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**STRATEGIC ORIENTATION, PERFORMANCE MEASUREMENT, AND
BUSINESS PERFORMANCE: A COMPARATIVE STUDY BETWEEN SMALL
AND MEDIUM-SIZED UK AND INDONESIAN INTERNET RETAILERS**

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STRATEGIC ORIENTATION, PERFORMANCE MEASUREMENT, AND BUSINESS PERFORMANCE: A COMPARATIVE STUDY BETWEEN SMALL AND MEDIUM-SIZED UNITED KINGDOM AND INDONESIAN INTERNET RETAILERS

ABSTRACT

This study investigates the application of performance measurement and considers how its use might affect the business performance of small and medium-sized retail businesses in the United Kingdom and Indonesia, which are using the Internet as a channel to market. In both countries, retailers were surveyed and the study has produced some interesting results, which have theoretical, practical and managerial implications. At the outset of the study, little was known about the extent of Internet adoption by retail businesses in Indonesia and it was not surprising to find that in the United Kingdom, Internet retailing is well established but in Indonesia, it is in the early stages of development. Nevertheless, there was sufficient Internet activity by Indonesian retailers to enable comparison of the use of performance measures by retailers in a mature economy and in a developing economy. The findings revealed similarities and differences in the number and type of performance measures used by retailers and found evidence of different strategic orientations, which could be used to predict certain types of organizational behavior. More specifically, in both countries, retailers adopting a conservativeness-oriented strategy were more likely to make greater use of performance measurement than those classified as applying an aggressiveness-oriented strategy. Interestingly, level of aggressiveness, was found to be an indicator of financial performance but in the United Kingdom, low aggressiveness was an indicator of better financial performance whereas in Indonesia high aggressiveness was an indicator of better financial performance. This study has explored the complex issues of strategic orientation, performance measurement and business performance in an Internet retailing context within developed and developing countries. The findings have important managerial implications for Internet retailers about how performance measures might be used effectively to enhance business performance.

Keywords: Internet retailing, e-retail, e-commerce, performance measurement, strategic orientation, performance indicator

Strategic Orientation, Performance Measurement, and Business Performance: A Comparative Study Between Small and Medium-sized United Kingdom and Indonesian Internet Retailers

1. Introduction

In certain areas of the world Internet retailing has become one of the fast growing business sectors. In the United Kingdom, the percentage of Internet retail sales has continued to rise: £14.5 billion in 2004, £26 billion in 2006, and to around £43.8 billion in 2008 (IMRG, 2005; 2006; 2009). Consumers in the United Kingdom are increasingly using the Internet for shopping for a whole range of products and as a result many retailers have developed the skills, resources and competencies required to trade successfully online. According to Ellis-Chadwick *et al* (2007) the Internet provides an extremely rich and flexible retail channel that major retailers are keen to exploit for strategic gain. Indeed, the success of large Internet retailers, such as Amazon.com, Tesco.com, Argos.com has been the subject of much case analysis and academic research (e.g. Constantinides, 2004; Hackney, 2006) but there have been fewer studies which have examined small and medium sized retailers (SME) from a strategic perspective.

In other parts of the world, Internet retailing is less developed. Arguably, Indonesia is at the other end of the spectrum of Internet retailing when compared to the United Kingdom. There is a much lower level of Internet adoption by consumers and businesses. This level of adoption could be attributed to levels of Internet exposure (Phau and Poon, 2000). The level of Internet adoption amongst consumers in Indonesia is comparatively less than many other parts of the world: there are approximately 25 million people online, representing about 10 per cent of the population (APJII, 2007). This penetration rate is lower than the world average of a 23.4 per cent penetration rate and also the 17.1 per cent penetration rate recorded for Asia as a whole (Internet World Stats, 2009). As a result the adoption of Internet shopping by consumers is relatively low in Indonesia. Furthermore, little is known about Internet adoption levels amongst retailers and even though Tosin (2001) recorded that some retailers had established online trading web sites, which predate the year 2000 there is almost no information about retail business profiles (size and sector), business strategy and performance measurement in Indonesia.

This study examines business strategies and performance measurement implemented by small and medium-sized Internet retailers in order to establish the effect on business performance in a highly developed online business environment (UK) and an under developed online business environment (Indonesia). It was expected that business strategies, application of performance measurement and business performance would be very different. Indeed, Zhu and Kraemer, 2002, suggest there is limited transfer of knowledge in the field of Internet business from leading Internet retailers to smaller ones.

2. Strategy and Internet Retailing Success

Researchers and practitioners have attempted to understand how Internet retailers become successful online. During the dotcom era, it was suggested companies focused on being the first-mover in order to develop competitive advantage (Tse and Soufani, 2003). However, the dotcom crash showed that success needed more than 'being first' online to create sustainable competitive advantage (Coltman et al., 2002). On the one hand, studies looking at the cause of business failure identified various possible causes: (1) Sales and costs - high start-up cost, slow growth in sales, unprofitable sales, and high customer acquisition costs; (2) Service quality - inability to meet or exceed customer expectations in fulfillment; (3) Customer relationships - failure to retain existing customers and attract new ones (Tarn et al., 2003). On the other hand, researchers proposed various sources of online business success: building the online customer value proposition (Coltman et al., 2002), identifying suitable market segmentation strategies (La and Kandampully, 2002). However, Porter (2001) suggested that any kind of trading via the Internet was no different than trading offline and strongly argued that success was more likely to be achieved through the application of sound business strategies. Bughin (2001) agreed that successful Internet retailers had to make clear strategic choices about which markets to target. According to Ellis-Chadwick *et al* (2007) there has been much discussion during the last ten years about the extent to which the Internet might be able to deliver success and sustainable competitive advantage (e.g., Amit & Zott, 2001; Nicholls & Watson, 2005). They suggest there is agreement that whilst *'the Internet offers a significant new weapon in any organisation's competitive armoury, there is still a significant amount of debate about how its competitive potential might best be realized'* (Ellis-Chadwick *et al*, 2007).

One of the most intriguing questions among researchers and business practitioners is specifically 'what kind of business strategy leads to superior performance'. Many studies have attempted to investigate such a link (e.g. Morgan and Strong, 2003; Venkatraman, 1989) however, many other factors have been suggested as having a positive impact on business performance: incentive plan characteristics (Rajagopalan, 1997), Total Quality Management (Prajogo and Sohal, 2006), sales force (Slater and Olson, 2000), strategic IT management and technology deployment (Bergeron et al., 2001, Croteau and Bergeron, 2001, Cragg et al., 2002), market dynamics (Homburg et al., 1999). Ultimately, researchers agree about the complexity of the relationship between business strategy and business performance but not about the exact components, which might ensure success. However, better understanding of business strategy and business performance is critical, especially in the highly competitive online environment.

2.1 Performance Measurement in Internet Retailing

Whilst the relationship between business strategy and business performance is highly complex the *indicators* for measuring online performance are potentially more clearly defined. Performance measurement in Internet retailing has steadily evolved and can be classified into three stages, based on the focus of the actual measurement:

Stage (1) site popularity was an early indicator of marketing success when launching a retail web site. Web traffic measures or web metrics (e.g. Sterne, 2002) have been employed as an evaluation tool of site popularity (Karagozoglu and Lindell, 2004) since the early stage of the Internet retailing business growth. During this period the business priority was to ensure fast growth in web traffic, rather than profitability and sales (Betts, 2001). However, as levels of interactivity and complexity of a retailer's websites began to grow, factors other

than traffic flows through a web site became important (Dholakia and Rego, 1998).

Stage (2) measuring customers' online shopping experience comes from the need to satisfy customers and encourage loyalty. Customer acquisition is costly and online transactions in the early part of the relationship are often unprofitable and online retailers became more aware that competitors are just *a mouse click away* (Semeijn et al., 2005; Srinivasan, 2002). The customers' shopping experience includes the interaction between a retailer and a customer through online (website) and offline processes (fulfillment). The quality of website experience could influence a person's attitude towards purchasing (van der Heijden and Verhagen, 2004), affect levels of satisfaction (e.g. Feinberg et al., 2002; Huang, 2005; McKinney et al., 2002; Srinivasan et al., 2002; Szymanski and Hise, 2000; Tamimi et al., 2003) and ultimately influence customer loyalty. Similarly, offline processing e.g., order fulfillment and delivery can affect customer satisfaction (e.g. Tarn et al., 2003; Semeijn et al., 2005). As Internet retailers learned the importance of traffic flows and the customers shopping experience they began to realize the picture was incomplete without some understanding of the web sites levels of business performance.

Stage (3) Business performance, as suggested by Venkatraman and Ramanujam (1986), should be evaluated with financial and operational measures. A few studies have attempted to cover both aspects in evaluating performance of Internet-based businesses: Agrawal et al. (2001) developed an 'e-performance scorecard' to measure a site's success in attracting, converting, and retaining visitors, based on the efficiency of costs and the effectiveness of a site's operation; Rayport and Jaworski (2003) proposed a 'performance dashboard' to measure the progress and health of an online business; Chaffey et al. (2006) proposed a framework to assess the effectiveness of the Internet retailing channel; Neely et al. (2002) showed the suitability of the Performance Prism framework in the online business context. However, those models and frameworks have one or more of the following limitations: (1) not focusing solely on financial and operational-related measures, (2) covering too many aspects of the business (3) not being specifically designed for Internet retailers.

3 Performance Measurement, Business Strategy and Business Performance

The understanding of business strategy and performance measurement implemented by Internet retailers raises the issue of how both constructs are related to each other, and how each affects business performance. Limited work has been carried out in an Internet retailing context but within the strategic management literature similar issues have been examined in a traditional business setting. Byars, (1996) explains that performance measurement is a part of the strategy evaluation phase and it is also suggested that performance measurement should be derived from an organization's strategy (Kaplan and Norton, 1992; Neely et al., 1997). Furthermore, organizations should select and align performance indicators carefully to their business needs and strategies (Evans, 2004). Although links between performance measurement and business strategy are anticipated, very few studies (e.g. Hoque, 2004) have investigated the relationship. Performance measurement has also been predicted to affect business performance (Kaplan and Norton, 1996), but again very little investigation has been completed (Powell, 2004). The understanding of the effect is important because the implementation of performance measurement requires resources, which need to be justified (Moullin, 2004; Amaratunga and Baldry, 2002; Azofra et al., 2003; Kuwaiti and Kay, 2000; Mahama, 2006).

4. Conceptual framework and propositions

A conceptual model was developed to investigate business strategy and performance measurement implemented by Internet retailers, and their possible effect on business performance. The model shown in Figure 1 consists of three constructs and four links.

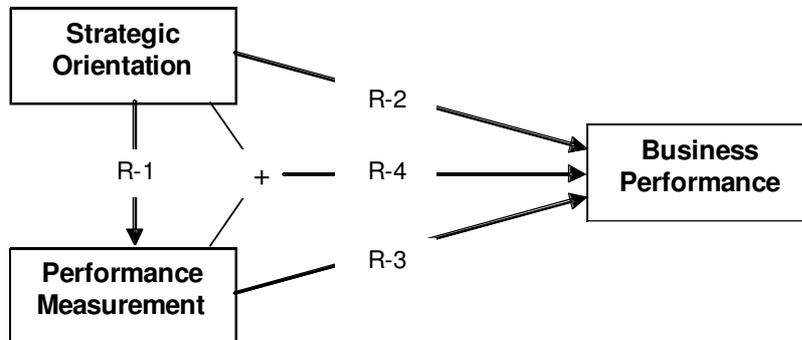


Figure 1: Conceptual model

Performance measurement, in the model, refers to a range of multidimensional performance indicators measured by an Internet retailer to evaluate its business performance. It comprises 30 performance indicators, which were developed from a comprehensive review of the literature (Agrawal et al., 2001; Bailey and Rabinovich, 2004; Barnes and Vidgen, 2002; Barsh et al., 2000; Bughin, 2001; Chaffey, 2006; Cotter, 2002; Janenko, 2002; Neely et al., 2002; Rayport and Jaworski, 2003; Srinivasan et al., 2002; Szymanski and Hise, 2000; Tamimi et al., 2003; Vargas, 2002). This list of indicators was compiled for the retail context then pre-tested with academics and practitioners to determine the validity of the list. The indicators were classified into five dimensions: financial, market-sales, customers, web, and process, as shown in Table 1.

Table 1: Performance Indicators

Financial	Market-sales	Customer	Web site	Process
Profit margin	Total sales	Conversion rate visitor to purchase	Number of visits	On-time delivery
Revenue per transaction	Number of orders	Number of newsletter subscribers	Page views	Percentage of error in goods picked and delivered to customer
Fulfilment cost	Number of customers	Repeated sales per each customer	Unique visitors	Percentage of error in delivery destination
Revenue per customer	Sales value per transaction	Conversion rate visitor to	Website's usability	Online enquiry- to-response time

registration				
Acquisition cost	Ratio of sales from overseas	Customer churn rate	Website's information quality	Return notification-to-refund time
Customer maintenance cost	Market share	Customer extension	Website's service-interaction quality	Percentage of error in charge made to customer

The strategic management literature emphasizes the importance of taking a grounded approach toward understanding business behaviour. As a result this study adopted a framework named Strategic Orientation of Business Enterprise (STROBE) developed by Venkatraman (1989). In this framework, a firm's *strategy* is identified in terms of the relative emphasis made by the firm along six strategic orientation dimensions: aggressiveness, analysis, defensiveness, futurity, proactiveness, and riskiness (see Table 2). As there is limited information about the specifics of strategy implementation by Internet retailers it was decided that investigation of the multiple traits suggested by Venkatraman's (1989) framework might accommodate the variety of strategies implemented by Internet retailers. This was considered to be a robust framework to use for the study even though it had not been previously applied to Internet retailing as it has been successfully used by several studies looking at strategic orientation amongst traditional offline businesses (e.g. Bergeron et al., 2001; Morgan and Strong, 2003; Ragu Nathan et al., 2001; Tan and Litschert, 1994).

Table 2: Strategic Orientation

Dimension	Item
Aggressiveness	We often sacrifice profitability to gain market share
	We often cut prices to increase market share
	We often set prices below competition
	We often seek market share position at the expense of cash flow and profitability
Analysis	We emphasise effective coordination among different functional areas
	We use information systems to provide support for decision making
	We usually try to develop through analysis when confronted with a major decision
	We use several planning techniques
	We use the outputs of management information and control systems
Defensiveness	We commonly use human resource planning and performance appraisal of senior managers
	We occasionally conduct significant modifications to retail operation technology
	We often use cost control systems for monitoring performance
	We often use operation management techniques
	We often emphasise service quality through use of quality circles

	We have criteria for resource allocation which generally reflect short-term considerations*
Futurity	We emphasise basic research to provide us with future competitive edge We commonly forecast key indicators of operations We commonly use formal tracking of significant general trends We often conduct 'what if' analyses of critical issues
Proactiveness	We are constantly seeking new opportunities related to present operations We are usually the first to introduce new services, products, or brands in the market We are constantly on the look out for businesses that can be acquired We are generally pre-empted by competitor's expanding capacity ahead of us* We strategically eliminate operations in later stages of life cycle
Riskiness	We conduct operations which can be generally characterised as high-risk We seem to adopt a rather conservative view when making major decisions We approve new projects on a 'stage-by-stage' basis rather than with 'blanket' approval* We tend to support projects where expected returns are certain* We have generally followed the 'tried and true' paths in our operations *

Note: Item Defensiveness-1: Retail operation technology replaces manufacturing technology

Item Defensiveness-4: Service quality replaces product quality

* reverse scored

Source: Adapted from Venkatraman (1989)

Business performance was investigated using five measures corresponding to five dimensions of performance indicators. As an Internet retailer might not measure the whole range of performance indicators, this study examines five common indicators: (1) *profitability* (e.g. Bergeron et al., 2001; Cragg et al., 2002; Croteau and Bergeron, 2001; Karagozoglu and Lindell, 2004; Lumpkin and Dess, 2001; Venkatraman, 1989; Wang, 2003), (2) *sales growth* (e.g. Bergeron et al., 2001; Cragg et al., 2002; Croteau and Bergeron, 2001; Hoque, 2004; Karagozoglu and Lindell, 2004; Lumpkin and Dess, 2001; Morgan and Strong, 2003; Venkatraman, 1989; Wang, 2003), (3) *customer retention* (e.g. Morgan and Strong, 2003), (4) *superiority of fulfillment process* (e.g. Trocchia and Janda, 2003), and (5) *quality of web store* (e.g. Trocchia and Janda, 2003). The rationale to include those five measures can be illustrated as follows: a good quality of web store may attract customers to buy products online; if the retailer is able to provide a good fulfillment process, customers might be satisfied by their experiences and return to buy more of the same product and to buy additional products. Potentially this process of repeat and extended purchasing could lead to increased sales and high profitability.

The four predicted conceptual links are formed as propositions. First, current knowledge on the relationship between strategic orientation and performance measurement is limited. A prior study conducted in manufacturing companies predicted there was an association between strategic priorities and the selection of non-financial performance indicators (Hoque, 2004). A similar relationship is expected to apply for Internet

retailers, for example (1) those retailers putting higher emphasis on analysis (problem solving) traits possibly measure more performance indicators in order to track problems as well as improvement efforts, and (2) those putting higher emphasis on defensiveness traits may measure more performance indicators, especially on financial-related measures, to track their achievement in minimizing costs. Consequently, the predicted relationship can be presented in the following proposition:

Proposition 1: *The choice of strategic orientation made by Internet retailers is related to the level of performance indicators measured.*

The different emphasis on strategic orientation pursued by Internet retailers might have a different effect on business performance. Firms with higher emphasis on the aggressiveness traits (e.g. to gain a bigger market share) might be less concerned with current profitability. Therefore, these traits are possibly related negatively to financial performance. Firms that place more emphasis on analysis traits might achieve better financial and operational performance because of their efforts in tracking and solving business problems. Firms, which place more emphasis on defensiveness traits may achieve better financial performance because of their efforts in minimising costs. These predicted relationships form the next proposition:

Proposition 2: *The choice of strategic orientation made by Internet retailers is related to the level of business performance.*

Little is known on the possible direct effect of performance measurement on business performance. Evans (2004) suggested that the number of performance indicators measured was related to the firm's performance. By measuring more performance indicators, an Internet retailer may obtain better information about its business operation and it may use the information to improve its business performance, especially operational performance. The improvement targeted for operational performance could be easier to achieve than that for financial performance because the former, to some extent, is under a firm's control. The predicted relationship can be presented in the following proposition.

Proposition 3: *The level of performance indicators measured by Internet retailers is related to the level of their business performance.*

Previous studies found strategic orientation was related to financial-related performance such as profitability and sales growth (Morgan and Strong, 2003; Tan and Litschert, 1994; Venkatraman, 1989). Consequently, it is predicted that the effect of strategic orientation is more on financial rather than operational performance. On the other hand, performance measurement normally provides information that can be used especially to improve business operation. Consequently, it is expected that the effect of performance measurement is more on operational rather than financial performance. This discussion leads to the prediction that if business strategy and performance measurement are analysed simultaneously, they might indicate different emphasis of effects on business performance.

Proposition 4: *The choice of strategic orientation and the level of performance indicators measured have different emphasis of effects on business performance.*

5. Methodology

This study adopted an industrial and cross-sectional survey method among United Kingdom and Indonesian Internet retailers. The target population included retailers selling tangible products (excluded those selling services or digital products), in order to produce a homogenous set of retailers, which were likely to encounter

the similar type of operational and strategic issues. For the United Kingdom survey, a conventional mail survey was used. The method was selected over Internet-mediated surveys for the following practical reasons: (1) the reliability and availability of business reply service from the national Post Office Company (Royal Mail) to support mail survey, (2) the lack of a comprehensive list of intended respondents' e-mail addresses. In Indonesia, an email survey was used. The advantages were speed of distribution, cost effectiveness, quick response time, visual appeal and interactivity (Hewson et al., 2003, Zikmund, 2003). Furthermore, in Indonesia there is: (1) a lack of business reply service provided by the Post Office Company (Pos Indonesia), (2) the availability of functional email accounts (e.g. order, info, and marketing) as well as personal owner's email accounts (with yahoo or gmail domains). In this email survey, the first step was to email potential recipients and ask if they were prepared to take part in the research. Once permission was given a questionnaire in the form of an attached MS Word document was sent to the recipient. Afterwards, if the recipient completed the questionnaire, an email was sent saying thank you for taking part in the survey.

For the United Kingdom survey, the absence of a readily accessible sample frame was overcome by using a combination of multiple sources: (1) established retail directory - Hemming Information Services (2005), which was used to identify Internet retailing businesses, which emerged from the existing traditional businesses; (2) industrial body - two prominent accreditation bodies TrustUK (www.trustuk.org.uk) and ISIS-IMRG (www.imrg.org) - the choice of industrial bodies is based on the assumption that an Internet retailer is likely to join a certain industrial body, which provides an accreditation for its members; (3) online shopping directories - Shopsy.co.uk and Kodoshops.com - the choice of an online directory of Internet shopping is aimed to cover an updated list of Internet retailers. From those three sources, a list of 1417 Internet retailers was generated as a planned sample. For the Indonesian survey, an established directory was not available but this obstacle was overcome by examining and selecting online directories of online shopping sites. Finally, the current most comprehensive online directory indonesia.com was chosen.

The questionnaire was developed to address the three main elements of the research model, and to establish retail business profiles. Performance measurement was operationalised by asking respondents whether each performance indicator was measured. Business performance was investigated by assessing respondents' satisfaction with regard to the five measures of business performance, using a 10-point numerical scale, anchored with 'very dissatisfied' at one end and 'very satisfied' at the other (e.g. Karagozoglu and Lindell, 2004). Strategic orientation was investigated by asking the extent to which respondents agree or disagree with each item (e.g. Morgan and Strong, 2003), using a 5-point Likert scale with the following descriptors: strongly disagree - disagree - not sure - agree - strongly agree. Business profile was investigated in three attributes: (1) business format measured by the existence of other retail channel(s), (2) maturity by years of establishment, and (3) size by annual sales turnover. The questionnaire development process followed a nine-step procedure proposed by Churchill and Iacobucci (2004). The issue of content validity was addressed by conducting three stages of pre-test among practitioners, which covered Internet, mail order, and store-based retail managers, as well as academics.

The United Kingdom survey produced 262 usable responses, 40 undelivered mail, and 8 non-participation responses. The level of response rate around 18.5% is adequate, accepting the condition that top managers of small and medium-sized companies undertake a broad range of tasks and face time pressures in day-to-day management of their companies (Karagozoglu and Lindell, 2004). Among the respondents, 83% were the top

key persons, who are owners, managing directors, and CEOs. Data analysis was limited to cover only 252 responses representing small and medium-sized businesses, which were defined as having annual sales less than £10 million in order to provide a more homogeneous sample. The time trend method to address non-response bias (Armstrong and Overton, 1977) was adopted by comparing the first 30 and the last 30 responses across all items of three main variables using a Mann-Whitney test. The results indicated that only two among 64 items are statistically significant, which means that persons who did not respond were not different from those who responded. This result implies that the information obtained from the actual sample could therefore be generalized to the planned sample.

The email survey among Indonesian Internet retailers produced 35 usable responses, but data analysis was limited to cover 34 responses, which have annual sales less than £60,000 in order to provide a more homogeneous sample. Among the respondents, 85% were the owners, who also managed the business operation. By running the business operation these entrepreneurs could maintain good customer service, friendliness, and honesty to customers, which are considered as a key success for small businesses (Benzing et al., 2009).

6. Results

The descriptive profile of responding companies is presented in Table 3. The profile shows that the business format is comparable for both data. The contrast appears in the business size, in which annual sales of Indonesian Internet retailers are about 1/100 of United Kingdom ones. The maturity indicates that only about a half of United Kingdom Internet retailers were established within the last 5 years, whereas in Indonesia the majority of online retail sites have been developed within the last 5 years.

Table 3: Descriptive profile of responding companies

Business profile	Category	Percentage
United Kingdom data		
Business format	Without-store presence	61%
	With-store presence	39%
Business size	GBP <1 million	77%
	GBP (1 to 10) million	23%
Maturity	Less mature (< 5 years)	56%
	More mature (> 5 years)	44%
Indonesian data		
Business format	Without-store presence	65%
	With-store presence	35%
Business size ^a	GBP < 10 thousand	59%
	GBP (10 to 60) thousand	41%
Maturity	0 to 2 years	74%
	3 to 5 years	23%
	6 to 10 years	3%

Note: ^a annual sales in IDR is converted to GBP

6.1 Factor Analysis

Factor analysis, using Principal Component Analysis technique, was performed for the three main variables in order to create good variables for the analysis of relationships. The appropriateness of data was confirmed by (1) correlation matrix, (2) Kaiser-Meyer-Olkin test of sampling adequacy, and (3) Bartlett's test of sphericity.

For each of the five dimensions, the number of performance indicators (PI) measured were added up to create five variables, and then factor analysis was performed. With regard to the number of factors to extract, Kaiser's criterion (eigen value more than 1) suggested two, and a Scree plot one. Table 4 compares factor loadings for both options.

Table 4: Factor loadings of performance measurement – United Kingdom data

	1 Component ^a	2 Components ^b	
PI-market	0.734	0.940	
PI-financial	0.806	0.739	
PI-web	0.696		0.718
PI-customer	0.786	0.704	
PI-process	0.676		0.912
Cronbach's α	0.780	0.759	0.593

Note: ^a varimax; ^b direct oblimin, as two components are correlated ($r=0.488$)

Factor loadings less than 0.3 are not presented to improve readability

Cronbach's α is calculated for items with factor loadings in bold

Cronbach's α presented in the bottom row indicates that the second component has a relatively low reliability score. By considering this comparison table and the meaning of components obtained, the optimum number was one factor. This single factor (variable) represents the total number of performance indicators measured by an Internet retailer. Adopting this finding, the total number of performance indicators measured is also computed for Indonesian data.

Factor analysis for the strategic orientation variable was conducted for 29 items, which were predicted to compose six dimensions. The examination of data appropriateness indicated that items composing proactiveness and riskiness have a small number (0, 1 and 2) of correlations (greater than 0.3) within their corresponding dimensions, as well as with all other items. These small numbers are supported by the low reliability scores of Cronbach's α , which are 0.343 for proactiveness and 0.386 for riskiness. Consequently, these two dimensions are excluded. Regarding the number of factors, Kaiser's criterion suggested four, and Scree plot two. Table 5 compares factor loadings for both options.

Table 5: Factor loadings of strategic orientation – United Kingdom data

Items ^a	2 Components ^b		4 Components ^c		
Aggressiveness-1		0.839		0.848	
Aggressiveness-2		0.887		0.878	
Aggressiveness-3		0.788		0.789	
Aggressiveness-4		0.834		0.847	
Analysis-1	0.443		0.458		

Analysis-2	0.542		0.708			
Analysis-3	0.619		0.758			
Analysis-4	0.692		0.627			
Analysis-5	0.669		0.808			
Analysis-6	0.638				-0.615	
Defensiveness-1	0.508					
Defensiveness-2	0.723				-0.654	
Defensiveness-3	0.733				-0.724	
Defensiveness-4	0.522				-0.817	
Futurity-1					0.461	
Futurity-2	0.591					0.833
Futurity-3	0.691					0.787
Futurity-4	0.641					0.799
Futurity-5	0.518					0.597
Cronbach's α	0.869	0.871	0.760	0.871	0.768	0.765

Note: ^a Symbol of items refers to corresponding items in Table 2.

^b varimax, as two factors weakly correlated; ^c direct oblimin, as correlations exist among factors

Factor loadings less than 0.3 are not presented to improve readability

Cronbach's α is calculated for items with factor loadings in bold

For two components, the first consists of analysis, defensiveness, and futurity (except Futurity-1) dimensions, and the second aggressiveness. For four components, most items are set in the expected four dimensions, except Analysis-6, Defensiveness-1, and Futurity-1. On consideration of the results, the number of components was decided as two. Firstly, these two factors could provide more simple analysis and interpretation of the results (parsimonious principle) than four factors. Secondly, as a firm's strategic orientation is a combination of its strategic traits, more simple combination, as well as interpretation, could be obtained from two weakly correlated factors than four correlated ones. The first, as a combination of analysis, defensiveness, and futurity traits, is named conservativeness-oriented strategy because the related items represent conservative strategic traits of a firm. The second is called aggressiveness-oriented strategy.

For Indonesian data, instead of performing factor analysis, the same factors are computed from the composing items. A reliability analysis is conducted for both factors, which have acceptable scores of Cronbach's α : 0.682 for SO aggressiveness and 0.884 for SO conservativeness.

For business performance, Kaiser's criterion suggested one factor, and Scree plot two factors to extract. Table 6 presents factor loadings of both options. On considering the results, the number of components was decided as two. The first factor contains profitability and sales growth; hence it was named financial performance. The second contains customer retention, superiority of fulfilment process, and quality of web-store, thus it was named operational performance. Naming of those two factors is consistent with the domain of business performance suggested by Venkatraman and Ramanujam (1986). For Indonesian data, both BP financial and BP operational were computed and each shows a high reliability score of Cronbach's α , which is 0.806 for BP financial and 0.834 for BP operational.

Table 6: Factor loadings of business performance – United Kingdom data

Item	1 component	2 components ^a	
Profitability	0.651		0.878
Sales growth	0.708		0.820
Customer retention	0.823	0.684	
Superiority of fulfilment process	0.762	0.955	
Quality of web store	0.798	0.826	
Cronbach's α	0.801	0.809	0.672

Note: ^a direct oblimin, as two components are correlated ($r=0.457$)

Factor loadings less than 0.3 not presented to improve readability

Cronbach's α calculated for items with factor loadings in bold

Five variables obtained from factor analysis are presented descriptively in Table 7. The main difference between United Kingdom and Indonesian data appears in the average number of performance indicators measured (PI), which is 15 for United Kingdom (see more details in Gunawan et al., 2008) and 20 for Indonesian Internet retailers.

Table 7: Summary of main variables

Variable	N	Minimum	Maximum	Mean	Std. Deviation	Cronbach's α
UK data						
PI	252	0	30	15.440	6.282	0.780
SO aggressiveness	252	1	5	2.663	1.044	0.871
SO conservativeness	252	1.5	4.75	3.067	0.630	0.869
BP financial	252	1	10	6.105	1.971	0.672
BP operational	252	1	10	6.726	1.754	0.809
Indonesian data						
PI	34	7	30	20.353	5.715	0.709
SO aggressiveness	34	1.75	4.25	2.971	0.679	0.682
SO conservativeness	34	2.79	5	3.794	0.471	0.884
BP financial	34	2.5	10	6.603	1.570	0.806
BP operational	34	3.33	9.67	6.814	1.496	0.834

Among three variables of business profile, only business size was associated with performance measurement, strategic orientation, and business performance, thus it was used as a control variable for UK data. Its seven categorical scales were transformed into linear by calculating the natural logarithmic transformation of mid-point of each category (e.g. Haleblan and Finkelstein, 1993; Li and Simerly, 1998). The correlation coefficients between business size and the five variables shown in Table 8 indicate its association with the number of performance indicators, conservative orientation, and financial performance.

Table 8: Correlation between business size and five main variables – United Kingdom data

Business size	PI	SO conservativeness	SO aggressiveness	BP financial	BP operational
Pearson Correlation	0.277*	0.243***	0.047	0.252***	0.057

Note: *p<0.05 **p<0.01 ***p<0.001

The business size, as measured by annual sales, for Indonesian data is considered homogeneous, in which all retailers have less than GBP 60,000 of annual sales. A similar natural logarithmic transformation for business size was performed, and its correlation to the five variables indicated none statistically significant relationship.

6.2 Relationships

The relationships were examined by regression analysis. The assumption of linearity and normality needed for the regression analysis has been confirmed by the scatter and normal plots. Table 9 summarises the results of the United Kingdom data.

Table 9: Results of regression analysis – United Kingdom data

Dependent variable	Independent variable	R²	F statistics	Beta	t statistics	t statistics^a
PI	SO conservativeness	0.389	79.189***	0.614	12.371***	11.519***
	SO aggressiveness			0.072	1.448	1.382
BP financial	PI	0.010	2.452	0.099	1.566	---
BP operational	PI	0.039	10.227**	0.198	3.198**	3.059**
BP financial	SO conservativeness	0.038	4.886**	0.149	2.385*	1.467
	SO aggressiveness			-0.136	-2.181*	-2.356*
BP operational	SO conservativeness	0.014	1.781	0.117	1.861	---
	SO aggressiveness			-0.028	-0.445	---
BP financial	PI	0.039	3.315*	0.036	0.453	-0.156
	SO conservativeness			0.126	1.594	1.273
	SO aggressiveness			-0.139	-2.210*	-2.329*
BP operational	PI	0.041	3.555*	0.211	2.649**	2.599**
	SO conservativeness			-0.012	-0.152	-0.156
	SO aggressiveness			-0.043	-0.690	-0.690

Note: ^acontrolling business size, if model (F statistics) is significant

*p<0.05 **p<0.01 ***p<0.001

The results suggest that strategic orientation is associated with financial performance, and performance measurement with operational performance. Internet retailers with less aggressiveness-oriented strategy were likely to have better financial performance and those, which measured more performance indicators were likely to have better operational performance. The level of performance indicators measured is associated positively with operational performance, but not financial performance. These empirical findings are illustrated in Figure 2, which shows a more detailed picture than the previous conceptual model. The advantage and significance of this empirical model can be viewed from its simplicity in presenting (1) the complexity of strategic orientation, performance measurement, and business performance, and (2) the links among these three constructs.

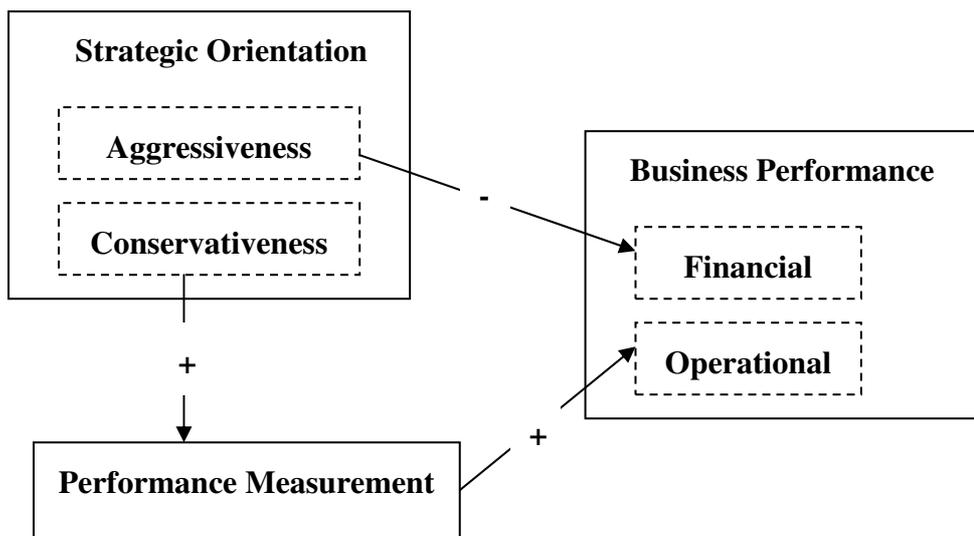


Figure 2: Empirical model

The regression analysis with stepwise method was performed for Indonesian data. The results indicate that there are only three out of seven regressions, which produce statistically significant results, as shown in Table 10.

Table 10: Results of significant regression analysis – Indonesian data

Dependent variable	Independent variable	Model	Beta	R ²	F statistics
PI	SO aggressiveness	excluded	-	0.157	5.948*
	SO conservativeness	predictor	0.396		
BP financial	SO aggressiveness	predictor	0.343	0.118	4.279*
	SO conservativeness	excluded	-		
BP financial	SO aggressiveness	predictor	0.343	0.118	4.279*
	SO conservativeness	excluded	-		
	PI	excluded	-		

Note: * p<0.05

Table 11 compares the summarized analysis between the United Kingdom and Indonesian data. It shows that only three relationships were obtained. The relationship between strategic orientation, through conservativeness strategy, and performance measurement is confirmed for both data. In contrast, the relationship between strategic orientation and business performance, through financial performance, indicates different direction between both data. While the United Kingdom data identifies a relationship between performance measurement and business performance, it is not found for the Indonesian data.

Table 11: Correlation comparison of findings

Independent variable	Dependent variable	correlation	
		UK data	Indonesian data
SO conservativeness	PI	positive	positive
PI	BP operational	positive	none
SO aggressiveness	BP financial	negative	positive

7. Discussion

United Kingdom and Indonesian Internet retailers have similar characteristics: the majority operate without a physical store presence. Among those UK retailers, some are mail order retailers exploiting the Internet channel. The success of online shopping in UK is supported by the long existence of mail order firms, which enhance the customer's readiness (e-readiness) toward Internet shopping (Dennis et al., 2004). However, the mail order or catalogue shopping is not popular in Indonesia, except the one operated by some credit card companies, which send a shopping catalogue attached to the monthly card statement to their customers. Therefore, customers are not used to do home shopping and consequently this condition limits the growth of online shopping. The limited availability of e-commerce infrastructures, such as reliable online payment systems and fulfillment services, is also likely to affect the growth.

In terms of maturity, United Kingdom Internet retailers are more mature than Indonesian. The majority of Indonesian retailers were established within the last 3 years. This fact might indicate that most online business entrepreneurs play a "hit and see strategy" to explore the potential of online market rather than seriously enter the business with a substantial amount of investment. It is also supported that some Internet retail sites recorded from the directory have disappeared a year after (2008 to 2009), or their domain names are currently listed for sale as they are out of business.

Furthermore, the business size, as measured by the amount of annual sales, of Indonesian retailers is about only one hundredth of United Kingdom retailers. This finding might reflect a relatively low adoption rate of online purchases in Indonesia compared to the United Kingdom. In this low e-readiness environment, customers are ready to make purchases for small-in-value goods, such as clothing and books, which are the most popular product categories provided by Indonesian Internet retailers. The national culture (Gong, 2009), perceived trust to online vendors (Berthon et al., 2008), individual shopping experience, and other socio-demographics variables also affects this condition (Broekhuizen and Huizingh, 2009).

The different characteristics of the United Kingdom and Indonesian Internet retailers found in this study is also reflected by the report of E-readiness Ranking which put the United Kingdom in the 8th and Indonesia 68th (Economist Intelligence Unit, 2008). This big gap is attributed to the criteria used in that ranking that reflect the broader themes of e-readiness: the connectivity environment, government investment and policy, and the underlying social and cultural attitudes surrounding Internet adoption (Economist Intelligence Unit, 2008).

7.1 Strategic Orientation and Performance Measurement

The findings thus support Proposition-1 and are consistent with literature on both strategic management and performance measurement, which suggests that the measurement should be derived from a company (Hoque, 2004). Internet retailers with higher conservativeness-oriented strategy might need greater variety of information regarding their business progress; accordingly they are likely to measure more performance indicators to obtain

such information. Aggressiveness-oriented strategy could be linked to daring aggressive companies that do not care too much about performance indicators, as their focus is on gaining market share. These companies may focus on only a few performance indicators, such as number of orders, number of customers, and total sales. The findings are supported by both United Kingdom and Indonesian data.

7.2 Performance Measurement and Business Performance

The findings from the United Kingdom data support Proposition-2 and are consistent with performance measurement literature concerning the rationale (value) of performance measurement (e.g. Kaplan and Norton, 1996; Widener, 2006). One of the possible explanations is that by measuring a range of performance indicators, Internet retailers would be better in understanding how the business is progressing, then they could take some decisions and actions, such as providing better product selection, selecting better advertising channels, and selecting better suppliers, to ensure the business is progressing on the expected track. While the information obtained from performance measurement could be used to improve operational business aspects, its use to influence directly financial performance seems limited. Because the achievement in profitability and sales growth, as components for financial performance, to some extent depends on the external factors, such as the number of competitors (retailers), the number of buyers (Porter, 2001), buyers' behaviour towards online shopping, and general economic conditions.

In contrast, the analysis of Indonesian data indicates no relationship between performance measurement and business performance. This finding could be linked to the immaturity of Indonesian Internet retailers, as about third quarter of them are still up to 2 years old, and nearly all are up to 6 years old. These immature businesses are still in their exploration of the web technology and customer acquisition (Rayport and Jaworski, 2003). In the survey, some respondents (owners) commented that they are still in their exploration regarding the technology adopted (e.g. web design, web hosting, web features), the way to do Internet marketing, and the response of the online market. They could also explore the way to measure business performance by measuring many performance indicators in their efforts to find critical ones. As shown in Table 7, the average number of performance indicators measured by Indonesian retailers (20 items) is higher than United Kingdom retailers (15 items), which are more mature. This unconfirmed link might support the finding of prior research that some predicted variables affected business performance are not found empirically for new technology-based firms (West III and Noel, 2009).

7.3 Strategic Orientation and Business Performance

The findings support Proposition-3. Internet retailers with high aggressiveness-oriented strategy may spend money excessively for marketing purposes, as well as reduce profit because of price-cutting. Therefore, these traits could have a negative effect on profitability, though the number of orders might increase. Aggressiveness traits were found not to be associated with operational performance, possibly because they were aimed directly to affect the front end of business performance, such as the number of orders and total sales. This finding is consistent with Morgan and Strong (2003), who identified a negative effect of aggressiveness on performance (measured as a single construct), and Venkatraman (1989), who identified this negative effect on profitability. The ineffectiveness of aggressiveness traits could be interpreted from two perspectives, namely market structure and business size. The market structure of online shopping consists of a considerable number of sellers and millions of individual buyers. In this condition, the excessive marketing spending would bring only a small

effect on drawing potential buyers' attention. Secondly, small and medium-sized businesses could be associated with limited financial resources. Therefore, excessive spending on marketing effort would be likely to bring negative effects on financial condition.

The effect of conservativeness-oriented strategy on financial performance is not genuine, but due to business size. The findings seem surprising, as some studies indicated positive relationship (Venkatraman, 1989; Morgan and Strong, 2003; Rajagopalan, 1997; Moore, 2005). However, those studies did not mention controlling business size. There could be a possibility that if they had controlled the business size, the effect of conservativeness-related strategy would have disappeared. In addition, the absence of the association between conservativeness and operational performance is surprising. Prior studies that identified the link between business strategy and business performance commonly used financial-related performance only (e.g. Moore, 2005; Venkatraman, 1989) or a single variable as a combination of financial and operational-related measures (e.g. Morgan and Strong, 2003). If the study reported here uses *the average score* of the five items comprising business performance, a positive relationship ($p < 0.05$) is also found between conservativeness-oriented strategy and business performance. Therefore, this study provided more specific evidence about the link between business strategy and business performance.

Similarly, the analysis of Indonesian data indicates a relationship between business performance and aggressiveness-oriented strategy, which supports the proposition. Conversely, the relationship is positive. For those immature and small online businesses, the aggressiveness orientation in the less developed online market, with a considerable small number of Internet retailers, it is necessary to gain customers and to obtain sales. Therefore it has a positive relation to financial performance.

7.4 Compound Effect of Strategic Orientation and Performance Measurement

The findings of the United Kingdom data support Proposition-4 and show that the effect of business strategy is on financial performance, while that of performance measurement is on operational performance. Aggressiveness-oriented strategy could be linked to positional advantages in a product-market position. Better business performance is considered as the result of a firm's ability to protect superior positions (Porter, 1980; Stoelhorst and Raaij, 2004). Internet retailers with good product-market position may not need to sacrifice their cash flow and profitability. The finding supports that aggressiveness-oriented strategy is negatively related to financial performance, for Internet retailers in a developed online business environment. However, in an immature environment, indicated by the relatively small number of internet retailers and online customers, and by relatively young and small-sized internet retailers, the aggressiveness orientation is necessary to acquire customers, gain sales, and grow. Therefore a positive link is identified.

Performance measurement could be linked to learning capability. The process of designing performance indicators, process of measurement, and the way of using the information could increase learning capability, for example (1) to find more efficient business processes (e.g. product outsourcing, fulfillment), and (2) to develop innovative capabilities in acquiring and maintaining customers. As these efforts are linked to the operational aspect of the business, they are likely to affect operational performance.

Literature on performance measurement suggests that financial performance (called lagging indicator) is the effect of non-financial performance (called leading indicator), for example the efficient internal business process combined with satisfied customers would lead to financial success (Kaplan and Norton, 1992). Empirical evidence supports that improvement in operational business aspects could lead to improvement in financial

performance (Azofra et al., 2003; Ittner and Lacker, 1998). For the data of this study, the statistical analysis indicates that financial and operational performance variables are significantly correlated with each other ($r = 0.444$, $p < 0.001$ for the United Kingdom data, and $r = 0.683$, $p < 0.001$ for Indonesian data). This result might be interpreted that improvement in website quality, fulfillment process and customer retention is likely to increase sales growth and profitability. Improvement in the quality of website (online business aspect) is likely to provide a better online shopping experience for customers, which could subsequently lead to better customer satisfaction. Improvement in the fulfillment and related process (offline business aspect) is likely also to lead to better customer satisfaction. Both may lead to more repeat orders, more new customers (affected by testimonials or ratings of previous buyers), and higher value of transactions. Subsequently, these might lead to higher sales and higher profits for a retailer.

8. Limitations and Implications

In assessing the findings of this study, it is important to interpret the results in the light of some limitations. The cross-sectional nature of data limits the ability to make stronger conclusions about the causality between dependent and independent variables. The findings are also limited to small and medium-sized United Kingdom and Indonesian Internet retailers, which sell tangible goods. The small number of Indonesian responses also limits the findings of comparative analysis. Future research could be conducted in more different country contexts of Internet retailing, and could explore the process of how performance measurement might affect business performance, and how the need in strategic orientation can be formulated into the selection of performance indicators.

Despite these limitations, there are important theoretical and practical implications deriving from this research. Firstly, it has provided further validation for the Venkatraman's STROBE instrument in non-traditional business, and showed the relevant and irrelevant traits/ dimensions in the Internet retailing context. Secondly, this study has enhanced the understanding of the relationships among strategic orientation, performance measurement and business performance. Furthermore, it has demonstrated that the importance of measuring performance indicators is apparent in at least two aspects: (1) performance measurement supports strategic orientation pursued by Internet retailers, especially those putting higher emphasis on a conservativeness-oriented strategy, and (2) performance measurement possibly leads to better operational performance, which in turn leads to better financial performance. This study would suggest to Internet retailers to measure various aspects of their business performance. In addition, Internet retailers in the more mature e-business environment, such as United Kingdom, should adopt a low aggressiveness-oriented strategy, to achieve better financial performance. This does not mean that aggressiveness traits bring a negative effect, as it is necessary for less mature Internet retailers to promote their existence and to acquire customers, supported by the findings that less mature ones are likely to be more aggressive, and those more mature to be more conservative. The combination of low aggressiveness and high conservativeness would be a successful strategic orientation. For Internet retailers in the less mature environment, such as Indonesia, might adopt a high aggressiveness-oriented strategy to achieve better financial performance, as the effort to promote customers shopping online is necessary. This study would also suggest to Internet retailers, which plan to enter a global e-commerce market, such as a developing country, to consider the local online business environment.

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