

An Exploratory Study in the use of SERVPERF to measure B2B Service Quality in the Maltese Hotel Industry

Nicholas ZARB, MBA (Exec.)

Senior Lecturer, Department of Systems of Knowledge, University of Malta Junior College, Malta

e-mail: nicholas.zarb@um.edu.mt

Abstract: *This paper focuses on the use of the SERVPERF instrument in order to measure service quality. The author visited one of Malta's major hotels. Three identical questionnaires were completed by the hotel's Purchasing Manager. An interview was also held. It seems likely that supplier 2 gives the best service. The results of the questionnaire are discussed in the light of customer-buyer relationships. This includes the use of power, competence and media richness.*

Keywords: *Quality perception, B2B, SERVPERF, power, competence, media richness.*

Introduction

In today's competitive environment, organisations must earn the customer's trust by consistently meeting or exceeding customers' expectations (Webster, 1992; Paul, 2003: 89). To accomplish this means proper management of resources at the disposal of the service provider and effective communication with the customer.

Meeting the expectations of users is critical since they assess service quality by comparing what they expect to receive with what they perceive they are getting. The disparity between expectation and perception is the major determining factor in a customer's assessment of service quality.

In this paper the author focused on the perception of quality by a customer (a four star hotel) in a B2B¹ environment. First theory is explored in terms of models and instruments that may be used to measure service quality. This is followed by an overview of the companies involved. Next is a brief explanation of how empirical evidence was collected. Results are then presented and discussed in the light of service literature.

Literature Review

Service quality is an aspect that has stimulated significant interest and debate in the research literature due to the difficulty of definition and measurement

¹ Business to business.

(Wisniewski and Donnelly, 1996). This section of the paper deals with broad aspects of these problems as well as possible solutions. There are a number of contrasting definitions as to what is meant by service quality. One that is commonly used defines service quality as the extent to which a service meets customers' needs or expectations (Lewis and Mitchell, 1980).

Why should quality be measured anyway? Measurement allows for comparison before and after changes, for the location of quality related problems and for the establishment of clear standards for service delivery (Shahin 2005: 2).

And what method shall be used to measure quality? Many instruments exist including SERVQUAL, SERVPERF as well as INDSERV. Later we shall take a brief look at these instruments and consider their strengths and limitations.

Model of Service Quality Gaps

There are seven major gaps in the service quality concept which are shown in Figure 1 (Parasuraman, Zeithmal and Barry, 1985; Curry, 1999; Luk and Layton, 2002). The three important gaps which are more associated with external customers are Gap 1, Gap 5 and Gap 6 since they have a direct relationship with customers.

- **Gap 1: Customers' expectations versus management perception:** as a result of the lack of a marketing research orientation, inadequate upward communication and too many layers of management.
- **Gap 5: The discrepancy between customer expectations and their perceptions of the service delivered:** as a result of the influences exerted from the customer side and the shortfalls (gaps) on the part of the service provider. In this case, customer expectations are influenced by the extent of personal needs, word of mouth recommendation and past service experiences.
- **Gap 6: The discrepancy between customer expectations and employees' perceptions:** as a result of the differences in the understanding of customer expectations by front-line service providers.

According to some researchers, 'the gap model is one of the best received and most valuable contributions to the services literature', (Brown and Bond 1995). Most instruments used to measure service quality in fact measure Gap 5.

The SERVQUAL Instrument

The SERVQUAL method (Parasuraman, Zeithmal, and Barry, 1985) is a technique that can be used for performing a gap analysis of an organisation's service quality performance against customer service quality needs (disconfirmation paradigm).

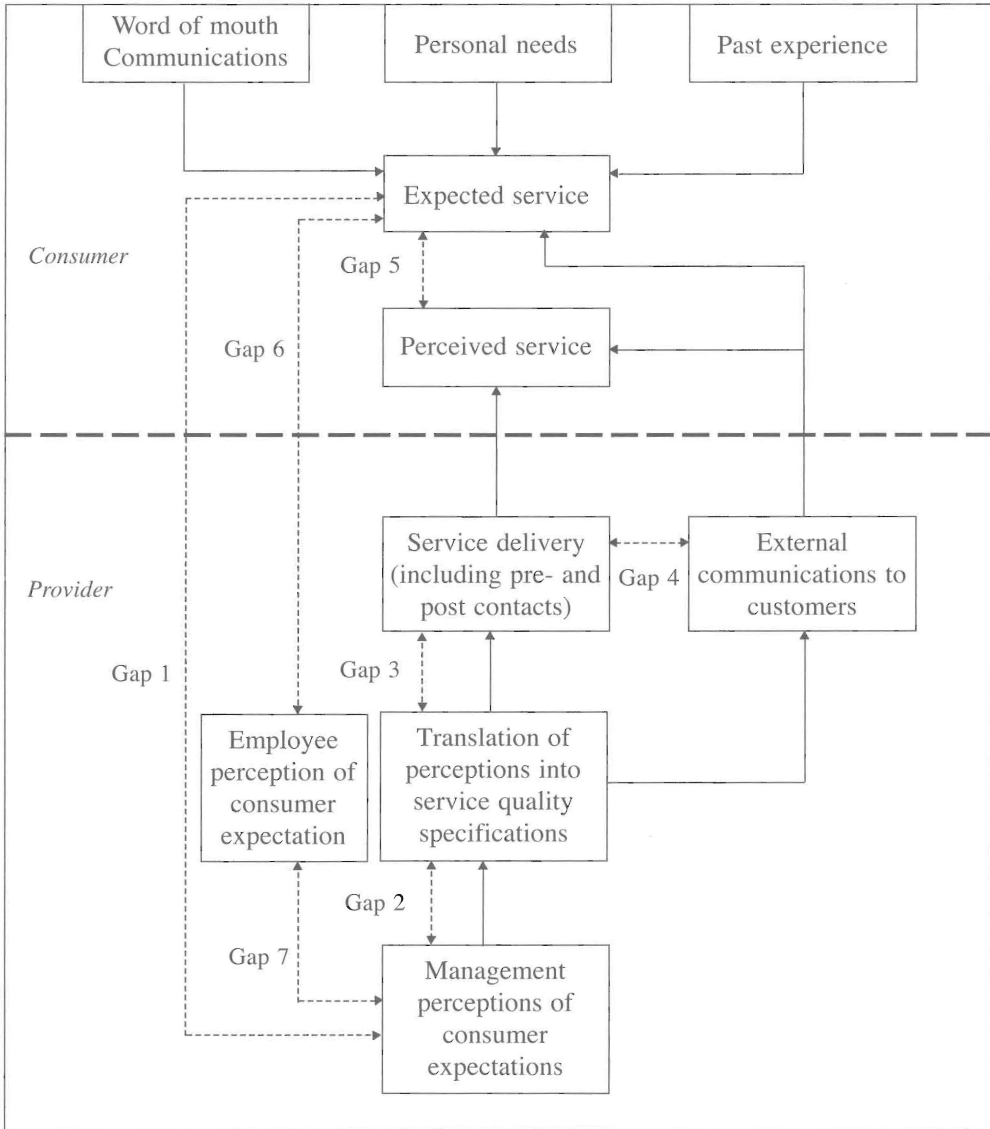


Figure 1. *Model of service quality gaps* (Parasuraman *et al.*, 1985; Cuny, 1999; Luk and Layton, 2002).

SERVQUAL is an empirically derived method that may be used to improve service quality. It takes into account the difference between customers' expectations and perceptions of a service. The data are collected via surveys of a sample of customers. Respondents rate the service provider's service along a Likert scale (in this case a 5 point scale was used).

The methodology was originally based around five key dimensions: Tangibles, Reliability, Responsiveness, Assurance and Empathy. The above has been expanded with the following additions: Competence, Courtesy, Credibility, Security, Access, Communication and Understanding.

Although SERVQUAL is widely used it is not without its critics. The main problems are outlined below:

- Expectations and perceptions should be measured separately since simultaneous measurement introduces a subtle interaction between perceptions and prior experiences (Oliver, 1981).
- Expectations are based on recall. (Hubbert, Sehorn, and Brown, 1995).
- Concern regarding the measurement of service quality over multiple service functions and the treatment of the expectations measurement (Carman, 1990).
- The applicability of SERVQUAL across a wide variety of services (Babakus and Boller, 1992).
- The applicability of SERVQUAL in B2B contexts. B2B contexts are considered to be more complex than B2C² contexts.

To summarise the problem lies with whether it is possible to assimilate responses under any one heading be it empathy or responsiveness. This is known as reification and has led to untold misery for millions in intelligence testing during the Twentieth Century (Gould, 1981).

The SERVPERF Instrument

In response to the above difficulties SERVQUAL has been modified into a performance-only measure (i.e. measuring perceptions). This is called SERVPERF (Cronin and Taylor, 2005).

SERVPERF makes use of the original SERVQUAL scale and also requires the respondents to rate the provider's service along a scale. Taking a single measure of service performance is seen to get around many of the problems outlined above.

Carrilat, Jamarillo, and Mulki, (2007) comment that the difference between SERVQUAL and SERVPERF is minimal and that the power of modern statistical methods can make do for SERVQUAL's perceived limitations.

In this study the author used SERVPERF rather than SERVQUAL.

Other Instruments

Surveying the service literature the author found other instruments which may be used to measure service performance in particular contexts:

²Business to customer.

- **INDSERV:** This instrument is relatively new and was designed to overcome the same problems outlined above, especially in B2B contexts. It is based on the idea that the industrial customer's perception of service quality is made up of four dimensions: Potential quality, hard quality, soft quality and output quality. However results have been mixed. (Gounaris, 2005).
- **LIBQUAL:** This instrument is based on SERVQUAL and is used in assessing library services (Cook and Heath, 2001).
- **HEDPERF:** An instrument used in technical schools and universities (Abdullah 2006: 31–47).

The Companies³

The Buyer

The hotel is situated close to the shore. It was inaugurated in late sixties. In the mid eighties the hotel was taken over by a major operator. Upon acquisition the hotel was closed down to start its transformation into a four star hotel under a new name.

It is the operator's philosophy that managers are fully empowered and encouraged to take decisions within their sphere of activity. It is believed that this factor combined with sound financial management, gives the organisation the capability of adapting effectively to ever changing market scenarios, the tourist market being no exception.

The Suppliers

Supplier 1

Supplier 1 produces a wide portfolio of carbonated and non-carbonated beverages. It has diversified interests, on a par with other European organisations. To achieve the above Supplier 1 focuses on customer satisfaction, product quality, human resources and future investments.

Supplier 2

The main activity of the company deals in frozen foodstuffs. Suppliers are acquired both through imports and local purchases. The products purchased are then sold to the catering, wholesale and retail trade, delivered by a fleet of refrigerated trucks.

The customer base includes most top hotels, restaurants and retail outlets. The company also trades in contract catering to government departments and hospitals and caters for military, cruise and cargo ship requirements.

³Information about the hotel and its suppliers was found on the websites affiliated to those companies. The sources have not been listed in accordance with the Data Protection Act (2001).

Supplier 3

Supplier 3 has over 40 years experience in marketing and trading in Malta. All the products and services provided by the group may be viewed in a large showroom.

The company has manufacturing facilities of 2000 sq. metres and about 25 personnel. They offer a wide range of products in catering disposables-hygiene products- and products for bakeries.

Supplier 3 has many sister companies and enjoys a large customer base.

The hotel in question utilises products offered by Supplier 3. These include aluminium foil disposables, plastic disposables and paper disposables.

Methodology

The author contacted the hotel via a third person. After initial contact a meeting was set up with the Purchasing Manager. During the meeting the author explained the rationale of the study and presented three identical questionnaires to assess service quality of three key suppliers. The purchasing manager chose the companies discussed above.

After the questionnaires were filled out the author held an interview with the Purchasing Manager.⁴ The answers were taped and subsequently used in the discussion.

Presentation of Results

The completed questionnaires are shown overleaf. As stated above a 5 point Likert scale was used in the following way,

- Strongly Disagree ----- 1
- Disagree ----- 2
- Neutral ----- 3
- Agree ----- 4
- Strongly Agree ----- 5

Applying the above to the three service companies, that company with the highest aggregate score (Zigmund 2003: 343–44) may be viewed as giving the best service. The following results are obtained,

- Supplier 1 107/165 or 64.85%
- Supplier 2 114/165 or 69.09%
- Supplier 3 104/165 or 63.03%

⁴ A list of questions is found in Appendix 1.

As outlined above, the total score is an aggregate of the individual scores and may be misleading. It is highly improbable that this value has any meaning considering the complexity of service quality. A more complete picture would be to separate the scores according to the dimensions outlined above (Figure 2).

Figure 2. *Likert scores for different service dimensions.*

Statement Number	Supplier 1	Supplier 2	Supplier 3
Tangibles Score			
5	4	4	4
7	4	2	3
8	2	4	4
12	4	4	4
31	4	4	2
32	4	2	2
33	2	2	2
Total / 35	29	22	21
Percentage	68.59	62.86	60
Reliability Score			
1	4	4	3
2	2	4	3
4	5	4	2
31	4	N4	2
Total / 20	15	16	10
Percentage	95	80	50
Responsiveness Score			
3	4	4	4
16	4	2	4
17	4	3	4
27	2	4	2
28	2	4	2
29	2	2	2
Total / 30	18	19	18
Percentage	60	60.33	60

Competence Score			
10	4	4	4
18	1	4	4
30	1	2	2
Total / 15	6	10	10
Percentage	90	66.69	66.69
Courtesy			
20	4	4	3
24	4	4	3
Total / 10	8	8	6
Percentage	80	80	60
Credibility Score			
9	3	4	3
13	4	3	3
Total / 10	9	9	6
Percentage	90	90	60
Security Score			
6	2	4	4
15	4	4	3
26	4	4	3
Total / 15	10	12	10
Percentage	66.69	80	66.69
Assurance (aggregate of competence, courtesy, credibility and security dimensions)			
Total / 50	31	39	32
Percentage	62	99	69

Communication Score			
14	4	4	4
22	2	2	3
TOTAL / 10	6	6	9
Percentage	60	60	90
Access Score			
21	2	4	4
23	2	2	2
25	2	4	4
26	4	4	3
Total / 20	10	19	13
Percentage	50	90	65
Understanding Score			
11	4	4	4
19	4	4	4
Total / 10	8	8	8
Percentage	80	80	80
Empathy (aggregate of communication, access and understanding dimensions)			
Total / 90	29	28	28
Percentage	60	90	90

Discussion

It is important to understand the principles that underlie B2B marketplaces and determine the shapes that they assume under pressure.

Every market represents a complex assembly of buyers and suppliers united by lines of power and dependency. Although forces of supply and demand control the flow of business, each market carries a built-in measure of inefficiency. The

B2B marketplace minimizes that inefficiency by strengthening the relationship between supplier and buyer, promoting price cuts, lowering supply chain costs and increasing the reach of suppliers (Lee, Padmanabhan, and Whang, 1997).

The above results show that Supplier 2 gives the best overall service. However when the results are broken down according to the given dimensions one gets mixed results.

- Supplier 1 had the best rating in the Tangibles dimension.
- Supplier 2 had the best ratings in the Reliability, Responsiveness, Security, Assurance and Access dimensions.
- Supplier 3 had the best rating in the Communication dimension.
- The remaining dimensions had joint best ratings (two companies) with the Understanding dimension showing that the three companies had identical ratings.

Other trends are interesting. Statement 33, 'The supplier is linked to my inventory system' had consistently low ratings for all companies. This may show the lack of a fully fledged IT system. Whether this is prevalent throughout the hotel industry or due to lack of trust or some other dimension is hard to discern. It is probable that more empirical work has to be done in this area before any conclusions can be made with certainty

Other statements also have low ratings. These include statement 23 and 29. Statement 23, 'We talk about common interests besides work' shows that the relationship between the buyer and sellers is somewhat formal. Again whether this is due to the particular circumstances of the situation or a reflection of local culture is difficult to establish. Statement 29, 'The supplier is free to contact any of our staff' again shows low ratings across the board.

Other results are mixed. Statement 16, 'We keep suppliers updated about possible demand fluctuations.' scores low with Supplier 2 and scores high with both other companies. Also it seems that the hotel does not have any staff dedicated to specific companies (statement 30).

It is now time to consider these trends with the larger and more complex picture of B2B relationships.

The Role of Relationships in B2B Commerce

Research indicates that the majority of economic transactions involve long-term relationships and private contracts (Blinder, Canetti, Lebow and Rudd 1998). The hotel has a contract with Supplier 1 as well as a barter system with Supplier 3. The hotel has no contractual obligations with Supplier 2. Supply chain partners benefit from relationship-based contracts in several ways. These include reductions in

transaction costs, improved information sharing and customized pricing (Grey, Olavson, and Shi, 2001).

Other aspects of supplier-customer relationships consist of those factors which make it difficult for customers to switch their supplier. Yanamandram and White (2006) discuss issues such as inertia, switching costs, relationship investment and service recovery and how their impact from the customer as well as supplier viewpoint.

The Role of Power in B2B Commerce

Often industry supply chains are dominated by large buyers that coordinate the activities of their suppliers. Since the hotel is large it may be able to exert a certain amount of pressure on its suppliers. However it seems unlikely that it will have any effect on the larger Supplier 3 or Supplier 1. The latter is a large player in the Maltese economy.

The answer to question 6 in the interview sheds some light on hotel's strategy. Should the hotel encourage competition between suppliers? To what extent could the hotel benefit from deeper relationships with its suppliers? While buyers always have an incentive to emphasise strong relationships, we find that this incentive can be greatest when buyers face specialist suppliers. The intuition is that the benefits to better relationships 'can be a powerful check on the value capture of the specialist because the buyer may threaten to put all of its business with another supplier' (Chatain and Zemski 2005). This may account for the high scores that Supplier 2 obtained in many dimensions including Empathy and Access.

Competence Development in Buyer-Supplier Relationships

It has been argued (Wernerfelt, 1984) that organisations may be viewed as a pool of resources with give rise to competitive advantage. These resources may be looked at as competencies. With this in mind one can state that competitive advantage is the result of knowledge, rather than product exchange. There are four ways in which a corporation can supplement its internal competencies so as to improve its competitiveness as shown in Figure 3 below.

- Purchased competence refers to the situation in which both the supplier's and the buyer's knowledge contribution to the relationship is minimal.
- Transferred competence refers to situations in which the buyer transfers resources to the supplier. E.g. Traditional outsourcing.
- Supplied competence is the opposite of transferred competence. It could even be described as injected competence.
- Cross competence is used to describe situations in which both buyer and supplier bring something into the relationship.

The close relationship that exists between the hotel and its suppliers may be partly explained using this model. The support that the hotel receives (statement 3) points to this. Surprisingly statement 8, “We prefer to meet the supplier personally when we have a problem scored low with Supplier 1 but rather high with the other two suppliers. Cross competence seems to explain well the relationship between the hotel and Supplier 2. Since the latter supplies meat products there is rich interaction between the supplier and the hotel.

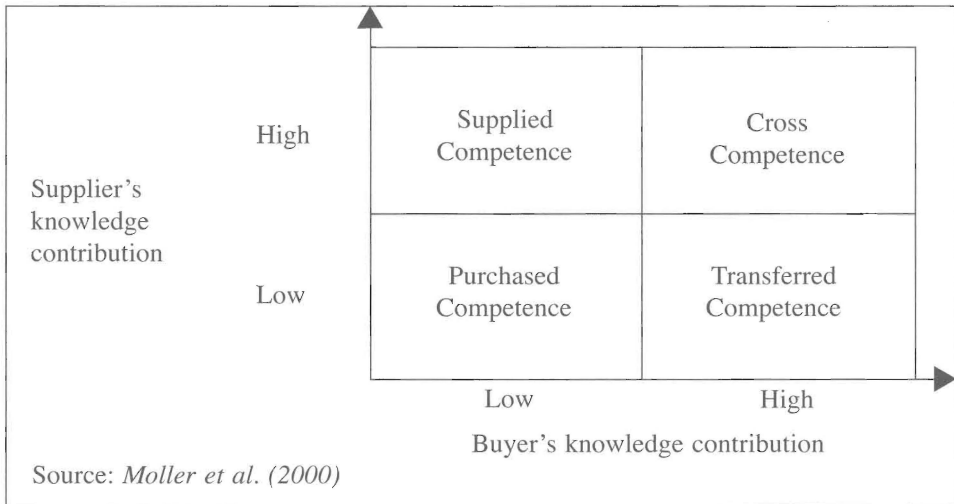


Figure 3. Four types of Inter-organisational Competence Development.

Source: Moller, M.M., Momme, J. and Johansen, J. (2000).

Media Richness and Buyer-Supplier Relationships in The B2B Context

The term ‘media richness’ was coined to explain the ability of communication media to process information based on the medium used (Daft and Lengel, 1984). Rich media may be important in a B2B context especially when considering speed and the complicated nature of the activities.

Figure 4 shows the different characteristics that determine the richness of information.

As can be seen face-to-face communication gives immediate feedback and is the rated as the highest in information richness. The presence of non-verbal communication seems to explain this. Media richness reduces ambiguity in a relationship, ensures that a sufficient amount of information is processed, helps managers deal with uncertainty and aids in bridge building in a B2B context (Johnson, Donahue, and Atkin, 1994). Thus a supplier can better know a customer’s needs and is better able to provide feedback in general and to give recommendations for improvements. Besides, buyers will get to know the strengths and weaknesses of particular providers and thus be able to discriminate between them.

Medium	Feedback	Channel	Source	Language	Information richness
Face-to-face	Immediate	Visual, Audio	Personal	Body, Natural	Highest
Telephone	Fast	Audio	Personal	Natural	High
Electronic (e-mail EDI)	Fast	Limited visual	Personal	Natural/Numeric	High/Moderate
Written, Personal (letters, memos)	Slow	Limited visual	Personal	Natural	Moderate
Written, Formal (bulletins, documents)	Very slow	Limited visual	Impersonal	Natural	Low
Numeric, Formal (computer output)	Very slow	Limited visual	Impersonal	Numeric	Lowest

Figure 4. *Media Characteristics That Determine Richness of Information.*

Source: *Daft, R.L. and R.H. Lengel, 1984.*

Media richness seems to be encoded in the hotel's relationship with supplier 2. Statements 25, 26, 27 deal with aspects of media richness. It may be argued that the questionnaire does not deal with the way that the hotel approaches the selling companies. However knowing your supplier personally, lack of formality when visiting a supplier and the supplier wanting to visit its customer points to a mix of face-to-face and telephone media when interacting together.

Limitations of the Study

The above study was based on qualitative rather than quantitative techniques. No inferential statistics were used on the study. The small number of questionnaires used means that factor analysis was not used to measure the validity of the questionnaire.

Other statistical tools including Cronbach's alpha measure could not be used since the sampling technique included a bias in favour of *key* service providers rather than any service provider.

Conclusion

There are three different threads in this study that need addressing. These are:

- Which instrument is valid to measure service quality?
- Interpreting the actual results and trying to understand the relationship between the hotel and its suppliers.
- Theoretical implications in the discussion.

Research shows that SERVPERF seems to be more reliable than SERVQUAL. The hotel seems to have a healthy relationship with its suppliers especially Supplier 2. However further quantitative research is needed to ascertain the above results.

References

- ABDULLAH, F. Measuring service quality in higher education: HEDPERF versus SERVPERF. *Marketing Intelligence and Planning*, 24(1): 31–47, 2006.
- BABAKUS, E. and BOLLER, G.W. An empirical assessment of the SERVQUAL scale. *Journal of Business Research*, 24(3): 253–68, 1992.
- BLINDER, A., CANETTI, E., LEBOW, D. and RUDD, J. *Asking about Prices: A New Approach to Understanding Price Stickiness*. New York: Russell Sage Foundation, 1998.
- BROWN, S.W. and BOND, E.U. The internal/external framework and service quality: toward theory in services marketing. *Journal of Marketing Management*, February, 25–39, 1995.
- CARMAN, J.M. Customer perceptions of service quality: an assessment of the SERVQUAL dimensions. *Journal of Retailing*, 66(1): 33–55, 1990.
- CARRILAT, F., JAMARILLO, F. and MULKI. The validity of the SERVQUAL and SERVPERF scales. *International Journal of Service Industry Management*, 18(5): 472–90, 2007.
- CHATAIN, O. and ZEMSKY, P. Buyer-supplier relationships and the scope of the firm. *Management Science*, 53(4): 550–65, 2005.
- COOK, C. and HEATH, F. *Re-grounding theory: the qualitative methods applied in the development of LIBQUAL, a new tool for assessing service quality in academic libraries*. Paper presented at the Annual Meeting of Library Research, Maryland, 2001.
- CRONIN, J.J. and TAYLOR, S.A. Measuring service quality: a re-examination and extension. *Journal of Marketing*, 56(3): 55–68, 1992.
- CURRY, A. Innovation in public service management. *Managing Service Quality*, 9(3): 180–90, 1999.
- DAFT, R.L. and LENGEL, R.H. Information richness: a new approach to managerial behaviour and organizational design. *Organizational Behaviour*, 6(191–233), 1984.
- GOULD, S.J. *The Mismeasure of Man*. Boston: Penguin Books, 1981.
- GOUNARIS, S. Measuring service quality in B2B services: an evaluation of the SERVQUAL scale vs the INDSERV scale. *Journal of Services Marketing*, 19(6): 421–35, 2005.
- GREY, W., OLAVSON, T., and SHI, D. Buyer-supplier co-ordination mechanisms in B2B transactions. *IBM Research Technical Report RC 22037*: IBM Corporation, 2001.
- HUBBERT, A.R., SEHORN, A.G., and BROWN, S.W. Service expectations: the consumer vs. the provider. *International Journal of Service Industry Management*, 6(1): 6–21, 1995.
- JOHNSON, J.W., DONAHUE, W. A., and ATKIN, C.K. Differences between formal and informal communication channels. *Journal of Business Communications*, 31(2): 111–22, 1994.
- LEE, H., PADMANABHAN, P. and WHANG, S. Information distortion in a supply chain: the bullwhip effect. *Management Science*, 43(4): 546–58, 1997.
- LEWIS, B.R. and MITCHELL, V.W. Defining and measuring the quality of customer service. *Marketing Intelligence and Planning*, 8(6): 11–17, 1980.
- LUK, S.T.K. and LAYTON, R. Perception gaps in customer expectations: managers versus service providers and customers. *The Service Industries Journal*, 22(2): 109–28, 2002.
- MOLLER, M.M., MOMME, J., and JOHANSEN, J. *Supplier segmentation in theory and practice-towards a competence perspective*. Paper presented at the 9th International IPSE Conference, Ontario, 2000.
- OLIVER, R.L. Measurement and evaluation of satisfaction processes in retail settings. *Journal of Retailing*, 57(3): 25–48, 1981.

- PARASURAMAN, A., ZEITHMAL, V.A. and BERRY, L.L. A conceptual model of service quality and its implication. *Journal of Marketing*, 49(Fall): 41–50, 1985
- PAUL, D.P. An exploratory examination of ‘SERQUAL’ versus ‘SERVPERF’ for prosthetic dental specialists. *Clinical Research & Regulatory Affairs*, 20(1): 89–100, 2003.
- SHAHIN, A. (2005). *SERQUAL and the model of service quality gaps: a framework for determining and prioritising critical factors in delivering quality services*. Iran: Department of Mngement, University of Isfahan, 2005.
- WEBSTER, F.E. The changing role of marketing in the corporation. *Journal of Marketing*, 56: 1–17, 1992.
- WERNERFELT, B. A resource based view of the firm. *Strategic Management Journal*, 5: 171–80, 1984.
- WISNIEWSKI, M. and Donnelly, M. Measuring service quality in the public sector: the potential for SERVQUAL. *Total Quality Management*, 7(4): 357–65, 1996.
- YANAMADRAM, V. and White, L. Switching barriers in business-to-business services: a qualitative study. *International Journal of Service Industry Management*, 17(2): 472–90, 2006.
- ZIGMUND, W.G. *Exploring Marketing Research*. New York: Thompson South Western, 2003.