

## E-commerce and corporate strategy: an executive perspective

Kuo-chung Chang<sup>a</sup>, Joyce Jackson<sup>a</sup>, Varun Grover<sup>b,\*</sup>

<sup>a</sup>*Management Science Department, The Darla Moore School of Business, University of South Carolina, Columbia, SC 29212, USA*

<sup>b</sup>*Department of Management, 101 Surrin Hall, Clemson University, Clemson, SC 29634, USA*

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### Abstract

Despite the recent downturn in Internet-based business, the dollar value of electronic commerce (EC) transactions is increasing at an astounding rate. In consumer-to-business applications, the amount of money spent by online shoppers is nearly doubling every year and is expected to approach US\$ 100 billion by 2004 while business-to-business sales is expected to reach US\$ 1.3 trillion by 2003. These opportunities, powered by the evolving computing and communication technologies, enable companies to gain tremendous operational efficiencies, personalization, and information based products and services. More and more conventional brick and mortar firms see e-commerce initiatives as offering strategic opportunities to transcend their normal operations. This study proposes that e-commerce initiatives are important strategic initiatives and that firms with a stronger EC market orientation will be more successful. Content analysis of CEO's letter to shareholders of 145 Fortune 500 firms was conducted to evaluate the importance of EC and strategic orientation. The results provide support to the study's propositions and indicate that EC must be pursued carefully as a strategic initiative rather than as an appendage to an existing organization.

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### 1. Introduction

The emergence of e-commerce is creating fundamental changes to the way that business is conducted. These changes are altering the way in which every enterprise acquires wealth and creates shareholder value. The myriad of powerful computing and communications technology enabling e-commerce allow organizations to streamline their business processes, enhance customer service and offer digital products and services. This shift in underlying marketing fun-

damentals is now the driving force that is luring many organizations to embrace e-commerce. However, as they are learning, organizations must proceed with caution, as the road to e-commerce is littered with failed initiatives. A plunge in the share prices of dot com companies sent the tech-heavy NASDAQ index into almost free fall; down over 70% of the record high of 10 March 2000. Though an economic slowdown was apparently likely, one thing was painfully clear; most Internet "pure plays" could not find sustainable profitability by operating only as e-commerce organizations simply by excelling in the management of technology, information, and the consumer behavior. Similarly, established companies that viewed e-commerce as a stand-alone appendage to their business

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\* Corresponding author. Tel.: +1-864-656-3773;  
fax: +1-864-656-6768.  
E-mail address: vgrover@clemson.edu (V. Grover).

would be less likely to succeed in these efforts. Therefore, it is our contention that firms must clearly recognize their e-commerce initiatives as an integral part of their strategic objectives. In addition, we propose that firms that carefully evaluate their customer and competitor base, as a part of strategic thinking, will reap more benefits.

In the process of forming a corporate strategy to respond to the challenges of environmental change, normative thinking requires that a firm should analyze its industry forces and value-chain activities in order to identify opportunities for IT innovation. Furthermore, it should examine assets, resources, and competency of the staff and identify those mechanisms that confer a distinctive advantage over their rivals. Choice of appropriate strategy could then lead to superior performance. In the case of e-commerce, firms implementing such initiatives should carefully analyze external forces, internal resources and their core competencies. The outcome of this process should be reflected through a tight integration between corporate strategy and e-commerce. This study focuses on this outcome and its relationship with corporate performance.

Specifically, the study investigated the extent to which large successful companies adopted an e-commerce posture that was integrated with their corporate strategy. Thus, we examined the qualitative portion of the company's Annual Report: the CEO's Letter to the Shareholder, using content analysis. This letter presents a unique observation point for the researcher interested in examining corporate strategy and holds potential for determining the innovative methods of the top manager's strategy [19]. Bettman and Weitz [6] argue that the CEO's letter, which is a standardized component of the report, provides comparable and more objective data on an organization than would interviews. Pfeffer [39], recognizing the utility of the CEO's letter as a source of "objective" data on organizations, has called for increased research use of annual report data.

The study uses the CEO's letter as input to address the following questions:

1. Is the importance of e-commerce to corporate strategy reflected in improved corporate performance?
2. Does a firm's strategic orientation with respect to e-commerce have an impact on its performance?

## 2. Background and propositions

### 2.1. The perceived importance of e-commerce

The emergence of E-commerce has created a novel marketplace. However, definitions of what constitutes e-commerce vary [35,44]. Extant studies have referred to the term "e-commerce marketplace" either from a system-oriented [3] or a market-structure perspective [33]. Bakos argued that it is the electronic market systems that create a space where buyers and sellers converge. Malone et al. referred to it as a corresponding governance mechanism. Zwass [51,52] proposed an architecture that embraces the aforementioned perspectives as two components of an e-commerce structure. E-commerce related IT, in this framework, serves as the infrastructure that leads to the rise of e-commerce. At the top level, resulting from the impact of e-commerce operation is the issue of governance mechanism. Support for electronic marketplaces and electronic hierarchies can be found at the bottom level. In-between these levels there are application layers that provide value-added activities with respect to information sharing, business transactions, and relationship building. Thus, e-commerce includes not only buying and selling goods, but also various processes within and across organizations. We define e-commerce as the use of computing and communication technologies to engage in a wide range of activities up and down the value-added chain, both within and outside the organization [1]. It is widely argued that e-commerce related IT, such as EDI, EFT, electronic messaging, shared corporate digital library etc. could enhance both organizational efficiency and effectiveness. In terms of *efficiency benefits*, an e-commerce application can generate internal efficiency and external coordination through changes in intra- or inter-organizational integrative processes [24]. Even before the rise of e-commerce, and particularly the Internet, companies engaged in electronic commerce using electronic data interchange (EDI) to improve their operational efficiency. Today, Internet EDI can further integrate and enhance an organization's operational efficiency. Riggin and Mukhopadhyay [43] using Chrysler as a case, has shown that the total benefits provided by electronic integration are both tangible and significant.

*Effective benefits* of e-commerce technology are reflected in the use of the extended information

exchange network to create organizational value. Because of the addressability and responsiveness [14] that characterize the system, e-commerce could increase an organization's ability to sense and respond to the market needs by collecting and disseminating market information throughout the organization. With that information, the organization could accurately assess or stimulate market demand and search for new markets. Making the right decision would in turn have a strategic impact that could change the relationship of the organization with its business rivals and customers.

Despite the benefits provided by e-commerce, however, adopting e-commerce does not ensure competitive advantage, because the technologies are open and available to competitors [31]. Economic impacts do not emanate from IT investments directly, but through the value created by the interaction of the IT assets with the "complementary assets" of the firm [11]. Researchers [7,26,30] propose that the ability to mobilize IT resources in conjunction with other resources is critical to superior performance. Therefore, corporations that see e-commerce integrated with its strategic orientation would be more likely to leverage complementary assets and achieve efficiency and effectiveness benefits. In other words, failure to recognize e-commerce as a part of corporate strategy is more likely to result in isolated initiatives or responses to competitive pressures that are less likely to leverage the full complement of organizational resources. Therefore, we propose:

**Proposition 1.** *There is a positive relationship between a firm's perception of the importance of e-commerce as reflected in corporate strategy and firm performance.*

## 2.2. Market orientation

Market orientation centers on an organization-wide generation and dissemination of, and responsiveness to, customer intelligence [27]. Narver and Slater [34] widen this conceptualization of market orientation by breaking it into its three components: customer orientation, competitor orientation, and inter-functional coordination. They argue that the market concept is not limited to customers but should include a competitor orientation. In other

words, a market orientated company would collect, dispatch, and swiftly respond to either or both customer's needs and rival's actions. Inter-functional coordination is, in fact, a function of intelligence generation, dissemination, and responsiveness. This study adopts Narver and Slater's conceptualization but only focuses on customer and competitor orientation. As they argue, market-oriented firms would continuously acquire, process, and disseminate knowledge about market, products, technologies, and business information. Therefore, the third behavioral component is a part of the central essence of the first two.

*Customer orientation* reflects the firm's understanding of its target buyers in order to be able continuously to create superior value for them. As defined by Deshpande et al. [15], customer orientation is "the set of beliefs that puts the customer's interest first." By stressing the evaluation of customer value and the accumulation of customer preferences, a firm can build a knowledge base of customer preferences. As an intangible asset that is difficult to be imitated by competitors, customer knowledge creates a strategic advantage for firms by raising the entry barriers. By leveraging established customer knowledge, a firm can avoid competing on pricing and also provide differential prices based on the customer's own demand curve; this eventually leads to higher average prices [17,45].

A *competitor orientation* can be defined as the ability and will to identify, analyze, and respond to competitors' actions. This emphasizes beating the competition and having the ability to make product offerings that are comparable with rivals. Competitor-driven firms watch costs closely, quickly match the marketing initiatives of competitors, and look for their sustainable edge in technology. Such firms keep a close watch on market share and contracts won or lost to detect changes in competitive position [13].

Prior research has predicted a positive relationship between market orientation and performance. This assumes that firms that learn about their markets and act on that information are well positioned for competitive advantage. While some research shows that the relationship between market orientation and performance could be contingent on industry characteristics, customer characteristics, or the type of performance measure used, the proposition that

market-driven companies will outperform their competitors is generally supported [12,18,22,29].

The market orientation of a firm is particularly important in e-commerce. Market oriented firms engaging in e-commerce would be more inclined to obtain both efficiency and effectiveness benefits. Further, many e-commerce technologies are particularly suited for supporting a market orientation by providing a responsive and interactive medium through which an organization can gain and respond to in-depth knowledge with respect to competitors' and customers' profiles [37]. For instance, customer information could be used to predict or assess customer demand; with this firms could tailor their products to meet the unique needs of their customer. Also, IT can be used to detect competitor's initiatives, and thus, keep abreast of rival's market profiles.

Additionally, by leveraging e-commerce technologies a firm can reduce transaction costs [2,18] and realize the possibility of mass customization, strategic flexibility that enables an organization to provide customers with personalized products while retaining the economic advantages of mass production [23,40]. These benefits provide a firm with positional advantages in that it could impart superior customer value with diverse products and lower costs [13].

In sum, market oriented firms that stress both customer and competitor orientation can leverage benefits offered by e-commerce technologies. Thus, in the intensely competitive e-commerce space, a market-oriented organization would outperform one that does not pursue that orientation. This leads to **Proposition 2**:

**Proposition 2.** *Companies that are market oriented will outperform those that are non-market oriented in the e-commerce market space.*

### 2.3. *Balanced versus skewed market orientation*

Considerable research has examined the holistic effect of market orientation on business performance. The research also posits that both customer and competitor orientation are equally important and that a company should keep a balanced mix of both [15,48]. However, some researchers indicate that keeping a balanced mix may not be possible, since

managers cope with vast amounts of rapidly changing and often conflicting market information through the processes of selective attention and simplification [36,38]. Since a manager's perception of the relative importance of customer or competitor analyses with respect to a business's ability to create and sustain superior value for customers determines the firm's primary orientation, it is argued that managers normally take a skewed or slanted market orientation. Due to the limited information processing capability of humans, managers generally take an orientation geared towards either the customer or competitor, rather than the balanced orientation. However, we argue that focusing primarily on only one could lead to a partial and biased picture and that a balanced mixture of the two is desirable. Furthermore, the open architectures on which e-commerce is based can reduce entry barriers, customer switching costs, and the power of suppliers. The capability to sense problems or opportunities and respond to them could improve the chances of success. Therefore, we propose that a balanced posture with would better leverage the benefits of e-commerce.

**Proposition 3.** *Companies pursuing a balanced market orientation strategy would outperform those pursuing a skewed strategy in the e-commerce market space.*

## 3. Methodology

This study used content analysis when examining the CEO's letter of each firm in the sample. The letter is essentially a status report and a statement of strategy to the company's shareholders, stakeholders, competitors, and financial analysts. It reviews the financial position of the company and provides an explanation of the results, discusses major events in the firm, and provides guidance on short and long-term strategies and how they will be implemented. Bowman [8] demonstrated that, "content analysis of annual reports can be of real usefulness for understanding issues of corporate strategy". Further, given that these letters are closely scrutinized, biased or flawed reasoning could lead to severe consequences [47]. We can, therefore, use this letter as a representation of a firm's strategic orientation. Such a method has been successfully used in prior IS research [21].

### 3.1. Sample

The sampling strategy had two objectives. First, industries were chosen to reflect a broad range of industry types as suggested by Narver and Slater, and second, the organizations within those industries were chosen to reflect a wide diversity of their potential use of e-commerce opportunities. The sample frame was corporations in the Standard and Poor's 500 index. This is appropriate, since it reflects a market-value-weighted index (shares outstanding multiplied by stock price) of 500 stocks that are traded on the major exchanges (NYSE, AMEX, and the NASDAQ). The weightings make each company's influence on the performance of the index directly proportional to that company's market value. It is this characteristic that has made the Standard and Poor's 500 Index the investment industry's standard for measuring the performance of actual portfolios.

A total of nine industries were selected to provide a wide diversity of the potential to use e-commerce: banking, non-banking financial, electronics, retailing, manufacturing, consumer products, fuel, food, and metals and mining. The industries were selected in order to coincide with the Standard and Poor (S&P) and Morgan Stanley Capital International (MSCI) Global Industry Classification Standard (GICS) system.<sup>1</sup> Using a stratified random sampling plan, companies were selected within each industry. The corporate website was used as a check to ensure that the companies engaged in e-commerce. Those firms without either a web presence or firm size information were removed from the sample, resulting in a total of 145 firms. Total assets, total number of employees, and total sales were collected from COMPUSTAT for each firm in the sample. Based on at least two of the three size variables, firms in the nine industries were divided into three sub-groups (extremely large, large, and medium).

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<sup>1</sup> S&P and MSCI jointly launched the GICS on 2 August 1999. The Global Industry Classification Standard, consisting of 10 economic sectors aggregated from 23 industry groups, 59 industries, and 123 sub-industries covering over 10,000 companies globally, was developed in response to the global financial community's need for one complete, consistent set of definitions that reflects today's economy.

### 3.2. Data collection

Based on a review of the associated literature [1,3,15,23,24,35,44–46,49,52] three sets of coding schemes associated with e-commerce, customer-centered strategy and competitor-driven strategy were developed. E-commerce terms or phrases referred to the e-commerce applications and those value added processes that enhance a firm's performance. Terms such as Internet, EDI, EFT, on-line, B2B, B2C, e-strategy etc. were thus identified as being associated with e-commerce.

Firms adopting a customer-led strategy tend to emphasize activities that could establish a close relationship with the customer; this leads to enhanced customer satisfaction, trust, and loyalty. Therefore, terms such as customer, customization, service, trust, relationship, satisfaction, loyalty, etc. were seen to be representative of a customer-oriented strategy.

Competitor orientation is most similar to Porter's overall cost leadership and differentiation strategies [41,42]. Porter's strategy of cost leadership is characterized by cost control efforts. The differentiation strategy focuses on product diversity in terms of design, style, and quality and tends to optimize the marketing mix to increase market share or expand the customer base. Thus, terms such as product differentiation, market niche, customization, cost reduction, product refinement, efficiency, market share, etc. were included as competitor-related terms.

The terms initially identified from literature sources were not exhaustive. Therefore, two additional steps were taken. First, a panel of six doctoral students and faculty were asked to classify terms based on definitions of customer and competitor orientation. Second, an iterative procedure was adopted whereby the letters were randomly scrutinized for additional terms before final data collection. Supplementary terms were added. Table 1 reflects the terms used for conducting the content analysis.

### 3.3. Content analysis

Content analysis was defined by Krippendorff [28] as "a research technique for making replicable and valid references from data to their contexts." The

Table 1  
Coding schema for content analysis

E-commerce		Strategy			
		Customer-orientation		Competitor-orientation	
Internet	B2B	Customer (service)	Collaboration	Differentiation	Cost reduction
Dot com	B2C	Relation	Cooperation	Brand	Product refinement
E-business	www	Service quality	Interaction	Image	Product quality
E-commerce	URL	Trust	Satisfaction	Product diversity	Efficiency
E-strategy	EDI	Customization	Reliability	New product	Market share
(e-)	EFT	Communication	Loyalty	R&D	Economies of scale
Virtual	Electronic (marketplace)	Customer retention		Unique market	Competitive pricing
(Web) site	Digital			Market niche	Price control
On line				Specialized market	

researcher searches for structures and patterned regularities in the text and makes inferences on the basis of these regularities. Since this method can be applied to any piece of writing or recorded communication, content analysis is used in many fields. Though it was regularly performed in the 1940s, it became a more credible and frequently used research method after the mid-1950s. Here, we utilized the three content analyses approaches; words, concepts and semantic relationships, in order to capture the desired information from the CEO's letters.

Year 2000 Annual reports were obtained for each of the firms. This year was selected because it was an important year in the emergence of e-commerce. During 1999, it appeared that the financial markets had suspended—at least, temporarily—traditional methods of investment valuation, resulting in stock prices of companies with no earnings exceeding those who had real earnings. Then, in 2000, the stock prices began to come into line with their valuations. At the same time, the perceptions of the Internet and e-commerce as an opportunity to fuel innovation, open up alternate distribution channels, create new cost structures and transform an organization's competitiveness, were being solidified in general and *particularly in the more traditional companies as they sought to build e-commerce strategies*. The CEO statement in the 2000 Annual Report was therefore reflective of initiatives taken by the companies as they sought to position themselves in the e-commerce market.

For each annual report, each CEO's letter was copied, read, and all words related to e-commerce underlined. The analysis proceeded, following the general principles put forth by Krippendorff. An e-commerce related phrase was the unit of analysis, defined as an instance of a word or a set of words that "embodied the concept of using network information technology in order to engage in a wide range of activities up and down the value-added chain both within and outside the organization." Each e-commerce related phrase referred to only one instance of an e-commerce related event, opportunity, or problem. Two judges received extensive training in the three sets of coding schemes that had been developed, based on the associated literature. An initial test with 30 letters that were similar to, but not included in the actual sample, revealed that the two judges were in about 90% agreement on the identification of e-commerce related phrases.

Next, each judge worked independently (and later collectively), in the coding of each letter in terms of the e-commerce related phrases, isolating those paragraphs containing these phrases, then coding the phrases based on the coding schemes. Each of the schemes formed the basis from which the numeric counts of the variables were obtained. Since the letters were of varying lengths, the e-commerce word count, as well as the count associated with the two components of the market orientation, was each divided by the total word count of the letter, forming ratios indicating the extent to which a company was e-commerce oriented, marketing oriented, and

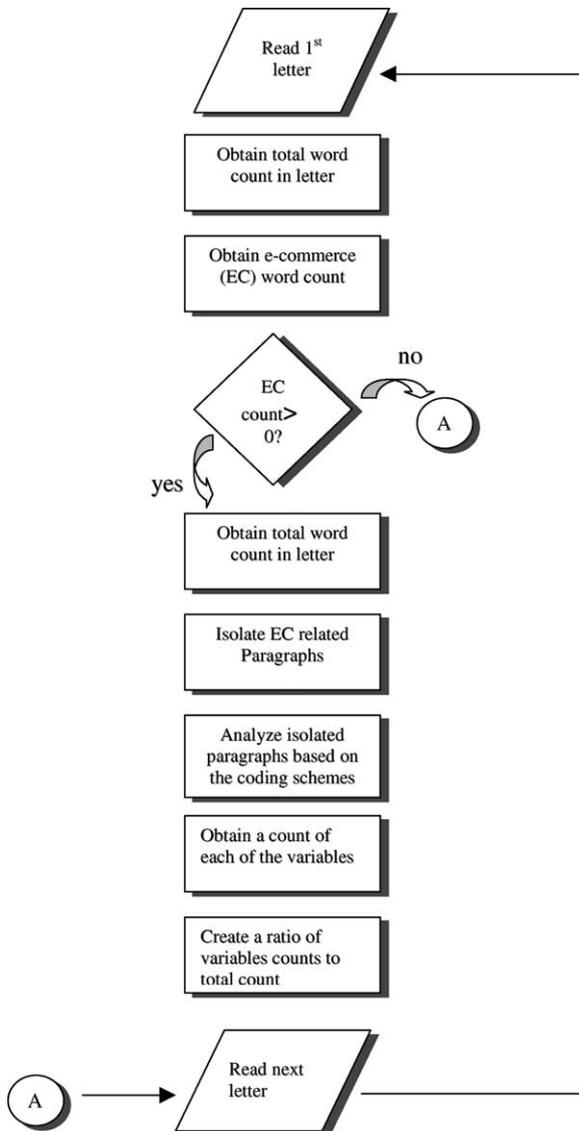


Fig. 1. Flowchart of content analysis coding procedure.

customer versus competitor oriented. Fig. 1 summarizes the overall process used to conduct the analysis.

Since we were only concerned with activities engaged in the context of the e-commerce marketplace, each e-commerce instance or term was counted and only the paragraphs containing those instances or terms were used in further analysis. In compliance with the definition of e-commerce, only proprietary

names related to conducting the *process* of e-commerce rather than being a proprietary e-commerce *product* were included. When identifying the customer, competitor, and e-commerce variables, only those sentences in previously identified paragraphs were analyzed (see the Appendix A for illustrative paragraphs from letters).

For Proposition 1, the firm's e-commerce ratio was used as the independent variable and was regressed on the performance measurements. In order to test Proposition 2, companies with a non-zero ratio of market orientation (i.e. customer or competitor) were classified as being market-oriented, while those whose market-oriented components ratio (for both customer and competitor) were zero, were classified as being non-market oriented. For Proposition 3, firms in the market-oriented group were further sorted into two levels (high or low), based on their ratios of customer and competitor orientation. Firms with a customer-orientation ratio above the ratio's statistical mean were labeled as high and those below were low. The same procedure was repeated for competitor orientation. For the determination of a balanced versus skewed strategy, a firm was perceived as pursuing a balanced strategy if it had a high customer orientation and a high competitor orientation. A firm was considered having a skewed strategy if it had either a high-competitor and low-customer orientation or low-competitor and high-customer.

### 3.4. Halo effect

Proposition 1 argues that the CEO's perception of the importance of e-commerce would lead to better performance. However, it is also possible that well-performing firms (in prior years), having more resources, could positively influence the perception of the importance of e-commerce. To address this concern, a test was conducted for a *financial performance halo effect*. Such an effect refers to circumstances where researchers are using secondary proxies to capture constructs of interest and, as a result, may introduce measurement error; if that error is pervasive—a halo is said to exist. A halo effect occurs when financial performance variables may affect the validity of research results that use secondary proxies, as may be the case here. Following the

procedures in Brown and Perry [9], a financial performance halo effect was identified and removed in the analysis.

### 3.5. Performance measurements

It is widely believed that performance is multi-dimensional in nature and that it is advantageous to integrate different dimensions of performance in empirical studies [10,32]. Wiklund [50] regards profitability and growth as different aspects of performance and holds that when combined they give a richer description of the actual performance of the firm. Company profit growth (CPG) was selected because, in the knowledge economy, strategy must focus on expanding existing markets or creating new ones—not only on beating the competition. Kim [25] systematically identified national and global growth champions from many industries and built strategic, organizational, and performance profiles of them and found that companies of sustained high profit growth all pursue a particular strategy that looks beyond simply beating the competition. Instead, by offering new and superior buyer value in existing markets or by enabling the creation of new markets through quantum leaps in buyer value, they are able to render the competition irrelevant. This way of strategic thinking is known as “value innovation.” Therefore, since this study had, as its focus, company performance in the context of the knowledge economy, we felt it appropriate to use the measure of company profit growth as a measure of company performance. However, as time has proved, growth without profitability is not sustainable. Many e-commerce companies had high valuations based on an excessive focus on high growth shown by their attracting new customers. However, their inability to generate profit proved detrimental. Therefore, Gross Profit Margin (GPM) is a measure of an organization’s operating efficiency and, in the new economy, is included as a second measure. The data regarding these performance measurements were collected from the COMPUSTAT database.

### 3.6. Control variables

In terms of the control variables, we selected industry type and firm size to be included in our

model. These have a recognized influence on performance. Extant literature has identified a number of industry variables that moderate an organization’s performance [16,20,48]. These variables include: market growth, market turbulence, competitive intensity, and technological turbulence. These situational variables unveil the complexities that exist in various industries; they should be controlled in order to avoid the potential effect on performance. Therefore, industry type was used as a blocking variable to control potential moderators of firm performance.

In addition to industry type, firm size is another important factor that could affect a firm’s performance [5]. Total assets, total number of employees, and total sales were collected from COMPUSTAT for each participant firm based on the fiscal year-end data. This was divided into three groups of equal size to distinguish very large, large, and medium sized firms. The overall size was calculated for each firm based on the three size variables.

## 4. Results

Due to large sample size, the normal distribution of the data, and the random selection of the firms used, the parametric statistical methods, multiple regression analyses, and ANOVA, were chosen to test the propositions. Table 2 reports the summary statistics. Ordinary least squares regression analysis was used to test the first proposition. The analysis of variance procedure was employed to test the remaining two propositions.

The first proposition posits a positive relationship between a firm’s perception of the importance of e-commerce and the firm’s performance. As can be seen

Table 2  
Descriptive statistics

S. no.	Variables	Mean	S.D.
1	Gross profit margin	40.95	18.76
2	Company profit growth	3.27	22.45
3	Customer-oriented strategy	0.06	0.12
4	Competitor-oriented strategy	0.13	0.25
5	Importance of e-commerce	0.27	0.47
6	Industry types	4.80	2.67
7	Firm size	2.06	0.83

Table 3  
Perceived importance of EC and performance

Dependent variables	Parameter estimates					
	E-commerce	S.E.	<i>N</i>	<i>R</i> <sup>2</sup>	Adj. <i>R</i> <sup>2</sup>	<i>F</i>
Gross profit margin	45.81****	4.09	135	0.31	0.3	20.01
Company profit growth	11.19***	3.93	132	0.06	0.04	2.75

\*\*\*  $P < 0.01$ .

\*\*\*\*  $P < 0.001$ .

Table 4  
Market orientation and performance<sup>a</sup>

Dependent variables	Tukey studentized range tests <sup>b</sup>		
	1–2 <i>H</i> <sub>2</sub>	3–4 <i>H</i> <sub>3</sub>	3–5 <i>H</i> <sub>3</sub>
Gross profit margin	127**	63**	6 3 (n.s.)
Company profit growth	116**	59***	59**

<sup>a</sup> Sample sizes are reported in parenthesis.

<sup>b</sup> 1 represents companies pursuing market oriented strategy; 2 represents companies pursuing non market oriented strategy; 3 represents companies having balanced market orientation strategy; 4 represents companies that are skewed to customer oriented strategy; 5 represents companies that are skewed to competitor oriented strategy.

\*\*  $P < 0.05$ .

\*\*\*  $P < 0.01$ .

in Table 3, there was significant support for the first proposition.<sup>2</sup> The regression coefficient for GPM is significant at 0.001 level and CPG at 0.01 level, suggesting that the more a firm perceives e-commerce as being important (as reflected in corporate strategy), the more likely it is that firm will have a higher level of operating efficiency and profitability compared to those firms with a lower perception of importance.

Table 4 contains the results of the tests on the impact of a market-oriented strategy on firm performance. For Proposition 2, we expected that companies pursuing a market-oriented strategy would outperform those with a non-market orientation. The results in Table 4 support this. The mean differences of the two performance measurements between market-oriented companies and non-market oriented companies are significant at the 0.05 level, suggesting that market-oriented firms perform better than non market-oriented firms.

<sup>2</sup>Based on Brown and Perry's model and suggestion, we conducted a financial performance halo effect test and removed the halo effect. The result remains statistically significant.

Proposition 3 contends that companies having a balanced market orientation posture will have a higher level of performance than firms that are more geared toward a particular component of market orientation. The table shows a significant difference between balanced and (skewed) customer-focused companies ( $P < 0.05$ ). However, performance differences are somewhat mixed between balanced and (skewed) competitor-focused companies. Although a substantial difference was found in terms of CPG ( $P < 0.05$ ), no difference is present regarding GPM.

## 5. Discussion

This study sought to investigate how the leaders of traditional companies view the rise of the e-commerce age. From our study, we concluded that the e-commerce market space is seen as promising and that it could generate positive performance implications if it is reflected in corporate strategy. This conclusion is interesting in light of the recent numerous dot-com failures and suggests that e-commerce must be given priority in corporate strategy. Brick and mortar companies (which constituted a significant portion of our sample) that incorporate a strategy of this nature would be able to leverage effectiveness and efficiency benefits more effectively. In contrast, if e-commerce is not adopted and integrated at the top, firms may not garner the appropriate resources in order to create the unique capabilities necessary to compete in the virtual market. In such cases it could yield a potentially useless appendage to the business.

While engaging in e-commerce undoubtedly has substantial benefits, this marketplace is also quite competitive. E-commerce reduces customer search and switching costs [4], has the ability to distribute information on new products, access new sales channels and reduce entry-level capital requirements

thereby lowering barriers to entry. Our findings are consistent with the marketing literature in that companies which exhibit a market orientation, by being vigilant regarding the needs of customers and the actions of competitors, would achieve better performance. Over-emphasizing one dimension at the cost of the other would lead to sub-optimization in an environment that rewards the ability to sense and response to a variety of informational cues.

As to the partial support for  $P_3$ , it is possible that in the e-commerce market space, reductions in customer search costs and lower entry barriers indicate greater competition among companies and thus intensify price competition. This situation would be reinforced in the case where there is competition between companies that pursue a competitor-oriented strategy. In such a competitive environment, firms may have increased their productivity, but they may also be compelled to pass on the subsequent benefits, in terms of profitability, to the consumer. As a result, Gross Profit Margin, the measurement of profitability performance, may not be able to detect this redistribution effect.

## 6. Limitations

Certain limitations should be recognized when interpreting the findings. First, this study adopts a cross-sectional research methodology. Caution should thus be taken in interpreting causality. Second, since the companies are large, questions remain as to the generalizability of this study to medium and small companies. Third, the CEO's perception concerning the importance of e-commerce may be influenced by the firm's past performance. Though, the relationship between the CEO's view of e-commerce and firm performance is still positive after removing the financial performance halo effect from the data, we cannot rule out other variables that may influence the CEO's judgment. Fourth, the partial support for [Proposition 3](#) suggests that high-level financial performance measures may not reveal the true value of e-commerce initiatives. Intermediate level performance measures, such as inventory turnover, time to market, and product and service quality may be more appropriate in establishing the relationship between e-commerce strategic initiatives and firm performance.

## 7. Implications for research

This study demonstrates that the CEO's letter to the shareholders presents a useful research tool for analyzing the relationship between strategy and e-commerce, and organizational performance. The content analysis methodology is replicable and can readily be applied to other research questions. Moreover, it provides the means to obtain the perspective of the leaders of organizations in a format that is readily available, longitudinal, and relatively consistent across publicly held firms. However, firms that are in financial trouble tend to focus their CEO letters on uncontrollable environmental factors. They also might avoid negative statements, lest they disorient the financial markets. Therefore, these letters represent strategic orientation, but are not equivalent to it. Therefore, complementing this approach with other sources of data, such as surveys and the study of corporate documents, would add richness to the representation of strategy. There are other promising topics for future research. For example, financial statistics regarding a firm's online activity, such as a firm's online revenues, online sales, etc. could be used to add granularity to specific instances of performance. Also, the data for this study was gathered for one specific year, and e-commerce is a rapidly changing phenomenon, studies conducted using lagged analysis over two or more years, would be useful. Additional variables specifically demarcated such as bricks-and-mortar versus pure plays, risk orientation, and type of product/service offered can shed further light on the performance implications of e-commerce initiatives.

In conclusion, this study examined CEO views of e-commerce across a variety of industries and found that e-commerce coupled with a balanced marketing orientation, as reflected in these views is positively related to performance. With e-commerce going through a transitional phase, it is important to seek out relationships that can provide guidance on the future tenor of this phenomenon as it becomes increasingly imbibed into businesses. This study provides a modest step in this direction, alerting interested observers to the importance of tying e-commerce initiatives to corporate strategy and consequently other business resources in order to create distinctive capabilities for competitive advantage.

## Appendix A

Company	Sample quotes from CEO's letter*
Federated Department Stores Inc.	Part of this strategy involves finding new ways to integrate the various facets of in-store and <i>online</i> retailing—bringing the <i>Internet</i> into our stores in innovative ways that can increase <b>customer service</b> and expand <b>merchandise offerings</b> , and using it to drive traffic to our stores through cross-promotions and multi-channel marketing
Washington Mutual	This combination of high-touch and high-tech is what today's <b>consumer</b> wants and it is why our company is investing in technology that allows for consistent, highly <b>personalized service</b> across all of our major distribution channels—whether offered on land or <i>online</i>
Deere & Co.	These (communications technologies) are being made available to <b>customers</b> through enhancements in our own equipment as well as through products such as the <i>Internet-based VantagePoint network</i> , which recently went online. It gives <b>farmers</b> information to manage inputs more successfully and thus maximize productivity and profit
Black & Decker Corp.	Recognizing that <i>Internet</i> technologies provide us with a unique opportunity to reinforce and leverage our competitive strengths, we made <i>e-business</i> a high priority at Black & Decker in 1999. As we refine our <i>e-business</i> strategies, our two-part goal is to improve the <b>efficiency</b> of supply chain transactions with our customers and vendors through a convenient, informative, and seamless interface and to communicate directly with consumers about product information and services
Kroger	Kroger's primary <i>Internet</i> activity has been our participation as equity partner in <i>GlobalNetXchange</i> , the first global <i>business-to-business online</i> exchange serving the retail industry. We believe that <i>business-to-business Internet</i> applications will increase <b>efficiencies</b> and <b>reduce supply chain costs</b> . In addition, Kroger is continuing our analysis of home delivery and retail <i>Internet</i> sales. We intend to give this activity careful attention
Ashland	We are also moving quickly to strengthen competitive position and increase sales in the rapidly growing <i>electronic-commerce</i> area, particularly in our <b>distribution</b> and consumer businesses. For example, Ashland and <i>e-Chemicals</i> Inc. have created the chemical industry's first <i>e-commerce alliance</i> . By the spring of 2000, our customers will be able to order from an array of 2500 Ashland- <b>distributed products</b> through <a href="http://www.e-chemicals.com">http://www.e-chemicals.com</a> . The alliance includes an equity investment in <i>e-Chemicals</i> , the leading <i>online</i> chemical marketplace, as well as joint marketing activities. More importantly, we are developing our own <i>e-commerce websites</i> . Each of our distribution businesses will have individualized <i>Internet</i> -based systems operational by early spring, joining a well-established <i>consumer ordering site</i> operated by Valvoline's Eagle One auto appearance product business
Texaco Inc.	We believe that <i>Internet</i> technology has the potential to significantly enhance our businesses in many ways—both those we clearly understand and those not obvious today. It is therefore important that everyone in our organization is comfortable using <i>Internet</i> and <i>Intranet</i> applications to explore for new ideas. We are pushing every part of the Company to establish partnerships and ventures to use this technology to make their business more <b>efficient</b> and to find new platforms for revenue generation and earnings growth

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**Kuo-chung Chang** is a doctoral candidate in the Management Science Department at the University of South Carolina. He has earned a MA in international relations and diplomacy from National Chen Chi University, Taiwan. His research interests

include E-commerce and business process reengineering. He can be reached at [changkp1@moore.sc.edu](mailto:changkp1@moore.sc.edu).



**Joyce Jackson** is a doctoral candidate in the Management Science Department at the University of South Carolina. She earned a BS in computer science at Point Park College and an MBA from Pennsylvania State University. Her research interests include technology acceptance and organizational strategy in the electronic exchange environment. Prior to returning to school to pursue her doctorate, Ms. Jackson spent 10 years designing and developing business information systems for General Electric, Champion International and Mellon Bank. She can be reached at [joyce.jackson@sc.edu](mailto:joyce.jackson@sc.edu).



**Varun Grover** is the William S. Lee distinguished Prof. of IS at the College of Business and Behavioral Sciences, Clemson University. Previously he was a business partnership foundation fellow and Prof. of information systems at the University of South Carolina. He holds a BTech in electrical engineering from the Indian Institute of Technology, New Delhi, an MBA from SIUC, and a PhD degree in MIS from the University of Pittsburgh. Dr.

Grover has published well over 100 refereed articles in the information systems field. His publications have appeared in journals such as *Information Systems Research*, *MIS Quarterly*, *Journal of MIS*, *Communications of the ACM*, *Decision Sciences*, *IEEE Transactions*, *California Management Review*, *Information and Management*, *European Journal of Information Systems*. He is currently on the Board of Editors/AE of numerous journals and was recently the special editor on business process change, knowledge management, and IT futures for issues of *JMIS*, *Database*, *Decision Sciences*, and the *International Journal of Electronic Commerce*. He is a recipient of the Outstanding Achievement Award from the Decision Sciences Institute, and has also received recognitions for his research from PriceWaterhouse Coopers, AIS and Anbar Intelligence. During his tenure at the Moore School of Business at USC, Dr. Grover twice received the college-wide Alfred G. Smith Award for teaching excellence and won the outstanding MBA Professor Award three times. Dr. Grover has also taught courses or given seminars in Austria, the Dominican Republic, India, and Canada. He has served various roles at national conferences, including track chair, associate editor, program committee member, panelist, and faculty counselor of DSI, ICIS and AMCIS. He can be reached at [vgrover@clemson.edu](mailto:vgrover@clemson.edu).