Influence of market orientation and strategy on travel industry performance: an empirical study of e-commerce in Taiwan

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Abstract

The purpose of this research is to investigate the effects of strategy and market orientation on the performance of the travel industry. Using the Taiwanese travel industry's electronic commerce as a primary research target, this paper will use the "contingency–structure–result" framework. Employing factor analysis and the Linear Structural Relations method for verification, the results indicate that the marketing departments still possess influence, and that strategy and market orientation affect performance through "customization" and "marketing influence".
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Keywords: Electronic commerce; Strategy; Market orientation; Marketing influence

1. Introduction

The Internet is an unprecedented invention that has reached 50 million users after only a short period of time. Because of its low cost, high speed, and ability to link physically disparate bodies of information, the emergence of e-commerce has had a significant impact on both marketing methods and consumer behavior. According to a report put out by MIC (Market Intelligence Center, Taiwan's leading IT industry analysis and consulting service provider) in 2001, the growth rate of businesses in the Asian electronics market from 2000 to 2004 will be 87%, which is only slightly less than the growth rate in Europe (118%). The report also states that the Asian electronics market in 2000 is the equivalent of 5.4% of all global electronic transactions and will grow to 8.9% in 2004. This research states that Taiwan's electronics market in 2000 did business totally NTD\$ 3.95 billion (USD\$ 0.11 billion), which increases 142% in 2000 than in 1999. Most of this business is found in three industries: travel services (52%), 3C (Computer, Communication, and Consumer) products (27%), and books and journals (5%). Furthermore, there will be an estimated 6 million users in

Taiwan by the end of 2001. The report also states that e-commerce will continue to grow: the number of mail orders is swelling, on-line banking business will open, the on-line environment is developing well, and Internet gaming is becoming quite popular. According to other investigation by the Yam search engine (www.yam.com.tw), the number of people who have never used the Internet for shopping is gradually decreasing every year in Taiwan (76.3% in 1999, 60.6% in 2000, and 44.5% in 2001). However, there is still room for tremendous growth. Internet shopping behavior related to travel and tourism has grown from 7.2% in 2000 to 10.7% in 2001.

The extant literature, however, has not yet to address how market orientation and strategy together influence organization performance (Kohli & Jaworski, 1990; Han, Kim, & Rajendra, 1998). The main goal of this research is to investigate the strategies and market orientations that travel and tourism service providers have considered ever since the advent of the Internet. The secondary goal is to discuss how the effects of strategy and market orientation on the performance of customization and marketing influence form an overall model to verify the changes in the travel and tourism industry in the electronic commerce environment.

This paper seeks to propose a "contingency–structure–result" framework. Section 2 will discuss some literatures, including the introduction of Taiwan's on-line travel

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industry, market orientation and strategy typology, marketing influence and customization, and performance and concept framework. Section 3 will analyze research designs, including pilot-test, measurement of variables, and sampling method. Section 4 will show the research result, including factor analysis and structure model fit. The discussion of the result and a conclusion will be presented in Section 5. We argue that the marketing departments still possess influence, and that strategy and market orientation affect performance through "customization" and "marketing influence".

2. Literature review

2.1. Internet and the travel industry

Nothing seems to have affected the travel industry as much as the Internet. It is clear that this is no fad, and that the Internet is reshaping all forms of commerce and competition. The world now functions in a 24×7 (24 h/day, 7 days a week) economy (Connolly & Olsen, 2001).

According to the distinctive approaches practiced by Buhalis and Licata (2002), currently, travel industry in Taiwan could be distinguished into "Traditional tourism e-Mediaries" and "New tourism e-Mediaries". Traditional tourism e-Mediaries mainly applies Global Distribution System (GDS) and Computer Reservation Systems (CRS). The three systems employed by GDS are ABACUS, AMADEUS and GALILEO, which were introduced to Taiwan around 1990. CRS acts as a medium between upstream supplier and downstream travel agency (or it could contact the customers directly). CRS comprises a massive database and rapid communication system to provide travel information and transmit reservation data to the customers, and through it, the customers could also access the instant reservation information.

New tourism e-Mediaries, rising along with the growth of Internet and electronic commerce, has changed entire "Business to Business (B2B)" and "Business to Consumers (B2C)" relationships, and at the same time, changed consumer behavior and attitude. The consumers have gradually accepted independent search and reserving travel packages on the Internet. The broad application of the Internet also creates a new traveling market on the Net.

The trade amount of traveling market on the Internet has long been the top of B2C electronic commerce in Taiwan. According to the result investigated by NetValue, in a single month, the average number of visitors searching on Taiwan's traveling websites came up to 1,820,000 in the second quarterly of 2002. Comparing to the same period in 2001, it raised 1.7 times of visitors. Among the traveling websites, the most

popular ones include Easy Travel (www.eztravel.com.tw), Lion Travel (www.liontravel.com.tw), and Easy Fly (www.ezfly.com.tw). Priceline (www.priceline.com), which has obtained profit in America, hold good expectations for Taiwan's market; it has prepared its website for a long time and is ready to join this competitive market.

2.2. Market orientation and strategy typology

Many scholars have investigated the application of strategy in the travel and tourism industry (Olsen, West, & Tse, 1998; Connolly & Olsen, 2001), and an increasing number of scholars are discussing the relationship between market orientation and performance (Narver & Slater, 1990; Kohli & Jaworski, 1990; Han et al., 1998). Whether or not market orientation directly affects performance, or affects performance via other variables, has also invoked much academic discussion (Han et al., 1998). However, most scholars agree that market orientation is one of the important variables (Jaworski & Kohli, 1993).

Market orientation could be divided into consumer orientation, competitor orientation, and cross-functional coordination, and pointed out that market orientation is the value system of an organization (Kohli & Jaworski, 1990; Narver & Slater, 1990). Market orientation denotes market information regarding the present and future needs of consumers, the dispersion of cross-department information, and the reaction of the organization towards information. "Consumer orientation" is information gathering focused on the preferences and needs of consumers. "Competitor orientation" is information gathering about competitor potential and tendencies. "Cross-functional coordination" is the coordination of organization resources for collating and dispersing market information. In support of their framework, each of which is engaged in intelligence generation, dissemination, and responsiveness to the collected information. Moreover, scholars proposed that the three core components are equally important and positively impact to performance (Narver & Slater, 1990; Kohli & Jaworski, 1990; Han et al., 1998).

Scholars have investigated whether or not market orientation and innovation conflict with each other, and separated strategy orientation into market orientation and innovation orientation. Innovation orientation means being able to produce goods capable of generating the maximum profit, quality, and monetary value in accordance to consumer preferences, or possessing a technological advantage (Han et al., 1998; Berthon, Hulbert, & Pitt, 1999).

Another determinant in the dimension of contingency is strategy typology. Miles and Snow (1978) claim different functional departments will employ different strategies. Naturally, as their idea was formed in the 1970s, prior to the introduction of the Internet, we

wonder if it is still applicable in the Internet age. Porter notes this problem and indicates that the proper fit of strategy still decides the performance of a company, even in the Internet age. That is, his strategy typology, which almost all executives are familiar with, can apply to the on-line industry. Homburg, Workman, and Krohmer (1999) also point out that Porter's strategy typology is the most competitive in cyberspace. According to Porter (1980), his strategy typology has three types. They are as follows:

(1) A low-cost strategy: a company must produce standardized commodities and sell them at low cost in order to maintain competitive advantage.
(2) A differentiation strategy: a company must emphasize the features and abilities of its products and services in order to separate the company from its competitors and occupy a unique position in market.
(3) A focus strategy: a company must focus its resources and abilities and serve a specific group of customers. It must focus on a given geographical market, a given distribution channel, and a given product to gain business profit and advantages.

According to Porter (1980), low-cost and differentiation strategies are more important. A firm can achieve high performance in one of two ways: either to supply different products or to reduce cost. He views cost leadership and differentiation as mutually exclusive. However, a focus strategy just combining the two types of competitive advantage with the firm's choice of narrow scope.

Achrol and Kotler (1999) argue that in order to provide higher value product and achieve better customer satisfaction than previous organization types did, e-commerce-based businesses must promote the interactions between customers and the market. In this study, the dimensions that presented by Kohli and Jaworski (1990) and Berthon et al. (1999) are used. These dimensions are market orientation, Porter's cost-leadership strategy and differentiation strategy.

2.3. Marketing's influence and customization

In past research, the influences of subunits have been mentioned only occasionally (Homburg et al., 1999). Even though boundaries between functions are gradually becoming blurred, marketing influence has not diminished (Webster, 1997), and many scholars believe that the influences of marketing are still important (Day, 1994). Additionally, in order to become a major supporter of decision-marking, corporations should gain the support of the marketing department when making decisions. Achrol and Kotler (1999) also believed that when production and information technol-

ogy become complex, the costs for coordinating the market interface also become very high; the influence of the marketing department at this time will also come under changes.

Pasa and Shugan (1996) used Decision Theory to identify the main variables that affect marketing value, and pointed out that the importance of marketing possessed value only when marketing decisions became important. When the marketing environment became unstable and the organization's size became larger, when marketing decisions significantly affected profits, and when marketing errors incurred larger losses, marketing decisions became more important. They stated that, unless marketing decisions become more important than other decisions, the marketing function would not develop well. They began examining, via this decision theory, the elements that would influence market value. In their studies, they found marketing decision would become more important when companies were in the following situations: the marketing environment becomes more unstable, the company had a larger scale, the functional background of the CEO was marketing, the marketing decision had a greater impact on profit, and the marketing mistake induced a bigger loss.

Homburg et al. (1999) argue that when we speak of the influence of a functional department we must consider whether the department influences the process of decision-making. They pose 11 strategic issues to help a company assess its subunit's influence. These issues include: pricing decisions, distribution strategy decisions, decisions regarding the strategic direction of the subunit, decisions on major capital expenditures, decisions on advertising messages, decisions on expansions into a new geographical markets, choices of strategic business partners, new products development decisions, decisions on procedures for measurement of customer satisfaction, decisions by programs for improving consumer satisfaction, and decisions on design of customer service and support.

In terms of customization, Wind and Mahajan (2002) mentioned this as an important construct in the administration of a business. Kotler (1997) believed that new technologies are permitting many companies to return to customized marketing. Customization is the process through which firms interact one-to-one with masses of customers to design products and products and services tailor-made to individual needs.

According to Deshpande, Farley, and Webster (1993), to achieve a long-term profit, business needs to concern about customer's need first. Pasa and Shugan (1996) emphasize the significance of customization, and indicate that it is an important technology that the commerce requires. Anderson and Narus (1991) also point out, while customers become the major concern, commerce must keep a long-term commitment to maintain the quality, service and innovation, and

further trace and reflect the requirement and preference of the customers, satisfy the consumers and get better achievements. Therefore, under the highly changing electronic commerce environment, customization could maintain providing high-quality products and service, and keep good interaction with customers. In order to support the marketing promotion, the company might spend more money on advertisement, promotion and other relevant marketing expenses; relatively, it exchanges the business with a higher achievement and performance.

2.4. Performance

Robbins (1990) lists more than 30 items in his paper on how to assess a company's performance. These items include productivity, profit, quality, growth rate, attendance, work satisfaction, control, etc. Rickarson, Toylor, and Gordan (1985) claim a company's performance is usually presented in both fields of finance and marketing. In the former, they select investment returns, sale returns, pre-tax profit, sales, and sale growth rate to denote business performance. In the latter, they use market occupancy. However, when the company begins its on-line business, assessment of that company's performance probably will not be limited to finance and marketing (Hanson, 2000).

Unlike Robbins and Richardson, who focus on looking for the indicators of performance, Walker and Ruekert (1987) argue a company's performance has three dimensions:

(1) Effectiveness—compared with competitors in market, the degree of success of a company's procedure, such as changes of sales growth rate and market share.
(2) Efficiency—the ratio of a company's input to its output. Investment return and pre-tax profit are usually the indicators that a company uses to assess its efficiency.
(3) Adaptability—if a company can successfully respond to the chances provided by changes in its environment, we say it has good adaptability. The ways of assessing a company's adaptability include analyzing the sales ratio and number of new products that succeed in market during a particular time period (usually 5 years).

This paper intends to explore the performance of companies on the Internet. Thus, we use not only financial performance but also Internet performance, such as customer contact and customer satisfaction.

2.5. The concept framework

Contingency Theory (Fiedler, 1967) emphasizes that under different environments, businesses must adjust

their structure and strategy in order to achieve better results. Our research, based on the concept of social systems, will discuss how this system influences business performance through changes of its environment and through the process of transforming inputs into part of its structure. Fig. 1 presents the main research structure, which is based on three dimensions: contingency, structure, and performance.

In the dimension of contingency, first of all, we consider market orientation as one of contingency determinants in our research because it can create more consumer value and improve business performance, as is demonstrated in Slater and Narver (1994). Han et al. (1998) also claim market orientation will not make any impact on performance without some mediating variables. As for strategy typology, another contingency determinant, we will emphasize how low-cost and differentiation strategies influence performance. Especially as Miles and Snow (1978) indicate, different organizations must employ different strategy typologies. Therefore, what strategy suits the need of on-line business and how it works also becomes our focus.

In the dimension of structure, we emphasize customization (Pasa & Shugan, 1996; Kotler, 1997) and marketing's influence (Homburg et al., 1999) in this study. Improvements in technology enabled marketers to become more consumer oriented and helped to develop the "relationship marketing". Relationship marketing has attracted considerable recent interest from marketing academics and practitioners. Within the academic community, although some viewed the relationship marketing merely as an applied topic of marketing with an insubstantial theory base, others argued that relational exchange represents a paradigm shift in marketing thought (Morgan & Hunt, 1994). In an increasingly populated on-line marketplace, businesses must compete with the limited time and attention
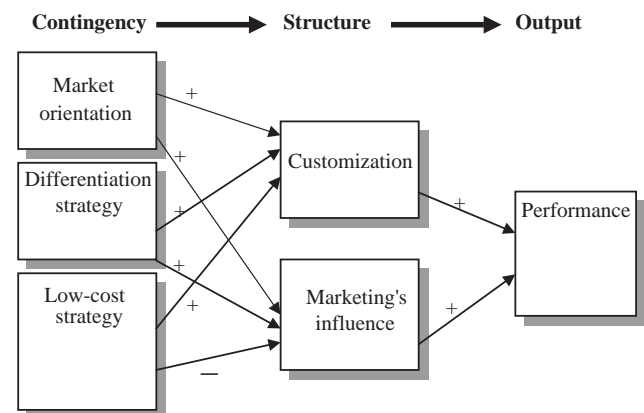
Hypothesized Relationships: + Positive, - Negative

Fig. 1. A conceptual model to explain marketing's influence and cross-functional interaction in e-commerce.

paid by Internet users. To compete successfully for consumer data, e-competitors must develop strategies to attract and keep users at their sites. In order to provide customers unique experiences, one of the most widely accepted and applied methods is "customization". On the other hand, with the development of information technology, the distinction between different functional departments was getting obscured, but the influence of marketing department, due to its expansion, would never weakened. Achrol and Kotler (1999) indicated that the more complicated the technologies of production and information, the higher the cost of the coordination of marketing interface. In other words, the influence of marketing departments will increase. Homburg et al. (1999) also argued that we must consider whether the marketing's influence plays an important role in the process of decision-making. The result shows that the marketing's influence is essential to structure determination.

Finally, in the dimension of performance, the research will emphasize the assessment of both outside and internal business performance. Generally speaking, most researchers focus on outside performance and select marketing share and growth rate as items in the assessment of performance. As our research discusses the influence of marketing departments, however, we must draw attention to the effect, efficiency, and adaptability of companies—that is, their internal business performance rather than their profit. This idea corresponds with Walker and Ruekert (1987).

3. Research design

3.1. Pilot-test

This questionnaire was designed according to theories brought up in various literatures, combined with the research objective and hypothesis. All questions are constructed using the Likert seven-point measure. In order to avoid situations in which interviewees misunderstand the meaning of the questions due to ambiguous sentence phrasing, the questionnaire was reviewed in interviews with two experts in the field of travel and tourism and three scholars in the field of marketing. The questionnaire draft was then tested by 25 EMBAs, and then corrected before being finalized.

3.2. Measurement of variables

This research compiles the results of discussions in various literatures, drawing upon measures in Table 1. All responses in this questionnaire were measured in a Likert seven-point measure, 1 signifying total disagreement, and 7 signifying complete agreement.

In considering the issue of variables of measurement. Previous studies have found a strong positively correction between subjective assessments and their objective counterparts (Gupta & Govindarajan, 1984; Narver & Slater, 1990; Zahra, 1993). Because the objective report of on-line stores is hard to obtain, this study uses subjective self-report to measure the average of all kinds of characteristics the managers identified with the peer business; moreover, through pretest and expert interview, the measure variables of this study is achieved.

3.3. Sampling method

This research uses travel websites as samples, drawn using the largest search engine in Taiwan, Yahoo-Kimo (tw.yahoo.com). This research searched for terms including "travel service", "travel", and "travel industry", for a duration of time extending from February 2001 to March 2001. Websites that merely provided consumers with information or e-advertisement services were excluded from this research, resulting in a population of 1200 travel agency websites (focusing on travel intermediaries and agent, and exclude travel suppliers such as airlines and hotels). From April 2001 to May 2001, 600 questionnaires were sent out to the Marketing Managers or main personnel in charge of marketing, and notices were sent out 2 weeks later to unreturned questionnaires. We did not send questionnaires to information systems departments since travel agencies generally do not have their own information departments in Taiwan, and they usually hand over the

Table 1
Measure variables

Construct	Variables	Reference
Contingency	Market orientation	Kohli and Jaworski (1990) and Homburg et al. (1999)
	Differentiation strategy	Porter (1980), Dess and Davis (1984) and Kim and Lim (1988)
	Low-cost strategy	Porter (1980), Dess and Davis (1984) and Kim and Lim (1988)
Structure	Customization	Homburg et al. (1999)
	Marketing's influence	Homburg et al. (1999)
Output	Performance	Walker and Ruekert (1987) and Hanson (2000)

work of software development and service out-resource to software service companies. The end result was a total of 128 questionnaires returned, with 13 invalid questionnaires, 115 valid questionnaires, yielding an effective response rate of 19.17%.

Of the 115 valid questionnaires, in order to assure the validity of returned questionnaires to represent all samples, we use split validity to assess the fit of the data in the responses. The result suggests there is no difference in the characteristics of the samples. Furthermore, we also take note if the response is different from non-response in our research. With these considerations, we compared our independent variables of the early respondents with those of the late respondents in both groups' data with the t-test, and the result showed no significance at the $p < 0.05$ level, which suggested that there was no difference between response and non-response (Armstrong & Overton, 1977)

4. Research result

4.1. Analysis of characteristics of sample population

In the samples returned, including 115 travel businesses, most had fewer than 100 employees (85.3%). In terms of capital size, 50.5% had capital ranging from 0.15 USD$ million to USD$ 1 million, while 27.8% had more than USD$ 1.5 million. Overall, the samples obtained by this research were mostly small-scale travel businesses. Businesses that did not use on-line security measures presented a majority of 60.9%, while 33.0% used SSL and SET, with only 6.1% using only SET. Here we think the software security system is very important because the customers would be willing to pay the fee on-line, and it also enhances their wish to use the system (Table 2).

4.2. Factor analysis

This research uses SAS to execute factor analysis. As shown in Tables 3–5, the data were submitted to factor analysis using principal components extraction and varimax rotation, as indicated through our interpretation of the scree plot and eigenvalue greater than 1. All factors—contingency determinants, industrial features, strategy orientations, marketing abilities, and performance—have at least a 0.7 value. The measure reliability of the research is, thus, considered reliable (Hair et al., 1998), also shows the correlation relationships between factors in Table 6.

4.3. Structure model fit

We use structural equation modeling (SEM) for our analysis because the structure model expresses these

Table 2
Descriptive statistics

	Sample size	Percent
Employee		
Under 10	17	14.8
11–30	15	13.0
31–50	35	30.4
51–100	31	27.0
101–150	2	1.7
Above 150	15	13.0
Capital (10^3 USD$)		
Under 150	17	14.8
150–500	27	23.5
500–1000	31	27.0
1000–1500	8	7.0
Above 1500	32	27.8
Security		
SSL SET	15	13.0
SSL	23	20.0
SET	7	6.1
None	70	60.9

relationships among independent and dependent variables, even when a dependent variable becomes an independent variable in other relationships. On the other hand, we use maximum-likelihood estimation (MLE) as the estimation procedure. Hair, Anderson, Tatham, and Black (1998) proposed that MLE, the most common estimation procedure, has been found to provide valid results. It is generally accepted that the minimum sample size to ensure appropriate use of MLE is 100–150. Although our sample size is just 115, and a sample size of 200 for Linear Structural Relations (LISREL) modeling is proposed as the "critical sample size", we still get good model fit.

The structure model of Fig. 1 is estimated using maximum likelihood in LISREL 8.03. In the examination of model fit, we have the following statistics: chi-square with four degree of freedom is 8.547 ($p = 0.073$), GFI = 0.977, RMR = 0.045, CFI = 0.952, NFI = 0.922, AGFI = 0.877. These statistics in our model all meet the criteria, and hence suggest the model fits the data well. Our research also tries to test the fit of two other paths: one is that strategy typology (including low-cost and differentiation strategies) directly an influence to performance and the other is that market orientation directly influences performance. Their statistics, which are not specified in this paper, indicate both paths do not fit the data. Therefore, the hypothesis that marketing's influence and cross-functional interactions are mediating variables is reasonable.

4.4. Results

The results support that statement that customization and marketing's influence are positively related to

Table 3
Factor analysis of contingency

Factors	Items	Eigenvalue	Cumulative	Factor loading	Alpha
Market orientation	Driven by customer needs	6.118	0.4370	0.766	0.9127
	Driven by customer satisfaction			0.798	
	Driven by the goal of increasing customer value			0.903	
	Respond rapidly to competitive actions			0.772	
	Share information about competitor information			0.806	
	Care about competitive capability			0.692	
Differentiation strategy	Competitive advantage through superior products	2.172	0.5922	0.661	0.8343
	Development of new products			0.830	
	Development of brand image			0.844	
	Development of customer-specific solutions and products			0.714	
Low-cost strategy	Pursuing low price in service	1.329	0.6871	0.841	0.7772
	Pursuing cost advantages in raw material procurement			0.721	
	Pursuing economies of scale			0.659	
	Pursuing operating efficiencies			0.799	

Table 4
Factor analysis of structure

Factors	Items	Eigenvalue	Cumulative	Factor loading	Alpha
Customization	In search of customer need information	4.774	0.4774	0.913	0.8881
	Understand customer's intention			0.896	
	Answer the question of customer			0.811	
	Give the right information to customer			0.792	
Marketing's influence	Marketing department has more influence on long-term plan	2.397	0.7171	0.833	0.9314
	Marketing department has more influence on resource distribution			0.927	
	Marketing department has more influence on capital expenditures			0.905	

Table 5
Factor analysis of output

Factors	Items	Eigenvalue	Cumulative	Factor loading	Alpha
Performance	Customer contact	4.80	0.7966	0.855	0.9480
	Customer satisfactory			0.919	
	Market share			0.907	
	Average return of sales			0.918	
	The ability to new product development			0.878	
	Sales growth rate			0.876	

Table 6
Correlation among different factors

	MO	DI	LO	CUS	MI	PER
Market orientation (MO)	1					
Differentiation (DI)	0.000	1				
Low cost (LO)	0.000	0.000	1			
Customization (CUS)	0.566**	0.221*	0.228*	1		
Marketing's influence (MI)	0.178	0.187*	0.059	0.000	1	
Performance (PER)	0.359**	0.152	0.194	0.453**	0.158	1

$*p < 0.05$, $**p < 0.1$.

market orientation. As we show in Table 7, the beta coefficients for this relationship are significant (0.566, 0.1) at the $p < 0.05$ level. This result supports the research of Jaworski and Kohli (1993) and suggests there should be some variables to mediate between market orientation and performance.

A differentiation strategy and low-cost strategy are related positively to customization. The relationship between two constructs is significant (beta = 0.221; 0.228) at the $p < 0.05$ level. The result suggests when a company emphasizes a differentiation strategy or a low-cost strategy, it will give priority to customization (Walker & Ruekert, 1987).

A differentiation strategy is related positively to marketing's influence. However, the statement that a low-cost strategy is related negatively to marketing's influence is not supported (beta = 0.059 at the $p < 0.05$ level). Nevertheless, the result at least somewhat suggests the exactness of the study of Walker and Ruekert (1987), who claim a company will draw less attention to marketing's influence if its business strategy is low cost. In other words, a company which employs a cost-leadership strategy must use a different method, such as cross-functional interactions, to improve its performance.

We tested whether customization and marketing's influence are related positively to business performance. As we show in Table 7, the beta coefficient for this relationship is significant (0.453; 0.158) at the $p < 0.05$ level. This result also supports Homburg's research that marketing's influence plays an important role in the improvement of performance. Moreover, contingency determinants, such as market orientation and strategy typology, cannot affect performance directly without the mediating variable of marketing's influence. This finding is also consisted with many studies (Walker & Ruekert, 1987; Pelham & Wilson, 1996; Gatignon & Xuereb, 1997).

5. Conclusion

Our research discusses how marketing's influence and cross-functional interactions function in the electronic market. There are two differences in our research in comparison to past research. First, most of the past research on e-commerce concentrates on discussing the application of the Internet, and merely examines either the use of net tools related to the application and performance of marketing activities, or on-line consumer behavior. Few of them refer to what happens to the inside of a company when e-commerce is introduced (Richardson, 2001). Second, most of the past marketing research draws more attention to the analysis of how market orientation influences business performance than to the discussion of how market orientation and strategy typology function together on business performance through the mediating roles of marketing's influence and cross-functional interactions.

The result of our empirical research indicates marketing's influence and cross-functional interactions are mediating factors between market orientation and strategy typology and performance. Our findings support not only the concept of Jaworski and Kohli (1993) and Walker and Ruekert (1987), but also the model of contingency theory. We also find that marketing's influence and cross-functional interactions continue to play an important role even in the on-line environment (Day, 1994), and also as Porter (2001) states, strategy is still the core of e-commerce.

There are also some managerial implications in our research. The marketing department is good at understanding the outside environment. If a strategy of a company can fit into its surroundings, its performance is usually improved. Thus, a marketing department in a company becomes crucial for a company to make its strategies fit with its surroundings. This idea is also useful in the Internet age, which is a new era for all companies. This is especially true when there are more and more companies participating in on-line industries and considering e-commerce as a tool to help them create a new competitive advantage. However, many companies fail to take into consideration the effects of introducing e-commerce. This oversight causes conflicts between departments, and hence negatively influences their business performance. As a result, companies have

Table 7
Parameter estimates for Fig. 1

Predictor	Dependent variable								
	Customization			Marketing's influence			Performance		
	b	s.e.	p	b	s.e.	p	b	s. e.	p
Market orientation	0.566	0.071	0.00*	0.178	0.090	0.00*			
Differentiation	0.221	0.071	0.00*	0.187	0.090	0.00*			
Low cost	0.228	0.071	0.00*	0.059	0.090	n.s.			
Customization							0.453	0.083	0.00*
Marketing's influence							0.158	0.083	0.1**

b = Unstandardized coefficient; s.e. = stand error; p = significance level; *$p < 0.05$, **$p < 0.1$.

to consider, in various ways, the impact of their outside environment when they take part in the on-line industry, and employ the appropriate management, arrangement of departments, and mechanism of organization to improve their performance (Pfeffer, 1992).

The objective of this research is to examine if the relationship between contingency determinants and performance depends on marketing's influence and cross-functional interactions in the electronic market. Our work can be extended in several directions. First, the research focuses only on the discussion of business-to-consumer commerce; further research might examine business-to-business e-commerce. Second, because marketing's influence discussed in this research is limited to the influence of marketing on the decision-making process of main issues in business, further research might focus on the influence of other functions, such as R&D. Finally, as the scope of marketing's influence seems too broad, future research might narrow down the scope of research to specifics like the discussion of relationship marketing.

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