Exploring Customers' Zone of Tolerance for B2B Professional Service Quality

Purpose – This paper aims to extend the current research on zone of tolerance (ZOT) and its antecedents to the context of B2B professional services from both client and service firms' perspectives, with a modified ZOT framework including five client and service firms attributes as antecedents of desired (DSL) and adequate (ASL) service levels.

Design/methodology/approach – A combination of qualitative (focus groups) and quantitative (online survey) research methods with managers of professional audit firms and their clients, using a reduced AUDITQUAL instrument with 39 items and seven dimensions.

Findings – Professional firm size and fee premium have a positive effect on DSL, service tenure positively affects DSL and ASL; client firm size has a negative effect on DSL; client and service firm sizes positively moderate each other's influence on the DSL; DSL positively affects ASL.

Research limitations/implications – We study a single B2B professional service (audit) in a single city (Hong Kong) from a single perspective (customers) that may limit the generalizability of our findings. Future research should validate our findings for other B2B professional services in diverse locations and also include service providers' expectations and perceptions.

Practical implications – Managers in professional services firms should understand the factors influencing different levels of expectations for their customers and develop suitable strategies (e.g., customer education and employee training) to manage these expectations more effectively.

Originality/value – We extend current research on customer expectations and zone of tolerance by identifying five unique attributes of professional service and client firms and testing their roles as antecedents of adequate and desired service levels using AUDITQUAL instrument.

Keywords – adequate service level (ASL), business-to-business (B2B), desired service level (DSL), professional services, service tenure, zone of tolerance

Paper type – Research paper

Exploring Customers' Zone of Tolerance for B2B Professional Service Quality

INTRODUCTION

Service quality is an important topic in marketing research because a comprehensive understanding of its antecedents and outcomes may help services firms satisfy their customers and improve their business performance and profitability (Heskett et al., 1994). In this context, zone of tolerance (ZOT) is a popular concept, defined as the gap between two levels of customer expectations, adequate service level (ASL) and desired service level (DSL) (Zeithaml, Berry and Parasuraman, 1993). However, despite growing research on business-to-business (B2B) service quality (e.g., Caceres and Paparoidamis, 2007; Gounaris, 2005; Woo and Ennew, 2005; Zolkiewski et al., 2007), prior research on ZOT mostly focuses on business-to-consumer (B2C) services such as, airlines (Gilbert and Wong, 2003; Wu and Wang, 2012), banking (Nadiri, Kandampully and Hussain, 2009; Yap and Sweeney, 2007), hospitality (Nadiri and Hussain, 2005; Zainol, Lockwood and Kutsch, 2010), fast food (Campos and Nóbrega, 2013), mobile phone service (Wu, 2011) and even public transport (Cavana, Corbett and Lo, 2007; Hu, 2010).

B2B services are different from B2C services with attributes such as, high information asymmetry between customers and service providers (Greenwood et al., 2005), high intangibility and customization of services (Maister, 2007) couple with high knowledge intensity, low capital intensity and highly professionalized workforce (Von Nordenflycht, 2010). However, there is hardly any research on the role of ZOT and its antecedents in B2B services and a few studies that explore this topic, show mixed results (e.g., De Ruyter and Wetzels, 1999; Kettinger and Lee, 2005; Zeithaml, Berry and Parasuraman, 1996). Hence, it is still not clear if there are any similarities or differences in these concepts between B2B and B2C contexts **(Gap 1)**.

Most studies of service quality and ZOT in both B2B and B2C contexts mainly focus on the customers' perspective, despite numerous calls for including the employees' perspective (e.g., Bitner, Booms and Mohr, 1994; Brown and Swartz, 1989; Sharma, Tam and Kim, 2009; Svensson, 2006). As a result, it is not clear if and how the unique characteristics of the customers and service providers would affect customer expectations of service quality, especially in the B2B professional services context **(Gap 2)**. We address this gap by using an extensive literature review to identify three characteristics of professional service firms (size, fee premium and service tenure) and two of client firms (size and participation level in service creation) as antecedents of ASL and DSL for customers of B2B professional services quality.

Specifically, in this paper, we develop a modified ZOT framework with specific hypotheses about the impact of these five antecedents on the desired (DSL) and adequate (ASL) service levels respectively. We then use an empirical study with 395 customers of professional audit firms to test our hypotheses using AUDITQUAL (Duff, 2004), a popular measure of B2B professional service quality for audit firms. Besides extending ZOT research, our study will help managers in B2B professional services firms understand the factors driving the expectations of their customers and develop suitable strategies to manage them in a mutually profitable manner.

LITERATURE REVIEW

B2C vs. B2B Service Quality

Parasuraman et al. (1985) describe *perceived service quality* as a global judgment or attitude about the superiority of the service, based on a comparison of what customers anticipate service firms should offer with their perceptions of the actual performance of the service firms. Thus, perceived service quality represents the discrepancy between consumers' perceptions and

expectations. Parasuraman et al. (1988) conceptualize service quality as a multidimensional construct with five dimensions (tangibles, reliability, responsiveness, assurance, and empathy) and operationalize it using a popular instrument called SERVQUAL, which was further revised by Parasuraman, Zeithaml and Berry (1991) and since then it has been used to measure service quality across a wide range of service industries all over the world (Ladhari, 2008).

Early research on service quality focused mostly on B2C services, including the pioneering work by Grönroos (1984), Parasuraman et al. (1985, 1988, 1991) and Zeithaml et al. (1993, 1996); however, there is growing research interest into B2B service quality across many industries, including audit services (De Ruyter and Wetzels, 1999), information systems (Pitt, Watson and Kavan, 1995), manufacturing (Zeithaml et al., 1996), distribution (Bienstock, Mentzer and Bird, 1996) and logistics (Mentzer, Flint and Hult, 2001). Most early studies on B2B service quality (e.g., Zeithaml et al., 1996) used the same five dimensions as proposed by Parasuraman et al. (1985) in SERVQUAL and some (e.g., Caceres and Paparoidamis, 2007) used two dimensions (technical vs. functional) proposed by Grönroos (1984).

In contrast, others have developed their own constructs and measures for B2B service quality, with three (PDSQ; Bienstock et al., 1996), four (INDSERV; Gounaris, 2005), six (PSQ; Woo and Ennew, 2005) or even nine (AUDITQUAL; Duff, 2004) dimensions. Notwithstanding all these efforts to measure B2B service quality, very few studies explore the applicability of ZOT concept and different levels of customer expectations (i.e., ASL and DSL) in the B2B context and they mostly offer mixed results (e.g., De Ruyter and Wetzels, 1999; Kettinger and Lee, 2005; Zeithaml et al., 1996). In the next section, we address this research gap by identifying five attributes of B2B service firms and their clients to develop a modified ZOT framework (Figure 2) and hypothesize the influence of these attributes on ASL and DSL.

Customer Expectations and Zone of Tolerance (ZOT)

Zeithaml et al. (1993) introduce a conceptual model showing different levels of customer expectations from service providers (Figure 1). Specifically, they define *desired service level* (DSL) as the level of service the customer hopes to receive and that is relatively stable and does not change frequently. In contrast, *adequate service level* (ASL) refers to the lowest level of service that the customer will accept and which is relatively unstable and may change from one situation to another. In addition, *perceived service level* (PSL) is the level of service that the customers think they received. Finally, *predicted service level* is what the customers think they may be able to get and it may affect both adequate as well the perceived service levels.

< Insert Figure 1 about here >

Zeithaml et al. (1993) also define the difference between the desired and adequate service levels as the *zone of tolerance* (ZOT), which represents the extent to which customers are willing to accept heterogeneity in their service experience. Most of the variations in ZOT result from changes in one side (ASL) rather than the other (DSL). Predicted service also plays a direct role in satisfaction assessments by influencing the adequate service level. Zeithaml et al. (1993) also suggest that the assessment of *customer satisfaction* is based on the comparison between predicted and perceived service levels and the assessment of *service quality* on the comparison of expected (desired or adequate) and perceived service levels.

Antecedents of Customer Expectations (ASL & DSL)

Zeithaml et al.'s (1993) conceptual model of customer service expectations (Figure 1) incorporates several factors that influence ZOT via different levels of customer expectations

(DSL and ASL); however, this model has found only mixed empirical support albeit mostly with B2C services (e.g., Clow et al., 1997; Devlin, Gwynne and Ennew, 2002; Dion, Javalgi and Dilorenzo-Aiss, 1998; Kalamas, Laroche and Cézard, 2002), either showing a few antecedents with any effect on customer expectations or major differences in the level of their impact across diverse service industries. In this section, we reconcile Zeithaml et al.'s (1993) conceptual model with these more recent empirical results to develop our modified ZOT framework.

Zeithaml et al. (1993) identify two antecedents of DSL, *enduring service intensifiers* and *personal needs*. Enduring service intensifiers represent those individual, stable factors that lead the customer to a heightened sensitivity to changes in service quality; whereas personal needs refer to the conditions essential for the physical or psychological well-being of a customer that influence the highest level of service desired by them. According to Zeithaml et al. (1993) both these factors are relatively stable and they translate a similar enduring effect on DSL as well. Prior research shows significant effect of the size of B2B professional services firm on their level of service quality (DeAngelo, 1981; Lennox, 1999). Similarly, client firms may have unique needs based on their size that may affect their expectations (Francis and Simon, 1987; Reynolds and Francis, 2000). Hence, we include both these variables in our modified ZOT framework.

Next, there are four factors that influence the level of adequate service, namely *transitory service intensifiers, perceived service alternative, customer self-perceived service role* and *situational factors*. Transitory service intensifiers are temporary, short-term factors that lead the customer to a heightened sensitivity to service, which may not be applicable in B2B professional services context due to their highly specialized nature (Hsieh, Chen and Yuan, 2014). Perceived service alternatives are customers' perceptions of the degree to which they can obtain better service through providers other than the focal company; however, due to the unique and complex

6

nature of B2B professional services, client firms may not find it easy to seek better services with other professional services firms due to high exit barriers (Lam et al., 2004). Hence, we ignore these two categories as well in our modified ZOT framework.

Self-perceived service role is the customers' perceptions of the degree to which they are involved in the creation of the service they receive. Recent research shows that client firms' involvement and participation is essential for the creation of B2B professional services and it affects client firms' expectations (Hsieh et al., 2014); hence we include 'Participation Level in Service Creation' as one of the antecedents in our study. Situational factors are contingencies that customers perceive as being beyond the control of the service provider; however, such factors (e.g., changes in government regulations and economic or political uncertainty) would generally affect all B2B professional services firms in an industry equally (Dion et al., 1998). Hence, we do not include situational factors as antecedents in our modified ZOT framework.

Finally, Zeithaml et al. (1993) identify four factors that influence both desired and predicted service levels: *explicit service promises*, *implicit service promises, word-of-mouth communication* and *past experience.* The first refers to personal and non-personal statements about the service taken in different forms (e.g., advertisements, personal selling, contracts, etc.) that are generally not applicable in B2B professional services context such as banking (Devlin et al., 2002). However, implicit service promises include service-related cues (e.g., price and tangibles) that help the customer infer what the service should and will be like (Clow et al., 1997). Hence, we include 'Fee Premium' as an antecedent in our modified ZOT framework because in the absence of any other tangible cues due to information asymmetry, client firms may find fee premium over competitors as a surrogate of service quality.

Word-of-mouth refers to verbal communication by and among the customers, which may affect both the desired and predicted service. However, due to the unique and confidential nature of B2B professional services, personal communication may have a negligible impact on customer expectations (Clow et al., 1997). Finally, past experience of the customer with the service also affects both desired and predicted service levels (Devlin et al., 2002; Dion et al., 1998). Therefore, we include 'Service Tenure' as an antecedent in our modified ZOT framework because experience with a B2B professional services firm will help the client firms form their expectations over time. Figure 2 shows our modified ZOT framework incorporating five relevant antecedents out of the ten included in Zeithaml et al.'s (1993) conceptual model.

< Insert Figure 2 about here >

CONCEPTUAL FRAMEWORK AND HYPOTHESES

Professional Services Firm Size (Enduring Service Intensifier)

Prior research shows a positive impact of the size of a professional firm on its service quality, ranking and reputation of the firm as well as customer expectations of service quality (Balvers, McDonald and Miller, 1988; DeAngelo, 1981). Client firms generally lack expert knowledge about the internal factors affecting the quality of service provided by professional service firms and hence, they may rely on objective measurement standards, such as market ranking etc. to evaluate their professional service provider firms. Therefore, the larger the size of the professional services firm, the higher its reputation and DSL expected by its client firms.

In contrast, ASL is likely to be insensitive to the changes in professional service firm size. Most B2B professional services are essential for the smooth operation of the client firm's

business and many of these are even regulatory requirements (e.g., statutory audit services). With these unique parameters, the minimum acceptable level of customer expectations of professional service quality (i.e. ASL) is to provide a stable service or to comply with the statutory requirement irrespective of the size of the professional service firm. Hence, we hypothesize:

H1:   Professional service firm size has a positive influence on DSL.

Fee Premium (Implicit Service Promise)

Price is an implicit service promise (Zeithaml et al., 1993) and it is particularly essential in the domain of professional services because client firms generally do not have the expertise and the knowledge to evaluate and identify the quality of the professional services, either before or after the service provision. In this context, client firms would perceive that the price of the services serves as an objective signal for identification of the respective service quality. From a professional service firm's perspective, charging higher fees for providing specific professional services is regarded as a 'fee premium' and this has been extensively evaluated in current literature (Francis and Simon, 1987; Palmrose, 1986; Simon, 2011).

We argue that fee premium would only influence the client firms' desired service level expectations because the fee premium represents a surrogate of excellence in premier, top and advanced high-end services that other professional service firms may not be able to provide in either technical or client service quality dimensions. Moreover, fee premium would not impact client firms' expectations of the level of adequate services (i.e. ASL) provided by professional service firms, as the minimum acceptable service is the basic service standard particularly both in technical and client service quality dimensions, and is not associated with whether or not the professional service firm can provide excellent and premier high-end services.

Client firms as well as external users of professional services understand that professional service firms are closely monitored by statutory and regulatory bodies. Their minimum service standards and technical competence are at least in line with governing standards, and these minimum quality standards do not change in response to any change in the service fee level. As the minimum acceptable service quality level expected by customers and external users is essentially the compliance of statutory requirement, ASL is likely to be insensitive to different levels of fee premium. Based on the above, we put forth the following hypothesis:

H2: Professional service firm's fee premium has a positive influence on DSL.

Service Tenure (Past Experience)

Customers' past experience shapes their service expectation level (Scott and Yalch, 1980) and it is also included as an antecedent of both desired and predicted service levels by Zeithaml et al. (1993). This indicates that the accumulation of experience by customers, especially by client firms who utilize professional services, has a significant impact on their level of service quality expectation and their satisfaction level in relation to the gap between their expectations and perceptions. The awareness of this scope of service level – both maximum (DSL) as well as minimum service levels (ASL) – is generally a result of the accumulation of experience gained from interaction with the specific professional service firm.

Through progressive interactions with a specific professional service firm during the course of service provision, client firms can achieve multiple outcomes; including, a) enhance their exposure to understanding the complexities of the professional services being provided and the procedures unique to a specific professional service firm; b) identify more clearly their essential and necessary service level expectations; and c) identify the optimal service level which

should be provided by the professional services firm. In this regard, the role of past experience of client firms with a professional services firm is a critical antecedent that would form both the desired and adequate service levels of professional service firms. Therefore, as follows:

H3a: Service tenure of the professional services firm has a positive effect on DSL.

H3b: Service tenure of the professional services firm has a positive effect on ASL.

Client firm size (Personal needs)

Prior research on the empirical examination of the SERVQUAL instrument and ZOT concept focuses on business-to-consumer service industries, however professional services are generally business-to-business in nature, and customers in this sector are principally corporate entities instead of individual customers (Von Nordenflycht, 2010). Accordingly, we need to differentiate the needs of corporate entities as customers from individual consumers. In this context, client firm size is a distinctive feature in the professional services sector that differentiates them from the individual customers and professional service firms are generally eager to be appointed by large client firms as they can assure regular assured income and higher reputation for them (Francis and Simon, 1987; Reynolds and Francis, 2000).

However, larger client firms also expect higher service quality from their professional service firms because of the greater importance of these services to them. For example, larger client firms would expect priority attention, prompt service, and greater involvement of senior service managers (Reynolds and Francis, 2000). In contrast, the minimum acceptable service levels for professional service firms are usually determined by the general business norms or contractual terms, hence client firm size may not have any impact on their ASL. In other words,

professional service firms need to maintain the basic competencies to provide minimum acceptable service regardless of client firm size. This leads to the following hypothesis:

H4: Client firm size has a positive influence on DSL.

Participation Level in Service Creation (Self-perceived Service Role)

B2B Professional service firms generally need close involvement and participation from the client firms to provide their services and being crucial in service creation and provision, such co-operation and participation of client firms would also affect their service quality expectations (Bone et al., 2014; Prahalad and Ramaswamy, 2000). Specifically, client firms may expect higher level of service quality if they participate proactively in the service creation process. However, the participation of client firms may only affect the operational aspects of professional service creation and not the more critical parts that may require expert knowledge and experience in performing the assessment, examination and professional judgment. In fact, client firm's involvement in such core activities may not be relevant or could even be counterproductive. Hence, we argue that client firm's participation in service creation will only impact their expectations of minimum acceptable service (i.e., ASL) that would relate to the operational aspects of service quality; and it would have no effect on their highest expectations (i.e., DSL) because those would be influenced by other factors beyond the control of the customers. Hence,

H5: Participation level of the client firm has a positive influence on ASL.

Moderating role of Professional Firm Size and Client Firm Size

We argue that the size of client firm may act as a catalyst accelerating the positive influence of professional firm size on DSL, leading to an even higher DSL for larger professional

firms compared to that for smaller profession firms. We expect this positive influence to be stronger for larger client firm because customer expectation on service quality may be escalated by the combined impact of client and professional firm sizes, thus accelerating their impact on DSL. Similarly, the positive influence of client firm size on DSL will be stronger when the professional firm size is large. Larger client firm will have higher DSL, and this positive influence will be greater for customers having larger professional firms as their service providers. Therefore, we posit that the client and professional service firm sizes would enhance each other's influence on the highest level of customer expectations (i.e., DSL), as follows:

H6a: **The positive influence of professional service firm size on DSL is stronger for larger client firms compared to smaller client firms.**

H6b: **The positive influence of client firm size on DSL is stronger for larger professional service firms compared to smaller service firms.**

Impact of DSL on ASL

According to the original ZOT framework, DSL is relatively stable and idiosyncratic as compared with ASL, however Zeithaml et al. (1993) also point out that a change in DSL due to some exogenous factors may have an impact on the predicted service level in the same direction. We expect this effect to be even stronger in case of B2B professional services because they require extensive use of expertise knowledge and professional judgment, hence an increase in the DSL on specific services may prompt customers to predict that the service firm has the ability to provide better service, which would then affect their expectations about minimal acceptable service (i.e., ASL). In contrast, any change in ASL would not affect DSL because DSL is relatively stable and idiosyncratic, as suggested by Zeithaml et al. (1993). Hence,

13

H7:   DSL has a positive influence on ASL.

METHODOLOGY

Research Setting and Design

We chose professional audit firms (CPA firms) as the research setting for this study as the services provided by CPA firms are used by corporate customers, which qualifies these services as B2B professional services and allows us to study the different levels of expectations and their antecedents. We also address recent calls for greater research on the quality of professional audit services triggered by concerns about corporate governance coupled with growing competition due to globalization and slow market growth (Duff, 2004). Being one of the first research studies about the antecedents of customer expectations for professional audit firms using ZOT concept, we used a similar approach as the one used by Zeithaml et al. (1993) to develop their ZOT conceptual framework, to conduct our research in two phases – qualitative and quantitative.

Phase I – Qualitative (Focus Group Interviews)

We conducted five focus group discussions with service providers from professional audit firms as well as client firms, to help us prioritize our research objectives, to validate the relevance of the five antecedents and measures identified from prior research and to improve them where appropriate. Each focus group consisted of three to four participants segregated based on their affiliation, as either a senior executive from a professional audit firm or senior accounting/finance managers of client firms, in order to help us differentiate the input generated from each interviews for a clear analysis (Berg and Lune, 2011). Specifically, three focus groups involved senior executives (e.g., CFOs, Financial Controllers) from client firms having extensive

experience and interactions with CPA firms on auditing services, and the other two groups consisted of senior executives from CPA firms (e.g., auditors, partners) with comprehensive experience of providing audit services.

We used a discussion guide to gather information about customer expectations of service quality from CPA firms, different dimensions of service quality, factors affecting the level of service quality expectations as well as measures for all the variables used in this study. Each discussion lasted for about 60 to 90 minutes and was moderated by the authors of this paper. All the focus group discussions were audio recorded with the participants' permission and these were transcribed for further analysis and interpretation. The key findings are summarized below:

1. All the participants had different perceptions on the audit services quality and respective expectations. Senior executives from large client firms emphasized the efficiency of auditing services as well as the auditors' all-round knowledge and expertise. Participants from smaller client firms were more cost consciousness and were willing to tolerate sub-standard audit service quality in response to more competitive service fees.

2. All the participants found the nine dimensions of AUDITQUAL a bit too complex and they suggested reducing them to fewer dimensions (e.g., technical vs. relational factors).

3. About fee premium, the participants observed that it should be a comparison of the fee for the provision of same audit service by different CPA firms across different firm sizes.

4. For client firm size, most participants believed that it should simply be quantified by the amount of their business turnover and the number of staff currently employed.

5. For participation level by client firms during the creation of audit service, most of the participants suggested that the involvement of client firms' employees before and after the audit field work should also be taken into consideration.

Overall, the focus groups provide many useful insights that supplement our findings from the literature review process. Specifically, all the participants recognized the multi-dimensional structure of the professional service quality and although there was no unanimous finding on any concrete client service dimensions, there was a general understanding that the responsiveness to client's enquiries from auditors should warrant a high priority. Moreover, in the discussion on customer expectations, many participants were unfamiliar with the notion of ASL, DSL and ZOT in the beginning but they understood these concepts as the discussion progressed.

Phase II – Quantitative (Online Survey)

Based on our findings from the qualitative phase and our extensive review, we prepared a self-report questionnaire and assessed it with a pilot-test before using it to collect data from customers of professional audit services based in Hong Kong using an online survey.

Scales and Measures

Despite the widespread popularity of SERVQUAL (Parasuraman et al., 1988, 1991), several studies have failed to replicate its original five factor structure (See Ladhari, 2008 for a comprehensive review). In fact, Parasuraman et al. (1991, p.445) also admit that the original SERVQUAL (with five dimensions and 22 items) only represents the 'core' evaluation criteria and a 'basic skeleton' underlying service quality, and that "SERVQUAL is a useful starting point, not the final answer, for assessing and improving service quality". Therefore, it is not surprising to that researchers have adapted SERVQUAL to evaluate B2B service quality using a wide variety of scales, with three (PDSQ; Bienstock et al., 1996), four (INDSERV; Gounaris, 2005), six (PSQ; Woo and Ennew, 2005) or even nine (AUDITQUAL; Duff, 2004) dimensions. In this study, we chose AUDITQUAL as the most appropriate measure because we explore customer

16

expectations and service quality for professional audit firms.

We included the 53 items AUDITQUAL scale (Duff, 2004) with the three-column format (Parasuraman et al., 1991) to measure the two dependent variables (DSL and ASL) with a seven-point Likert format (1=strongly disagree to 7=strongly agree). We also adapted well-established scales to measure all the dependent variables included in this study, as described below:

1. **Professional firm size:** A dichotomous variable classifying audit firms as 'Big-4' (Deloitte, E&Y, KPMG and PwC) or "Non-big 4" (Balvers et al., 1988; Lennox, 1999).

2. **Fee premium:** A three-item seven-point scale measuring perceived difference in fees compared to larger, similar-sized, and smaller professional audit firms (Simon, 2011).

3. **Service tenure:** Number of years for the relationship between the auditor firm and its client firm (Cameran, Moizer and Pettinicchio, 2010).

4. **Client firm size:** A two-item seven-point scale with perceived turnover and number of employees relative to other firms in the same industry (Reynolds and Francis, 2000).

5. **Participation level in service creation:** A four-item seven-point scale with client firm's employees' participation in audit activities (Licata, Chakraborty and Krishnan, 2008).

6. **Demographic variables** such as gender, position/title, professional association membership, work experience and audit experience were also included.

Pilot Test

We conducted a pilot test (N=39) to examine if the respondents could understand the questions and provide answers, and to obtain their feedback on the relevance and suitability of the measures used to operationalize all the variables included in this study. Specifically, we found 10 items (A3, B4, D1, E1, F1, F2, G1, H3, H4 and H8) not very reliable (i.e., item-to-total correlations below 0.40). We carefully reviewed all these items and cross-checked with the pilot

test participants to ensure that deleting these would not affect the meaning of the construct (face validity). We also deleted item E5 ("The client has a knowledgeable and active audit committee") is found irrelevant in this study as the regulatory framework in Hong Kong does not require the clients of CPA firms to have an audit committee. Next, we merged a few items (D2 and D3, E3, E4 and E5) to avoid duplication. Finally, we merged the sole remaining question in 'Experience' sub-dimension and the items in 'Expertise' sub-dimension under the original 'Knowledge' dimension; and, merged the sole remaining question under 'Independence' dimension with the 'Reputation' dimension. Table 1 shows both the original and revised dimensions.

< Insert Table 1 about here >

Sampling and Procedure

We used an online survey to collect the data by sending email invitations to the customers using professional audit services registered in the members' databases of professional accounting bodies in Hong Kong. Participations were told that a small amount of donation (HK$ 10) would be made to Médecins Sans Frontières for each completed questionnaire. We sent about 3000 invitations and collected 442 questionnaires for a response rate of 14%. However, only 395 out of these questionnaires were found complete and suitable for data analysis.

As shown in Table 2, our sample includes senior employees of client firms directly involved in audit activities, including accountants (15.7%), accounts/finance managers (20.5%), financial controllers (15.2%), chief financial officers (12.7%) and directors (23.8%). Most of them are members of professional accounting associations (67%) and have more than six years'

experience (67%). Thus, all the participants in our sample possess sufficient knowledge and experience about professional audit services to be able to participate in our study.

< Insert Table 2 about here >

DATA ANALYSIS AND FINDINGS

We used the well-established two-step method with Structural Equation Modeling (SEM) to analyze our data by first testing our measurement model followed by the structural model (Anderson and Gerbing, 1988). We found a good fit for our measurement model with all the "Goodness of Fit" indices better than the cut-off values (χ^2=546.72, df = 375, χ^2/df=1.46, CFI = 0.96, NFI = 0.95, SRMR = 0.038, RMSEA = 0.032) recommended by Hu and Bentler (1999). All the parameter estimates are large with significantly large t-value ($\geq$ 10) and the average variance extracted is larger than 0.40 for all the scale items, showing good convergent validity (Fornell and Larcker, 1981). Discriminant validity is also confirmed as the average variance extracted in each factor exceeds its squared correlations with each of the other constructs (Fornell and Larcker, 1981). Composite reliabilities for all the scales are also higher than 0.70, hence all the scales appear to be reliable (Bagozzi and Yi, 2012). Table 3 and 4 show all the scale items and their descriptives for all the independent and dependent variables used in this study.

< Insert Table 3 and 4 about here >

Next, we tested our structural model and found a good fit (χ^2=448.12, df = 284, χ^2/df=1.58, CFI = 0.95, NFI = 0.93, SRMR = 0.060, RMSEA = 0.043). We found that audit firm size (H1: β = 0.28, p < 0.001) and fee premium (H2: β = 0.15, p < .01) have significant positive effects on DSL; hence both these hypotheses are supported. Service tenure positively affects both

DSL (H3a: $\beta = 0.33$, $p < 0.001$) and ASL (H3b: $\beta = 0.24$. $p < 0.001$), hence both these hypotheses are also supported. Client firm size has a significant but negative effect on DSL (H4: $\beta = -0.19$, $p < 0.01$) against a positive effect as hypothesized, hence H4 is not supported. Client participation level in service creation has a significant positive effect on ASL (H5: $\beta = 0.12$, $p < 0.05$). We also found support for both H6a and H6b, with a stronger positive effect of audit firm size on DSL (H6a) for large client firms ($\beta = 0.48$, $p < .001$) than for small client firms ($\beta = 0.02$, $p > 0.50$) and a stronger positive effect of client firm size on DSL (H6b) for large audit firms ($\beta = 0.13$, $p < 0.05$) compared to small audit firms ($\beta = -0.23$, $p < 0.001$). Finally, DSL has a positive influence on ASL (H7: $\beta = 0.35$, $p < 0.001$), hence H7 is also supported. Overall, we found support for all our hypotheses except H4. None of the covariates have any influence in this study.

Non-response Bias

Non-response bias occurs if the answers of respondents differ from the potential answers of those who did not respond to the survey questions (Groves, 2006). To assess the potential impact of this bias, we divided our sample into two groups based on their timing of response; namely early responders (n=198) and late responders (n=197). We then compared the average scores for all the variables across these two groups and found no significant differences. Hence, non- response bias is unlikely to affect the results in this study (Armstrong and Overton, 1977).

Common Method Variance

We gathered the data for both predictor and criterion variables from the same source using a single survey questionnaire; hence we also test and control for common method variance (CMV) as recommended by Podsakoff et al. (2003). We first used several procedural remedies to minimize the impact of CMV, including an online survey to reduce socially desirable responding

and evaluation apprehension by ensuring the anonymity of the responses and scales with different response formats (e.g., Likert and Semantic Differential) to reduce the "method bias due to the commonalities in scale endpoints and anchoring effects" (Podsakoff et al., 2003).

These procedural remedies may only minimize the possibility of CMV but not fully eliminate it. Hence, we first used Harman's (1967) single-factor test and found that it explained only 22.8% variance in our data, which is far less than the 50% cut-off. We also used latent common method variance factor (LCMVF) method (Herath and Rao, 2009; Liang et al., 2007) and found that the new factor explained only 9.3% variance in our data compared to 84% by all the existing factors in the model giving a ratio of substantive to method variance of about 9:1, which shows that common method variance is not a major concern (Podsakoff et al. 2003).

RESULTS AND DISCUSSION

We extend the growing research on B2B professional services by identifying five unique antecedents of the different levels of customer expectations (ASL and DSL) to develop a modified ZOT framework based on Zeithaml et al.'s (1993) conceptual model. We then apply this framework to test the applicability of ZOT concept in the professional audit services context using a combination of qualitative and quantitative research methodologies. Specifically, we use five focus group interviews and an online survey, with customers of professional audit services in Hong Kong, one of the major financial hubs in the world. We found support for all our hypotheses except H4. In this section we discuss the conceptual contribution of our findings and their implications for the managers of professional services firms.

First, we successfully operationalize five out of ten antecedents of customer expectations included in the original ZOT framework (Zeithaml et al. 1993); namely, service firm size as an

enduring service intensifier, fee premium as an *implicit service promise*, service tenure as *past experience*, client firm size as *personal needs*, and client participation level in service creation as *self-perceived service role*. Next, we test the impact of all these antecedents on ASL and DSL as proposed in the original ZOT model, in the context of a B2B professional service (i.e., audit) to extend prior research in this area that focused only on B2C services (e.g., Clow et al., 1997; Devlin et al., 2002; Dion et al., 1998; Kalamas et al., 2002).

We tested the impact of two professional service firm attributes, size (H1) and fee premium (H2) on DSL, the highest level of customer expectations, and found that customers have higher expectations from larger service provider firms and those charging higher fee, compared to other firms providing similar services. We provide two explanations for these results. First, the clients of professional service firms may not possess the necessary knowledge to evaluate the quality of service received by them (Liechty and Churchill, 1979). Second, the complex and intangible nature of many professional services may also make it difficult for the customers to evaluate them or to form their expectations (Zeithaml et al., 1996). Hence, they may use heuristic cues such as professional firm size and fee premium as signals of the firm's superior capabilities and resourcefulness, hence higher service quality.

We use service tenure as a proxy for past experience and study its impact on customer expectations for B2B professional services, thus extending prior research in this area, which explored the role of customers' past experience mostly in the B2C context (Bolton and Drew, 1991; Verhoef et al., 2009). Specifically, we show that service tenure positively influences both DSL (H3a) and ASL (H3b). In fact, our results indicate that the positive influence of service tenure is stronger on DSL than ASL, which supports Zeithaml et al.'s (1993) idea that DSL is relatively stable over time whereas ASL may be subject to fluctuations due to situational factors.

We did not find support for H4 and in fact, contrary to our expectation, we found that client firm size has a negative effect on DSL. However, we did find a significant difference in this relationship between small and large professional service firms as hypothesized in H6b, showing a positive effect of client firm size on DSL for larger audit firms ($\beta = 0.13$, $p < 0.05$) and a negative effect for smaller audit firms ($\beta = -0.23$, $p < 0.001$). To understand this result, we went back to the participants in our study and asked them for possible reasons for these. Based on the responses from a cross-section of audit firm employees and their customers, this result may be driven by cynicism on part of the larger client firms and optimism on part of the smaller client firms. Specifically, larger client firms seem to have a great deal of experience in dealing with different types of professional service providers over a longer period of time, which may make them realize the limitations and constraints faced by them in providing a high service quality. In contrast, smaller client firms may expect personal attention from their professional service providers because they need it to survive and become successful.

Many prior studies examine the moderating effects of ZOT in B2C context (e.g., Wu, 2011; Wu and Wang, 2012; Yap and Sweeney, 2007; Zeithaml et al., 1993) with few studies exploring this for B2B professional services and that too with mostly mixed results (e.g., De Ruyter and Wetzels, 1999; Kettinger and Lee, 2005; Zeithaml et al., 1996). We address this by including moderating influences of client and service firm sizes in our modified ZOT framework and show that the effect of professional firm size on DSL is stronger for larger client firms and vice versa (H6a & H6b). Besides extending our current mainly customer-centric understanding of ZOT, these findings show that it is important to incorporate the service-providers' perspective and its influence on customer expectations, especially in B2B professional services.

We also address a long-standing gap in prior research by exploring the direct positive

impact of DSL on ASL (H7) to show that the highest level of customer expectations also affect their minimum level of expectations such that the ZOT shifts up rather than becoming wider. Hence, customers with a high DSL would not necessarily be more tolerant. This finding is different from Zeithaml et al. (1993) who do not show a direct relationship between DSL, possibly because we study professional services that require specific technical knowledge under stipulated regulatory requirements. Hence, client firms with higher DSL may simultaneously increase the overall level of predicted services, and accordingly increase the ASL.

Finally, we combined qualitative (focus groups) and quantitative (online survey) methods to validate the dimensionality and refine AUDITQUAL scale (Duff, 2004). Based on responses from senior managers with audit and client firms who participated in our focus groups, we reduced the number of items in AUDITQUAL from 53 to 39 and the number of dimensions from nine to seven (Knowledge, Reputation, Capability, Responsiveness, Non-audit Services, Empathy and Client Service) by combining experience and expertise into knowledge and independence and reputation into reputation dimensions. We believe this makes the AUDITQUAL more relevant and convenient for future researchers and managers.

Our study also has important implications for B2B professional services managers. First, our modified ZOT framework provides a parsimonious model for B2B professional services, which can help managers gain a better understanding of the mechanism by which their customers form different levels of expectations and perceptions about service quality. In fact, B2B professional services sector has improved a lot in terms of its technical quality (e.g., knowledge and expertise) but a comprehensive understanding of clients' expectations on service quality using our modified ZOT framework can further enhance their service quality on other important dimensions such as reputation, empathy and responsiveness, to ensure future business growth.

We capture the complex business environment faced by professional service firms in our simple yet theoretically sound modified ZOT framework, which can be used by service managers to plan effective strategies (e.g., customer education and employee training) to manage their customers' expectations based on different client and professional services firm sizes and service tenures, to improve customer satisfaction and loyalty.

First, managers of large professional service firms need to acknowledge that their customers may have rather unrealistic expectations as evident from a strong positive impact of service firm size and fee premium on DSL. This would translate into a higher zone of tolerance making such customers less likely to experience delight in service. Moreover, this effect is stronger for bigger client firms and vice versa, raising the possibility of bigger clients being over-serviced and the smaller clients being under-serviced. Therefore, managers in these companies would need to educate their customers to keep their expectations at a realistic level and also train their employees to keep an eye on their customers' highest expectations (DSL) to prevent these from going beyond their capabilities and to ensure that they provide a service that is at least higher than the minimum level (ASL) to all their customers, big or small.

Second, we also show that customers with longer service tenure may be more demanding and difficult to please as well as less tolerant and forgiving of lower service quality, due to a stronger positive effect on DSL compared to ASL, which will result in a higher and narrower zone of tolerance. This finding would present a challenge for managers because many of them have been chasing customer loyalty due to the perceived benefits of customer lifetime value, repeat business, positive word-of-mouth and referrals. However, we show that customer loyalty may be a double-edged sword that could benefit professional services firms by giving them more business and profits from loyal customers but also push their loyal customers' expectations to

unreasonable levels that may be beyond the service firms' capabilities.

LIMITATIONS AND FUTURE RESEARCH

Our paper has limitations that future research may address. First, we study customer expectations in a single professional services context (i.e., audit) in a single city (Hong Kong) that may limit the generalizability of our findings. Hence, future research should test the generalizability of our findings by applying our modified ZOT framework to other B2B professional services (e.g., business consulting, project management or technology support services) and geographic locations (e.g., North America and Europe). Second, we examined customer expectations in a cross-sectional manner (at a particular point of time); however, customer expectations change over time (Licata et al., 2008), hence a longitudinal study may reveal new insights. Third, although we include attributes of both client and service provider firms in our modified ZOT model, we still investigate their influence only on customer expectations. Future research may address this limitation by exploring the expectations and perceptions of the professional service providers. Finally, as pointed out by one of the anonymous reviewers, the client firm's level of expertise and knowledge in evaluating the quality of professional services could mediate the hypothesized relationship between professional firm size and DSL (H1) and client firm's level of experience may mediate the relationship between client firm size and DSL (H4). However, we did not measure these constructs in our study; a limitation that future research may address.

REFERENCES

Anderson, J.C. and Gerbing, D.W. (1988), "Structural equation modeling in practice: A review and recommended two step approach", *Psychological Bulletin,* Vol. 103 No. 3, pp. 411–423.

Armstrong, J.S. and Overton, T.S. (1977), "Estimating Non-response Bias in Mail Surveys", *Journal of Marketing Research,* Vol. 14 No. 3, pp. 396-402.

Bagozzi, R.P. and Yi, Y. (2012), "Specification, evaluation, and interpretation of structural equation models", *Journal of the Academy of Marketing Science,* Vol. 40 No. 1, pp. 8-34.

Balvers, R.J., Mcdonald, B. and Miller, R.E. (1988), "Underpricing of new issues and the choice of auditor as a signal of investment banker reputation", *Accounting Review,* Vol. 63 No. 4, pp. 605-622.

Berg, B.L. and Lune, H. (2011), *Qualitative Research Methods for the Social Sciences,* 8th ed., Pearson. Boston, MA.

Bienstock, C.C., Mentzer, J.T. and Bird, M.M. (1996), "Measuring physical distribution service quality", *Journal of the Academy of Marketing Science,* Vol. 25 No. 1, pp. 31-44.

Bitner, M.J., Booms, B.H. and Mohr, L.A. (1994), "Critical Service Encounters: The Employee's Viewpoint", *Journal of Marketing,* Vol. 58 No. October, pp. 95-106.

Bolton, R.N. and Drew, J.H. (1991), "A multistage model of customers' assessments of service quality and value", *Journal of consumer research,* Vol. 17 No. 4, pp. 375-384.

Bone, S.A., Fombelle, P.W., Ray, K.R. and Lemon, K.N. (2014), "How Customer Participation in B2B Peer-to-Peer Problem-Solving Communities Influences the Need for Traditional Customer Service", *Journal of Service Research,* Vol. No., pp. 1094670514537710.

Brown, S.W. and Swartz, T.A. (1989), "A Gap Analysis of Professional Service Quality", *Journal of Marketing,* Vol. 53 No. April, pp. 92-98.

Caceres, R.C. and Paparoidamis, N.G. (2007), "Service quality, relationship satisfaction, trust, commitment and business-to-business loyalty", *European Journal of Marketing,* Vol. 41 No. 7/8, pp. 836-867.

Cameran, M., Moizer, P. and Pettinicchio, A. (2010), "Customer satisfaction, corporate image, and service quality in professional services", *The Service Industries Journal,* Vol. 30 No. 3, pp. 421-435.

Campos, D.F. and Nóbrega, K.C. (2013), "Importance and the zone of tolerance of customer expectations of fast food services", *Journal of Operations and Supply Chain Management,* Vol. 2 No. 2, pp. 56-71.

Cavana, R.Y., Corbett, L.M. and Lo, Y.L.G. (2007), "Developing zones of tolerance for managing passenger rail service quality", *International Journal of Quality & Reliability Management,* Vol. 24 No. 1, pp. 7-31.

Clow, K.E., Kurtz, D.L., Ozment, J. and Ong, B.S. (1997), "The antecedents of consumer expectations of services: an empirical study across four industries", *Journal of Services Marketing,* Vol. 11 No. 4, pp. 230-248.

De Ruyter, K. and Wetzels, M. (1999), "Commitment in auditor–client relationships: antecedents and consequences", *Accounting, Organizations and Society,* Vol. 24 No. 1, pp. 57-75.

Deangelo, L.E. (1981), "Auditor size and audit quality", *Journal of Accounting and Economics,* Vol. 3 No. 3, pp. 183-199.

Devlin, J.F., Gwynne, A.L. and Ennew, C.T. (2002), "The antecedents of service expectations", *Service Industries Journal,* Vol. 22 No. 4, pp. 117-152.

Dion, P.A., Javalgi, R. and Dilorenzo-Aiss, J. (1998), "An empirical assessment of the Zeithaml, Berry and Parasuraman service expectations model", *Service Industries Journal,* Vol. 18 No. 4, pp. 66-86.

Duff, A. (2004), *AUDITQUAL: Dimensions of audit quality,* Institute of Chartered Accountants of Scotland. Edinburgh, Scotland.

Fornell, C. and Larcker, D.F. (1981), "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error", *Journal of Marketing Research,* Vol. 18 No. Feb, pp. 39-50.

Francis, J.R. and Simon, D.T. (1987), "A test of audit pricing in the small-client segment of the US audit market", *Accounting Review,* Vol. 62 No. 1, pp. 145-157.

Gilbert, D. and Wong, R.K.C. (2003), "Passenger expectations and airline services: a Hong Kong based study", *Tourism Management,* Vol. 24 No. 5, pp. 519-532.

Gounaris, S. (2005), "Measuring service quality in b2b services: an evaluation of the SERVQUAL scale vis-à-vis the INDSERV Scale", *Journal of Services Marketing,* Vol. 19 No. 6, pp. 421-435.

Greenwood, R., Li, S.X., Prakash, R. and Deephouse, D.L. (2005), "Reputation, diversification, and organizational explanations of performance in professional service firms", *Organization Science,* Vol. 16 No. 6, pp. 661-673.

Grönroos, C. (1984), "A service quality model and its marketing implications", *European Journal of Marketing,* Vol. 18 No. 4, pp. 36-44.

Groves, R.M. (2006), "Nonresponse rates and nonresponse bias in household surveys", *Public Opinion Quarterly,* Vol. 70 No. 5, pp. 646-675.

Harman, H.H. (1967), *Modern factor analysis,* University of Chicago Press, Chicago, IL.

Herath, T. and Rao, H.R. (2009), "Encouraging information security behaviors in organizations: Role of penalties, pressures and perceived effectiveness", *Decision Support Systems,* Vol. 47 No. 2, pp. 154-165.

Heskett, J.L., Jones, T.O., Loveman, G.W., Sasser, W.E.J. and Schlesinger, L.A. (1994), "Putting the service-profit chain to work", *Harvard Business Review,* Vol. 72 No. 2, pp. 164-174.

Hsieh, Y.-H., Chen, I.-H. and Yuan, S.-T. (2014), "FCM-based customer expectation-driven service dispatch system", *Soft Computing,* Vol. 18 No. 2, pp. 359-378.

Hu, K.C. (2010), "Evaluating city bus service based on zone of tolerance of expectation and normalized importance", *Transport Reviews,* Vol. 30 No. 2, pp. 195-217.

Hu, L.-T. and Bentler, P.M. (1999), "Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives", *Structural Equation Modeling,* Vol. 6 No. 1, pp. 1-55.

Kalamas, M., Laroche, M. and Cézard, A.D. (2002), "A model of the antecedents of should and will service expectations", *Journal of Retailing and Consumer Services,* Vol. 9 No. 6, pp. 291-308.

Kettinger, W.J. and Lee, C.C. (2005), "Zones of Tolerance: Alternate Scales for Measuring Information Systems Service Quality", *MIS Quarterly,* Vol. 29 No. 4, pp. 607-623.

Ladhari, R. (2008), "Alternative measures of service quality: a review", *Managing Service Quality,* Vol. 18 No. 1, pp. 65-86.

Lam, S.Y., Shankar, V., Erramilli, M.K. and Murthy, B. (2004), "Customer value, satisfaction, loyalty, and switching costs: an illustration from a business-to-business service context", *Journal of the Academy of Marketing Science,* Vol. 32 No. 3, pp. 293-311.

Lennox, C. (1999), "Are large auditors more accurate than small auditors?", *Accounting and Business Research,* Vol. 29 No. 3, pp. 217-227.

Liang, H., Saraf, N., Hu, Q. and Xue, Y. (2007), "Assimilation of enterprise systems: the effect of institutional pressures and the mediating role of top management", *MIS quarterly,* Vol. 31 No. 1, pp. 59-87.

Licata, J.W., Chakraborty, G. and Krishnan, B.C. (2008), "The consumer's expectation formation process over time", *Journal of Services Marketing,* Vol. 22 No. 3, pp. 176-187.

Liechty, M.G. and Churchill, G.A. (1979), *Conceptual insights into consumer satisfaction with services,* Graduate School of Business, University of Wisconsin-Madison.

Maister, D.H. (2007), *Managing the professional service firm,*Simon and Schuster. New York, NY.

Mentzer, J.T., Flint, D.J. and Hult, G.T.M. (2001), "Logistics service quality as a segment-customized process", *Journal of marketing,* Vol. 65 No. 4, pp. 82-104.

Nadiri, H. and Hussain, K. (2005), "Diagnosing the zone of tolerance for hotel services", *Managing Service Quality,* Vol. 15 No. 3, pp. 259-277.

Nadiri, H., Kandampully, J. and Hussain, K. (2009), "Zone of tolerance for banks: a diagnostic model of service quality", *The Service Industries Journal,* Vol. 29 No. 11, pp. 1547-1564.

Palmrose, Z.-V. (1986), "Audit fees and auditor size: Further evidence", *Journal of Accounting Research,* Vol. 24 No. 1, pp. 97-110.

Parasuraman, A., Berry, L.L. and Zeithaml, V.A. (1985), "A Conceptual Model of Service Quality and its Implications for Future Research", *Journal of Marketing,* Vol. 49 No. Fall, pp. 41-50.

Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1988), "SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality", *Journal of Retailing,* Vol. 64 No. 1, pp. 12-37.

Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1991), "Refinement and reassessment of the SERVQUAL scale", *Journal of Retailing,* Vol. 67 No. 4, pp. 420-450.

Pitt, L.F., Watson, R.T. and Kavan, C.B. (1995), "Service Quality: A Measure of Information Systems Effectiveness", *MIS Quarterly,* Vol. 19 No. 2, pp. 173-187.

Podsakoff, P.M., Mackenzie, S.B., Lee, J.-Y. and Podsakoff, N.P. (2003), "Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies", *Journal of Applied Psychology,* Vol. 88 No. 5, pp. 879-903.

Prahalad, C.K. and Ramaswamy, V. (2000), "Co-opting customer competence", *Harvard business review,* Vol. 78 No. 1, pp. 79-90.

Reynolds, J.K. and Francis, J.R. (2000), "Does size matter? The influence of large clients on office-level auditor reporting decisions", *Journal of Accounting and Economics,* Vol. 30 No. 3, pp. 375-400.

Scott, C.A. and Yalch, R.F. (1980), "Consumer response to initial product trial: A Bayesian analysis", *Journal of Consumer Research,* Vol. 7 No. 1, pp. 32-41.

Sharma, P., Tam, J.L.M. and Kim, N. (2009), "Demystifying Intercultural Service Encounters: Toward a Comprehensive Conceptual Framework", *Journal of Service Research,* Vol. 12 No. 2, pp. 227-242.

Simon, D.T. (2011), "Additional evidence on the large audit-firm fee premium as an indication of auditor quality", *Journal of Applied Business Research (JABR),* Vol. 13 No. 4, pp. 21-30.

Svensson, G. (2006), "New aspects of research into service encounters and service quality", *International Journal of Service Industry Management,* Vol. 17 No. 3, pp. 245-257.

Verhoef, P.C., Lemon, K.N., Parasuraman, A., Roggeveen, A., Tsiros, M. and Schlesinger, L.A. (2009), "Customer experience creation: Determinants, dynamics and management strategies", *Journal of Retailing,* Vol. 85 No. 1, pp. 31-41.

Von Nordenflycht, A. (2010), "What is a professional service firm? Toward a theory and taxonomy of knowledge-intensive firms", *Academy of Management Review,* Vol. 35 No.

1, pp. 155-174.

Woo, K.-S. and Ennew, C.T. (2005), "Measuring business-to-business professional service quality and its consequences", *Journal of Business Research,* Vol. 58 No. 9, pp. 1178-1185.

Wu, L.-W. (2011), "Satisfaction, inertia, and customer loyalty in the varying levels of the zone of tolerance and alternative attractiveness", *Journal of Services Marketing,* Vol. 25 No. 5, pp. 310-322.

Wu, L.-W. and Wang, C.-Y. (2012), "Satisfaction and zone of tolerance: the moderating roles of elaboration and loyalty programs", *Managing Service Quality,* Vol. 22 No. 1, pp. 38-57.

Yap, K.B. and Sweeney, J.C. (2007), "Zone-of-tolerance moderates the service quality-outcome relationship", *The Journal of Services Marketing,* Vol. 21 No. 2, pp. 137-148.

Zainol, N.A., Lockwood, A. and Kutsch, E. (2010), "Relating the zone of tolerance to service failure in the hospitality industry", *Journal of Travel & Tourism Marketing,* Vol. 27 No. 3, pp. 324-333.

Zeithaml, V.A., Berry, L.L. and Parasuraman, A. (1993), "The Nature and Determinants of Customer Expectations of Service", *Journal of the Academy of Marketing Science,* Vol. 21 No. 1, pp. 1-12.

Zeithaml, V.A., Berry, L.L. and Parasuraman, A. (1996), "The behavioral consequences of service quality", *Journal of Marketing,* Vol. 60 No. 2, pp. 31-46.

Zolkiewski, J., Lewis, B., Yuan, F. and Yuan, J. (2007), "An assessment of customer service in business-to-business relationships", *Journal of Services Marketing,* Vol. 21 No. 5, pp. 313-325.

Figure 1 – Original ZOT Framework (Zeithaml et al. 1993)

Expected Service

| Enduring Service Intensifiers |
| Personal Needs |

Desired Service

| Explicit Service Promises |
| Implicit Service Promises |
| Word-of-Mouth |
| Past Experience |

| Transitory Service Intensifiers |
| Perceived Service Alternatives |
| Self-Perceived Service Role |
| Situational Factors |

Zone of Tolerance

Adequate Service

| Predicted Service |
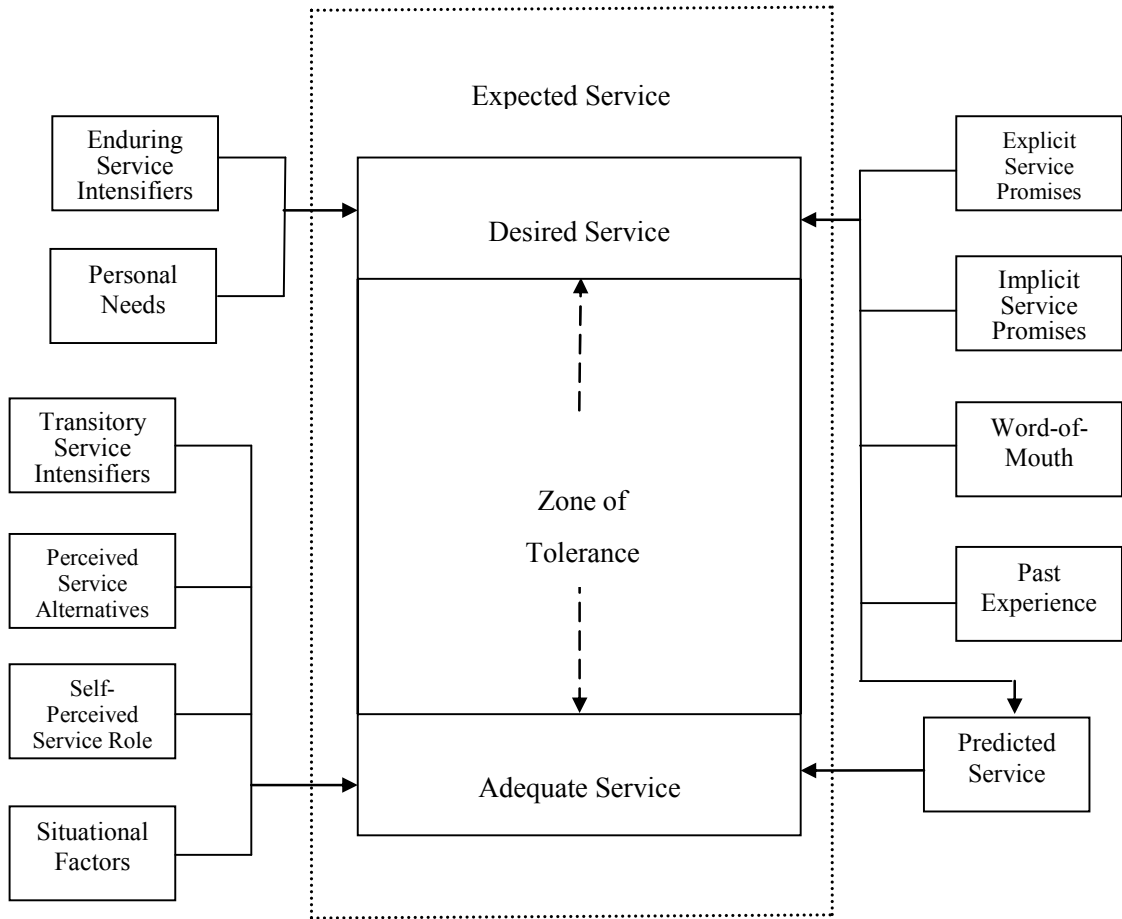
Figure 2 – Modified ZOT Framework for B2B Professional Services
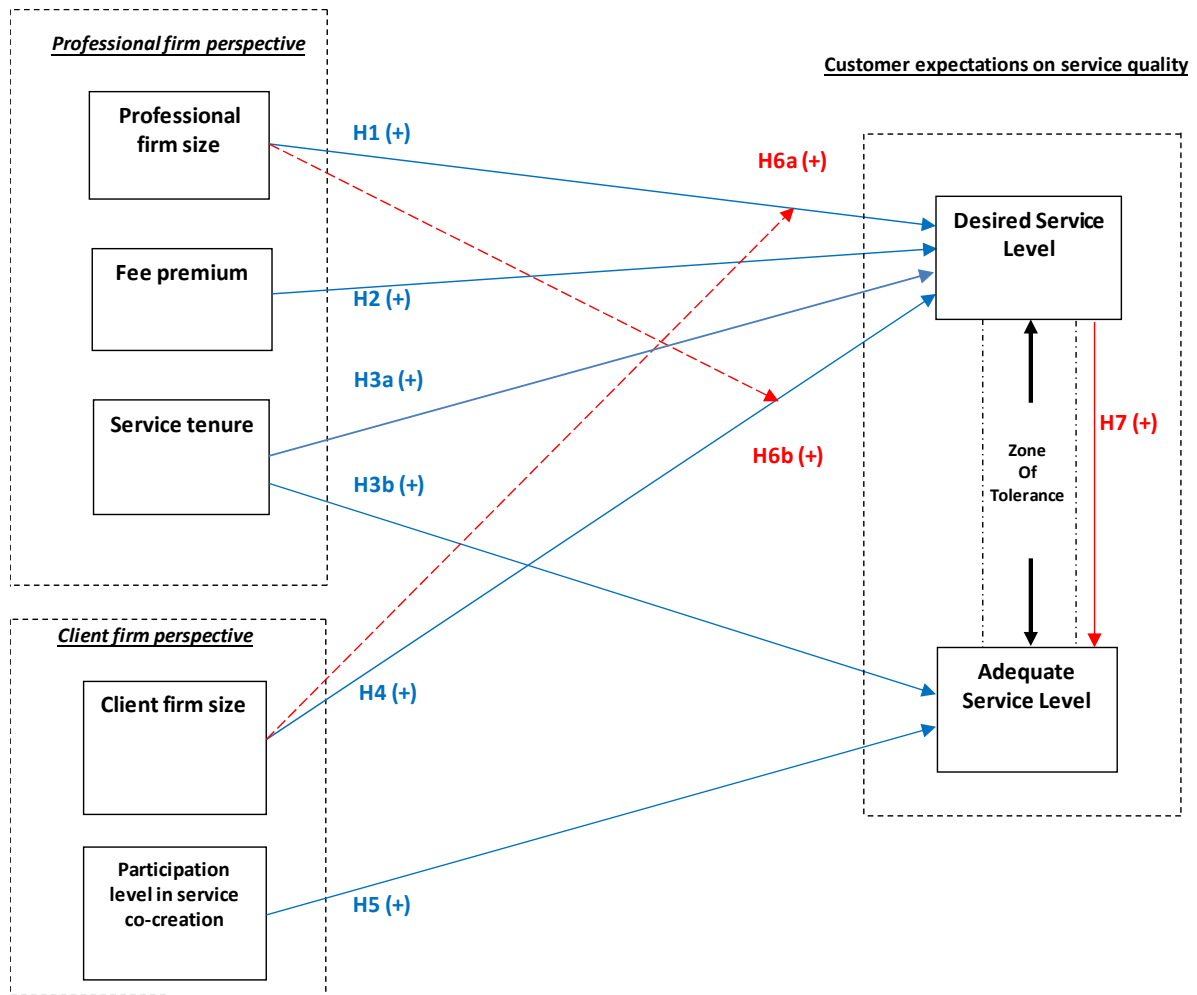
Table 1 – Comparison of AUDITQUAL dimensions

AUDITQUAL (Duff 2004) Dimensions		Revised AUDITQUAL Dimensions
Technical Quality	Experience	Knowledge
	Expertise	
	Independence	Reputation
	Reputation	
	Capability	Capability
	Responsiveness	Responsiveness
Service Quality	Non-audit Services	Non-audit Services
	Empathy	Empathy
	Client Service	Client Service

Table 2 – Sample Profile & Demographic Characteristics

Demographic		Nos.	%age
Gender	Female	200	50.7%
	Male	195	49.3%
Respondent's Designation/Position in the Organization	Accountant	62	15.7%
	Accounts/Finance Manager	81	20.5%
	Financial Controller	60	15.2%
	CFO	50	12.7%
	Director	94	23.8%
	Others	48	12.1%
Professional Accounting Association Member	No	130	32.9%
	Yes	265	67.1%
Worked as an auditor	No	201	51.0%
	Yes	194	49.0%
Work experience in current company	< 6 years	130	33.0%
	6-10 years	95	24.1%
	11-15 years	63	16.0%
	16-20 years	59	15.0%
	> 20 years	48	11.9%
Total work experience	< 6years	39	9.9%
	6-10 years	54	13.7%
	11-15 years	67	17.0%
	16-20 years	58	14.7%
	> 20 years	177	44.7%

Table 3 – AUDITQUAL (Duff, 2004) Scale Items & Descriptives

	DSL (Mean)	ASL (Mean)	PSL (Mean)
1. Capability			
1.1 The engagement partner is highly competent	6.16	4.55	5.30
1.2 The engagement partner has high ethical standards	6.25	4.69	5.49
1.3 The engagement partner has financial statement users' best interest at heart	6.08	4.58	5.30
1.4 The engagement partner is keen to understand what is happening within the client's organization	6.07	4.43	5.12
1.5 The audit team staff are highly competent	6.10	4.55	5.07
1.6 The audit team staff operate to high ethical standards	6.19	4.69	5.32
	6.14	**4.58**	**5.27**
2. Client Service			
2.1 The audit firm conducts client service review	6.12	4.43	5.03
2.2 The engagement partner arranges regular meetings with the client's key staff to identify issues of concern	6.00	4.38	4.92
2.3 The engagement partner regularly identifies examples of added value to the client	5.92	4.26	4.77
2.4 The audit team is willing to provide guidance on accounting principles	6.27	4.58	5.08
2.5 There is frequent communication between the audit team and audit committee	5.97	4.46	4.94
2.6 There is frequent communication between the audit team and executive management	6.06	4.41	4.92
	6.06	**4.42**	**4.94**
3. Empathy			
3.1 The engagement partner is pro-active and contributory	6.05	4.44	5.03
3.2 The engagement partner provides the client's finance director with individual attention	5.89	4.35	4.88
3.3 The engagement partner has the client's best interest at heart	6.13	4.40	5.03
3.4 The audit team provides the client with personal attention	5.93	4.31	4.91
	6.00	**4.38**	**4.96**
4. Knowledge			
4.1 The manager (senior manager) of the audit firm has been performing the audit for at least two years	6.08	4.50	5.28
4.2 The audit firm undertakes research into the client's industry	6.00	4.37	5.02
4.3 The audit partner is subject to internal review during the audit by other partners of the firm	5.97	4.33	5.05
4.4 The engagement partner is very knowledgeable about	6.14	4.52	5.16

the client's industry

4.5	The audit manager assigned to the audit is very knowledgeable about the client's industry	6.10	4.53	5.06
		6.06	**4.45**	**5.11**

5. Non-audit Services

5.1	The audit firm is able to provide additional consultancy services	5.91	4.26	5.12
5.2	The audit firm is able to provide additional accounting services	5.95	4.33	4.90
5.3	The audit firm is able to provide internal audit services	5.87	4.22	4.89
		5.91	**4.27**	**4.97**

6. Reputation

6.1	The audit firm is highly competent	6.17	4.55	5.20
6.2	The audit firm operates to the highest standard of integrity	6.27	4.71	5.43
6.3	The audit firm is conscientious	6.21	4.81	5.43
6.4	The audit firm is credible to third parties	6.27	4.65	5.51
6.5	The audit firm enjoys a good reputation	6.26	4.77	5.45
6.6	The audit fee paid by the client is immaterial to the engagement partner	6.03	4.51	5.22
		6.20	**4.67**	**5.37**

7. Responsiveness

7.1	The audit firm is skillful in devising accounting treatments that generate results management wishes to obtain	6.12	4.52	5.16
7.2	The audit firm is willing to provide detailed cost information	6.13	4.55	5.12
7.3	The audit firm is willing to be flexible when scheduling the timing of audit visits	6.19	4.59	5.31
7.4	The audit firm's office is geographically close to the client office	5.64	4.09	4.95
7.5	The engagement partner is easily contactable	6.05	4.46	5.17
7.6	There is a "good fit" between the personality of the engagement partner and the finance director	6.05	4.48	5.18
7.7	The relationship between the engagement partner and finance director is relatively informal	5.91	4.40	5.20
7.8	Audit team staff create the minimum of disruption so far as practically possible	6.14	4.35	5.17
7.9	The audit team develops stringent time budgets for each audit area and expects people to meet them	6.02	4.50	5.15
		6.03	**4.44**	**5.16**

Table 4 – Scale Items & Descriptives (Independent Variables)

Independent Variables	Min	Max	Mean	SD
Professional Firm Size (Balvers et al., 1988)				
• Type of current audit firm	Big-4 (192)	Others (203)	NA	NA
Fee Premium (Simon, 2011)				
• How much does this audit firm charge for its services on average as compared to:				
- Similar-sized audit firms	1	7	4.08	1.85
- Larger audit firms	1	7	3.03	1.72
- Smaller audit firms	1	7	5.26	1.72
Service Tenure (Cameran et al., 2010)				
• Number of years served by this audit firm	1	40	7.37	5.08
Client Firm Size				
• Is your firm a listed company (Yes/No)	Listed (153)	Unlisted (242)	NA	NA
• Annual turnover compared to other companies in the industry (1=smaller, 7=larger)	1	7	4.17	1.77
• Number of employees compared to other companies in the industry (1=smaller, 7=larger)	1	7	4.30	1.65
Participation level in service creation (Licata et al., 2008)				
• Client's staff's participation level with the audit firm during the following creation activities:				
- Prepare precise management accounts	1	7	4.50	2.00
- Keep tidy accounting records	1	7	4.47	2.21
-Elaborate and explain to auditors clearly on the matters and queries raised by them	1	7	4.75	2.17
-Follow up outstanding issues after the audit	1	7	5.04	2.09