# A qualitative study of multi-channel marketing performance measurement issues

## Michael J. Valos

is a senior lecturer in marketing at Deakin University, Melbourne. He has a PhD in strategy implementation. His research interests include CRM and the role of marketing research in strategic decision-making.

**Abstract**  The aim of this study was to provide quantitative research propositions for future researchers studying multi-channel marketing performance. The literature suggests that multi-channel marketing is becoming more prevalent and offers many opportunities to organisations. Multi-channel marketing is, however, more complex to implement and measure than 'traditional' single or dual-channel marketing. Thirty-one senior marketing executives from a diverse range of industries were asked to provide a 'single key challenge' in the area of multi-channel marketing. The findings suggest that the main areas of multi-channel marketing measurement problems are: (a) understanding return on channel investment, (b) understanding customer channel preference and (c) isolating individual channel impact. The paper concludes by using both the qualitative findings and implementation theory to provide propositions for future research as well as tentative management Guidelines.

**Michael J. Valos**
School of Management and
Marketing
Faculty of Business and Law
Deakin University
221 Burwood Highway
Burwood, Vic. 3125,
Australia
Tel: +61 3 924 46168;
Fax: +61 3 925 17083;
e-mail: michael.valos@
deakin.edu.au

## INTRODUCTION

'Multi-channel distribution is an increasingly important phenomenon in marketing, and the internal organizational dynamics associated with its use are strategically critical in nature'.[1] The recent and continuing impact of multi-channel marketing on both retail consumers and business consumers has been immense. The impact on retail consumers is evidenced by previous research: 'Individual consumers have quickly embraced the practice of using a variety of channels through which to make their purchases, as 65–70 per cent of them are multi-channel shoppers'.[2] In terms of business consumers, previous research shows 'In the last two decades, particularly with the advent of the internet, multi-channel strategies have come to the fore in business-to-business marketing'.[3] Typically, multi-channel consumers utilise a range of channels in order to purchase and obtain post-purchase service. Channels include the internet, call centres, retail stores, salesforce and direct mail.

The growth of multi-channel marketing can be attributed to the following factors:

1 '[…] allows firms to reach customers in multiple ways, increasing the firms' reach'.[3]
2 'Customers who use three different channels spend four times as much as customers using only one of the three channels'.[4]

3 '[…] channels such as the internet and overseas call centers promise big cost savings'.[5]

Nevertheless, the complexity of multi-channel marketing requires internal processes to be reconfigured, which create challenges: '[…] multi-channel marketing is harder than it might appear'.[5] Some challenges include the internal politics when the role of a traditional channel is reduced or modified, understanding synergies when multiple channels provide complementary roles, and balancing effective and efficient performance measures. Another aspect adding to multi-channel marketing complexity is the movement of consumers between online and offline modes for different products or for different stages of the purchase process.[6]

In order to reduce implementation obstacles, the critical role of performance measurement is apparent. According to one author, 'Evaluating channel performance is crucial for actively managing multiple sales channels, and requires understanding the customers' channel preferences'.[7] Research has shown that multi-layered segmentation is required to understand the needs of consumers. It has also shown differences in consumers according to characteristics such as information search, demographics and mix of online and offline channels used.[8] In attempting to use performance measurement to overcome challenges of multi-channel marketing, one researcher saw the problem as being an overemphasis on channel activity-based metrics at the expense of channel outcome metrics.[9]

The aim of this paper is to contribute to marketing practice by obtaining views of extremely senior marketing practitioners and integrating their views with a theoretical strategic implementation framework. This approach will provide testable qualitative research propositions. By using a qualitative methodology, an emerging area such as multi-channel

performance measurement can be better understood. The paper is organised as follows. First, a review of channel, multi-channel and strategy implementation literature is provided. Next, the methodology used to obtain qualitative insights from senior marketers is explained. Research propositions are then developed from a combination of strategy implementation theory and qualitative insights. Finally, implications for managers are provided.

## LITERATURE REVIEW

### Integrating traditional, emerging multi-channel and strategy implementation literature

*Traditional channel literature*
'The strategic nature of distribution channels has been well-established in the extant literature'[10] A business firm can be seen as a portfolio of marketing channels with different functions, structures and behaviours, with the objective of adding value to the process of making products and services available to business and household consumers. The Porterian view of strategy developed in the 1980s influenced, to some extent, channel research published in the early 1990s, which suggested that organisations, in order to be successful, were required to match suitable channel performance measures with their strategy[10–12]

In order to achieve marketing success, it is important to understand the relationship between channel performance measures and strategy implementation success. It is also important to know whether, regardless of marketing strategy, the same channel performance measures should be used. The key question in terms of ensuring that channel strategy supports marketing performance is, 'How do we know our channel strategy is performing?' We only understand performance according to the

channel performance measures selected. Therefore, in order to understand whether the channel is performing, we need to ensure that the channel measures are appropriate for each marketing strategy.

### Multi-channel marketing literature

Typically, multi-channel consumers utilise a range of channels in order to purchase and obtain post-purchase service. Channels include the internet, salesforce, call centres, retail stores, salesforce and direct mail. Over the last 10 years, the number of customers that have become multi-channel has increased dramatically. 'During the past decade, customers have become familiar with using various interface technologies, such as websites and wireless devices, to interact with firms. Increasingly, they choose the times and the channels through which they deal with firms for different aspects of their interactions'.[13] In some cases, customers will use one channel to obtain pre-purchase information, another channel for sales fulfilment and yet another channel for post-purchase service.

It is also possible for marketers to match low-cost channels such as the internet to low-value customers, and to allocate more expensive channels such as salesforce to high-value customers. As discussed earlier, the benefits of multi-channel marketing can only be provided when the implementation challenges of multi-channel marketing are overcome. These benefits include reaching customers by their preferred channel,[3] reaching new customers available through new channels[3] and offering increased levels of choice and service.[14] As a result, the next section of this paper will introduce strategy implementation theory that will aid the development of multi-channel marketing research propositions.

### Strategy implementation theory

One way of identifying possible solutions for managers facing strategy implementation challenges is through the use of a strategic typology. Strategic typologies assume that an organisation or business unit with a given marketing strategy has specific Guidelines for human resource and organisational structure practices. Miles and Snow[15] put forward the three successful generic strategies of Prospector, Defender and Analyser as the means by which an organisation could successfully cope with the industry forces and degree of environmental uncertainty.

According to Miles and Snow, the Prospector strategy achieves competitive advantage through being the first into new markets with new products. It is innovative and adapts to new technology well. In contrast, the Defender achieves competitive advantage by being more efficient. This means that it does not have to be first into new markets with new products. Defenders tend to have less product innovation than Prospectors, who aim to compete through innovative product or service features. The third of the generic strategies is the Analyser strategy. This strategy combines elements of the Prospector and Defender. The Analyser may be aggressive in some markets and defensive in others. It could be seen as an opportunistic strategy. This is because it attempts to seize the best opportunities. As a result, the Prospector and Defender types have totally contrasting human resource, organisational structure and, most importantly for this paper, performance measurement Guidelines.

## Miles and Snow and channel performance measurement

Prospectors would have more adaptive, flexible, externally focused and organic channel performance measures than Defenders. Miles and Snow propose that the performance control methods of the Prospector are loose and organic, with control being decentralised throughout the organisation. Conversely, the Defender with a more predictable future and more detailed plans can develop tighter, more

comprehensive controls. This is because the Defender has more predictable processes and outcomes. Analysers would have a mix of tight and loose (ie organic and mechanistic) channel measures due to their mixture of Prospecting and Defending activities.

Where Miles and Snow implementation literature is not available to develop research propositions, an assumption has been made that literature regarding the Porter[16] strategy types will provide a theoretical basis. This is appropriate because the typologies are similar, although not identical. For example, Porters Differentiators often compete with new products and innovation in the manner of the Miles and Snow Prospectors, whereas many Miles and Snow Defenders compete on low cost and low price in the manner of the Porter Cost Leaders. Both typologies are based on a mechanistic vs organic underlying dimension.

## Research objectives

1 Identify the types of multi-channel marketing performance measurement challenges marketers must overcome.
2 Integrate multi-channel marketing measurement challenges with strategy implementation theory to develop research propositions addressing multi-channel marketing measurement issues.

## METHODOLOGY

The study used qualitative research to explore issues in multi-channel marketing for the same reason cited by Webb: 'To understand issues from marketing managers in order to generate propositions for research'.[1] In addition, previous researchers have used qualitative research to develop channel theory.[17] Other benefits of a qualitative methodology in understanding an emerging area have been cited in the literature. These include '[…] basic understanding of a new phenomenon

and/or the development of new theory',[18] as well as the benefit of allowing qualitative observations to be integrated with existing theory.[19,20] In summary the qualitative methodology used is appropriate for the exploratory purpose of this paper which is to address the inadequate conceptualization of multi-channel marketing performance measurement.

## Sample

The sample comprised 40 senior marketing executives. Of these, the number of respondents to the initial email request to take part in the study was 31. The most common job titles of the 31 respondents were 'General Manager of Marketing', 'Marketing Manager' and Head of Marketing. Table 1 shows the seniority of the respondents. To ensure the highest level of knowledge about channel management, senior marketing respondents were required. In most cases, they were directly responsible for distribution strategy or channel strategy. The participants should be considered 'experts', and highly relevant to the research objectives.

In order to provide generalisable propositions, a broad range of industry

**Table 1:** Job titles of respondents

| Job title | Frequency |
|---|---|
| Brand Manager | 1 |
| Chief Executive Officer | 2 |
| Chief Marketing Officer | 1 |
| Communications Manager | 1 |
| Director Brand Marketing | 1 |
| Director Business Sales | 1 |
| General Manager | 1 |
| General Manager Direct | 1 |
| General Manager Marketing | 4 |
| Head of Channels | 1 |
| Head of Marketing | 3 |
| Manager Marketing | 1 |
| Manager Marketing Strategy | 1 |
| Marketing and Internet Director | 1 |
| Internet Director | 1 |
| Marketing Director | 2 |
| Marketing Manager | 5 |
| Marketing Manager Direct | 1 |
| National Marketing Manager | 1 |
| Operations Manager | 1 |
| Total | 31 |

**Table 2:** Industry sectors of respondents

| Industry sector | Frequency |
|---|---|
| Banking/finance | 2 |
| Business services | 5 |
| Communications | 5 |
| Government | 1 |
| Hospitality | 2 |
| Insurance | 6 |
| Mining | 2 |
| Manufacturing | 1 |
| Transport | 1 |
| Utilities | 2 |
| Retail | 4 |
| Total | 31 |

sectors were approached. Table 2 shows these industries to include financial services, manufacturing, retail, utilities, business-to-business services, telecommunications, mining and media. The industry diversity of the respondents provided a more generalisable understanding of the key challenges in the area of multi-channel marketing.

### Data collection

The initial e-mail request to provide a key challenge in the area of multi-channel marketing was sent to 40 senior marketers. These marketers were known to the researcher thorough University and industry events convened by the researcher. Of the 40 senior marketers, 27 provided an e-mailed multi-channel marketing key challenge and 4 provided a telephone call response. These were conducted in September 2006, with follow-up e-mail reminders every 3 weeks until November 2006. A total of 63 multi-channel issues were provided by the 31 participants. Each participant was told that they would receive a copy of the final report summarising the respondents' views. Because of the sensitive nature of the channel problems and obstacles raised in the study, the anonymity of both respondent and organisation was promised in return for participation.

### Data analysis

The 63 multi-channel marketing challenges identified by the senior marketers were classified into three sections. These sections

were strategic (19 responses), implementation (27 responses) and measurement (17 responses). If a challenge contained two or more sub-points applying to more than one of these three classifications, it was allocated to the relevant section. This paper only examines the 17 channel measurement-related responses.

## DEVELOPING RESEARCH PROPOSITIONS FROM QUALITATIVE FINDINGS

The complexity and breadth of multi-channel marketing challenges are identified in the literature: 'But the task of coordinating and integrating multiple channels that operate at high levels of efficiency has forced managers responsible for channel management to deal with a variety of challenging issues'.[14] The 'key multi-channel measurement challenges' provided by the senior executives add a contemporary practitioner perspective to the development of research propositions. Of the 17 channel measurement challenges, 2 were too broad to use. The following eight themes best represent the remaining 15 key challenge responses. They are listed in ascending order according to frequency cited, bearing in mind that a range of challenges was the purpose of this qualitative analysis. For each of the eight themes, the most representative quotation is provided.

### Return on channel investment (three senior marketer responses)

'How do you manage "cost to serve" and deliver appropriate levels of service/channel choice in an environment where consumer and channel preferences are becoming increasingly fragmented?'

**Proposition 1** Understanding the impacts of alternate tiers of service levels on customers will be more important to the marketing performance of Prospectors than to that of Defenders.

## Understanding customer channel preferences (three senior marketer responses)

'How do you obtain better understanding of the customer channel preferences for products and services in order to drive channel capability, training and management?'

**Proposition 2** Understanding customer segment channel preferences will be more important to the marketing performance of Prospectors than to that of Defenders.

## Isolating individual channel impact (three senior marketer responses)

'How do you measure the effectiveness of one channel over another when consumers use all channels, interchangeably and at varying stages of the decision-making and buying process?'

**Proposition 3** Isolating the impact of the individual channel on consumers will be more important to the marketing performance of Prospectors than to that of Defenders.

## Single 'holistic' view of customer (two senior marketer responses)

'Developing and managing a "whole of customer view" across multiple channels. How do you ensure that relevant information is effectively captured and managed across multiple channels (touch points) for a customer? For example, a customer may call into a call centre, or visit a retail outlet — or an outbound contact by a call centre, a personal calling program or an account manager'.

**Proposition 4** Integrating dispersed multi-channel customer information will be more important to the marketing performance of Prospectors than to that of Defenders.

## Uniformity of channel measures (two senior marketer responses)

'How do you measure/rate the "experience" that customers gain from using different electronic channels? Do you maintain a common set of standards or rate each channel differently? Does the introduction of "less rich" channels such as SMS lead to a dropping of standards in the overall customer experience gained from your channels?'

**Proposition 5** Recognising differences in channel attributes when setting service standard measures will be more important to the marketing performance of Prospectors than to that of Defenders.

## Third-party relationships (one senior marketer response)

'What are the key objectives and measures of success/metrics that an organisation should apply when offering a suite of third-party products to their client/membership base?'

**Proposition 6** Accurately measuring the impact on customers of third-party channels will be more important to the marketing performance of Prospectors than to that of Defenders.

## Channel synergy (one senior marketer response)

'How much are organisations measuring channel effectiveness and efficiency in delivering marketing messages? That is, are there mechanisms in place to measure the effective delivery of campaigns by all channels, or a combination of channels, and the relative cost of delivery? Also, are there organisations that measure this by segment, to ensure the most effective means of reaching their market?'

**Proposition 7** Accurately measuring the impact on customers of alternate combinations of channels will be more important to the marketing performance of Prospectors than to that of Defenders.

## DEVELOPING RESEARCH PROPOSITIONS FROM STRATEGY IMPLEMENTATION THEORY

Traditional performance measurement systems were financially focused and were neither multidimensional nor strategic.[21] The Miles and Snow strategic type literature provides a multidimensional characteristic that can be brought to multi-channel marketing performance measures. These characteristics allow further research propositions to be developed to complement the propositions developed in the previous section from qualitative responses.

### Subjective vs objective channel performance measurement

Porter (1980) argued that Cost Leaders would be more successful when using objective performance measures. Govindarajan and Fisher[22] found that Differentiators were more likely to be effective when using subjective measures. This suggests that Prospectors require subjective measures.

**Proposition 8** Emphasis on subjective performance measures will be more important to the marketing performance of Prospectors than to that of Defenders.

### Qualitative vs quantitative channel performance measurement

As discussed above, Collins *et al.*[23] found that quantitative measures were more

appropriate for Prospector-like organisations.

**Proposition 9** Emphasis on qualitative performance measures will be more important to the marketing performance of Prospectors than to that of Defenders.

### Frequent vs infrequent channel performance measurement

Surprisingly, Simons[24] found the approach taken in terms of performance measurement by successful large Prospectors involved frequent performance reporting.

**Proposition 10** Emphasis on frequent performance measurement will be equally important to the marketing performance of Prospectors and Defenders.

### Behavioural vs output channel performance measurement

Simons found the control methods of successful Prospectors included emphasis on output monitoring. This emphasis was expected to be associated with Defenders.

**Proposition 11** Emphasis on behavioural performance measurement will be equally important to the marketing performance of Prospectors and Defenders.

### External vs internal channel performance measurement

As Prospectors target new markets, it appears appropriate that they emphasise external measures. Conversely, Defenders would rely more on existing markets and need to monitor internal efficiency while they compete with older generation products.

**Proposition 12** Emphasis on external performance measures will be more important to the marketing performance of Prospectors than to that of Defenders.

### Product quality vs cost channel performance measurement

Prospector strategies compete with higher–quality innovative products. Conversely, Defenders depend more on the efficiency and cost reduction of existing product technologies.

**Proposition 13** Emphasis on product and service quality performance measurement will be more important to the marketing performance of Prospectors than to that of Defenders.

### Non-financial vs financial channel performance measurement

Collins *et al.* obtained surprising findings when studying the 'strategy measure relationship'. The data '[…] contradict[ed] some of the contingency theorists […] who felt that qualitative, non-financial controls were more appropriate for Prospector-like organizations […]'

**Proposition 14** Emphasis on financial performance measures will be more important to the marketing performance of Defenders than to that of Prospectors.

### Short-term vs long-term channel performance measurement

As discussed above, Prospector strategies may take longer to eventuate, whereas Defenders have a more realised strategy that is less 'future-focused'. This suggests that Defender goals lend themselves to being quantified, compared with the high-risk innovative Prospector strategies, which may take time to evaluate.

**Proposition 15** Emphasis on long-term performance measures will be more important to the marketing performance of Prospectors than to that of Defenders.

### CONCLUSIONS AND LIMITATIONS

The aim of this paper was to use qualitative research and implementation theory to develop multi-channel measurement research propositions. Previous researchers have also used qualitative research methods when developing research propositions for multi-channel marketing.[25] The qualitative research found eight themes of multi-channel marketing measurement challenges facing marketers. The three most commonly cited were: (a) determining return on channel investment, (b) understanding customer channel preference and (c) isolating individual channel impact on consumers.

The study limitations included a single respondent from each organisation, and an inability to probe respondents regarding the brief 'key multi-channel marketing challenge' provided. Further, the context of each company was not considered, which would be the case if an in-depth case study methodology had been used. Nevertheless, the study was based on extremely senior and knowledgeable respondents from large, prestigious and successful organisations. In addition, industry diversity provided a broad exploratory set of 'key multi-channel marketing challenges' for theory development and testing.

### IMPLICATIONS FOR RESEARCHERS AND MANAGERS

In terms of future quantitative research, the aim of the research propositions outlined above is to determine whether multi-channel marketing measurement is strategy-specific, that is, Prospectors vs Defenders, or generic to all organisations. A future

quantitative study would need to consider control variables such as number of channels used, market share, the role of the channels, degree of outsourcing, organisational size, marketing manager characteristics, external environment and competitors. On the other hand, additional qualitative research using case studies to explore these findings would provide a further level of insight beyond this preliminary exploratory study.

As far as managers are concerned, one author states that an ideal performance measurement system must include measures that are strategically relevant, as well as measures that address both efficiency and effectiveness.[26] Other researchers feels that managers have too many performance measures and that a simplified set with fewer yet more important metrics would lead to superior performance.[27] Other researchers believe that performance management systems are hindered by too many low-level measures.[28] Bearing in mind that this is an exploratory study in an emerging area, the following tentative management Guidelines are put forward:

1 Multi-channel marketing crosses organisational boundaries. New relevant multi-channel marketing measures must be obtained in order to help the marketer communicate to internal stakeholders to achieve internal cooperation and coordination (ie salesforce, operations, call centres, etc)
2 Managers must develop links between multi-channel marketing measures such as share of wallet, customer lifetime value, channel usage and channel preference.
3 The synergies that occur when using alternate combinations of channels must be quantified in order to be leveraged in strategy.
4 The role of any individual channel must be aligned with customer attitudes, customer behaviours and customer profitability.

## References

1 Webb, K. L. and Lambe, C. J. (2007) 'Internal multi-channel conflict: An exploratory investigation and conceptual framework', *Industrial Marketing Management*, Vol. 36, No. 1, pp. 29–43.
2 Weinberg, B. D., Parise, S. and Guinan, P. J. (2007) 'Multichannel marketing: Mindset and program development', *Business Horizons*, Vol. 50, No. 5, pp. 385–394.
3 Sharma, A. and Mehrotra, A. (2007) 'Choosing an optimal channel mix in multichannel environments', *Industrial Marketing Management*, Vol. 36, No. 1, pp. 21–28.
4 Shankar, V. and Winer, R. S. (2005) 'Interactive marketing goes multichannel', *Journal of Interactive Marketing* Spring, Vol. 19, No. 2, pp. 2–3.
5 Myers, J. B., Pickersgill, A. D. and Van Metre, E. S. (2004) 'Steering customers to the right channels', *McKinsey Quarterly*, No. 4, pp. 36–47.
6 Van Dijk, G., Minocha, S. and Laing, A. (2007) 'Consumers, channels and communication: Online and offline communication in service consumption', *Interacting with Computers*, Vol. 19, No. 1, pp. 7–19.
7 Gensler, S., Dekimpe, M. G. and Skiera, B. (2007) 'Evaluating channel performance in multi-channel environments', *Journal of Retailing and Consumer Services*, Vol. 14, No. 1, pp. 17–23.
8 Choi, J. and Park, J. (2006) 'Multichannel retailing in Korea: Effects of shopping orientations and information seeking patterns on channel choice behavior', *International Journal of Retail & Distribution Management*, Vol. 34, No. 8, pp. 577–796.
9 Sinickas, A. (2007) 'Measuring the impact of New-Media tools', *Strategic Communication Management*, April/May, Vol. 11, No. 3, p. 11.
10 Paswan, A. K. (2003) 'Channel support activities and perceived goal orientation: An exploration in the Indian market', *Asia Pacific Journal of Marketing and Logistics*, Vol. 15, No. 4, pp. 19–41.
11 Jaworski, B. J. and Kohli, A. K. (1991) 'Market orientation: Antecedents and consequences', *Journal of Marketing*, Vol. 57, No. 3, pp. 53–70.
12 Larson, P. D. and Lusch, R. F. (1992) 'Functional integration in marketing channels: A determinant of product quality and total cost', *Journal of Marketing Channels*, Vol. 2, No. 1, pp. 1–28.
13 Rangaswamy, A. and Van Bruggen, G. H. (2005) 'Opportunities and challenges in multichannel marketing: An introduction to the special issue', *Journal of Interactive Marketing* Spring, Vol. 19, No. 2, pp. 5–11.
14 Rosenbloom, B. (2007) 'Multi-channel strategy in business-to-business markets: Prospects and problems', *Industrial Marketing Management*, Vol. 36, No. 1, pp. 4–9.
15 Miles, R. E. and Snow, C. C. (1978) 'Organisational Strategy, Structure, and Process', McGraw-Hill, New York.
16 Porter, M. E. (1980) 'Competitive Strategy', Free Press, New York.
17 Frazier, G. L. and Antia, K. D. (1995) 'Exchange relationships and interfirm power in channels of

distribution', *Journal of the Academy of Marketing Science*, Vol. 23(Fall), pp. 321–326.

18  Bonoma, T. V. (1985) 'Case research in marketing: Opportunities, problems, and a process', *Journal of Marketing Research*, Vol. 22(May), pp. 199–208.

19  Workman Jr., J. P., Homburg, C. and Gruner, K. (1998) 'Marketing organization: An integrative framework of dimensions and determinants', *Journal of Marketing*, Vol. 62(July), pp. 21–41.

20  Kohli, A. K. and Jaworski, B. J. (1990) 'Market orientation: The construct, research propositions', *Journal of Marketing*, Vol. 54(April), pp. 1–18.

21  Yeniyurt, S. (2003) 'A literature review and integrative performance measurement framework for multinational companies', *Marketing Intelligence & Planning*, Vol. 21, No. 3, pp. 134–142.

22  Govindarajan, V. and Fisher, J. (1990) 'Strategy, control systems, and resource sharing: Effects on business-unit performance', *Academy of Management Journal*, Vol. 33, No. 2, pp. 259–285.

23  Collins, F., Holzmann, O. and Mendoza, R. (1997) 'Strategy, budgeting, and crisis in Latin America', *Accounting, Organisations and Society*, Vol. 22, No. 7, pp. 669–689.

24  Simons, R. (1987) 'Accounting control systems and business strategy: An empirical analysis', *Accounting Organisations and Society*, Vol. 12, No. 4, pp. 357–374.

25  Webb, K. L. (2003) 'Managing channels of distribution in the age of electronic commerce', *Industrial Marketing Management*, Vol. 31, No. 2, pp. 95–102.

26  Najmi, M., Rigas, J. and Fan, I-S. (2005) 'A framework to review performance measurement systems', *Business Process Management Journal*, Vol. 11, No. 2, pp. 109–122.

27  Lubieniecki, E. C. and Desrocher, N. J. (2003) 'The case for simple comparison: A simple performance scorecard for effectiveness and efficiency', *Journal of Corporate Real Estate*, Vol. 6, No. 1, pp. 39–52.

28  Neely, A. D., Gregory, M. and Platts, K. (2005) 'Performance measurement system design: A literature review and research agenda', *International Journal of Operations & Production Management*, Vol. 25, No. 12, pp. 1228–1263.