



A Review of Service Quality and Service Delivery: Towards A Customer Co-Production and Customer-Integration Approach

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Abstract

Purpose (mandatory) The purpose of this paper is to provide researchers with an overview of the service quality and delivery domain, focusing on the inclusion of customer co-production and customer integration. Specifically, this paper concentrates on service quality (including quality measurement), the service environment, controls and their consequences.

Design/methodology/approach (mandatory) A comprehensive review of the literature is conducted, analysed and presented.

Findings (mandatory) The review shows that service delivery is both complex and challenging, particularly when considering the unique characteristics of services and the high level of customer involvement in their creation. The FTU (facilitation, transformation and usage) framework identifies how failures can occur at each stage of service delivery, beginning with the characteristics of the service environment, while control theory offers insights into the formal and informal controls that may be applied in the facilitation and transformation stages, which may reduce the likelihood or extent of such failures.

Originality/value (mandatory) Despite the fact that it is widely accepted that service quality is an antecedent to customer satisfaction, it is surprising that this customer co-creation aspect has been largely neglected in the extant literature. As such, the role that customer co-production plays in service quality performance has been examined in this article. It is hoped that this examination

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3 will enhance both theoretical and practical understanding of service quality. It would be useful to
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5 find modern tools that can help in improving service quality performance.
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9 **Key words** – Service quality, service delivery, customer co-production, customer integration,
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11 co-creation, service controls.
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Introduction

In today's globalized and rapidly changing world, services constitute an important element of the economy in both developed and developing countries (Roy *et al.*, 2015). The service sector is categorized by the international industrial standard as, "wholesale and retail trade; restaurants and hotels; transport, storage and communication, financing; insurance, real estate and business services, community, social and personal services" (Van Looy *et al.*, 2003, p. 6). Services account for a major part of the global economy and the service sector plays an important role in economic growth of both developed and developing countries alike (Roy *et al.*, 2016). Moreover, as the number of service organisations increases and customers become more demanding and discriminating, service organisations face mounting pressure to ensure service quality, to remain competitive (e.g., Nguyen *et al.*, 2016). Zeithaml *et al.* (2006) observe that service quality is more difficult to define, measure and assure than quality of manufactured goods, due to a number of distinctive characteristics of services and the way in which they are produced. These include the intangibility of much of the service offering, the heterogeneity of services, and their perishability, all of which mean that service quality depends on many uncontrollable factors (Zeithaml *et al.* 2006).

In recent years, there has been an increasing trend for customers to be actively involved in the production of the goods and services they consume, and literature has explored such activities under the heading of customer participation (Dabholkar *et al.*, 2000; Curran and Meuter, 2005). Others prefer the term customer integration, to reflect the fact that customer involvement is broader than activity, to include service enabling by the provision of resources such as property and information (Moeller, 2008). Extending this notion, service dominant logic proposes that customers share in creating the core offering itself, a concept termed customer co-production (Vargo and Lusch, 2004). Co-production entails the integration of customer resources in creation

of service (Lusch *et al.*, 2007), whether in the form of their physical presence, their property or information (Bitner *et al.*, 1994; Fließ, 2004). This means employees must interact with customers to co-ordinate and integrate their contribution (Moeller, 2008), although this process varies according to the nature of the service concerned (Hsieh *et al.*, 2004).

The purpose of this paper is to provide researchers with an overview of service quality, focusing the inclusion of customer co-production and customer integration. The paper is divided into two main parts. In the first, the unique nature of services is explored, and the dilemma that service characteristics pose for service quality is identified, in terms of what constitutes quality in services and how it can be measured, and lastly, sources of service quality failure. In the second, theories and concepts related to the determinants of service quality are introduced, including the service environment, quality controls, and consequent employee and customer behaviours.

Figure 1 illustrates the paper.

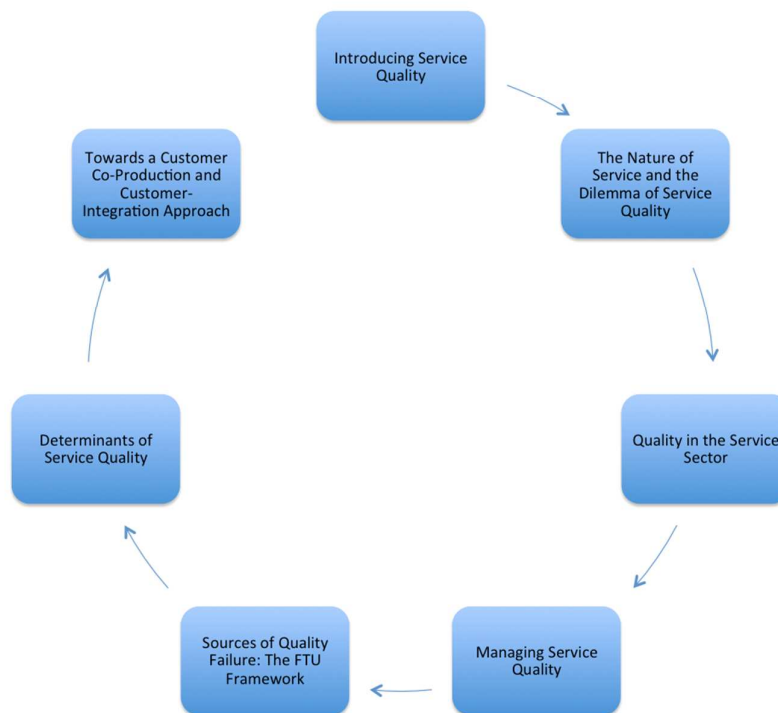


Figure 1 Towards a Customer Co-Production and Customer Integration Approach

Introducing Service Quality

At a basic level, service quality refers to a customer's comparison between expectations from a service with the perceptions of what is actually delivered by the service provider (Grönroos, 1984; Parasuraman *et al.*, 1985). Early work on quality originated in manufacturing industry. In that context, quality was defined as "zero defects" and "conformance to specification" (Crosby, 1980). Juran (1988) defined it as "fitness for use by the customer". By looking at the different characteristics of services and manufacturing goods, a need for a different approach to definition of quality appears when dealing with quality in the service sector. Such a broader perspective was offered by Garvin (1984) who recognised that quality can be interpreted in a variety of ways, according to the industry or service in question, and the interests of the stakeholders in question. In the 1980s and 90s, important attention was paid to the issues relating to service and product quality, driven by competition and continuous attempts to satisfy customers. Whereas early work on quality was more focused on the manufacturing industry, increasing attempts to identify and understand quality of service have been undertaken in the last three decades (Kang and James 2004; Wilkins *et al.*, 2007).

In particular, assessing the quality of services has become an imperative. Countries at all levels of development and with all types of political structure are thinking about the service sector, which has become one of the key priorities for many countries. Hence, leaders and managers in service sector organisations, whether in the public or private sectors, are under increasing pressure from customers and negative media presentation (Shahin, 2002). The importance of quality of service has become one of the top priorities in the service sector, such as hotels (Callan and Bowman 2000; Callan and Kyndt 2001; Min *et al.*, 2002), and in a broader business context (Zeithaml *et al.*, 1996; Bloemer *et al.*, 1999), it is widely accepted that quality of service is antecedent to customer satisfaction.

The Nature of Service and the Dilemma of Service Quality

Service delivery is different from manufacturing in several ways, and that makes the quality issues in the service sector different from the manufacturing ones. For example, overall, the output of the service sector is intangible, whereas manufacturers offer visible and tangible products. The service sector usually deals with a large volume of transactions. Services are consumed as they are generated and they are impossible to be kept, like manufacturing goods. Moreover, overall services are more labour intensive, while manufacturing is capital intensive. In the service sector, providers and customers usually have to interact in order for the service to be delivered. Some may argue that the perception of service quality by customers rises or declines according to the interactions of customers with service providers.

Furthermore, the process of service provision often demands a higher level of customization than manufacturing of goods. The customization often gives rise to heterogeneity of the service and the possibility of problems in the performance of the service. In other words, the interaction of the customer with the services should be considered when the service is shaped, performed and provided (Cândido and Morris, 2001). These differences between manufacturing goods and service have significant implications for quality issues in the service sector. For example, the result of service simultaneity in customer service is that customers not only expect a high level of quality of service, but are also interested in the frontline employee who provides the services as well (Van Looy *et al.*, 2003; Zeithaml and Bitner, 2003). Likewise, the simultaneous production and consumption of the service make it difficult to assess the quality of service before services are used. Thus, failure of quality cannot always be found and avoided before a customer uses the provided service.

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3 Looking at the different characteristics of services and manufacturing goods, the difficulties of
4 quality assurance become apparent because perspectives in quality shift at various points in
5 service provision (Wetzels, 1998; Cândido and Morris, 2001). Scholars of marketing focus on
6 examining the service encounter as a process where perceived quality or value has neither
7 beginning nor end. That means many factors related to the service employees may determine
8 perceived quality or value, while perceptions of quality and value often determine multiple
9 outcomes such as organisational effectiveness or customer behaviours. Although the whole
10 process of service production is quite involved, simple ways to evaluate the process may be
11 expressed, such as performance of service cues/attributes, overall service quality/ value and
12 customers' behavioural intention (Hartline and Jones, 1996). However, most research on service
13 quality has focused on the customer perspective. For example, Parasuraman *et al.* (1985) view
14 service quality in terms of the difference between what customers expect from the service, and
15 what they experience (Parasuraman *et al.*, 1985; 1991). This gap model has been widely adopted
16 in service quality research (Babakus and Boller, 1992). However, much less consideration has
17 been given to employees' perspective on quality, a gap which will be addressed in this article.

38 **Quality in the Service Sector**

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40 Quality in service companies, as providers of service, is clearly a critical factor that the providers
41 of the service and managers have to address in order to raise the performance of their service
42 companies in relation to revenue and meet customer satisfaction (Garvin, 1984; Garvin, 1988;
43 Cândido and Morris, 2001; Van Looy *et al.*, 2003; Zeithaml *et al.*, 2006; Wilson *et al.*, 2012).
44 Improving the level of quality of service delivery has become a significant factor for all
45 organisations in terms of competition and global marketing. The study of quality in firms has
46 included marketing, organisational and managerial perspectives, reflecting the several
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3 orientations occupied by researchers from various disciplines in determining the quality problem
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5 (Cândido, 2001; Van Looy *et al.*, 2003; Wetzels, 1998; Zeithaml and Bitner, 2003).
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9 There are several definitions of quality. For example, Deming (2000) identifies quality as a
10 service or product that assists someone and benefits from a good and sustainable market. Juran
11 defined quality as “fitness for use by the customer” (Juran, 1988). There are four bases of
12 absolute quality: firstly, quality is conformance to needs. Secondly, quality is caused by
13 prevention. Thirdly, the level of performance is no defects. Finally, the measure of quality is the
14 price of non-conformance (Crosby, 1980). Quality is the total combination of product
15 characteristics, marketing, engineering, manufacture and maintenance by which the product and
16 service used would meet consumer expectations (Feigenbaum, 1991).
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29 Quality can be seen from several different disciplines, for instance, economics, marketing,
30 psychology or the study of operations. Moullin *et al.* (2011) and Kasper *et al.* (1998) stated that
31 the five approaches classified by Garvin (1984) are the best framework for the definition of
32 quality (Kasper *et al.*, 1998; Moullin *et al.*, 2011). To recapitulate, these are as follows:
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38 1. **Transcendent:** quality is synonymous with innate excellence or a level of universal
39 value, for instance, when people talk about a high level of quality (Oakland, 1995) it is
40 based on experience. An issue linked to this approach, according to Moullin *et al.* (2011)
41 is that it drives firms to focus on particular elements of the service provided by the
42 organisation.
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47 2. **Product-based:** this type identifies quality as one dimensional and means that top quality
48 inevitably costs more money (Moullin *et al.*, 2011). Kasper *et al.* (1998) argued that this
49 category is based on distinctiveness in some components or features of a product.
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3 3. **User-based:** quality is determined by the consumer, because the customer is always right.
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5 Quality means that the attributes of a product meet the customer's requirements (Oakland,
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7 1995, Dale *et al.*, 2013).
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- 10 4. **Manufacturing-based:** quality in this category implies conformance to specification and
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12 focuses on the supply perspective. The issue with this category is that the specification
13
14 may not meet the customer's need, so a product or service can meet an organisation's
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16 specification but not the consumer's desires (Moullin *et al.*, 2011).
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- 18 5. **Value-based:** quality is focused on cost and price (Garvin, 1984; Moullin *et al.*, 2011).
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23 Many of the quality definitions mentioned above derive from the work of leading quality
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25 practitioners and authors, whose work has been central to the assessment of the quality definition
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27 and the way it has been operationalised (Crosby, 1979; Feigenbaum, 1983; Ishikawa and Lu,
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29 1985; Deming, 1986). Although the above-mentioned authors each have their own specific
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31 emphases, strengths and weaknesses, similarities or common directions in their thoughts can be
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33 identified. These can be pointed out as follows:
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- 36 • It is very important to control the process, not the outcomes.
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- 38 • Inspection is never the answer to quality improvement, nor is policing.
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- 40 • The importance of human process is recognised.
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- 42 • Quality is a long-term process and requires continuous development.
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- 44 • The advantage of quality outweighs the cost of it.
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- 46 • All parts of the organisation should be involved and participate in quality.
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- 48 • Quality concepts are applicable to both services and industry.
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- 50 • Education and training are extremely important.
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3 From the definitions and principles raised by the leading quality authors, it seems there are two
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5 potential fields of focus:
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- 7 • Technical terms of quality management (or level one): providing services and producing
8 products whose assessable characteristics fit a fixed set of particulars. This is a largely
9 accomplished by statistical and quantitative approaches (Parasuraman *et al.*, 1988; 1991).
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11 • Human dimensions of quality management (or level two): services and products that aim
12 to satisfy customer expectations and perceptions (Hoyer and Hoyer, 2001).
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21 The key points of these authors' approaches and their levels of focus are summarised in Table 1.
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30 It can be seen that there is no agreement on one correct approach to quality management.
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32 Nevertheless, it is demonstrated that there are two key levels to concentrate on: (1) the technical
33 dimension of quality and (2) the human dimension of quality. Technical requirements of
34 prediction and control are addressed largely by statistical and quantitative methods, which cover
35 the technical demands from design via production to inspection of the final product.
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37 Management of the human dimension of organisations is not at all clearly provided for. The key
38 quality authors commonly declare their interest in managing people in their philosophies but on
39 analysis offer few tangible principles and virtually no usable methods.
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50 The fast increase of the service sector has raised different perspectives on quality issues and the
51 meaning of service quality. Service companies (e.g. banks, hospitals and hotels) do not provide
52 tangible goods. The interaction between providers and customers is crucial in such companies.
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54 Lehtinen and Lehtinen (1991) proposed that quality of service is an outcome of the interactions
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3 between the customer and the agents of the service company. They described that the quality of
4 service has three dimensions as follows: material quality, organisation quality, and interactive
5 quality. Interactive quality recognises that quality of service is created from the interaction
6 among the provider of the service and customers, a perspective which is necessary to
7 complement the receiver-focused view of quality of service which has been the dominant pattern
8 until now (Svensson, 2006).
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18 In their conceptualisation of quality of service, Brady and Cronin (2001) identified three core
19 dimensions of significance: physical environment quality, outcome quality and interactions
20 quality. *Environment quality* considers the “physical or built” environment within which the
21 service takes place, *outcome quality* refers to “what the customer is left with when service is
22 rendered”, and *interaction quality* refers to “interpersonal interactions that occur in service
23 delivery” (Brady and Cronin, 2001: 38-40). Of Brady and Cronin’s (2001) three dimensions of
24 quality of service, interpersonal interactions are recognised as having the greatest influence on
25 quality of service (Bowen and Schneider, 1985; Bitner *et al.*, 1994; Hartline and Ferrell, 1996;
26 Hartline and Jones, 1996). This is because in many service situations, the employee is seen as
27 representing the organisation or the service itself (Bitner, 1990; Zeithaml and Bitner, 1996).
28 However, Brady and Cronin (2001) identify a lack of research into the interaction domain and
29 call for more investigation in this field.
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47 According to Lucas (2005), what customers want is value for their money and effective, efficient
48 service. Customers also expect to obtain intangible things while in a service encounter. Lucas
49 has listed a few significant matters that customers expect and need to be provided in order to
50 induce them to continue to do business with a company:
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- Personal recognition: this might be shown in a variety of ways such as posting thank you cards or notes, or birthday cards, returning calls in a timely fashion, taking the time to find information that may be useful even if the customers do not ask for it. An easy way to demonstrate recognition to a customer who enters the company, even if the staff cannot immediately stop doing what they are doing to serve him or her, is to welcome, smile, and acknowledge the customer's presence.
- Courtesy: simple courtesy including expressions such as please and thanks. There is no place or excuse for rude behaviour in a customer service area. It might be true to say that customers may not always be right, but they must be treated with full respect.
- Timely service: most customers do not mind being kept waiting a short time for service if there is reasonable cause, such as another customer or serving another customer on the phone. However, if staff keep the customer waiting for no reason, such as staff talking to each other or do not care about customer, that may affect perceived service quality and customers will be dissatisfied.
- Professionalism: customers expect to receive all sorts of skills such as knowledgeable response to their questions, and service that meets their requirements.
- Enthusiastic service: customers come to the company for one reason, to satisfy their needs. Delivering service with good will, offering additional services and information and exerting maximum effort in every service encounter will help a company to ensure a positive service experience for its customers.
- Empathy: customers wish to be understood. This is especially true when the customers face a language barrier or have some kind of disability that reduces their communication effectiveness. When a customer has a complaint or believes that he or she was not satisfied with the service, it is the job of the customer service staff to make an effort to understand him/her.

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- 3 • Patience: a customer might be unhappy about the service that the company provides
- 4 which may cause a customer to become enraged. This may require customer service staff
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- 7 to be able to keep calm and control their feelings while talking to the customer.
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11 Lucas's list can be seen as an attempt to operationalize the concept of service quality in terms of
12 specific attributes, although he did not offer a developed measurement instrument, nor did he
13 explain the cognitive process by which such attributes are evaluated in order to form perceptions
14 of service quality. However, a cognitive explanation was provided in one of the most widely
15 adopted and operationalized approaches to service quality measurement, the "Gap" model
16 developed by Parasuraman *et al.* (1985). Based on in-depth interviews and focus groups in
17 several service industries, they identified five potential "gaps" in service quality, as follows:
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- 28 1. The first gap: is between the expectations of customers and management's perception of
- 29 the customers' expectations. According to Parasuraman *et al.* (1985), the scholars
- 30 discovered that the confidentiality and privacy of operations appeared as key quality
- 31 attributes in the banking and securities focus group: nevertheless, this was rarely
- 32 considered by the executives. The authors summarised that weakness in understanding
- 33 this gap will have an effect on the customer's perception of the quality of service.
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- 43 2. The second gap: is between the management's perception of consumer expectation and
- 44 quality of service specifications. Even when executives try to meet the expectations of
- 45 consumers, they face some difficulties in providing what the consumer expects
- 46 (Parasuaman *et al.*, 1985). The researchers mentioned that the reason for that is the
- 47 difficulty in finding ways to provide a rapid response continually, due to the weakness of
- 48 training of service personnel and the wide range of functions in demand. Another reason,
- 49 which increases the gap, is the low commitment of management to quality of service.
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3 This discrepancy among the management's perception of consumer expectations and the
4 service specifications of an organisation has an impact on quality of service from the
5 consumers' perspective.
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12 3. The third gap: is between the specifications of quality of service and the actual service
13 that is delivered. The best quality of service may not be guaranteed, even if there is a
14 blueprint for accomplishing excellent services. According to Parasuraman *et al.* (1985),
15 service providers play a significant role in service quality as their performance may not
16 always adhere consistently to the formal specifications of service quality. This causes a
17 gap between the specifications of service quality and its delivery.
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27 4. The fourth gap: is between the delivery of service and the communications to customers
28 about service. Since the advertising and other media by an organisation may impact the
29 expectations of customers, the organisation must not promise more that it can provide.
30 Parasuraman *et al.* (1985) argued that when the service delivered to the customer is less
31 than the organisation promised, it has a harmful impact on consumers because the
32 promises increase the initial expectations and then quality perception is lower by
33 comparison. Furthermore, an organisation should also keep customers informed and
34 updated of special efforts to guarantee quality that are not visible to consumers, because
35 the external media or communications may impact both the expectations of customers
36 toward the service and the perceptions of customers of the service delivered.
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51 5. The fifth gap: is between the customers' expectations and perceptions of service quality.
52 According to Parasuraman *et al.* (1985), the point of service quality is to meet or exceed
53 a customer's expectations. They argued that the rating of the service quality is as good or
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3 bad as defined by customers, which means customers compare between the service
4 performance experienced and what was expected. To conclude, “The quality that a
5 consumer perceives in a service is a function of the magnitude and direction of the gap
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9 between expected service and perceived service” (Parasuraman *et al.*, 1985 p. 46).

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14 Wetzels (1998, p.21) described this expectation of the concept of service quality as an
15 “extremely user-based perspective” which matches with the concept of quality and orientations
16 of Garvin (1984, 1988). Accordingly, from the point of view of customers, quality of service is
17 often explained as the difference between the expectation and perception of services. Although
18 quality of service is difficult to control due to the intangibility, heterogeneity, perishability and
19 simultaneity of services, good perceived service quality (or “right” quality in Edvardsson’s
20 (1994) term) might be accomplished if customer expectations are met, whereas poor perceived
21 service quality happens if the expectations of the customer are not met (Parasuraman *et al.*, 1985;
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Zeithaml *et al.*, 1988, 1990).

In other words, customer service and perceived quality of service are assessed and measured by comparing the expectations customers had before they used the service with their perceptions of the actual service (Parasuraman *et al.*, 1985, 1988; Wetzels, 1998; Zeithaml and Bitner, 2006; Zeithaml *et al.*, 1988, 1990). When the service perceived equals the service expected, the service customer’s expectations have indeed been met. In this particular situation, quality of service is satisfactory to that specific service customer (Cândido, 2001; Grönroos, 1990; Parasuraman *et al.*, 1985; Wetzels, 1998; Zeithaml *et al.*, 1988). Moreover, when service perceived is better than service expected, the provided service quality exceeds what the customer expected and the customer would be satisfied. Finally, when the service expected exceeds service perceived, then the expectations of quality of service are not met and the actual quality of service provided is

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3 perceived as disagreeable. This approach to measuring service quality is operationalized in the
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5 widely used SERVQUAL instrument (Parasuraman *et al.*, 1985) as discussed next.
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8 9 **Measuring Service Quality**

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11 Quality in service industries cannot be objectively measured as it can in manufactured goods and
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13 therefore it remains a relatively elusive and abstract concept (Zeithaml *et al.*, 1990; Akbaba,
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15 2006, Khan and Shaikh, 2011). The assessment of quality performance for services is more
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17 complex than for products because of their inherent nature of heterogeneity, inseparability of
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19 production and consumption, perishability and intangibility (Frochot and Hughes, 2000; Roy *et*
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21 *al.*, 2015). Quality of service was defined by Parasuraman *et al.* (1988) in terms of the gap
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23 between the expectations of customers of a service and their perceptions of the actual service
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25 provision by an organisation. They developed the SERVQUAL scale, a survey instrument which
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27 is intended to measure the service quality in any kind of service organisation based on five
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29 dimensions, namely: Reliability, Tangibles, Assurance, Responsiveness and Empathy
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31 (Parasuraman *et al.*, 1988). For a recent review of SERVQUAL measurement, see also Roy *et al.*
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33 (2015).
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41 Initially, Parasuraman *et al.* (1985) classified ten key factors to measure quality of service,
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43 which are described as quality of service dimensions, as follows:
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- 45 • Reliability: the firm should perform the services to its customers at the exact time.
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47 Moreover, the firm should abide by its promises to customers, for instance, accuracy in
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49 billing and keeping records accurately.
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- 51 • Responsiveness: the employees of the firm should be able to perform the full service
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53 according to the plan of the firm, for instance, react to customers and understand
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55 customers' needs. Moreover, employees should answer all customer questions.
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- Competence: the employees of the firm should have ability and high skills to perform the service, for instance, knowledge and skills of the contact personnel and knowledge and skills of operational support personnel.
- Access: the customers should be able to contact the firm in various ways, for instance, by telephone, internet and fax. Waiting time impacts the service quality as well.
- Courtesy: the employees of the firm should be friendly, polite and respectful. The team who face the customers should be neat in appearance.
- Communication: keeping the customers informed and providing clear and understandable information. For instance, inform the customers how the service works, inform the customers how much the service will cost and guarantee the customers that a problem will be solved.
- Credibility: the firm should gain the credibility of the customers, specifically in cost, time, delivery, dates etc.; this will elevate the reputation of the firm with their customers and also will lead the firm to gain new customers.
- Security: the firm should be able to keep customer information, including financial accounts, confidentially.
- Understanding: the company should be able to understand the customer's needs and learn how to provide these needs to its customers.
- Tangibles: the company should provide all kind of services and materials such as equipment and instruments.

According to Parasuraman *et al.* (1985, 1988) and Zeithaml *et al.* (1990), the process of development of their SERVQUAL scale started with generation of a large number of items representing different aspects of the ten quality of service dimensions. Each item was divided into two statements, firstly, to measure expectations about companies overall within a service

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3 type being examined and secondly, to measure perceptions about the specific company whose
4 quality of service was being assessed. Analysis of extensive data from five groups of
5 respondents produced a highly reliable and valid measure of quality of service. Factor analysis
6 resulted in grouping the items into five distinct dimensions: Tangibles, Reliability,
7 Responsiveness, Assurance and Empathy. Tangibles, Reliability and Responsiveness correspond
8 to three of the original 10 dimensions. Assurance was formed by the consolidation of
9 competence, courtesy, credibility and security from the initial 10-dimensions structure, while
10 access, communication and understanding were combined to form the Empathy dimension.
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23 The instrument's designers suggested that "when expected service (ES) is greater than the
24 perceived service (PS), perceived quality is less than satisfactory and will tend towards totally
25 unacceptable quality, with an increased discrepancy between ES and PS; when ES equals PS,
26 perceived quality is satisfactory; when ES is lower than PS, perceived quality is more than
27 satisfactory and will tend toward ideal quality, with increased discrepancy between ES and PS"
28 (Parasuraman *et al.*, 1988, p. 48-49). This quotation implies that the scale was developed to
29 measure how satisfied the customer is with perceived quality of service based on unacceptable to
30 ideal, rather than the level of quality of service itself, from low to high (Augustyn and Seakhwa-
31 King, 2005).
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45 **Criticism of SERVQUAL**

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47 SERVQUAL has attracted criticism on various grounds. For example, it is noted that the
48 SERVQUAL scale was based on defining quality of service as meeting or exceeding customer
49 expectations (Parasuraman *et al.*, 1985), but defining quality in this way is the most complex
50 definition of quality and hence, the most difficult to measure (Reeves and Bednar, 1995). A
51 major concern with the use of SERVQUAL is regarding whether expectations and perceptions
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3 should be measured separately, before and after experience of the service, respectively, or
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5 whether it is acceptable to collect both sets of data at a single administration. From a practical
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7 point of view, Carman (1990) argued that it is not easy to expect that a customer would fill in the
8
9 questionnaire on expectations when they visit a service provider and afterwards fill in the
10
11 questionnaire on perceptions when they leave. In answer to this particular criticism, Parasuraman
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13 *et al.* (1991) indicated, that customers who have already recently dealt with the service can be
14
15 asked to fill in both perceptions and expectations sections at the same time. However, in
16
17 Carman's (1990) view, expectation responses obtained in this way have little value, since they
18
19 are gathered *ex post* and so are not genuine expectations but are affected by experience and
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21 memory. The authors asserted that the gap model (variance scores) offers information
22
23 encouraging the essential role of expectations in measuring quality of service as well as
24
25 demonstrating excellence in identifying weak areas. They also argued that the difference
26
27 limitations might be an issue only when the variance measure is applied as the dependent
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29 variable in a multivariate analysis.
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36 The majority of criticisms of the SERVQUAL comprise three aspects: i) the number and nature
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38 of the quality dimensions, ii) the argument that gap scores are driven by high expectation scores,
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40 and iii) reliability. Firstly, with regards to the dimensionality of the scale, authors have
41
42 challenged the 5 dimensional structure, suggesting that both the number and content of
43
44 dimensions may differ according to context. For instance, Carman (1990) discovered that
45
46 SERVQUAL was not a comprehensive, generic measure for all services. He proposed that more
47
48 replication and examination of the dimensions are required before approving it. Applying the
49
50 instrument in four different service settings, Carman (1990) argued that each service has
51
52 different dimensions. Crompton and Mackay (1989) also deemed that the dimensions would
53
54 differ for different kinds of service. Scott and Shieff (1993) suggested that the five dimensions
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3 only apply to the services in which SERVQUAL was developed. Furthermore, Finn and Lamb
4 (1991) advised that theoretical constructs should be researched in the field of an industry and the
5
6 basis of the industry considered, determining if the label comprehensive is justified.
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11 Babakus and Managold (1992) identified a factor which measured quality of service in an
12 organisation. Their findings “basically produce an individual model” of service quality,
13 explaining 66.3% of the differences. They suggested some clarifications for this one-
14 dimensional structure, including the standard of the service, non-response bias and the
15 application of individual perceptions and expectations gap scales. The authors summarised that
16 the results of the five dimensions of quality of service proposed by Parasuraman *et al.* (1988) did
17 not support the expectations. Babakus and Boller (1992) suggested that the number of
18 dimensions of service quality differ depending on the industry in question. They found, for
19 example, that for utility services, perceived quality appeared to be essentially one-dimensional;
20 an overall abstraction of “quality” in which different aspects or elements are not distinguished.
21 They attributed this to the fact that basic services such as gas and electricity are delivered on a
22 continuous basis, normally without contact between customers and providers. Moreover, the
23 monopoly status of the company in this study meant an absence of competition that might have
24 affected customer awareness. In other industries, they suggested, perceived service quality may
25 be a more complex and multidimensional domain. However, the possibility that the number and
26 configuration of quality dimensions differ for different industries calls into question the
27 universal applicability of the scale. Parasuraman *et al.* (1988) proposed that the SERVQUAL
28 instrument might be “applied as necessary” to particular study circumstances. In relation to this
29 criticism, they proposed that essentially, every single researcher who tries to use SERVQUAL
30 should adapt it according to the situation. Although no-one has raised a problem of the meaning
31 of the label “generic” SERVQUAL, a fundamental problem in the research of those who criticise
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3 this label is that many adaptations to the survey elements were necessary and the number of
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5 dimensions and the configuration of the dimensions were not similar.
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10 Application of the SERVQUAL scale regularly yields inconsistent results in terms of the number
11
12 and the sort of quality dimensions, depending on the service sector investigated (Augustyn and
13
14 Seakhoa-King, 2005). In a business-to-business context, Jayawardhena (2004) found that
15
16 “SERVQUAL’s five dimensions could be reduced to a smaller number”, and claimed that “other
17
18 research is needed to determine if the SERVQUAL scale can be reduced to a more parsimonious
19
20 structure” (Jayawardhena, 2004).
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25 However, several authors (Crompton and Mackay, 1989; Luk *et al.*, 1993; Patton *et al.*, 1994;
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27 Johns and Tyas, 1996; Suh *et al.*, 1997; Ekinci and Riley, 1998; Frochot and Hughes, 2000;
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29 O’Neill *et al.*, 2000; Fu and Parks, 2001; O’Neill and Palmer, 2001; Atilgan *et al.*, 2003; Getty
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31 and Getty, 2003; Juwaheer and Ross, 2003; Juwaheer, 2004; Nadiri and Hussain, 2005; Kvist
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33 and Klefsjö, 2006; Marković, 2006; Ramsaran-Fowdar, 2007; Hsieh *et al.*, 2008; Narayan *et al.*,
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35 2008; Wang *et al.*, 2008; Filiz, 2010; Qin *et al.*, 2010; Bastič and Gojčič, 2012; Han and Hyun,
36
37 2015) measured quality in service industries using either the service quality (SERVQUAL) scale
38
39 in its original form (as developed by Parasuraman *et al.*, 1988), or modified the SERVQUAL to
40
41 reflect some of the unique characteristics of the context of the investigated study or to avoid
42
43 some of the inherent weaknesses of the original SERVQUAL scale (Augustyn and Seakhoa-
44
45 King, 2005) (See Table 2).
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52 Insert Table 2 here.
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3 Because of the arguments about the number of dimensions in the SERVQUAL scale, several
4 authors have suggested alternative or additional dimensions to capture some of the unique
5 features of the service sector investigated. As a result, many other modified scales to measure
6 quality of service in different context have emerged. The proliferation of quality measurement
7 scales may be due to a lack of a standardized operational definition of quality of service
8 (Augustyn and Seakhoa-King, 2004). Difficulty of definition is a particular problem in the hotel
9 industry, where other attributes, such as short distribution channel, imprecise standards, face to
10 face interaction and information exchange, reliability and consistency claimed have been
11 identified and further complicate the task of measuring the quality of service performance
12 (Akbaba, 2006).
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27 Another criticism related to the instrument concerns the basic notion of operationalizing service
28 quality in terms of the difference between expectation and perceptions, since it is claimed that
29 the gap scores are essentially driven by one component. The notion of applying the difference
30 between expectations and perceptions is rejected by Carman (1990), from the theoretical point of
31 view, because expectations differ among settings. He cites as an example the differing
32 expectations of an expensive restaurant, compared to a pizza parlour. Where expectations are
33 lower, the customer is likely to be more easily satisfied, so the gap between expectation and
34 perception scores is likely to be smaller. This means perceptions of quality are affected by
35 expectation (Carman, 1990). Carman (1990) also raised the possibility that if expectations and
36 perceptions are measured on separate occasions, the cognitive structure of the respondent may
37 differ from one administration to another.
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54 Babakus and Boller (1992) recognised that applying a difference score to quality of service
55 measurement is “intuitively appealing”. However, they expressed doubts whether the difference
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3 scores offer any additional information beyond that already contained in the perception elements
4 of the SERVQUAL. They emphasized that the dominant contributor to the gap was the
5 perceptions score because there is a common tendency to rate expectations high. Peter *et al.*
6 (1993) and Brown *et al.* (1993) were also interested in the problem of using difference scores.
7 They argued that difference scores should not be applied in customer studies because problems
8 may arise regarding reliability, discriminant validity, false relations and difference limitations. In
9 terms of discriminant validity, the authors suggested that difference scores are often less reliable
10 than non-separation scores (performance-only). Moreover, difference limitation was considered
11 as an issue with the use of two score elements in SERVQUAL.
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25 Even if the validity of using difference scores is accepted, Babakus and Boller (1992) doubted
26 the reliability of individual items, and the discriminant and convergent validity of the
27 SERVQUAL elements. Their reason for criticising these elements is that the factor loadings
28 reported by Parasuraman *et al.* (1985; 1988) were lower than desirable and less than half of item
29 variances, in most cases, was explained by the underlying factor. Carman (1990) also raised
30 doubts about reliability and suggested that items may need to be added to or removed from
31 dimension sub-scales according to context, and that all items be subject to reliability checks.
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43 Brown *et al.* (1993) questioned the meaning of gaps, because different scores may show the
44 same quantitative gap scores (e.g. $4-7=-3$; $2-5=-3$). Some researchers argued that care needs to be
45 taken when applying quantitative data and follow-up study should be of a qualitative nature
46 (Mels *et al.*, 1997; Taylor *et al.*, 1993). In the past decades, the questions about SERVQUAL as
47 a measure of the theoretical construct of quality of service have increased. Nevertheless, despite
48 the many deficiencies of the SERVQUAL model, as a universal measure of quality of service, it
49 is still widely applied these days.
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5 The debate on whether perceptions minus expectations or only perceptions measures quality of
6 service dominated in the services marketing literature in the 1990s (Cronin Jr and Taylor, 1992;
7 Cronin Jr and Taylor, 1994; Parasuraman *et al.*, 1994). There is evidence that the perceptions
8 only measure is more psychometrically robust (Cronin Jr and Taylor, 1992; Dabholkar *et al.*,
9 2000). A few scholars have argued that perceptions are the measure of quality of service that
10 best explains the construct. They suggest that since perceptions include an assessment of
11 expectations in their calculation, the use of both perceptions and expectations in quality of
12 service calculations is superfluous. Hence, the perceptions-only subset of the SERVQUAL
13 battery has been widely used in business research (Jayawardhena, 2004).
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27 A variety of rationales have been given for measuring performance only. Respondents may feel
28 bored if asked to complete SERVQUAL because it has two sections and is very long. Two
29 responses are needed for each question: a report of expectations of service quality and a
30 perception of the actual performance of service quality. It has been suggested that expectations
31 might not be present or be clear enough in respondents' minds to act as a benchmark against
32 which perceptions are evaluated (Iacobucci *et al.*, 1994). Hence, respondents have a tendency to
33 tick "strongly agree" for all aspects. It is also argued that expectations are established only as a
34 result of previous service interactions (Kahneman and Miller, 1986). Carman suggested that
35 expectations might not be particularly significant in the establishment of customers'
36 development of service quality impressions (Carman, 1990). Bitner (1990) hypothesized that
37 quality of service is essentially an attitude rather than a disconfirmation between customer
38 expectations and perceptions. empirical study confirmed this hypothesis by demonstrating that
39 quality of service is strongly affected by performance and the effect of disconfirmation between
40 customer expectations and perceptions is temporary and weak (Bolton *et al.*, 2007).
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5 Cronin and Taylor (1992) investigated the advantage of measuring quality of service simply in
6
7 terms of customer perceptions of service provider performance. The authors accepted the five-
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9 dimensional structure of quality of service and 22 individual performance scale items that made
10
11 up the SERVQUAL scale (Parasuraman *et al.*, 1988). That is, they originally used the same 22
12
13 performance items defined by Parasuraman and his colleagues (1988) in their study of suitable
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15 measurement tools of quality of service. They compared four alternative quality of service
16
17 models including the SERVQUAL model in the four industries of banking, pest control, dry
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19 cleaning and fast food. The findings demonstrated that the performance-only (SERVPERF)
20
21 model accomplished the best fit in the four industries in contrast to the (P-E) SERVQUAL.
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23 Hence, SERVPERF explained more of the variance in quality of service than did SERVQUAL.
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25 Furthermore, Cronin and Taylor (1992) concluded that administering only the performance-
26
27 based scale (SERVPERF) is more efficient in terms of the number of items, validity and
28
29 reliability issues. According to Hope and Muhlemann (1997), this approach of performance-only
30
31 (SERVPERF) overcomes some of the problems raised by SERVQUAL, namely: raising
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33 expectations, administration of the two parts of the questionnaire, and the statistical and
34
35 measurement problems that emerge from analysing and explaining various scores. Using a single
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37 measure of service performance is seen to circumvent all of these issues (Hope and Mühlemann,
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43 1997).

44 45 46 47 **Sources of Quality Failure: The FTU Framework**

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49 In order to manage the process of delivering service effectively, an organisation that supplies
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51 service must be aware of any inadequacy of quality of service. A framework for service delivery
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53 which is suitable and helpful in regard to services, is the FTU (Facilitation, Transformation and
54
55 Usage) framework. Vargo and Lusch's (2004) interpretation of the FTU framework enhances
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3 service-dominant logic (SDL) through the provision of an implementing perspective in which
4 customer co-production is explicitly considered. From this perspective the framework
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6
7 categorises three levels of service delivery. The first level of the FTU framework is facilitation,
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9
10 which is concerned with a conducive environment and contains all organisation resources,
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12 employees, know-how and other facilities that should be visible and available before delivering
13
14 the service (Möller, 2008) and constitute the basis of any value creation (Fließ and
15
16 Kleinaltenkamp, 2004). These include organisation resources, for instance, human resource
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18 management and availability of the data needed in order to succeed in delivering service, and
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20 customer resources, including customers' material goods, rights and nominal goods (Bitner *et al.*,
21
22 1994). According to SDL, organisational and customer resources can be segmented into operand
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24 resources "on which an operation or act is performed to produce an effect" and operant resources,
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27 which are vital resources that are used to act on operand resources and other operant resources
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30 (Vargo and Lusch, 2004, p. 2).
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35 SDL views usage of operant resources in relation to competencies (knowledge and skills) that
36
37 are critical for accomplishing competitive advantages (Lusch *et al.*, 2007). Consequently, service
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39 employees and customers who are capable of acting on other operant and/or operand resources
40
41 as cooperative co-partners, who co-create value within the organisation (Lusch *et al.*, 2007), are
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43 necessary operant resources for delivering services. Service failure might happen in the first
44
45 stage of FTU, facilitation, due to insufficient competencies of both the organisation and
46
47 customer (Fließ and Kleinaltenkamp, 2004). Hence, this article will focus on "Quality control
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49 initiatives" (QCIs), which will be discussed later. QCIs are measures intended to manage
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51 customer and organisation resources in a manner leading to delivery of high service quality.
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3 The second stage of service delivery is the transformation level, in which organisation resources
4 are exchanged with the resources of the customer that are incorporated into the delivery of
5 service for the purpose of transformation (Möller, 2008). This level includes knowledge
6 implementation which, according to SDL, shapes delivery of service (Möller, 2008). Here,
7 service employees and customers function as resource integrators (Lusch and Vargo, 2006).
8
9 While the service organisation usually has the role of the main integrator coordinating the
10 delivery of service, the customers effectively take part in the transformation process by
11 transferring their resources to the organisation and sharing in the creation of a main offering
12 (Lusch *et al.*, 2007). Customers act as co-producers in the delivery of service. Hence, the service
13 provider has to deal with the customers to coordinate and integrate them into the transformation
14 process (Möller, 2008). However, the process of integration and coproduction might depend on
15 which particular service employees and/or customers are involved (Hsieh *et al.*, 2004). Service
16 failures might happen because service employees are not capable of integrating themselves
17 and/or customer resources into the process of transformation. They might also happen because
18 the quality of customers' coproduction is not enough (Sichtmann *et al.*, 2011).
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38 The last level of the FTU framework is usage. Usage or delivery of a service begins when
39 “customer resources exit the company sphere and customers or their belongings are no longer
40 integrated into the transformation process” (Möller, 2008, p. 204). At this stage, the delivery of
41 service is achieved, and the customer makes an independent decision towards the usage of the
42 service (Möller, 2008). Notice that because the process of service is achieved, the service
43 provider is unable to control service quality (process) at the usage stage; in fact at this stage
44 “there is no mechanism for preventing mistakes until after they occur” (Snell, 1992). Hence,
45 QCIs that are intended to guarantee quality of service are not effective anymore; instead, the
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3 focus is on strategies of service recovery, which are applicable in the situation of failure of
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5 service (Sichtmann *et al.*, 2011).
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10 For each of these three stages of service delivery, Vargo and Lusch (2004) offer corresponding
11
12 perspectives of customer integration and co-production linked to resources, decisions and value.
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14 The FTU framework (see Table 3) is based on the distinction between direct and indirect service
15
16 delivery (Vargo and Lusch, 2004).
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21 Insert Table 3 here.
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25 From the resources perspective, the FTU framework discloses the moment of change from
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27 organisations to customers as prime resource integrators. It further aids in determining whether
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29 the service organisation or the customer encourages the process of direct or indirect service
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31 delivery. Moreover, the framework enables identification of situations in which customers act
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33 essentially as operant resources and those in which they act as operand resources (Constantin
34
35 and Lusch, 1994). From the decision perspective, the framework illustrates the interdependency
36
37 of organisations and customers in decision-making and demonstrates how this interdependency
38
39 differs by stage of service delivery. Finally, from the value perspective, use of the framework
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41 facilitates determination of when customers are co-producers of value. Moreover, the stage of
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43 service delivery that displays real value, as opposed to those that displays only possible value is
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45 highlighted.
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51 From the FTU framework, the possibility of identifying potential antecedents or determinants of
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53 quality at each stage of service delivery can be inferred, including aspects of the service
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55 environment, quality controls operated by the service organisation, and consequent behaviours,
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3 including customer co-production. The nature of these factors, and their role in the creation of
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5 quality, will be explored in the next section.
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9 10 **Determinants of Service Quality**

11 In the light of the service quality issues discussed above, and particularly the FTU framework
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13 this section lays the theoretical foundation for the identification of conditions and behaviours
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15 their contribute to determine service quality.
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19 20 21 **The Service Environment**

22 There are various aspects of the environment that can affect service quality. As indicated
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24 previously, for example, Parasuraman *et al.* (1988) identified “Tangibles” as an influencing
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26 factor in their SERVQUAL model. “Tangibles” are physical features of the location where the
27
28 service is provided, which are observable by the customer. They can be considered external to
29
30 the service itself. Service provision may also be affected by the wider environment, e.g. the
31
32 economic situation, or consumer legislation. This article will focus on two different
33
34 environmental factors, namely, task characteristics, including procedural knowledge and
35
36 performance documentation, and organisational commitment. Both these elements are associated
37
38 with the internal environment, and are of interest here specifically in relation to their effect on
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40 the use of specific types of controls.
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47 *Task Characteristics*

48 Task characteristics are performed by marketing personnel, and affect the use of specific kinds
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50 of marketing controls. Task characteristics refer to different dimensions such as attributes of a
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52 specific position within the firm or description. The two main characteristics tested in this
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3 research are, as indicated above, procedural knowledge and the availability of documentation
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5 regarding job performance (Ouchi, 1979; Jaworski and MacInnis, 1989).
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10 Procedural knowledge refers to “the degree to which managers can specify clearly the activities
11
12 an individual must perform to achieve a desired outcome” (Jaworski and MacInnis, 1989).
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14 Knowledge should be clearer in situations in which the relevant task is highly routinized. For
15
16 instance, salespersons might have developed clear written targets for sales performance (Weitz
17
18 *et al.*, 1986; Leigh and McGraw, 1989) and might be able to illustrate these actions in writing to
19
20 new salespersons. In contrast, a marketing director who requests a subordinate to develop a new
21
22 environmental scanning system might have little knowledge of what the marketing employee
23
24 needs to do in order to develop such a system. Procedural knowledge is likely to differ from
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26 position to position, task to task and organisation to organisation (Peterson, 1984).
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32 The second task characteristic examined is performance documentation, “Performance
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34 documentation reflects the extent to which marketing superiors have available forms of
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36 documentation to assess a marketing employee’s performance (similar in spirit to Ouchi’s
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38 “measurability” variable)” (Jaworski and MacInnis, 1989). Such documentation is anticipated to
39
40 be most common in situations in which the organisation can simply measure the contributions of
41
42 individual employees. Hence, documentation of performance is more likely to be evident for low
43
44 level marketing research positions than for senior market planners (Ouchi, 1979).
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48 49 50 *Organisational Commitment (OC)*

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52 The second aspect of the environment investigated in this paper is organisational commitment.
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54 Commitment has become an important notion in organisational studies and in understanding
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56 workers' attitudes and behaviours in the workplace. As such behaviours and attitudes have been
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3 investigated in different ways; commitment has been defined and measured from different
4 perspectives (Becker, 1960; Meyer and Herscovitch, 2001; Mowday *et al.*, 1979). In order to
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6
7 define commitment it is very important to clarify the long-standing distinction between
8
9
10 attitudinal commitment and behavioural commitment (Meyer and Allen, 1997). Mowday *et al.*
11
12 (1982) explain that attitudinal commitment focuses on the process by which people come to
13
14 think about their relationship with the organisation. In many ways it can be thought of as a mind
15
16 set in which individuals consider the extent to which their own values and goals are congruent
17
18 with those of the organisation. Meanwhile behavioural commitment relates to the process by
19
20 which individuals become locked into a certain organisation and how they deal with this
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22 problem. Salancik (1977, p.62) defines commitment as “a state of being in which individual
23
24 becomes bound by his action and through his actions to beliefs that sustain the activities of his
25
26 own involvement”. Meyer and Herscovitch (2001, p.301) define commitment as a force that
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28 binds an individual to a course of action of relevance to one or more targets. As such,
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30 commitment is distinguishable from exchange-based forms of motivation and from target-
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32 relevant attitudes, and can influence behaviour even in the absence of extrinsic motivation or
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34 positive attitude.
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41 O'Reilly and Chatman (1986, p.493) define commitment as the psychological attachment felt by
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43 the person for organisations. It reflects the degree to which the individual internalizes or adopts
44
45 characteristics or perspectives of the organisation. They argue that commitment is a multi-
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47 dimensional construct consisting of identification, compliance and internalisation. *Identification*
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49 occurs when a person accepts influence to set up or maintain a satisfying relationship, based on a
50
51 need for affiliation. *Compliance* occurs when attitudes and behaviours are adopted as
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53 involvement to gain specific benefits or rewards. Finally, *internalisation* is involvement that
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55 occurs based on the convergence between the individual's attitude and behaviours and
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3 organisational objectives and values. Moreover, it has been argued that compliance is not only
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5 different from the other two dimensions (internalisation and identification), but also different in
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7 its relation with turnover. Although organisational commitment is correlated negatively to
8
9 turnover (Meyer and Allen, 1997), it has been found that compliance is correlated positively to
10
11 turnover (O'Reilly and Chatman, 1986). Tayyab (2006) suggests that the items measuring
12
13 compliance could include day-to-day pressures for performance, not pressure to remain in the
14
15 organisation. Compliance in O'Reilly and Chatman's (1986) measurement assesses commitment
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17 to perform rather than measuring commitment to remain. Thus, this compliance commitment is
18
19 similar in conceptualisation to Meyer and Allen's continuance commitment.
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25 High quality services are the result of employee dedication and commitment. Organisational
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27 commitment is the combination of the employees' conviction in the objectives and aims of the
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29 organisation along with readiness to contribute fully to those goals. With organisational
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31 commitment, employees relate to the principles and aims of the organisation and endeavour to
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33 preserve their place.
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38 **Controls**

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40 Overall, control is recognised as an essential management activity, but historically the problem
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42 of control has received less attention in the marketing management literature. Likewise, despite
43
44 the increase of strategic marketing, few scholars have undertaken past market planning and
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46 portfolio assessment to consider in detail the control of strategy. Hence, the increase of
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48 knowledge in the fields of analysis and planning goes far beyond the increase of control
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50 knowledge. Due to this inequity, any positive impact that may happen as an outcome of
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52 successful analysis or planning might be imbalanced by a misleading control process.
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3 The control theory is a bridge for completing the FTU framework by suggesting QCIs for the
4 facilitation and transformation stages of service provision. Scholars have used it widely as a
5 conceptual model in some disciplines such as human resource management, for instance, (Turner
6 and Makhija, 2006), and personal selling, for instance (Bello and Gilliland, 1997; Baldauf, 2005).
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8 Generally, “control” refers to “any process that helps align the actions of individuals to ensure a
9 consistent high service quality” (Snell, 1992, p. 293). Controls are here referred to as quality
10 control initiatives (QCIs), which Sichtmann *et al.* (2011) defined as “specific service provider
11 initiates directive aimed or influencing both employees and customers to perform service
12 delivery in ways that positively affect the quality of the service outcome” (p2). Two types of
13 control mechanisms can be identified within marketing units: formal and informal controls.
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27 *Formal controls*

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29 Formal controls are identified as “written, management-initiated mechanisms that influence the
30 probability that employees or groups will behave in ways that support the stated marketing
31 objectives” (Jaworski, 1988). Formal controls are classified into three mechanisms: input,
32 process and output. These formal controls are differentiated from each other by the timing of
33 management intervention, for instance, input to output. In order to assist and ensure that
34 employees are achieving desired outcomes, management may manipulate inputs (for instance
35 training programmes) the process (for instance, standard operating procedures), or outputs (for
36 instance, performance standards). Input controls are assessable actions taken by the organisation
37 before implementing an action. Common input controls include selection criteria, recruitment
38 and training programmes, manpower deployment, strategic plans and other resource allocation
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3 A number of input controls reflect the idea of employee-environment fit. As Schneider notes,
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5 there is a distinction between the organisation itself and the particular job tasks expected of an
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7 employee (Schneider *et al.*, 1997). Accordingly, overall, prior approaches to employee-
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9 environment fit can be divided into two categories: (A) fit between the employee and the
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11 particular organisation and (B) fit between the employee and the tasks associated with a specific
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13 job. The second category of fit is usually known as person-job (P-J) fit. On the basis of a P-J fit
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15 mechanism, those service employees who have a higher degree of customer orientation will
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17 express higher levels of job performance (Super, 1953; Edwards, 1999). In contexts in which the
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19 primary task is the serving of customer needs, customer-orientated employees fit the service
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21 setting better than employees who have lower customer orientation because they are predisposed
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23 to enjoy the work of serving customers. As a result, service employees who have higher degrees
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25 of customer orientation will be more satisfied with their jobs than the employees who have less
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27 customer orientation (Donavan *et al.*, 2004). Scholars have investigated the possibility of a
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29 relationship between job performance and customer orientation (Hoffman and Ingram, 1991;
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31 1992; Pettijohn *et al.*, 2007). Increasing the levels of satisfaction produces higher levels of
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33 customer orientation. It is been argued that as a characteristic of the employee, dispositional
34
35 customer orientation will lead to job performance, not vice versa. That is, a customer-oriented
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37 service employee is a more natural fit in a service job and, as a consequence, will experience
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39 better job performance. The direction of causality is a key problem because of the recruiting
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41 implications for services managers. If customer orientation is a result of job performance, less
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43 emphasis can be placed on identifying customer-oriented candidates. However, if the causality is
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45 reversed, organisations should devote effort to hiring employees who possess a customer-
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47 oriented personality and/or training employees to adopt a customer-oriented approach.
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3 Process control is exercised when the organisation tries to impact the means to achieve desired
4 ends. It therefore centres on assessing an individual in relation to the means, behaviour, or
5 activities that are thought to lead to a given result (Ouchi, 1979). It differs from output control in
6 that the focus is on behaviour and/or activities rather than the end outcomes. In regard to
7 “complete” process control, management holds the employee responsible for following the
8 prearranged process but it does not hold the individual responsible for the result. If management
9 informs a sales representative to follow certain prearranged procedures for new market
10 development, and it holds the individual responsible for following the procedures, but not for the
11 extent of new business generated, in this case “complete” process control is exercised. Output
12 control, in contrast, is exercised when a given individual is assessed in relation to the outcome of
13 his or her behaviour relative to set standards of performance (Merchant, 1985). Output control
14 means that behaviours are influenced by defined targets and rewards. Behaviour that is
15 motivated by attaining specific performance targets is an indication that outcome control is
16 operating (Choudhury and Sabherwal, 2003).
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36 There is an argument about the relationship between the structure of the organisation and
37 process/behaviour. A number of scholars support the view that organisational structure
38 represents a control mechanism. Nevertheless, this view is not shared by everyone (Ouchi, 1979;
39 Flamholtz *et al.*, 1985). For instance, Flamholtz *et al.*, (1985) argue that, “organisation structure
40 has significant implications for controls, but is still not a control mechanism per se” (Flamholtz
41 *et al.*, 1985). Ouchi (1979) considered organisational structure as vertical and horizontal
42 integration, centralization and formalization. In contrast he considered the control system as a
43 process of monitoring, comparing results with standards, rewarding and adjusting strategy. The
44 problem with Ouchi’s categorization is that although structure is distinct from traditional
45 management controls, for example, output monitoring, it still represents a control mechanism in
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3 so far as it directs, impacts and shapes individual and group behaviour. “Since formal control
4 consists of efforts by the firm to impact the behaviour of individuals, organisation structure is,
5 by definition a control mechanism” (Jaworski, 1988). This categorization does not mean
6 structure is part of the traditional management output system, but that it is an additional control
7 mechanism present in firms.
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13 14 15 16 ***Informal Controls*** 17

18 Informal controls are “unwritten, typically worker-initiated mechanisms designed to influence
19 behaviour” (Jaworski 1988). Informal control includes three mechanisms, self, social or
20 professional and cultural, the three mechanisms referring to “the level of aggregation (i.e., self to
21 small group to large social unit)” (Jaworski, 1988, p. 27).
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29 With regard to self-control, for instance, Dalton and Hopwood suggested that the personal
30 objectives of individuals influence people and they monitor their achievement and control
31 behaviour to keep it on the right track (Dalton and Lawrence, 1971; Hopwood, 1973). Behaviour
32 that is motivated by self-set goals, self-monitoring, and self-rewarding is an indication that self
33 control is operating (Kirsch, 1996; Kirsch *et al.*, 2002). It is important to bear in mind that self-
34 control should not be equated with no control (Lawler, 1976). Rather, although evidence is
35 mixed, self-control may avoid many of the problems associated with traditional management
36 controls (Lawler, 1976). Lawler (1976) concluded that self-control may be related to positive
37 managerial outcomes such as satisfaction, although other managerial outcomes, for instance,
38 performance might suffer (Miner, 1975). Also Kerr and Slocum concluded that while self-
39 control has been successful, external incentives, for example other forms of control, are usually
40 necessary for the required behaviour to be performed (Kerr and Slocum, 1981).
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3 The second category of informal control is variously described as "social", "small group"
4 (Dalton and Lawrence, 1971), "clan" (Ouchi, 1979), or "professional" (Waterhouse and Tiessen,
5 1978) control. Same behaviour that is influenced by shared norms, values, and a common vision,
6 and reflects attempts to be "regular" or accepted members of a group by behaving in a manner
7 that is cooperative, collegial, and consistent with group expectations, can be taken as evidence of
8 clan control (Kirsch *et al.*, 2002). Thus, the mere existence of shared norms, values, vision, or
9 agreed-upon behaviours does not indicate clan control; however, when actual behaviour is
10 influenced by those shared norms, values, vision, or agreed-upon behaviours, clan control is
11 operating. In the context of marketing, work units establish certain standards (norms), monitor
12 compliance and take action when deviations happen. Social control might be defined more
13 formally as the prevailing social views and patterns of interpersonal interactions within a
14 subgroup in the organisation. This form of control comes from the absorption of values and a
15 sense of mutual obligation towards some common targets referring to established performance
16 norms. When deviations happen, for instance, a performance standard is infringed, the group
17 will initially try to get the behaviour back on the normal track by hidden forms of control such as
18 hinting, humour or kidding (Dalton and Lawrence, 1971). Nevertheless, when the norms are
19 frequently infringed, ostracism is likely. In a marketing unit, social control will probably develop
20 in different subunits in the marketing function, for example, marketing research, sales and
21 advertising. For instance, salespersons may establish norms for expenses, volume of sales
22 ceilings, or informal typing dates for paperwork. Once the norms are infringed, the group exerts
23 subtle pressure on the "deviant" group member (Jaworski, 1988).
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52 The third category of informal control is culture control. Culture control involves complete
53 segmentation or organisation (Wilkins and Ouchi, 1983). Culture is defined as "the broader
54 values and normative patterns that guide worker behaviour within the entire organisation"
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3 (Ouchi, 1979, p. 96). Culture has been studied as a structural variable and analogy. Some
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5 researchers pointed out that the organisational culture will have important influences on
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7 marketing performance (Parasuraman and Deshpande, 1984; Cherian and Deshpande, 1985;
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9 Deshpande and Parasuraman, 1986; Deshpande and Webster Jr, 1989). Cultural control can be
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11 achieved by the slow accumulation of stories, legends and norms of social interaction (Meyer
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13 and Rowan, 1977; Smith and Steadman, 1981). When an individual has internalized the goals of
14
15 the company, the acculturation time is completed (Ouchi, 1979). Cultural control is seen to be
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17 the dominant control criterion in management positions demanding non-routine, non-
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19 programmatic decisions. For instance, organisations that provide customized services might find
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21 it more useful to rely on professional standards and group obligation more than "objective"
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23 performance indicators or formal operating procedures (Mills, 1985).
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30 Surveys of work values in the past decades indicate that today's workforce seems to value more
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32 freedom on the job and to desire more opportunity to participate in the decision making process
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34 (Hackman and Suttle 1977; O'Toole and Meier, 1999). This emerging need for active
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36 involvement and increased responsibility may be fruitfully channelled in pursuit of
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38 organisational objectives.
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43 The growth of professionalism in many occupations may be a potential mechanism of control.
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45 According to Filley *et al.* (1979), professionals hold the values of autonomy, authority of
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47 expertise, high ethical standards, collegial evaluation of performance, and service to society
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49 rather than personal or organisational interests. Many of these characteristics are ascribed to
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51 individuals who are capable of and desire self-control. This may relieve the hierarchical
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53 managers from close managerial activities of feedback and frequent evaluation, leaving them to
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3 concentrate instead on promoting goal congruence between the professionals and the
4 organisation (Filley *et al.*, 1976; Hogg and Terry, 2014; Nahavandi *et al.*, 2014).
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9 10 **Consequences**

11 The theoretical framework provided by the FTU model and control theory suggests that the
12 application of quality control initiatives in the facilitation and transformation stages of service
13 delivery can influence employees' and customers' attitudes and behaviours. This in turn is likely
14 to influence the nature of the interaction between them, which forms an important part of the
15 way the service is provided and its quality perceived. For this reason, the following
16 consequences of QCIs in service delivery, specifically, customer co-production and customer
17 integration are investigated in this article.
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29 **Towards a Customer Co-Production and Customer-Integration Approach**

30 **Customer Co-Production**

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32 Service dominant logic proposes that customers and organisations cooperate in creating value
33 (Vargo and Lusch, 2004). Such cooperation entails co-production (Lusch and Vargo, 2006),
34 which means that the customer shares in creating the core service offering via innovation and co-
35 design (Lusch *et al.*, 2007). Organisations that reinforce the experience of customers by
36 providing opportunities to co-produce in line with customers' wishes are claimed to have a
37 competitive advantage (Lusch *et al.*, 2007). "Co-production involves the participation and
38 integration of resources in the creation of the core offering itself" (Lusch *et al.*, 2007, p. 11). The
39 resources that may be integrated into organisation processes by customers are named the
40 customer resource. These include the individuals themselves as customers, for instance, in a
41 surgery; their material property, for example, in maintenance services; their nominal goods, for
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3 example in banking services and/or individual information, for example in tax advice (Fließ and
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5 Kleinaltenkamp, 2004).
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10 The core offering created can be intangible, tangible, or both (Lusch and Vargo, 2006; Etgar,
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12 2008). Customer co-production resulting in an intangible offering has been widely considered in
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14 the domain of services (Lovelock, 1983; Bowen, 1986; Mills and Morris, 1986), where it is often
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16 referred to as customer participation, attention is also emerging to the customer's involvement in
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18 co-production of tangible offerings (Etgar, 2008), i.e. co-production of goods, is a process in
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20 which customer organisation interactions transform the organisation's resources (rather than
21
22 customer resources) into the customer's product. The emerging literature on the domain of co-
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24 production of goods is extensive, although several articles in the field of goods, nevertheless,
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26 have concentrated on particular sub-fields within the larger domain. For instance, research has
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28 examined co-design of products (Berger *et al.*, 2005), mass customization (Piller, 2004), and
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30 product co-manufacturing (Dahl and Moreau, 2007).
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36 The majority of research on customer-organisation interactions has however, been carried out in
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38 the context of services (Bendapudi and Leone, 2003), where customer participation, the
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40 customer's engagement in the creation and delivery of a service, has long been acknowledged
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42 (Lovelock, 1983; Bowen, 1986; Mills and Morris, 1986). This stream of study links customer-
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44 organisation interactions to the service domain (Bowen, 1986; Wikström, 1996). For example,
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46 Bowen argued that customer participation applied only to the services world, and not to the
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48 industrialized manufacturing world in which "customers are typically distant spectators" (Bowen,
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50 1986). However, customers can now choose to participate in the creation of many intangible and
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52 tangible goods (Sheth *et al.*, 2000; Sharma and Sheth, 2004). Thus, authors have started to
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3 conduct more research on customer organisation interactions in the domain of production of
4 goods and services (Jiménez *et al.*, 2013).
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10 The research on co-production of service is significant because, as seen earlier, service differ
11 from goods in terms of tangibility, perishability, variability and inseparability of service
12 performance and consumption. This gives an indication of the importance of co-production of
13 services and draws attention to the difficulties that might face the customers in order to be a part
14 of the core service as well as the interactions with employees or providers of the service
15 (Solomon *et al.*, 2012). It can be seen that there is confusion in the literature regarding
16 terminology, definitions, the resources involved and co-production outcomes (tangible or
17 intangible). Some scholars have tried to differentiate between types of co-production. Others
18 emphasize that despite the confusion as to whether co-production produces tangible or intangible
19 outcomes, participation in the process of service provision may lead to satisfactory outcomes
20 which would improve performance and make the customers satisfied. The following table
21 illustrates the range of terms used to discuss co-production and the differences between them.
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39 Insert Table 4 here.
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43 It is important to observe some basic distinctions between the terms (refer to table 4).
44 Empowerment is an attitude of the organisation towards customers and a willingness to view
45 them as partners, without specifying the form(s) such partnership may take. Customer
46 participation refers to customer integration with service employees in the performance of a
47 service without specifying the nature of the participation or the stage at which it occurs. In the
48 case of customization (more applicable to tangible offerings), customer participation takes the
49 form of provision of information on the basis of which providers design product features, and/or
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3 the selection of desired features, so that the product offering is flexibly tailored to meet specific
4 needs. Thus, the emphasis is on customer inputs, which are acted upon by the provider. Both co-
5 production and co-creation of value, in contrast, imply both more intensive and extensive
6 involvement of customers in the process of delivering the service (not just designing the
7 product). They imply input of resources (whether tangible or intangible) from both sides, and
8 cooperative interaction. The term value co-creation, however, places emphasis on the output of
9 the process, suggesting that the value of the product is realized only in its use by the consumer.
10 In this sense, it might be suggested that customer co-production is a means towards the co-
11 creation of value and conversely, co-creation of value is the result of co-production.
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25 Work on co-production and related terms draws our attention to the importance of the
26 customer's input in the process of the service delivery. Customer input means any type of
27 customer contribution during the service process that influences the final intangible outcome.
28 Jiménez argued that if the customer input does not directly affect the final intangible outcome
29 during its production or interactions between customers and providers, then there is no co-
30 production of services or of goods (Jiménez *et al.*, 2013). It can be said that customer co-
31 production has a positive influence on outcomes. An example of participation during the
32 production process of a tangible product may illustrate the relationship between co-production
33 and similar terms. A customer at The Quilting G (www.thequiltingg.com), a store specializing in
34 quilting, is able to select a design to make. The store then dispatches a kit to the customer and
35 the customer starts quilting. Then, the customer can return the quilt back to the store for
36 completing. The example illustrates the customization of service when the customer selects by
37 selecting product features from a catalogue. At the same time, the customer participates in
38 limited co-manufacturing by engaging in hands-on co-production before the production process
39 is finished by the store. This means the customer participates in both goods and services, which
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3 leads to a satisfactory outcome, the finished quilt, which provides value to the customer
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5 (Jiménez *et al.*, 2013).
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10 Research on consumer behaviour has restricted its attention to the stages culminating in a
11 transaction (Gardial *et al.*, 1994). Nevertheless, as the above example illustrates, and in line with
12 the idea of presumption (Kotler, 1986; Xie *et al.*, 2008), customer participation in co-production,
13 the emergent service-dominant logic, self design, customer creativity and empowerment
14 strategies in product development (Fuchs *et al.*, 2010), consumers' involvement in the value
15 chain is not restricted to their obtaining and subsequent consumption of goods and services
16 provided by organisations. Van Raaij and Pruyn (1998) suggest that in terms of services,
17 customers participate in stages that cover (1) specification or design; (2) use of input production
18 and realization (process); and (3) consumption of outcome (Van Raaij and Pruyn, 1998).
19 Participation is involved with most offerings, whether goods or services, which need some
20 activity on the customer's part to provide value. For instance, vehicles require to be driven,
21 maintained and serviced to provide the advantages desired and food items must be assorted,
22 combined, transformed and presented so that nutritional and psychosocial values can be
23 produced (Troye and Supphellen, 2012). Troye and Supphellen (2012) proved through empirical
24 evidence that self-production influences outcome evaluation positively. Manipulating self-
25 production by having participants prepare a meal using a dinner kit in a test kitchen, they found
26 that participants who assumed that they prepared the food themselves were more satisfied with
27 the quality of the meal produced than those who perceived they had invested less personal effort.
28 This supports the theory that a high level of participation would influence service performance
29 positively.
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3 Customer co-production represents a fundamental source of quality uncertainty in relation to the
4 unpredictable nature of the customer's resources and behaviour (Bateson, 2002), because the
5 contribution of customers to the delivery of service might be variable and unpredictable, which
6 can affect the effectiveness and efficiency of the process of service delivery (Kelley *et al.*, 1990)
7 and hence, the quality of the outcome. The quality of customers' coproduction depends on their
8 ability and willingness to participate in the service provision process (Lengnick-Hall, 1996). In
9 an organisation setting, the latter might differ across cultural borders (Stauss and Mang, 1999).
10 For instance, in a comparison of 11 countries across cultural borders, Schumann *et al.* (2009)
11 found important country differences in customers' willingness to coproduce in financial service
12 delivery. Certainly, it is possible "that the service cannot be fulfilled at the usual performance
13 level because the foreign customers do not maintain the role behaviour expected by the domestic
14 supplier" (Stauss and Mang, 1999; Schumann *et al.*, 2009).
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32 **Customer Integration**

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34 It was highlighted earlier that services are characterized by involvement of customers in the
35 process of service production. These production-enabling contributions of customers may take
36 the form of activities, or provision of resources (Moeller, 2008). "Customer integration" refers to
37 the organisation's use of these customer contributions in the service delivery process. The
38 quality of interactions between service providers and participants (customers) has generally been
39 conceptualised, by a number of authors, as categorised of three dimensions (albeit different).
40 Czepiel *et al.* (1985) argued that the attitude of the providers or employees, behaviours and skills
41 influence customers' evaluation of customers' service quality (Czepiel *et al.*, 1985; Edvardsson
42 *et al.*, 2014). Similarly, Bitner *et al.* (1990) establish three phases of employee-customer
43 interaction: demeanour, actions and skill. Both these typologies highlighted the significance of
44 employee attitudes and behaviours to the provision of high service quality. More recently, Brady
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3 and Cronin (2001) conceptualise interaction quality as a function of employee attitudes,
4 behaviours and expertise. While there is no doubt that study into the nature of employees'
5 attitudes, behaviours and expertise is well known and continuing, there have been calls in the
6 literature for an investigation into customer co-production and customer integration, particularly
7 in the process of delivering services (Moeller, 2008; Sichtmann *et al.*, 2011; Jiménez *et al.*,
8 2013).

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18 It should be noted that customer coproduction and customer integration are distinct (Moeller,
19 2008). Customer coproduction concentrates on the customer's co creation of value (Vargo and
20 Lusch, 2004) and, therefore, on the density and quality of customers' contribution to service
21 delivery. In contrast, customer integration is defined as "combining customer resources (persons,
22 possessions, nominal goods, and/or personal data) with the company resources in order to
23 transform customer resources" (Moeller, 2008); it refers to the organisation's role as a major
24 resource integrator (Lusch *et al.*, 2007). Particularly, customer integration is related to the
25 customer resources that are combined with organisation resources in service delivery (Moeller,
26 2008). Customer co-production of goods is different from customer participation. The concept of
27 co-production focuses, as indicated earlier, on the input of resources from both customer and
28 organisation, and interaction in the outlined creation of the core offering, i.e. some degree of
29 simultaneity. Thus it can be argued that co-production is a wider concept than co-integration.
30 The latter is seen more from a company perspective, and the consumer involvement may be little
31 more than the provision of information. Customer and company contributions are seen as
32 sequential; the customer provides resources, which the company acts on. Hence, customer
33 integration is associated with service delivery designed to transform the customer's resources
34 (Moeller, 2008). Service designs that need a higher level of customer integration are more
35 complicated to control than those with low customer integration (La *et al.*, 2005). The
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3 complexity of customer integration with service designs that ultimately lead to improved service
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5 quality is an area that warrants more research.
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9 10 **Conclusion**

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12 Delivering a high standard of services to customers is recognised as an important objective for
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14 any service provider. In order to achieve this goal, employees are encouraged perform their jobs
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16 in certain ways, comply with guidelines and in accordance with the strategy drawn by the
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18 organisation. Although service quality is difficult to define and measure, research has not
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20 stopped looking for processes, tools and business practices so as to improve service quality
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22 performance. Scholars suggest both practical tools to achieve organisational goals with respect
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24 to service delivery and offers theoretical foundations to examine the interrelationships between
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26 variables that contribute to those organisational goals. Managers should by now realise that one
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28 of the drivers that improve service quality performance is co-production. In practical terms,
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30 service managers could, for instance, inform customers where, when and how they should
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32 contribute to the service process, involving them in the service delivery. This is in line with the
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34 theory that co-production and integration improves the performance the service and would lead
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36 to the satisfaction of the end-customers.
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43 Despite the fact that it is widely accepted that service quality is an antecedent to customer
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45 satisfaction, it is surprising that this customer aspect has been largely neglected in the extant
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47 literature. As such, the role that customer co-production plays in service quality performance has
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49 been examined in this article. The paper has reviewed the current state of extant research on the
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51 topics of service quality and service delivery and explored their links to customer co-production
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53 and customer-integration. The paper's main contribution lies in (a) conceptualising the links
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55 between service quality and service delivery with customer co-production and customer
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3 integration, and (b) incorporating the FTU framework and control theory in order to develop and
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5 position the literature on service quality and delivery more comprehensively. It is hoped that this
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7 examination will enhance both theoretical and practical understanding of service quality. It
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9 would be useful to find modern tools that can help in improving service quality performance. As
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11 the nature of this paper is conceptual, future studies should develop a more quantitatively-based
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13 research model in order to effectively investigate and verify the relationships presented in this
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15 paper.
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Table 1 Classification of Quality Philosophies

Practitioners and authors	Definition	Salient Points	Level of focus
Deming	“Quality is multidimensional to produce a product and/or deliver a service that meets customer’s expectations to ensure customer satisfaction” (Deming, 1986, p.54)	Quality must be defined in terms of customer satisfaction Quality is multidimensional. There are a different degrees of quality because it is essential equated with customer satisfaction.	Two
Crosby	Conformance to requirements (Crosby, 1979, p.7)	It is necessary to define quality. We should know the requirements and translate them into measurable product or service characteristics. We must measure the characteristics to ensure the high quality of services or products.	Mixed
Feigenbaum	“The total composite product and service characteristics of marketing, engineering, manufacturing and maintenance through which the product and service in use will meet expectations of the customers” (Feigenbaum, 1983, p.7).	Quality must be defined in terms of customer satisfaction. Quality is multidimensional and must be defined comprehensively. Quality is dynamic since customers’ needs change.	Mixed
Juran	“Quality consists of those product features which meet the needs of customers and thereby provide product satisfaction” (Juran, 1988, p.2). “Quality consists of freedom from deficiencies” (Juran, 1988, p. 2).	No practical definition of quality. Quality is apparently associated with customers’ requirements and fitness suggests conformance to measurable product or service characteristics.	Mixed
Ishikawa	“We engage in quality control in order to manufacture products with the quality which can satisfy the requirements of customers” (Ishikawa, 1985, p.44).	Quality is equivalent to customer satisfaction. Quality must be defined comprehensively. Customers’ needs and requirements change continuously. The price of the service or product is important in quality.	Two

Table 2 Examples of Application of the SERVQUAL Scale in Leisure, Tourism and Hospitality

Reference	Object of Evaluation	Scale Used
Crompton and MacKay (1989)	Recreational services	
Knutson <i>et al.</i> (1991)	Hotels and motels	Modified SERVQUAL scale called LODGSERV (26 items)
Saleh and Ryan (1991)	Hotels	Modified SERVQUAL scale (33 items)
Luk <i>et al.</i> (1993)	Organised tour services	Modified SERVQUAL scale (19 items)
Bojanic and Rosen (1994)	Restaurants	
Getty and Thompson (1994)	Lodging industry	Modified SERVQUAL scale called LODGQUAL
Patton <i>et al.</i> (1994)	Hotels	Application of LODGSERV
Akan (1995)	Hotels	Modified SERVQUAL scale (30 items)
Gabbie and O'Neill (1996, 1997)	Hotels	
Johns and Tyas (1996)	Foodservice outlets	Modified SERVQUAL scale – perceptions only
Ryan and Cliff (1997)	Travel agencies	
Suh <i>et al.</i> (1997)	Hotels	
Ekinci <i>et al.</i> (1998)	Resort hotel	Modified SERVQUAL and LODGSERV scale; (18 items)
Wong <i>et al.</i> (1999)	Hotels	
O'Neill <i>et al.</i> (1999)	Surfing event	Modified SERVQUAL scale (21 items)
Ingram and Daskalakis (1999)	Hotels	Modified SERVQUAL scale (27 items)
Frochot and Hughes (2000)	Historic houses	Modified SERVQUAL scale called HISTOQUAL (24 items) perceptions
O'Neill <i>et al.</i> (2000)	Dive tour operator	Modified SERVQUAL scale called DIVEPERF – importance/performance
Fu and Parks (2001)	Restaurants	
O'Neill and Palmer (2001)	Accommodation facilities, water based adventure theme park	Modified SERVQUAL scale – importance/performance
Atilgan <i>et al.</i> (2003)	Tour operators	Modified SERVQUAL scale (26 items)
Getty and Getty (2003)	Lodging industry	Development of new scale based on Parasuraman <i>et al.</i> (1985) ten original dimensions
Juwaheer and Ross (2003)	Hotels	Modified SERVQUAL scale (39-items)
Juwahee (2004)	Hotels	Modified SERVQUAL scale (36-items)
Nadiri and Hussain (2005)	Hotels	SERVPERF scale (only two dimension : tangibility (4) and intangibility(18 item)
Markovic (2006)	Tourism higher education	Modified SERVQUAL scale (40-items)
Kvist and Klefsjo (2006)	inbound tourism in Sweden	Modified SERVQUAL scale contains 10 dimensions
Ramsaran-Fowdar (2007)	Hotel industry	Modified SERVQUAL scale (58-items)
Narayan <i>et al.</i> (2008)	Tourism industry	New scale contains 10 dimension
Wang <i>et al.</i> (2008)	Hotels	Modified SERVQUAL scale (35-items)
Hsieh <i>et al.</i> (2008)	hot spring hotels in Taiwan	Modified SERVQUAL scale contains 23 dimensions
Filiz (2010)	Travel agents	Modified SERVQUAL scale (26-items)
Qin <i>et al.</i> (2010)	fast-food restaurants	SERVQUAL scale +the dimension of recoverability,
Bastič and Gojčič (2012)	Hotel	Modified SERVQUAL scale contains 28 dimensions
Han and Hyun (2015)	Medical tourism Quality	Modified SERVQUAL scale

Table 3 FTU Framework: Stages of Service Provision

Facilities ①	Transformation ②	Usage ③
Resources perspective: company resources act as prerequisite to any transformation	<p>2a Company-induced transformation</p> <p>Resources perspective: companies act as prime resource integrators. Transformation is induced by companies and includes only company resources. The transformation intends to end with a marketable good.</p> <p>Decision perspective: company autonomous decisions</p> <p>Value perspective: company-induced transformation only exhibits potential value for customers</p>	Resources perspective: customers act as prime resource integrators and operant resources producing effects.
Decision perspective: company autonomous decisions	<p>2b Customer-induced transformation</p> <p>Resources perspective: companies act as prime resource integrators. Transformation is induced by customers integrating their resources (as operand resources) and acting as co-producers and co-creators.</p> <p>Decision perspective: integrative decisions for customers and companies</p> <p>Value perspective: customer-induced transformation can exhibit value in transformation for customers, customers act as co-producers and co-creators of value</p>	Decision perspective: Customer autonomous decisions.
Value perspective: facilities only exhibit potential value for customers		<p>Value perspective. Customers act as co-creators of value in use:</p> <p>Customers benefit from company induced transformation (2a) by consuming a good (distribution mechanism)</p> <p>Customers benefit from customer induced transformation (2b)</p>

Table 4 Terms and Definitions Related to Co-Production

Author	Term	Meaning / Definition
Sichtmann <i>et al.</i> (2011)	Customer co-production	Customer co-production involves the participation [and integration of customer resources] in the core offering itself.
Lau <i>et al.</i> (2010)	Customer integration	Combining customer resources (persons, possessions, nominal goods, and/or personal data) with the company resources in order to transform customer resources.
Fuchs, Prandelli, and Schreier (2010)	Empowerment	Empowerment “(co) creative force that structures the possible field of interaction and exchange of free agents” (p. 68).
Etgar (2008)	Co-production	Consumers participate in the performance of various operational activities of a company resulting in valuable outcomes to be consumed.
Etgar (2008)	Customization	Customer participation in the creation of unique products by choosing product features or providing information to the company about idiosyncratic needs.
Lusch, Vargo, and O’Brien (2007)	Co-creation of value	“There is no value until an offering is used experience and perception are essential to value determination” (p. 7).
Lusch, Vargo and O’Brien (2007)	Co-production	A company producing an offering interacting with the customer.
Lusch and Vargo (2006)	Co-creation	“The product is a result of cooperation between each single customer and the manufacturer, not only providing benefits, but also demanding input from both sides” (p.71).
Piller (2004)	Mass Customization	“Customer co-design process of products and services, which meet the needs of each individual customer with regard to certain product features. All operations are performed within a fixed solution space, characterized by stable but still flexible and responsive processes” (p. 315).
Prahalad and Ramaswamy (2004)	Value co-creation	Interaction between companies and customers to design, develop production processes, crafting marketing messages, and controlling sales channels. The interaction during these activities generates experiences which become the very basis of value.
Wind and Rangaswamy (2001)	Customerization	“A buyer-centric company strategy that combines mass customization with customized marketing” (p.14).
Prahalad, Ramaswamy, and Krishnan (2000)	Consumer empowerment	Firms consider customers as partners, give them control over information and decision making at a certain degree, and co-opt their competence in ways that are mutually beneficial.
Sheth, Sisodia, and Sharma (2000)	Co-creation marketing	Co-creation marketing involves both the marketers and the customer who interact in aspects of design, production, and consumption of the product or service.
Youngdahl and Kellogg 1997	Customer participation	Customers prepare for the service, and interact with service providers to obtain the best outcome.

Source: Adapted from Jiménez *et al.* (2013, p.28)

Covering Letter**Ms. Ref.: BPMJ-09-2016-0185.R2****“A Review of Service Quality and Service Delivery: Towards A Customer Co-Production and Customer-Integration Approach”
Business Process Management****Reviewer 1**

We are grateful for Reviewer 1's recommendation of 'minor revision'. Below we have addressed each of the comments in more detail.

Reviewer comments	Author response
Even though it is a collection and presentation of literature work, the efforts made towards fine tuning is not enough; more literature needs to be collected related to quantitative measures & its draw backs related to service quality & service delivery and further more figures / tables rather than theoretical explanation from the collected literature.	Thank you. We now added some more literature on 'measuring service quality'. In addition, there are several sections dedicated to the drawbacks – see the section 'Criticism of SERVQUAL. Finally, a new Figure has been added.
Additional Questions: 1. Originality: Does the paper contain new and significant information adequate to justify publication?: It is a collection of literature & presenting in sequence	N/A
2. Relationship to Literature: Does the paper demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources? Is any significant work ignored?: Need further more quantitative measures / MOP related to service quality and service delivery	As noted previously, this paper is conceptual in nature and not a meta analytic paper or a systematic review of the literature. It's a paper that theoretically links different conceptual literature streams. This is very common and nothing unusual at all. For that reason, adding some quantitative part makes little sense.
3. Methodology: Is the paper's argument built on an appropriate base of theory, concepts, or other ideas? Has the research or equivalent intellectual work on which the paper is based been well designed? Are the methods employed appropriate?: It is a collection & not an intellectual work	Not intellectual work? We disagree. It is clear that the reviewer does not understand the nature of theoretical papers. Please contact <i>Academy of Management Review</i> and tell them their papers are not intellectual work.
4. Results: Are results presented clearly and analysed appropriately? Do the conclusions adequately tie together the other elements of the paper?: Yes	Thank you.
5. Implications for research, practice and/or society: Does the paper identify clearly any implications for research, practice and/or society? Does the	OK

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<p>paper bridge the gap between theory and practice? How can the research be used in practice (economic and commercial impact), in teaching, to influence public policy, in research (contributing to the body of knowledge)? What is the impact upon society (influencing public attitudes, affecting quality of life)? Are these implications consistent with the findings and conclusions of the paper?: ok</p>	
<p>6. Quality of Communication: Does the paper clearly express its case, measured against the technical language of the field and the expected knowledge of the journal's readership? Has attention been paid to the clarity of expression and readability, such as sentence structure, jargon use, acronyms, etc.: need to simplify it further by more illustration / figures / tables rather than complete theory</p>	<p>As recommended, a new figure has been added.</p>

Thank you.