



## Open Research Online

---

The Open University's repository of research publications  
and other research outputs

# The application of performance measures in the UK retail sector: an exploratory analysis

## Conference Item

How to cite:

Ellis-Chadwick, Fiona; Gunawan, George and King, Malcolm (2007). The application of performance measures in the UK retail sector: an exploratory analysis. In: 'Flexible Marketing in an Unpredictable World, 36th EMAC Conference,, 22-25 May 2007, Reykjavik, Iceland, .

For guidance on citations see [FAQs](#).

© 2007 The Authors

Version: Accepted Manuscript

---

Copyright and Moral Rights for the articles on this site are retained by the individual authors and/or other copyright owners. For more information on Open Research Online's data [policy](#) on reuse of materials please consult the policies page.

---

[oro.open.ac.uk](http://oro.open.ac.uk)

# **The Application of Performance Measures in the UK Retail Sector: An Exploratory Analysis**

**Track: New Technologies and E-Marketing**

# **The Application of Performance Measures in the UK Retail Sector: An Exploratory Analysis**

**Abstract:** *An empirical investigation of the use of performance measurement by small and medium sized online retailers in the UK. The purpose of the study is to investigate type and range of performance measures applied and extent to which measures are likely to affect business performance and strategy development. The key findings are that whilst a good range of measures are applied, the measures are more likely to be used for checking strategy implementation rather than strategy formulation or for informing corrective action to ensure longer term strategic success. Further work is required to explore relationships between strategy and business performance.*

**Key Words:** Performance; Measurement; Strategy; Internet

## ***Introduction***

Online retailing in the UK is growing. According to the Office of Fair Trading (2006) the online shopping market now accounts for 2.5 per cent of all household spending, an estimated total of 18 billion a year and in 2005 the typical online shopper spent £560 online. In real terms these figures represent a relatively small but growing proportion of the total household spend. The impact on retailing is that more and more companies are seeking to provide retail shopping services via the Internet. In certain sectors dominant players have emerged i.e., Tesco.com (groceries), Amazon.com (books) and Argos (non-food goods). Moreover, it has been suggested that such superior performance is based on a well-developed strategy and optimised operations (Hackney, Grant, Birstwistle, 2006). The purpose of this exploratory study is to investigate the extent to which performance measurement is being applied to strategy development and monitoring operational performance. More specifically, the key objectives of the study are:

1. What is the extent of use of performance measures by online retailers?
2. What is the likely impact of performance measurement on strategy, development, implementation and evaluation?

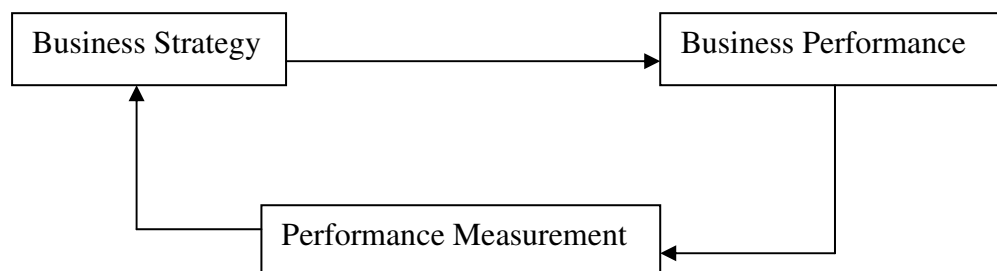
## ***Research Framework and Literature Review***

The success of a strategy can be defined by its ability to achieve organisational goals, Khandwalla (1977), and is linked ultimately to achievement of optimal organisational performance. Strategic management researchers have been interested in investigating the relationship between business strategy and business performance for some time (Morgan & Strong, 2003; Venkatraman, 1989) but it has been suggested that whilst strategic management is a robust construct, it is difficult to clearly define business performance due to the variation in organisational goals, Khandwalla (1977). Venkatraman and Ramanujam (1986) offered some insight with their model of business performance, which identified various domains for measuring performance: financial indicators, operational performance (non-financial indicators), organisational effectiveness (which involves reconciliation of multiple and conflicting organisational goals). Subsequently, Kaplan and Norton, (1992) produced a measurement framework which proved to be very popular: the Balanced Score Card (BSC) as it incorporated the shift in thinking about performance measurement by including not only accounting-based measures but also a comprehensive range of other measures which encourage managers to consider business performance from four perspectives: 1) Financial, 2) Customer, 3) Internal business, 4) Innovation and learning. Folan & Brown, (2005) categorised this and similar frameworks (Performance Prism, Neely, Richards, Mills, Platts, Bourne, 1997) as structural frameworks due to the provision of clear key dimensions from

which to develop performance measures. Consequently, performance measurement frameworks are an increasingly important part of the strategic management process.

For further investigation of the links between strategic management and business performance it is important to first consider the generics of strategic management. As a process, strategic management can be divided into three phases: 1) Formulation, 2) Implementation 3) Evaluation (Byars, Rue, Zahra 1996; David, 1995). Byars et al. (1996) goes on to explain that in order to evaluate the success of a strategy three specific activities are involved: 1) Establishing standards of performance for the overall organisation and its different units or functional areas, 2) Monitoring progress in the execution of the organisation's strategy, and 3) initiating corrective actions to ensure continued commitment to the implementation of the strategy, thereby making a strong link with what can be collectively referred to as performance measurement. Hence, performance measurement arguably becomes an integral part of the strategic management processes undertaken by an organisation.

The conceptual model for this study takes business strategy as a process, which guides an organisation's progress in a given environment to achieve its strategic and operational goals. Business performance refers to how well a firm achieves its goals, and it covers multiple aspects of financial and operational performance. Performance measurement plays a linking role as a control system, informing strategy development, monitoring implementation, and evaluating operational performance and finally feeds back into business strategy in order for any refinements to be applied (see Figure 1). For the purpose of the study specific performance measures were identified using sources identified in the literature.



**Figure 1: Business strategy, business performance and performance measurement.**

The following sections report on exploratory research designed to determine the extent to which performance measurement is used strategically amongst UK online retailers.

### ***Methodology***

The aims of this study are to explore the current use and impact of performance measures amongst online retailers in the UK. Little is known about existing levels of uptake and application within this context. The research instrument was a postal questionnaire, designed to capture the views of 1417 online retailers in the UK. This method was chosen as it is an efficient and accurate method of polling the opinions of the entire sample frame and an effective means of collecting quantitative data (May, 1997). Another benefit of using a questionnaire is that it offers the maximum potential to produce results, which are generalisable and precise in terms of the population (Firestone, (1987). Furthermore, a quantitative approach was used as results can be more precise than qualitative works due to de-emphasis of individual judgement (McGrath, 1982,). In order to derive the benefits of this method of data collection, it is important to ensure the validity of the research instrument. This issue was addressed by rigorously applying a pre-testing and pilot testing scheme. Consideration was given to gathering the data using a web-based survey, as this method has some advantages: speed, cost effectiveness, interactivity, real-time data capture, personalized questioning, and anonymity (Zikmund, 2003). However, the more traditional postal method

was eventually chosen due to issues relating to online security and privacy and difficulties in obtaining email addresses of specific respondents.

**Sample frame**

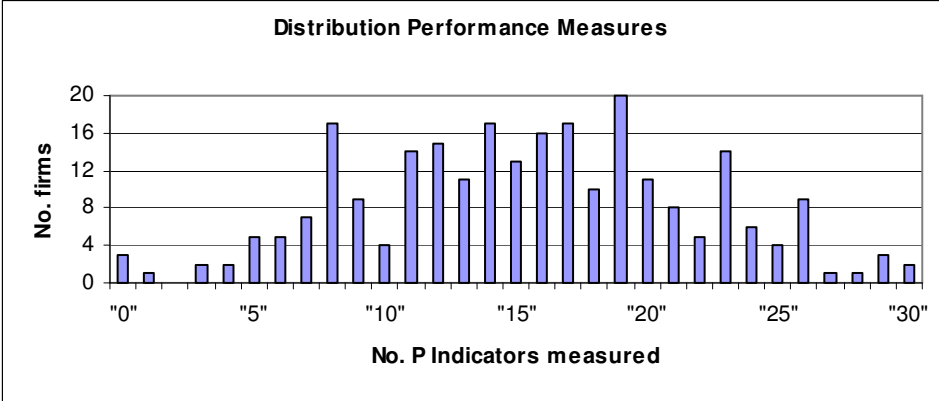
The target population for the study was online retailers in the UK which sell tangible products, not services or digital products. Services and digital product retailers were excluded in order to produce a more homogenous set of retailers, which were likely to encounter the same type of operational and strategic problems and issues. Difficulties were encountered as there was no readily accessible sample frame. The solution was to use a combination of multiple sources to generate a robust sample frame: Healey and Baker Retail Directory (2005), TrustUK, Interactive Media Retail Group, Shopsafe.co.uk and Kodoshops.com. Key informants were persons responsible for managing online retailing business were identified.

**Development of Research Instrument**

The design of the questionnaire was an iterative process, several early drafts of the survey questions were written based on the conceptual framework. The design process refined the research instrument removing ambiguities to improve clarity of meaning and increase the potential of the questionnaire to eliciting useable responses. Eventually a validated instrument was produced for the full survey, which consisted of two mailings, dispatched sequentially in September and October 2005. A total, of 264 usable responses were received giving a 19% response rate, which was deemed acceptable, given responsibilities and time pressures in day-to-day management of top managers (Karagozoglu and Lindell, 2004). Non-response bias is a critical issue in a mail survey but this was found to be not applicable in this survey.

**Discussion of Exploratory Findings**

The objectives of the study are addressed in this discussion of the key sets of results. The extent of use of performance measurement is defined as the number of performance indicators measured, the frequency of measurement and the type of indicators measured. Figure 2 shows the frequency distribution for the number of performance indicators measured by online retailers.



**Figure 2. Distribution of Performance Indicators Measured by Online Retailers in the UK**  
 The distribution shown in Figure 2 shows varied levels of use of performance indicators. 2 companies measured all 30-performance whilst 3 companies measured no indicators at all. These respondents stated the reason to be lack of suitability of measures for their particular operations, which is surprising given the increasing availability of web metric measurements. A third of companies measured between 0-12 indicators, a third between 13-18 and a final third measured between 19-30 indicators. This indicates much greater variation in the use of performance indicators than had been anticipated and suggests there is no clear or agreed view of what should be measured and why.

**Table 1. Type of Performance Indicators Measured**

Rank	Performance Indicator	No.	%	Rank	Performance Indicator	No.	%
1	Total sales	242	96%	16	Repeated sales per each customer	126	50%
2	The number of orders	241	96%	17	Acquisition cost	113	45%
3	Profit margin	218	87%	18	On-time delivery (promise vs. actual)	109	43%
4	The number of visits	210	83%	19	Ratio of sales from overseas	107	43%
5	The number of customer	209	83%	20	Percentage of error in goods picked and delivered to customer	103	41%
6	Sales value per transaction	198	79%	21	Website's service-interaction quality	95	38%
↓ less than 75% of respondents				22	Percentage of error in delivery destination	85	34%
7	Page views	185	74%	23	Conversion rate visitor to registration	82	33%
8	Unique visitors	182	72%	24	Online enquiry-to-response time	79	31%
9	Revenue per transaction	170	69%	25	Return notification-to-refund time	68	27%
10	Website's usability	152	60%	↓ 25% or less of respondents			
11	Website's information quality	149	59%	26	Customer churn (withdrawal) rate	63	25%
12	Conversion rate visitor to purchase	142	57%	27	Percentage of error in charge made to customer	56	22%
13	Fulfilment cost	138	55%	28	Customer extension (buy another product category)	35	14%
14	Revenue per customer	137	55%	29	Market share	34	14%
15	The number of newsletter subscribers	135	54%	30	Customer maintenance cost	28	11%

These results of type of indicators measured show some interesting usage patterns. There are six frequently used indicators in the >75% - 100% band, which measure aspects of actual implementation. Interestingly, these are indicators, which would also be expected to be measured by offline retailers. In the second band >50% - 75%, the type of indicators are more specifically related to web site performance. However, with the exception of conversion rate of visitors to purchase, which is likely to inform strategy development, all of these measures again focus on implementation. In the third band >25% - 50%, the indicators suggest focus on evaluation of performance i.e., on-time delivery, error rates, although there are some links to strategy development: sales from overseas. In the fourth band <25%, the type of indicators are more likely to be linked to strategy evaluation and development i.e., market share is a key indicator for determining strategic thrust objectives (development) and customer churn and customer extension (evaluation).

The final measure of the extent of use of performance measure is the frequency of measurement in terms of daily, weekly, monthly, quarterly and annual application. The 3 most popular measures were identified for each of the intervals. Not surprising the indicators measured by most of the respondents were also on the whole most frequently measured i.e. number of orders daily (142 respondents), total sales (117), number of customers (84). Indeed, even at monthly and quarterly intervals the type of indicators used were those providing results about implementation rather than as might be expected evaluation and strategy formulation. Linking the number of indicators measured, type and frequency of performance measurement suggests that online retailers in the UK focus mostly on implementation. This could indicate that performance measures are more pertinent at the operational and short-term tactical planning level rather than informing long-term strategic planning.

### Summary and Conclusions

A good range of measures are applied by online retailers but initial analysis suggest measures are more likely to be used for checking strategy implementation rather than strategy

formulation or for informing corrective action to ensure longer term strategic success. Further work is required to explore relationships between strategy and business performance.

## References

- Byars, L. L., Rue, L. W. & Zahra, S. A. (1996).** *Strategic management* Chicago: Irwin.
- David, F. R. (1995).** *Strategic management* London: Prentice-Hall International.
- Firestone, W.A. (1987).** Meaning in method: The Rhetoric of quantitative and qualitative research. *Educational Researcher*, 16 (7), 16-21.
- Folan, P. & Browne, J. (2005).** A review of performance measurement: Towards performance management. *Computers in Industry*, 56(7), 663–680
- Hackney, R., Grant, K. & Birtwistle, G. (2006).** The UK grocery business: towards a sustainable model for virtual markets. *International Journal of Retail & Distribution Management*, 34(4/5), 354-368.
- Healey & Baker (2005).** *Retail Directory of the UK – 2005*, London: Hemming Information.
- Kaplan, R. S. & Norton, D. P. (1992).** The balanced scorecard - measures that drive performance. *Harvard Business Review*, January-February, 71-79.
- Karagozoglou, N. & Lindell, M. (2004).** Electronic commerce strategy, operations, and performance in small and medium-sized enterprises. *Journal of Small Business and Enterprise Development*, 11(3), 290-301.
- Khandwalla, P.N. (1977).** *The Design of organisations* New York: Harcourt Brace Jovanovich, Inc.
- May, T. (1997).** *Social research: Issues, methods and process*. Open University Press.
- McGrath, J. E. (1982).** Dilemmatics. The Study of Research, Choices & Dilemmas. In **McGrath, Martin & Kulka (Eds)**, *Judgement Calls in Research* (pp.69-102). Newbury Park, CA: Sage Publications.
- Morgan, R. E. and C. A. Strong (2003).** Business performance and dimensions of strategic orientation. *Journal of Business Research*, 56(3): 163– 176.
- Neely, A., Richards, H., Mills, J., Platts, K. and Bourne, M. (1997).** Designing performance measures: a structured approach. *International Journal of Operations & Production Management*, 17(11), 1131-1152.
- Office of Fair Trading (2006)** – [http:// www.of.gov.uk](http://www.of.gov.uk).
- Venkatraman, N. & Ramanujam, V. (1986).** Measurement of business performance in strategy research: A comparison of approaches. *The Academy of Management Review*, 11(4), 801-814.
- Venkatraman, N. (1989).** Strategic orientation of business enterprises: The construct, dimensionality, and measurement. *Management Science*, 35(8): 942-962.
- Zikmund, W.G. (2003).** *Business Research Methods* (7ed.) Ohio: Thomson South-Western.