to the increased environmental hostility created by the recent arrival of Wal-Mart. Data on environmental hostility, competitive tactics, and performance were collected from 238 small independent retailers. Findings suggest that effective pricing tactics were the most effective competitive behavior for small merchants in hostile environments. In benign environments, on the other hand, satisfying selective markets appeared to be the most effective competitive behavior.

Introduction

Environmental conditions facing organizations are often described as falling along a continuum ranging from benign to hostile. Benign environments afford a safe setting for business operations in which competition is relatively predictable and orderly. Hostile environments, on the other hand, are characterized by precarious industry settings, intense competition and harsh business climates. Hostility is an environmental dimension which, by definition, poses a threat to firm viability and performance, and a growing body of research has focused upon its relationship to competitive behavior and firm performance (e.g., Covin and Slevin, 1989, Davis, Morris and Allen, 1991). However, the results of much of this research are fragmented and somewhat contradictory. In fact, the only recurrent theme in this literature is that the degree of environmental hostility facing businesses and the pace of environmental change seems to be increasing (Miles and Arnold, 1991; Morris and Paul, 1987; Miller and Friesen, 1983).

The adverse effects of increased environmental hostility pose a severe threat to small businesses due to the limited resources of most smaller firms and their relative inability to survive the consequences of poor managerial decisions (Covin and Slevin, 1989). Competing in a hostile environment, therefore, will become increasingly important. This is particularly true for small rural retailers which face the continuing and rapid expansion of large discount chain stores into their markets. Rural retailing markets were once quite benign (Ozment and Martin, 1990). Environmental conditions were relatively stable, as demonstrated by the longevity of many firms in those markets. The existing small merchants generally competed in an orderly manner. The entry of a large discount chain store, however, often dramatically disrupts this tranquility for many local merchants since the newly located chain store often takes market share from the existing businesses (Ozment and Martin, 1990). Unfortunately, the existing literature is of limited value to small retailers confronting recently-created hostile environment because most of the prior research has focused on the appropriateness of various competitive behaviors of either large or industrial firms (e.g., McGinnis and Kohn, 1993; Zahra, 1993).

This paper attempts to fill this void by reporting the results of a study in which the competitive behaviors of small retailers in hostile and benign environments were examined. Specifically, we surveyed local retailers located in and around five Midwestern communities in which Wal-Mart recently had opened stores. We then compared the competitive behaviors of local merchants who believed Wal-Mart's arrival created a hostile environment to the behaviors exhibited by merchants who did not believe the mass-merchandiser's entry into the area caused an increase in the degree of environmental hostility. The purpose of this study was to identify and contrast the patterns of competitive behavior associated with high performance in an environment perceived as either hostile or benign.

Theoretical Foundations

The literature describes hostile environments as "risky, stressful, and dominating" (Khandwalla, 1977, p. 335) due to the presence of precarious industry settings and intense competition (Covin and Slevin, 1989). A hostile environment can be viewed as negative, uncertain and the source of unfavorable conditions beyond the immediate control of the firm (Miles, Arnold and Thompson, 1993). Managers within hostile environments will likely be confronted with smaller decision windows, diminishing opportunities, changing constituencies, increased resource specialization, lack of predictable needs, fragmented markets, greater risks of obsolescence and a general lack of long-term control (Davis, et al., 1991). The findings regarding the impact of environmental hostility on the competitive behavior of small retail firms, however, are not fully understood.

The relationship between competitive behavior and firm performance is context specific, especially in the environmental context (see Lumpkin and Dess, 1996: Davis, et al., 1991). Prior research has studied the effects of distinct dimensions of competitive behavior on firm performance within hostile or benign environments. The research suggests that environmental hostility may elicit more perilous behavior on the part of the firm (e.g., Khandwalla, 1977). Ettlie (1983) proposed a link between perceived environmental hostility and strategic moves that foster innovation and entrepreneurship. Empirical research tends to support this proposition. For example, in a study of conservative and entrepreneurial firms, Miller and Friesen (1982) found that the latter faced significantly higher degrees of environmental hostility.

Davis, Morris, and Allen (1991) surveyed 98 managers to evaluate the impact that perceived environmental turbulence had on the entrepreneurial behavior and marketing activities of manufacturing firms. They discovered that perceived turbulence had a significant causal impact on both the entrepreneurship and marketing orientations of the sampled firms. Similar findings were discovered by McGinnis and Kohn's (1993) survey of manufacturing logistics managers and Zahra's (1993) study of large consumer and industrial goods manufacturers.

Several empirical studies have examined the impact of increased environmental hostility on a firm's competitive behavior by focusing on firms within specific industry contexts -- business sectors which had experienced dramatic environmental changes or shifts. Smith and Grimm (1987), for example, capitalized on the deregulation of the railroad industry to examine the changes in competitive behavior of railroad companies as the industry went from tightly regulated to highly competitive. They discovered that the competitive behavior of railroad companies facing the increased environmental hostility created by deregulation became more aggressive and innovative. Meyer, Brooks, and Goes (1990) documented the changes in competitive behavior of San Francisco hospitals during the 1980s as that industry underwent dramatic changes. The results of their longitudinal study indicated that hospitals generally adopted more entrepreneurial competitive behavior in response to the increased hostility.

In one of the few studies that focused explicitly on the relationship between environmental hostility and the competitive behavior of small firms, Covin and Slevin (1989) argued that "small firms in hostile environmental settings will devote their competitive efforts to prevailing environmental conditions by aggressively trying to gain or maintain their competitive advantage" (1989: 77). Such an advantage, they argued, would most likely result from the proactive, innovative, risk-taking behavior of entrepreneurial firms rather than the passive and reactive behavior of conservative firms. The results of their study of 161 small manufacturers generally supported their assertions.

In contrast to the foregoing arguments, some researchers contend that firms should strive to minimize the uncertainties associated with operating in hostile environments by adopting relatively passive or risk-averse competitive behavior (Miles, et al., 1993). Small firms are encouraged to engage in relatively passive behavior because their limited resources make them extremely vulnerable to poor managerial decisions. A study of 169 furniture manufacturers by Miles, Arnold, and Thompson (1993) revealed significant negative correlations between environmental hostility and entrepreneurial competitive behavior. Similar results were produced by Miller and Friesen's (1983) study of 50 large Canadian industrial firms.

Taken together, the existing literature suggests that hostile and benign environments require small firms to exhibit certain competitive behaviors in order to succeed. However, the relationship between environmental hostility and small firm behavior has not been fully explored. The present study examines the interplay between patterns of competitive behavior, environmental hostility, and small firm performance by addressing the following two research questions. First, do the patterns of competitive behavior of small firms in hostile and benign environments differ? Second, do differences in firm performance exist among the distinct patterns of competitive behavior in hostile and benign environments?

The Empirical Setting

While not totally unforeseeable, the entry of a Wal-Mart into a local market is a turbulent, unsettling event (see Taylor and Archer, 1994; Welles, 1993; Ozment and Martin, 1990). Applying the "zero-sum game" principle to the local market, the opening of a discount mass merchandiser, like Wal-Mart, will have an substantial impact on local trade. The new stores will take a sizeable slice of the fixed retail pie, with existing local merchants often being the losers (Stone, 1995).

A hostile environment is thereby created; one characterized by precarious industry settings and intense competition (Covin and Slevin, 1989). Hostile environments are also often stagnant, where one competitor's gains are another's losses (Morris and Paul, 1987). Under these hostile circumstances, there can be numerous responses, and smaller, better performing firms will often realize the need to change and compete differently than their lower performing counterparts (Covin and Covin, 1990). The arrival of a Wal-Mart is thus a perfect context in which to study the competitive behavior of retailers as they respond to a newly-created hostile environment.

Methodology

The data were collected from a census (i.e., a total population) of the 658 retail merchants located in five rural Midwestern communities and the communities of the adjoining counties where Wal-Mart had opened a store between 1989 and 1993. The sample was also limited to towns with populations of less than 25,000 inhabitants and which were more than 20 miles from a major metropolitan area. This limitation helped to better elucidate the explicit impact of Wal-Mart's arrival and the subsequent change in environmental hostility.

The data were collected through a mail

survey. Initially a booklet including a cover letter of explanation, the questionnaire, and a postage-paid return envelope were sent to each retailer. The list of retailers in the communities where the Wal-Mart store opened and the surrounding communities was acquired from American Business Lists, a marketer of mailing lists. A reminder postcard was then sent to all potential responders approximately one week later. Finally, a second booklet was sent to nonrespondents approximately three weeks later.

The survey booklet was adopted from existing strategic management, marketing and small business literature (e.g., Conant, Smart and Solano-Mendez, 1993; Robinson and Pearce, 1988; Shama, 1993; Stone, 1995). The questionnaire addressed four primary areas. First, the questionnaire solicited information concerning Wal-Mart's impact on the local merchant. Next, the strategy of the participating retailer was measured using 24 competitive method questions. The questions were adopted from the previous work of Conant, Smart and Solano-Mendez (1993) and Robinson and Pearce (1988). The questionnaire collected data concerning the competitive methods which the retail organization emphasized *since* Wal-Mart opened its store. A five point, Likert-scaled response was used: e.g., 1 = no emphasis ... 5 = major, constant emphasis. Third, the local merchant was asked to compare its performance relative to other local businesses on three dimensions: net income after taxes, total sales growth over the past three years, and overall store success or performance. Finally, the survey instrument solicited descriptive information about the responder's merchandise categories, age/years in operation, approximate annual sales, and number of employees. The survey booklet was pretested on six small retailers not included in the study's sample to determine if there were any interpretation difficulties. No problems were discovered and the pretest respondents were not troubled by any of the questions or their abilities to rate the position of their companies.

The performance of the sampled firms was operationalized using subjective self-report measures. The subjective method was chosen over objective data because small firms are often reluctant to disclose financial information, objective data are not readily available, and reporting of the data may be inconsistent across industries. Due to the cross-industry design of the study, making objective comparisons may also be misleading (Covin and Slevin, 1989). Organizational performance measures are meaningful, when assessed comparatively or relatively (Conant, Smart and Solano-Mendez, 1993). Previous research has also found that subjective assessments of organizational performance are quite consistent with objective performance data both internal and external to the organization (see Dess and Robinson, 1984; Venkatraman and Ramanujam, 1986).

Altogether, 238 of the 658 surveys were returned, representing a response rate of roughly 36 percent. To detect any potential nonresponse bias, a comparison of the early and late responding firms was performed (see Armstrong and Overton, 1977). This extrapolation method assumes the late or last respondents in a sample are similar to theoretical nonrespondents. The similarities found between the early and late responders in this study can be interpreted as suggesting the absence of response bias (Miles and Arnold, 1991).

One purpose of the study was to identify patterns of competitive behavior by producing a taxonomy (an empirically-derived classification framework) of generic strategy patterns utilized by the local retailers. To do this, factor analysis was employed to identify how many distinct patterns of competitive behavior existed. The 24 competitive methods were factor analyzed using a principal components analysis with varimax rotation. A minimum factor loading of .40 was utilized because factor loadings greater than or equal to .40 can be considered more important than those below this level (Hair, Anderson and Tatham, 1987).

As part of the taxonomy creation, the items contained in each factor were employed in a cluster analysis (FASTCLUS in SAS). Cluster analysis is appropriate when attempting to classify groups and group members. Nonhierarchical clustering techniques are useful for large databases (Hair, Anderson and Tatham, 1987). Each strategic group was labeled in an attempt to capture the nature of each strategic behavior.

For purposes of determining performance differences among utilized strategies, each strategic cluster identified was compared, using ANOVA and Tukey pairwise comparisons, along the three performance dimensions (net income after taxes, total sales growth over the past three years, and overall store success or performance).

Results

The sample was nearly evenly divided between small retailers that perceived increased levels of environmental hostility as a result of Wal-Mart's arrival and those local retailers that believed the discount chain's entry had no impact. Previous analysis of the data indicated that there were significant differences between these two groups so the sample was split for the purposes of this study.

Retailers Impacted by Wal-Mart

The factor analysis yielded six patterns of strategic behavior with eigenvalues greater than one (see Table 1). Factor one -- "presentation and preparation" -- represents a pattern of strategic behavior in which a significant priority is given to the presentation of high quality merchandise by well-trained employees. The factors loading on the second factor -- "specialty products and service" -- depict a strong emphasis on offering unique products and better pre-purchase service. Factor three -- "heavy discounting" -- represents a straightforward strategic behavior. Retailers emphasizing this factor use frequent sales to maintain a low price image. Small retailers emphasizing the fourth factor -- "high priced convenience"-- carry private label brands, offer superior buying convenience, and are visible in the community through their civic involvement and advertising activities. As one would expect, these retailers also carry higher priced merchandise. Retailers emphasizing the fifth factor -- "Innovative pricing" -- strive to maintain low prices by monitoring their competitor's prices, carrying lower priced merchandise, and by using co-op advertising. The final factor -- "product variety" -- depicts a strong emphasis on carrying a wide variety of products. It also appears these retailers use computers to help monitor their sales and inventory.

The items comprising each of the six factors were then used in a cluster analysis. A four cluster solution (with a pseudo F statistic of 43.2 and a CCC of 4.2) was produced. Table 2 provides a narrative of the competitive profiles of each cluster. Cluster 1 -- "Innovative Pricers" -- firms rely on innovative pricing along with high priced convenience. They also feature effective merchandise presentation and preparation. Cluster 2 -- "Variety Discounters" -- firms depend heavily upon product variety with a tendency to compete on pricing. Cluster 3 -- "Target Marketers" -- firms seek to service specific niches or markets, relying on finding the right niche rather than offering low prices or variety. Finally, cluster 4 -- "Aggressive Pricers" -- firms compete within specific markets on the basis of price. Interestingly, these merchants are also willing to offer superior buying convenience.

The four identified strategic patterns were then compared on the three performance measures (net income after taxes, total sales growth over the past three years, and overall store success or performance). As the ANOVA results indicate (see Table 3), significant differences exist on all three performance measures. The Tukey-Kramer paired comparisons also produced identifiable patterns. Aggressive Pricers and Innovative Pricers reported significantly higher net income after taxes than Target Marketers and Variety Discounters. In terms of sales growth, both Innovative Pricers and Target Marketers outperformed Variety Discounters. Finally, the overall store performances of Target Marketers were significantly higher than Variety Discounters. One noticeable conclusion can be drawn from these results. Variety Discounters, firms exhibiting the competitive behavior most similar to Wal-Mart, experienced the lowest performance across all three measures.

Retailers Not Impacted by Wal-Mart

Three distinct patterns of competitive be-

Table 1
Factor Analysis of Competitive Methods Used by Small Retailers in Hostile Environments

Competitive Methods	Factor Loadings[a] Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Commun-alities
Store layout and merchandise presentation	.80						.74
Maintaining high inventories	.79						.74
High quality merchandise	.74						.77
Employee training	.61						.70
Monitoring competitor's promotional activities		.89					.85
Stocking unique products		.84					.84
Pre-purchase service		.53					.57
Depth of product line		.42					.50
Post-purchase service			.79				.76
Sales promotion programs			.64				.59
Pricing below competitors			.60				.65
Holding sales			.48				.58
Stocking highly recognized products			.48				.68
Stocking private label brands				.77			.64
Buying convenience				.65			.71
Civic involvement				.54			.54
Carrying higher priced products				.52			.43
Advertising				.48			.58
Concerted effort to be innovative					.68		.49
Monitoring competitor's pricing					.68		.59
Carrying lower priced products					.58		.60
Use of co-op advertising					.55		.60
Carrying a variety of products						.77	.66
Use of computers to monitor sales and inventory						.64	.66
Eigenvalues	4.06	2.52	1.40	1.32	1.18	1.08	

[a] These six factors accounted for 64.9 percent of the total variance.

Table 2
Cluster Profiles
Merchants in Hostile Environments (N = 122)

Cluster 1: Innovative Pricer (n = 51)
The competitive orientation of this group is one that seeks to emphasize both innovative pricing policies and superior buying convenience.

Cluster 2: Variety (n = 28)
The competitive orientation of this group is simple and straightforward. Merchants in this group place a major emphasis on product variety. Conversely, these merchants do not emphasize high priced convenience or niche marketing.

Cluster 3: Target Marketer (n = 31)
The competitive orientation of this group is one that seeks to service specific market segments or niches. These firms are not concerned with low prices or variety.

Cluster 4: Aggressive Pricer (n = 12)
The competitive orientation of this group is one that seeks to emphasize aggressively pricing programs to specific market niches. The merchants of this group also strive to offer buying convenience.

Table 3
Results of Analysis of Variance
Merchants in Hostile Environments (N = 122)

	Retailing Type					
Performance Measure	Innovative Pricer (I)	Variety (V)	Target Marketer (T)	Aggressive Pricer (A)	Univariate F - Value	Tukey Paired Comparison
Net income after taxes	3.74	2.75	2.90	3.83	6.71***	A>T; A>V I>T; I>V
Three year sales growth	3.96	2.75	3.87	3.25	4.91***	I>V; T>V
Overall store performance	3.90	3.03	4.03	3.25	2.68*	T>V

* p < .05 ** p < .01 *** p < .001

havior with eigenvalues greater than one were identified when this subsample of retailers was analyzed (see Table 4). However, two measures, concerted effort to be innovative and carrying a variety of products, failed to load on any factor. A well-balanced emphasis on the presentation of high quality merchandise by well trained employees characterizes factor one -- "strong merchandising." These retailers also enhance their overall image of quality by providing superior post-purchase service and through their civic involvement. Factor 2 -- "sophisticated target marketing" -- represents retailers that offer a combination of unique and highly recognized merchandise. These merchants use computers to track this product mix and strive to keep abreast of their competitor's promotional activities. The final factor -- "low prices and advertising" -- depicts a competitive behavior in which retailers carry lower priced items and strive to set low prices. These firms also use considerable advertising but tend to use the less expensive manufacturer's sponsored co-op programs.

Table 4
Factor Analysis of Competitive Methods Used by Local Retailers in a Benign Environments

Competitive Methods	Factor Loadings[a] Factor 1	Factor 2	Factor 3	Communalities
Buying convenience	.80			.63
High quality merchandise	.79			.76
Employee training	.76			.74
Carrying higher priced products	.70			.63
Store layout and merchandise presentation	.68			.66
Civic involvement	.67			.61
Post-purchase service	.67			.66
Maintaining high inventories	.66			.67
Holding sales	.57			.44
Sales promotion programs	.51			.52
Stocking unique products		.75		.70
Stocking highly recognized products		.74		.57
Using computers to track sales and inventory		.74		.61
Monitoring competitor's promotional activities		.70		.61
Depth of product line		.65		.57
Advertising			.79	.72
Monitoring competitor's pricing			.76	.72
Use of co-op advertising			.67	.68
Carrying lower priced products			.62	.57
Stocking private label brands			.55	.66
Pre-purchase service			.50	.56
Pricing below competitors				.49
Concerted effort to be innovative				.42
Carrying a variety of products				.20
Eigenvalues	4.24	2.01	1.26	

[a] These three factors accounted for 60.5 percent of the total variance.

A cluster analysis of the items comprising each of the three factors produced a three cluster solution (with a pseudo F statistics of 28.7 and a CCC of 3.5). Narrative profiles of each cluster are provided in Table 5. Small retailers in Cluster 1 -- "Target Marketers" -- are geared toward offering a combination of unique and highly recognized products. These merchants carry deep product lines and monitor their sales and inventories through the use of computers. These retailers also monitor competitor's promotional activities. Such attributes depict firms that concentrate on servicing well defined market niches rather than focusing on low price. Cluster 2 retailers -- "Price Matchers" -- exhibit a desire to compete on price, and are concerned with carrying lower priced merchandise. They also emphasize advertising but frequently use manufacturer-subsidized programs. These firms do not, however, emphasize strong merchandising practices. Cluster 3 -- "Strong Merchandisers" -- emphasize high quality merchandise and service. They stress product presentation and employee training and tend to carry higher priced goods.

Table 5
Cluster Profiles
Merchants in Benign Environments (N = 116)

Cluster 1: Target Marketer (n = 27)
The competitive orientation of this group seems to be geared toward offering a combination of unique and highly recognized products. The merchants in this group carrying relatively deep product lines and use computers to track their sales and inventory levels. These merchants also keep abreast of their competitor's promotional activities.

Cluster 2: Price Matcher (n = 41)
The competitive orientation of this group seems to rooted in a desire to remain price competitive with the competition. The merchants in this group exhibit a concern for the competition's prices and carry lower priced merchandise. The merchants emphasize advertising but utilize cooperative advertising programs offered from private label manufacturers.

Cluster 3: Strong Merchandiser (n = 48)
The competitive orientation of this group is one that seeks to emphasize buying convenience, high quality merchandise, and merchandise presentation. The merchants of this group emphasize employee training so they tend to charge relatively higher prices. This group also places considerable emphasis on civic involvement and post-purchase service.

Table 6
Results of Analysis of Variance
Merchants in Benign Environments (N = 116)

	Retailing Type				
Performance Measure	Target Marketer (T)	Price Matcher (P)	Strong Merchandiser (S)	Univariate F-Value	Tukey Paired Comparison
Net income after taxes	3.41	2.36	2.58	4.66**	T > P; T >S
Three years sales growth	4.82	4.24	4.28	1.42	-----
Overall store performance	4.59	4.76	4.45	0.59	-----

* p < .05 ** p < .01 *** p < .001

Again, an ANOVA was used to compare the performance of firms exhibiting the three patterns of competitive behavior. As the results indicate (see Table 6), significant differences exist only on the net income after taxes measure. Specifically, Target Marketers experienced significantly higher income than Price Matchers and Strong Merchandisers.

Discussion

The central focus of this study was to determine if small retailers exhibited different patterns of competitive behavior in hostile and benign environments. The results of the study, which generally corroborate previous research (e.g., Covin and Slevin, 1989; Covin and Covin, 1990; Morris and Paul, 1987), indicate that: (1) distinct patterns of competitive behavior can be identified; and (2) these patterns of behavior are associated with different levels of performance.

Generally, the study's most compelling findings are related to the discovery that pricing is such an important element of successful competitive behavior in hostile environments. Our finding that small retailers following some form of pricing strategy outperformed firms exhibiting other competitive behavior is somewhat at odds with prevailing wisdom. Prior research has indicated that local merchants should avoid low pricing practices when competing against a large discount chain (see Taylor and Archer, 1994; Stone, 1995). One of Wal-Mart's primary competitive weapons is low price, which is difficult, if not impossible, for small merchants to replicate. Further, small business theory provides that small firms should focus their competitive efforts on target markets or niches that their larger competitors will likely ignore. Covin and Covin (1990), for example, suggest that small firms should compete on customer service and product specialization or customization, rather than price. Stone (1995) recommends that stores should not attempt to compete head-to-head with a discount chain but offer different or complimentary merchandise.

The current study's results, however, suggest that the sampled firms were not competing exclusively on low price. Instead, it appears that they were remaining "price competitive" while featuring other competitive factors such as superior service. We believe this is a direct reflection of entrepreneurial competitive behavior and does not necessarily refute the notion that pure price competition is detrimental to small retailer performance. Further, the results support the existing literature which suggests that local merchants should compete against discount chains on factors other than price (see Mammarella, 1994). The successful stores in our sample exhibited competitive behavior in which pricing was only one component -- not necessarily the overriding characteristic.

Suggestions For Future Research

The overall findings of this study support the idea that strategy is a determinant of firm profitability (Smith and Grimm, 1987). Additional empirical evidence is needed, however, to adequately understand which competitive strategies, among those which are apparently equally viable, are most effective when competing within a hostile environment. This is especially true within the context of a rural market area.

Further, the study was structured to span various industries or segments of a rural market. Our study was not concerned with specific market segments, but generally with the responses and perceptions of individual retailers within a specific market context. Mass merchandisers, such as a Wal-Mart, by their nature, also span various market segments. Consequently, we believe the effects of the arrival of mass merchandisers on a rural market should have important implications for both researchers and practitioners in a general as well as a specific market settings. As specialty retailers, such as Home Depot, enter rural markets, specific segment or industry responses are also likely to be a fruitful area for future research.

In conclusion, the results of this study indicate that, following the arrival of a discount chain like Wal-Mart, local merchants adopt distinct strategies to compete in the newly-created hostile environment. The strategies implemented are identifiable and there are performance differences among the varied strategic behaviors. Our research supports the notion that environmental hostility moderates the relationship between competitive behavior and firm performance. We have identified specific strategies which were associated with superior performance by small retailers. What seems clear is that firms must change and adapt to jolts in their environments. Future research is needed to identify and fully understand which competitive responses are most effective in competing within a hostile environment.

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