An exploration of marketing tactics for turbulent environments

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Abstract

Purpose - The purpose of this paper is to propose that the choice of marketing tactics is influenced by the company's external environment. It aims to illustrate the marketing tactics suggested for a complex, turbulent environment, when marketing and the environment are viewed through a complexity lens.

Design/methodology/approach - A marketing mix model, derived from complexity literature, was assessed via a multiple case study to identify the type of marketing mix suggested for a complex, turbulent environment. The study was exploratory, using in-depth interviews with two companies in the IT industry.

Findings - The results tentatively confirmed that the more successful company used a destabilizing marketing mix, and suggest that using complexity theory to develop marketing tactics could be helpful in turbulent environments.

Research limitations/implications - The findings are limited by the study's exploratory, qualitative nature and the small sample. Generalizing should be done with care and therefore further research with larger samples and in different environments is recommended.

Practical implications - The paper will benefit marketers by emphasizing a new way to consider future marketing activities of their companies. The model can assist marketers to identify the tactics to use, dependent on the nature of their environment.

Originality/value - Most work on complexity in marketing has concentrated on strategy, with little emphasis on tactics and the marketing mix. Therefore, the paper is an important contribution to the understanding of marketing mix choices, of interest to both practising marketers and marketing academics.

Introduction

The business environment is becoming extremely complex, experiencing continuous, rapid change (Doherty and Delener, 2001). In stable environments, coping is relatively easy, but as complexity increases, and change happens faster, coping becomes problematic. Traditional methods, such as strategic planning and scenario planning, have become inadequate to cope with the speed, volume, and unpredictability of discontinuous change (Edgar and Nisbet, 1996). Therefore, finding new ways of coping are essential. One way of finding such new ways

is by applying theories from outside marketing to obtain fresh insights. Many authors believe the new sciences, chaos and complexity theories, can provide a better understanding of marketing (Smith, 2002; Gundlach, 2006). Wollin and Perry (2004, p. 569) maintain that:

Complexity theory […] has implications for marketing managers as a holistic, self-consistent framework for understanding profound forces within a market and provides some guides for action when operating within such a system.

Another method of finding new ways is to use emerging markets as laboratories to expand marketing knowledge, as these markets are significantly different to those in industrialized countries (Burgess and Steenkamp, 2006). Theories and assumptions can be tested in contexts different to those in which the traditional marketing theories were developed.

This paper assesses a model of marketing activities for turbulent environments, developed from a review of the chaos and complexity literature as applied to marketing. A case study approach is used, comparing two South African companies against the model to identify if their marketing activities and resultant performance is as predicted by the model. Thus, this study uses both the new sciences and an emerging market context.

Business environment

The business environment is comprised of relationships between environmental stakeholders, which "co-create" the fast changing environment (Conner, 1998). Change occurs in two major dimensions; complexity and turbulence. As complexity increases, the ability to understand, plan and predict becomes more difficult (Black and Farias, 2000). The increasing complexity leads to more change (Conner, 1998), and making sense of it and predicting its behavior becomes more difficult (Black and Farias, 2000).

Turbulence involves rapid, unexpected change in the environmental sub-dimensions (Conner, 1998). It is caused by changes in, and interaction between, environmental factors, including technology and the confluence of the computer, telecommunications, and media industries. This turbulence results in less orderly competition, increasing need for information, quicker development cycles and more difficulty in predicting customer, product and service requirements (Chakravarthy, 1997). The net result of these changes is an environment with strong Knightian uncertainty, which states that the future is unknowable (Wilkinson and Young, 1998).

Many authors see such complex, turbulent environments as complex adaptive systems (CASs) (Holbrook, 2003). Others highlight the presence of complexity and chaos constructs in business environments, such as eco-systems (Ritter *et al.*, 2004; Gundlach, 2006), self-organization and emergence (Wilkinson, 2006), sensitive dependence on initial conditions (Tedesco Analytics, 2001), and nonlinearity (Black and Farias, 2000; Tedesco Analytics, 2001, p. 3).

Furthermore, Black and Farias (2000) explain how actions taken to reduce uncertainty can lead to nonlinearity and unpredictability, causing the marketplace to be in a continuous state of disequilibrium. Since environments do appear to be CASs, a complexity or chaos perspective should be used to understand their dynamics and behavior and to guide strategy development

(Tedesco Analytics, 2001; Mason, 2007). For example, an entrepreneurial approach of constructing the future, rather than trying to predict the future, can be helpful (Mason, 2006).

Complexity theory

The underlying idea of complexity theory is that local interaction enables agents, elements or components to self-organize into systems. These systems develop patterns when simple rules are applied over many iterations, resulting in unexpected behaviors (Goldberg and Markoczy, 1998). Such unexpectedness is because of nonlinear feedback networks (Stacey, 1996), loosely coupled networks that produce order from the bottom up (Ritter *et al.*, 2004) and the way the system's parts interact and adapt to each other (Meade and Rabelo, 2004). These interactions imply that business systems are "eco-systems" and therefore are difficult to manage. Their behavior cannot be predicted, but can be influenced by encouraging relationships between system members (Baskin, 1998).

Several complexity concepts have relevance to marketing. The central concept is self-organization, the process of an orderly pattern emerging from a set of simple rules in an interconnected network. The process spontaneously self-organizes, bottom-up, through the inter-relationships of the system's parts (Smith, 2002; Holbrook, 2003). In such a system, a "manager" does not direct activities – agents participate in, and respond to, the system, rather than directing and controlling it (Wilkinson, 2006). Thus, self-organization allows and encourages creative and innovative responses to emerge from changing environments (Dolan *et al.*, 2003).

This emergence is the second complexity concept. It happens when the system's parameters change, leading to a movement towards disorder – important because too much order causes system ossification, but just enough disorder enables it to innovate and reorganize into new patterns of relationships, from which new actions emerge (Holbrook, 2003). In the longer term, what emerges is not predictable and therefore is not fully under the control of "management".

The third concept is feedback. Negative feedback pushes the system back to its original state, producing regular, predictable behavior. Positive feedback amplifies changes, pushing the system away from equilibrium, towards instability (McGlone and Ramsey, 1998; Doherty and Delener, 2001). Together, positive and negative feedback balance the system at the "edge-of-chaos" (Wollin and Perry, 2004), the best position in a turbulent market (Doherty and Delener, 2001). Positive feedback enables a firm with an early small advantage to grow exponentially until the advantage becomes "locked in", as happened with VHS video recorders and Microsoft Windows (Holbrook, 2003).

The fourth important concept is sensitive dependence on initial conditions (SDIC) (Phillips and Kim, 1996). In a stable system, small changes have small effects, but in a CAS, small, seemingly unimportant, changes can grow exponentially, producing surprisingly large effects (Holbrook, 2003; Wilkinson, 2006). SDIC also suggests ways to cope in turbulent environments. Rather than dramatic controlling actions, small nudges at the correct time (the initial condition) can lead, through positive feedback, to major changes (Nilson, 1995). Being a "first mover" is essential, as SDIC and positive feedback create a "flywheel affect", providing an advantage in the long-term (Koch, 2000). Although the future is unknowable, a successful

first mover can influence, or "create", the future by recognizing the patterns and clues that indicate which small changes to nudge and when to nudge them (Morrison and Quella, 1999).

Attractors, the fifth complexity concept, reflect the underlying order, structure or predictable patterns in a CAS (Wilkinson, 2006). The edge-of-chaos attractor, known as a "strange attractor", reflects the area where maximum creativity and innovation happens. A unique feature of the strange attractor is that behavior always stays within certain boundaries (Holbrook, 2003). Behavior is never identical within these boundaries, but is broadly predictable. Thus, change is permitted, while maintaining some order. Strange attractors in business include corporate vision and values (Frederick, 1998), industry standards (Black and Farias, 2000) and customer relationship management (Kurtyka, 2000).

Marketing in turbulent environments

Marketing success in a turbulent environment requires a different approach to that recommended by traditional marketing theory, which is inadequate in changing, turbulent markets. For example, the "product life cycle" can be misleading if environmental factors are not considered concurrently, and "marketing warfare" focuses on the competitive environment, not taking adequate account of other variables. Thus, these approaches are unlikely to develop defendable, sustainable, and competitive positions. Furthermore, they are not consistent with the current strategic approaches of collaboration and networking (Mason, 2004). Sequential strategic planning is too slow and unresponsive for a fast changing marketplace, and cannot keep up with customers' requirements or with aggressive competitors (Nilson, 1995). In addition, traditional market research and marketing mix models are too simplistic to understand complex marketing situations, because such models assume linear relationships between mix variables and their outcomes (McGlone and Ramsey, 1998).

In complex, turbulent environments, speed in recognizing opportunities, developing new productsm, and reducing time to market is essential (Morris, 1996). Since decisions have to be taken without full information, planning should concentrate on "how to do it" and keep the "what to do" options open as late as possible (Nilson, 1995, p. 70). Effective marketing must be proactive, creating events, and not merely relying on market research, since competitors can easily copy the reactive following of customer requests.

Nilson (1995) maintains that, as complexity and turbulence increases, a firm must focus scarce resources on those key activities that will give the best result. He identifies two approaches for using marketing tactics effectively in chaotic environments: stabilizing or destabilizing.

Some marketing activities stabilize by encouraging the system to behave within boundaries, while other activities destabilize by causing unanticipated consequences (McGlone and Ramsey, 1998). This is typical of a "chaos system", in which stabilizing and destabilizing activities can be used to balance the system between uncontrollability and stagnation. Thomas (in D'Aveni, 1999) found that a stabilizing approach produced better returns in a stable environment, but found little difference between better and poorer performers. However, when turbulence increased, companies following a stabilizing strategy performed worse, and the gap between successful and less successful company performance increased. This implies that destabilizing tactics used in turbulent markets should lead to greater success than when using stabilizing tactics in such markets. To avoid becoming locked into old or obsolete technologies

or products, Mohr (2001) suggests continuously innovating to make the firm's products obsolete and to replace them with the firm's own developments. Continuous leadership in a market is not possible without this creative destruction, which is a form of continuous destabilization.

From a chaos perspective, stabilizing can be seen as reducing the rate of change through negative feedback, bringing the system back towards equilibrium, within its attractor boundaries (Nilson, 1995; Hibbert and Wilkinson, 1994). Destabilizing is the disrupting of a "stable" environment, or reinforcing or increasing change in a particular direction (Nilson, 1995). It also implies increasing the rate of change, encouraging events to alter the marketing system or unsettling the established market. Destabilization involves positive feedback, the nudge effect, thereby moving the system away from equilibrium.

Nilson (1995, p. 50) ranks marketing tactics in terms of stabilizing or destabilizing as shown in Figure 1.
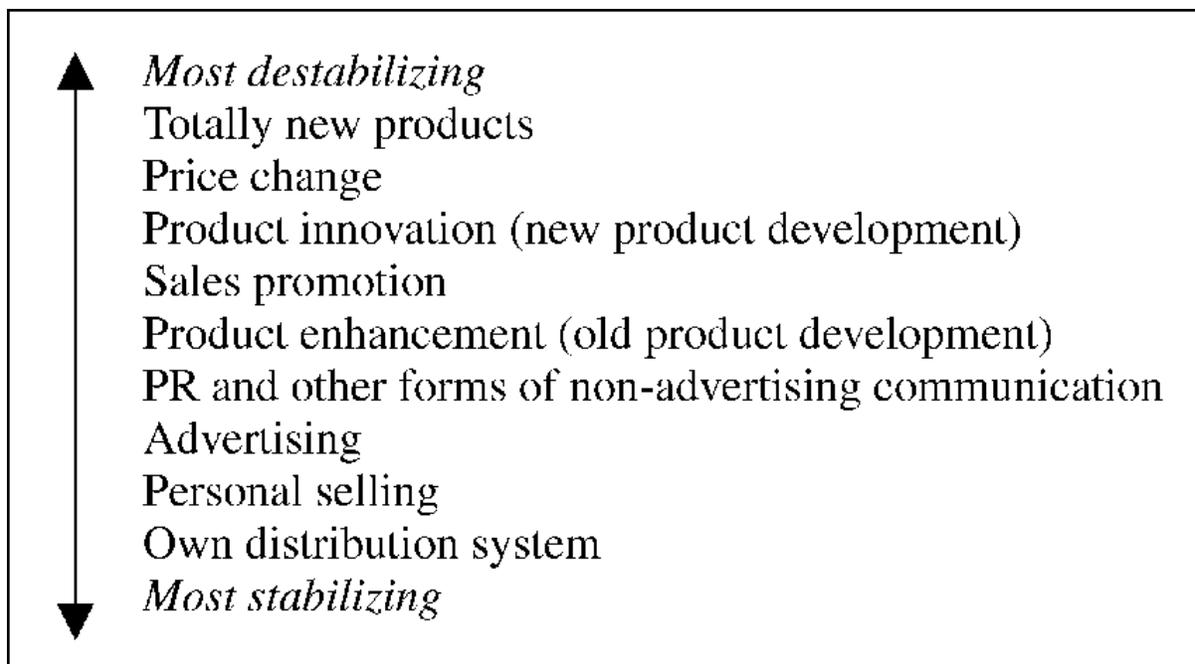

Most destabilizing
Totally new products
Price change
Product innovation (new product development)
Sales promotion
Product enhancement (old product development)
PR and other forms of non-advertising communication
Advertising
Personal selling
Own distribution system
Most stabilizing

Figure 1 Marketing tactics continuum

The marketing mix

The 4Ps is the most common model of the marketing mix (Kotler and Keller, 2006), and has been consistently used in chaos and complexity articles on marketing. Therefore, the standard

4P model was used for this research. The marketing mix elements are now considered from a complexity perspective.

Product

Product, especially new product development (NPD), can involve destabilizing tactics. Nilson (1995) maintains that a totally new product can destabilize an existing market. To achieve this, short lead times, fast feedback loops, flexible development processes and late design changes are necessary (Nilson, 1995; Thomke and Reinertsen, 1998). Many trials and experiments are required, producing new lines, improvements and repositioning (Morris, 1996). Short-term adaptability and flexibility is important for hi-tech firms, which have short product life cycles and little time to launch and establish new products.

Regarding the product range, new lines, additions to lines and product extensions are required (Morris, 1996). A "complexity" approach allows the product to develop as the customer uses it, with the "perfect" product emerging from the inter-relationship between product and customer use, rather than from rigid product planning (Millier, 1999). Thus, in turbulent markets increasing ranges can be expected. Range reduction, or culling, is equally important, because slow sellers drain resources from the marketing system (Nilson, 1995). Culling the company's own products can disrupt the environment for competitors (Grulke and Silber, 2000). Speed of execution is critical-NPD must be faster than environmental change, happening so quickly and unexpectedly that by the time an imitator has copied the strategy, the originator has changed again.

Stabilizing activities can also be important, e.g. range enhancement, or old product development (OPD), to provide profits to pay for NPD (Nilson, 1995). The brand is also an important stabilizer. In a market facing rapid change and turbulence, a strong brand can rapidly communicate the values for which it stands, important in markets with shortened life cycles (Nilson, 1995). Thus, branding and range enhancement are necessary in a turbulent environment to support the application of destabilizing activities.

Pricing

Pricing can be both stabilizing and destabilizing. Status quo pricing, for example, attempts to maintain the market pricing system at equilibrium, while dramatic price changes can disturb the system and change the nature of market demand. Applying chaos/complexity theory, marketers can use the "nudge" effect to encourage a change in a desired direction (Nilson, 1995). If price is cut to increase sales, competitors may follow suit and a price war results. If this receives a positive response from the market (positive feedback) it may result in an unanticipated market restructure. However, the company initiating the change can take advantage of the restructuring better than its competitors, thereby building a new competitive advantage. Aggressive, destabilizing pricing strategies can win short-term sales benefits (Nilson, 1995), especially if the business environment is price focused. Short-term tactics, such as rebates, coupons and cents-off deals create innovative, flexible, and proactive pricing strategies. In addition to aggressive pricing, successful companies in turbulent markets use visible pricing approaches that are more complex, more customized, have a superior value proposition and are often very low, or even free, generating profits from upgrades, add-ons, service, installations and complementary products (Pitt *et al.*, 1997; Roberts, 2000; Kumar *et*

al., 2000; Mohr, 2001). Such prices send clear signals to the market about product value and company objectives. Thus, pricing tactics also communicate with the market, instigating word-of-mouth advertising (Pitt *et al.*, 1997).

Place

Place is the least changing marketing tactic. Distribution and availability are stabilizing dimensions, controlling the link between supplier and customer, and reducing customers' abilities to change suppliers, thereby stabilizing the market. Backward and forward integration also reduce the uncertainty of retailer stocking, thereby stabilizing the environment (Nilson, 1995). If the attractor pattern is not understood, minor ordering differences or disturbances can be amplified up the chain, via SDIC, resulting in large, unpredictable disturbances (Forrester, in Stacey, 1996). The solution is to treat the whole supply chain as a single system, aiming to optimize the system rather than the individual elements. Considerable emphasis is placed on stabilizing dimensions such as partnerships and strategic alliances (Mohr, 2001), buffer inventories (Phillips and Kim, 1996) and planned inventory replenishment (Johnston and Betts, 1996). However, destabilizing actions can be necessary, especially when a company does not have ready access to distribution channels (Nilson, 1995), or when a radical innovation is implemented (Kumar *et al.*, 2000). In such situations, suggested actions include reduction of intermediaries and increase in direct distribution (Roberts, 2000), and reactive inventory replenishment (Johnston and Betts, 1996).

Promotions

Although promotions are mostly stabilizing elements, they can be destabilizing. However, it should be noted that, in terms of chaos/complexity theory, promotions are unlikely to achieve major, predictable disruptions in the marketplace, e.g. changing consumer attitudes and behaviors. They can, however, encourage, or nudge, an already changing attitude or behavior. Thus, a marketer can, through promotions, speed up a change that has already started (Nilson, 1995). Aggressive promotional tactics in a turbulent market allow the alert marketer to take advantage of the turbulence to influence, or nudge, the trajectory of the attractor in order to increase market share, sales or profitability (Priesmeyer, 1992).

Feichtinger *et al.* (1994) suggest that image or institutional advertising should be used in stable markets, while aggressive, pulsed advertising (typically pioneering or competitive product advertising) should be used in turbulent markets. Advertising can stabilize by minimizing volatility, because the high costs of advertising act as a barrier to entry, reducing competition and building brand loyalty, which itself is a stabilizing factor (Herbig, 1990; Nilson, 1995). It can also destabilize, by hijacking another brand's reputation via comparative advertising (Nilson, 1995), by using a new, controversial or shocking campaign (Dru, 1996), or by using a creative approach to "change the rules of the game" (Nilson, 1995).

Personal selling is a stabilizing factor, encouraging customer loyalty (Nilson, 1995). A learning relationship helps retain customers because the company learns more about their needs, while the customer is less likely to switch because of the time and effort invested in the relationship (Pitt, 1995). The sales force acts as a feedback loop between customer and company, providing the fast communication required in a turbulent environment (Nilson, 1995). The sales force

should be decentralized and empowered, with strong marketing knowledge (Cespedes, 1996). Personal selling is important in stable environments.

Much of what has been said about personal selling may also be true of public relations (PR), as PR also emphasizes relationship building (Herbig, 1990), effectively disseminates information and builds loyalty (Nilson, 1995), and is thus stabilizing. However, in chaos/complexity terms, a relatively small and inexpensive PR activity (a nudge) can lead to significant outcomes because of the multiplier effect. However, like all activities based on SDIC, the result is uncontrollable and unpredictable.

Sales promotions, especially when linked to price promotions, create instability in a market (Nilson, 1995). An unexpected outcome is more likely if the promotion is unusual in some way. However, if the sales promotion follows a theme (e.g. competitions, cross-promotions), or uses direct marketing to build relationships, it can also be stabilizing. Research into the nonlinear dynamics of sales patterns at two petrol retailers with significantly different environments supported this. Promotional activities in the less turbulent environment did not influence sales significantly, whereas they did influence demand in the highly turbulent environment (Priesmeyer, 1992).

Herbig (1990) found a relationship between chaos and word-of-mouth advertising. Each word-of-mouth activity, small and relatively unimportant, could escalate to create strong and positive brand images and beliefs. Word-of-mouth has a strong nonlinear effect and is impossible to control (Nilson, 1995). However, a small investment in encouraging customers to talk about a product can produce a significant effect, especially for hi-tech products that cannot build brand image over years because of their short life cycles (Mohr, 2001). Word-of-mouth does not happen by itself – it must be encouraged by identifying influential individuals, winning their support and providing information for them to disseminate (Heckman, 1999). Word-of-mouth is an effective tactic as it is grounded in one of the main characteristics of chaos theory, namely SDIC (Mason, 2008).

The marketing mix tactics model

Although considerable work, from a complexity viewpoint, has been done on management, strategy and networks, very little has been done on marketing in general, and especially on marketing tactics. What has been done has been conceptual or using test or generated data. Almost nothing has been done on studying companies' marketing from a nonlinear approach (Ritter *et al.*, 2004). Therefore, a detailed review and analysis of the literature on marketing and chaos and complexity theories was conducted, enabling a model to be built of the tactics that would be adopted by a successful company in a complex, turbulent business environment (Mason and Staude, 2006). The model is presented in Table I, structured according to the 4Ps.

Product

NPD planning	Short-term planning. Involve customers in process
Range change	Increasing ranges through continuous NPD
Culling	Slow sellers culled to avoid drain on company resources
Innovation	Many trials leading to stream of new products. Make own products obsolete
Enhancement	Less important-improve current products to offset cost of new products
Customization	Individual, local needs met through enlarged ranges of customized products-unique, personalized, in many permutations. All aspects of product customized
Speed of development	Very fast, bring product to market before competitors and before needs change. Short lead times, fast feedback loops because of short PLC
Design/flexibility	Flexible for late changes and environment shifts. Set design specs late in process
Branding	Quickly conveys image, long-term stability in fast changing market
Importance	Critical-often basis of destabilization. Rest of mix determined by product

Price

Aggression	Price promotions especially in hostile, competitive, and price focused markets
Price leadership	Lead in initiating price changes, price-cutting. Different pricing policies
Innovation	Novel, unexpected, including differentials, payment schemes, and discounts
Price setting	Complex/sophisticated/flexible methods to customize prices and adapt to changes. Integrate with other elements of marketing mix
Price premium	Obtained via customer's inability to assess costs. Negotiate on quality/value
Importance	Important: visible, communicates with market, stimulates w-o-m, destabilizes

Place

Channel changes	Treat supply chain as single system. If change needed, do carefully
Intermediaries	Reduction of intermediaries. Deal more with end-users
Partnerships/alliances	Used to balance destabilization in other elements. Blurring of boundaries and roles. Employees work on customer/supplier site. Shared info and systems
Distribution	Quick delivery to reduce need for inventory – often same-day delivery
Stock levels	Load shared throughout supply chain. Quick response and integrated IT systems
Stock replenishment	Short-term, reactive management-inventory based on end-user, rather than intermediate, customer demand
Importance	Important but a "given". Total system copes with environmental turbulence

Promotion

Media advertising	Pulsed, pioneering, competitive, product oriented. Comparative ads disrupt consumers' beliefs. Creative ads create controversy, change "rules of the game"
Personal selling	Although needed, is less important for destabilizing in turbulent market
Public relations	Less important, but small PR activities can nudge system into destabilization.
Sales promotions	If used with price, can be destabilizing. Minor, but unusual promotions/changes lead to major impacts. More effective than adverts in turbulent markets
Word of mouth	Very important-"influence-the-influencer" promos. Spread info re new, amazing aspects of product. Use multiplier channels like Internet, blogs
Aggressive use	Aggression enables trends to be nudged and advantage to be taken of turbulence
Speed of change	To be unusual or surprising, campaigns must be short-term, and changed often
Importance	Important to manage via nudge effect, but less effective for major changes

Table I *Marketing Mix Model*

Propositions

The research aimed to investigate how a more successful company, operating in a turbulent environment, differs in its use of marketing tactics from a company that is less successful, and to compare these actual tactics against the tactics suggested by the model. Due to the paucity of research in this field and the resulting need for exploratory research, two propositions to explore this problem were developed:

P1. A more successful company uses more destabilizing marketing tactics.

P2. A less successful company uses more stabilizing marketing tactics.

Research method

The lack of research in the specific field (Smith, 2002) dictated the need for an exploratory study, as is supported by Mitleton-Kelly (2003, p. 3) argument for "a deeper understanding of complex systems." Some authors suggest that, because chaos is a mathematical theory, a quantitative methodology is required. However, others stress the importance of metaphors for theory formulation, seeing new connections and for generalizing across contexts (Smith, 2002; Wilkinson, 2003). These arguments highlight the need for a qualitative approach. Although much research in the chaos and complexity fields is done via simulations, very little research is done using real data. Therefore, research, albeit qualitative, that uses real data, as this study does, is an important contribution to knowledge about marketing from a complexity theory viewpoint.

The method chosen for the study was the case method to enable the problem to be studied intensively (Welman and Kruger, 1999). To improve the rigor of the study a comprehensive research protocol was developed (Yin, 2003). Maximal variation sampling was used to select the case companies. This method strives "to integrate only a few cases, but those which are as different as possible, to disclose the range of variation and differentiation in the field" (Flick, 1998, p. 70). The sample was selected through a two-stage process:

1. First the most complex/turbulent industry was identified via a questionnaire completed by six experts (stock brokerage industry analysts and management consultants). It questioned the experts on the complexity and turbulence in seven external environment sub-categories in nineteen industries. The information technology (IT) industry was identified as the most complex/turbulent.
2. Within the IT industry, a more successful and a less successful company was selected, based on a Delphi process (Roberts, 2000), using a panel of four experts specializing in the IT industry (consultants, journalists, and buyers). A two-iteration, ranking process of the more successful and less successful companies resulted in the panelists nominating ITA as the more successful and ITB as the less successful companies.

Data was collected via semi-structured focused depth interviews (Yin, 2003) because they provide deeper understanding, allowing patterns and connections to emerge which provide insights. "Interviewees are not seen as an average sample … but as fractal representatives of

the whole" (Mitleton-Kelly, 2003, p. 5). Interviews were conducted with a total of thirteen CEOs, directors, managers and marketing and sales staff in the two companies. All thirteen met Morse's criteria for being good informants (Flick, 1998). To obtain co-operation, anonymity was promised. Interviews took about an hour each, were based on an interview guide and were audiotape recorded and, in addition, notes were taken. Furthermore, various company documents were collected and analyzed, for example, annual reports, brochures, web pages, advertisements, meeting minutes, and policy and procedure manuals.

A combination of techniques was used to analyze the material. Thematic coding, using NVIVO software, was used to deconstruct and reconstruct the transcripts to categorize findings according to the perspective being studied (more/less successful). Each code, and its associated set of extracts, was manually analyzed, looking for patterns of similarities and differences in the themes or initial codes. These "pattern codes" constituted the themes, causes/explanations and relationships that are discussed in the findings section of this paper. Content analysis was used to paraphrase, summarize and reduce the field note data and the documents to generalizations in order to compare them with the propositions. This material was summarized into tables to compare the two companies against each other, and against the proposals.

"Method-appropriate criteria" and multiple data collection methods, namely data triangulation, methodological triangulation, prolonged engagement and an audit trail, validated the procedures, increasing rigor and trustworthiness (Flick, 1998). Construct validity was increased by using multiple data sources, internal validity was increased by comparison and pattern matching across the cases, external validity was increased by using cross-case analysis of multiple cases (thereby allowing some generalization), and reliability was increased by using a data collection protocol and keeping a data base of the empirical data and a chain of evidence (Yin, 2003). This method adhered to the ten design considerations of Lincoln and Guba, and thus met the criteria for a high quality, rigorous and trustworthy study (Rudestam and Newton, 1992).

Findings

The average ranking by the respondents of the importance of the various marketing tactics is given in Table II. Note that the lower the ranking or rating, the more important the activity was perceived to be.

Tactics	ITA		ITB	
	Ranking	Rating	Ranking	Rating
Personal selling	1	2.1	1	1.0
Product innovation	2	2.4	2	3.0
Develop new products	3	2.7	6	5.8
PR/other communications	4	3.9	3	3.8
Product enhancement	5	5.4	4	4.0
Media advertising	6	6.6	8	7.4
Price changing	7	6.7	5	5.4
Sales promotions	8	6.9	7	6.8
Distribution	9	8.3	9	7.8

Table II Perceived importance of marketing tactics

It can be seen from the rankings that little difference is perceived in the two companies about the importance of the various tactical activities. However, when the ratings are examined it can be seen that personal selling is perceived as less important by ITA (2.1 versus 1.0), whereas they perceive product innovation (2.4 versus 3.0) and NPD (2.7 versus 5.8) as more important than ITB does. It is also interesting to note that ITB perceives product enhancement (4.0 versus 5.4) and price changing (5.4 versus 6.7) to be more important than ITA does. Moreover, of the three most important tactics, for ITA two are destabilizing, whereas for ITB two are stabilizing. These findings are consistent with the model, namely that the more successful IT company would place more emphasis on destabilizing innovation and development, while the less successful company would emphasize stabilizing personal selling, product enhancement (OPD), and price changing. It should be noted that, due to the small size of the sample, these results may not be statistically significant. However, the fact that they do tend to agree with the literature provides some trust in these findings, and they can be taken as indicative of the samples' beliefs about the relative importance of marketing tactics.

In order to gain a better understanding of the perceived importance of the marketing tactics, an analysis of the depth interviews compared each company against the proposed model.

ITA – more successful company

ITA's tactics were mostly what would be expected of a successful company in a turbulent market:

- Place emphasis on new market development, and are prepared to aggressively disrupt the market.
- Leaders in marketing strategy, changing faster than the market does.
- Product management activities are aggressive, quick and flexible, incorporating customers and suppliers-ruthless with under-performing products.
- Although not too important, they would use aggressive price-cutting to win a specific, strategic customer.
- Place/distribution has little importance in their marketing activities, except for partnerships.
- Little use is made of destabilizing promotions. However, they do surprise/amaze the industry, and use PR to encourage word-of-mouth and create a "buzz" about the company.

Thus, most of ITA's marketing activities were consistent with what was expected of a successful company in a turbulent market, but the following were aspects that were not consistent:

- Emphasis on relationship building, partnerships and alliances-stabilizing activities.
- Little use of pricing as a tactical tool-follow suppliers' price changes.
- Insignificant use of sales promotion to destabilize and disrupt the market.

ITA uses product (mainly NPD), PR and word-of-mouth to destabilize the market and thus keep ahead of competitors, and uses the stabilizing tactic of relationships to maintain their hold on customers. The more aggressive tactics of price-cutting and sales promotion may not be

necessary until they face competition that is itself more aggressive and destabilizing. Overall, it can be concluded that ITA behaves as predicted by the model.

ITB – less successful company

Many of the activities of ITB were similar to those of ITA, but conducted at a lower level of intensity. For example, their NPD activities were less aggressive than ITA's and they did little to encourage word-of-mouth advertising, whereas ITA aggressively encouraged it. The activities consistent with a less successful company in a turbulent market are:

- More emphasis on stability and efficiency, and reliance on acquisitions, rather than new markets, for growth.
- Market followers, changing slower than the market and planning over a longer time horizon.
- NPD is mostly customer driven, with customers intimately involved. They are not first movers, waiting for the market to change, and lead times are slower than the rest of the industry.
- Pricing as a tactical weapon is not used aggressively. Their transparent pricing method strengthens relationships, and ensures projects are costed to set a premium price.
- Much emphasis is placed on building relationships, or partnerships, with customers and suppliers. Other aspects of "place" are unimportant.
- The stabilizing activities of personal selling by account managers and, to a lesser extent, the PR activity of customer entertainment, are important, also encouraging word-of-mouth. Little use is made of the stabilizing effects of advertising.

Not consistent with a less successful firm in a turbulent market was the fact that they perceive word-of-mouth to be important, although not doing much to encourage it – mainly playing golf with customers and taking prospects to visit successful customers' sites.

Thus, in general it appears as if ITB's activities, with a few exceptions, are consistent with what would be expected of a less successful company in a turbulent industry, as predicted by the model.

Table III summarizes these findings, showing that both *P1* and *P2* may be accepted.

	Less successful	More successful
Complex/turbulent environment	ITB matches P2	ITA matches P1

Table III Comparison of results against propositions

Discussion of findings

The fact that the study findings support *P1* and *P2* indicates that the use of complexity and chaos theories may be helpful to understand the dynamics in a complex, turbulent market. For example, as suggested by the chaos and complexity literature, the use of destabilizing marketing tactics seems to contribute to ITA's success. Furthermore, these findings confirm that some of the chaos and complexity characteristics are important to marketers, for example:

- SDIC explains the importance of relatively minor differences in product offerings and of word-of-mouth advertising.
- Successful product development requires co-evolution between marketer and customer, ensuring market needs are rapidly met. Thus, a self-organizing approach rather than a centrally planned approach is suggested.

However, the accuracy of the marketing tactics predicted by this approach can be questioned. The model is not foolproof, as the exceptions and anomalies listed in the findings section show. Possible reasons may be:

- Since the entire South African environment has become complex and turbulent, even less successful companies may be adopting tactics predicted for more successful companies. In fact, the model may even apply to unsuccessful companies, but by definition unsuccessful companies are no longer in business, and so cannot be examined.
- How a company perceives its market may be more important than the actual state of the market. Since all interviewees believed their industries to be changing, their strategic and tactical actions could well be copied, but poorly implemented, from those who are more successful in their industry. Such poor implementation is indicated in the discussion on level of intensity in the ITB section above.
- Although the nature of the environment may determine the tactics to use, these tactics alone may have little effect on success. It may be that other issues are more important determinants of success, for example, the quality of the implementation of the tactics.

Conclusion

As a general conclusion the overall objective of the study has been met because the more successful company did differ, to a considerable degree, in its use of marketing tactics from those of the less successful company. Furthermore, the differences were more-or-less as suggested by the literature. Thus, it can be concluded that success in a complex, turbulent environment requires the use of more destabilizing marketing tactics, while more stabilizing marketing tactics would probably be more useful in a simple and stable environment.

Although this conclusion appears to be valid for the two companies studied, care should be taken if generalizing the results more broadly. However, as mentioned in the Method section above, the study design, via the use of "method-appropriate criteria", does permit some degree of generalization. Although definitive conclusions cannot be extrapolated to other companies, industries or countries, the findings can be seen as indicative of the probable dynamics in other complex, turbulent environments, and a tentative conclusion can be drawn that marketing tactics may be determined by the nature and dynamics of the external environments in other

industries and countries. However, more research is required before such a proposition can be made definitively.

Implications for businesses

This study has highlighted the relevance of chaos and complexity theories as techniques to better understand the market dynamics being experienced by companies. It has further highlighted the complex nature of the problem and the difficulty in making conclusive statements about marketing success or failure in rapidly changing markets. Despite the tentative nature of the findings, it is believed that this approach can help companies operating in complex, turbulent and volatile environments in three ways:

- Viewing the environment and markets through a chaos/complexity perspective may enable marketers to identify opportunities, and the relevant actions, sooner and more clearly than when using traditional approaches.
- It could help companies to adopt marketing strategies that are different to those developed by more traditional marketers, and which therefore may be more relevant to complex, turbulent environments.
- At a micro level, it may help companies to develop superior marketing tactics, more suitable for the environment in which they operate, and also to better understand the behavior and dynamics of competitors in their markets.

More specifically, marketers operating in complex, turbulent environments should be prepared to use the product, price and promotion components as destabilizing tactics. Product development should be innovative and fast, and involve customers in the process for maximum flexibility. Pricing should be innovatively and aggressively used, with the aim being to lead the market in pricing tactics. Promotions should include aggressive, shocking or amazing campaigns to surprise and shift perceptions. Distribution, on the other hand, is the foundation of other tactics and should not be destabilizing. The stabilizing nature of supply chain management improves responsiveness and flexibility, and is consistent with the needs of complex, turbulent environments.

Although the research was done in the South African environment and the findings are tentative, it is believed that these findings could be helpful to companies operating in similar environments. Therefore, it is possible that companies in other emerging economies, such as Eastern Europe, South America or other African countries could benefit from using this approach.

Recommendations for further research

It is hoped that some of the anomalies outlined above can be resolved by research involving a wider range and number of companies, in different industries and countries, especially other emerging countries, with complex, turbulent environments. Such research could involve replication studies in other industries and countries to confirm or refute whether the findings of this study are generalisable.

Furthermore, it is believed that quantitative research, focusing on multiple companies in a specific industry, could be helpful in more conclusively identifying if a deterministic

relationship between the external environment and marketing tactics does exist. Quantitative research could also provide a clearer understanding of such dynamics and more clearly differentiate the marketing tactics of more successful from less successful companies.

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