

## Research Paper

# Mapping Zone of Tolerance from Destination Atmospherics

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**Abstract:** The concept of zone of tolerance is quite complex as it delves deep into the cognitive spread of consumers which determines the level of acceptance or rejection of services. Thus for service marketers, the deterministic impact of zone of tolerance may play a critical role towards acceptance/ rejection of services based on quality, delivery, physical evidence and employee interaction. Research on zone of tolerance thus far has been restricted to the identification of the stretch limit using empirical evidence of retail customers. The subtle variation in the psychological perception of services and vis-a-vis receptivity based on sectoral dimensions has remained inconclusive. Further, zone of tolerance as a pivotal determinant of destination attachment has not been focused either, although the concept is likely to have serious connotations with respect to behavioural consequences of tourists. Destination atmospherics, a major input in tourism-servicescape, is apprehended to be deterministic of zone of tolerance. This paper intends to map the zone of tolerance of tourists from the perspective of destination atmospherics. The findings will lend additional inputs to the theoretical base of travel motivation.

**Keywords:** Destination atmospherics, zone of tolerance, tourist

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## Introduction

World Travel and Tourism Council (WWTC, 2015) in their report, portrayed India as one of the most sought destinations in the world tourism circuit. According to the WTTC, India ranked 9th out of 184 countries in terms of growth and ranked 4th in terms of predicted growth for the period 2015-2025. The direct contribution of travel and tourism for India's GDP in 2015 rose by 7.6% as compared to 2014 (INR 2478.2 billion) and is projected to grow at a rate of 7.1% per annum till 2025.

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The report further projected a growth of 7.4% per annum on leisure travel spending for both inbound and domestic tourists compared to a cumulative spending of INR 5502 billion in 2014. The upsurge in the travel and tourism industry also affects capital investment and it is projected to grow at 6.5% per annum during 2015-2025 (WTTC, 2015).

This in turn, affects employment in the sector which is predicted to climb at a rate of 2% to total employment for the same said period.

This upsurge in tourist flow has serious implications for destination marketing organisations (DMOs) as they need to focus on the issues of tourist satisfaction, repeat visitation, positive advocacy and share-of-wallet to maintain the inbound flow. The facts and figures are encouraging enough to delve into the realms of perceived service-quality enhancement and positive cognitive response thereof. The showcasing of destinations and marketing of tourism products must go hand-in-hand to generate a synergistic pull-effect. This calls for identifying the alluring atmospheric elements of the destination and their impact on the perceived service quality of tourists. The economic buzz rings a bell for the academic fraternity too as research works on identifying factors pertaining to tourist satisfaction, perception of service quality, destination attachment factors etc. The possible contribution of destination atmospherics in shaping human cognition towards accepting or rejecting the bundle-of-services associated with tourism has evoked a number of queries for the researchers.

A broad-spectrum study on the travel and tourism industry, with specific reference to destination marketing and image building, has been observed as a means of addressing service-quality heterogeneity, tourist satisfaction and other behavioural consequences (Riege & Perry, 2000). Service quality, from a tourism perspective, interests not only academic researchers but also practitioners as it has been found to have a profound impact on the behavioural consequences of visitors including the intention to return to the destination and support for the destination. Service quality has been acknowledged as a tool for sustainability (Shemwell, Yavas, & Bilgin, 1998) and the research initiatives of Parasuraman, Berry & Zeithaml (1985, 1988, 1991), Zeithaml, Berry & Parasuraman (1993), Cronin & Taylor (1994) etc. presented the same critical measuring variable in the form of SERVQUAL, SERVPERF etc. Service quality has been linked up with destination attachment (Baksi, 2015a, 2015b) and destination brand building (Balakrishnan, 2009; Pike, 2007a, 2007b). While 'perception of service quality' has been accepted as the controlling variable of behavioural response, researchers pondered over the range of accepted service performance in determining favourable behavioural response from tourists. Parasuraman et al. (1994) proposed zone of tolerance (ZOT) which presented a whole new take on the expectation-based service quality measurement. The researchers identified the "adequate" and "desired" levels of service performance which is perceived to limit the acceptability of services. The concept offered a framework to service providers in designing and delivering

their offers with acceptable parameters. ZOT, however, has been understudied in the context of tourism, and more specifically, it has not been taken up in conjunction with destination-atmospheric variables.

Atmospherics has been extensively studied in the context of retail services and atmospheric elements were found to generate a cognitive urge in customers which further stimulated their shopping behaviours. Destination-specific atmospherics were never studied from a tourism perspective to assess its deterministic role, if any, in the zone of tolerance. Therefore a comprehensive model combining the elements of SERVQUAL and destination atmospherics may offer a more vivid explanation on parameters and measurability of ZOT of tourists.

### **Literature Review**

Service quality, as the foundation of a cognitive relationship between the provider and customers, assumes paramount importance in terms of cognitive outputs, namely customer satisfaction, customer retention, lowering of costs, profitability and overall sustainable business performance depends on it (Peng & Wang, 2006; Gurau, 2003; Sureshchander, Rajendran, & Anatharaman, 2002; Lasser, Manolis, & Winsor, 2000; Silvestro & Cross, 2000). Service quality, in the context of the tourism and hospitality industry, has also received considerable attention from researchers and practitioners alike as a potent differentiator among tourism establishments (Nadiri & Hussain, 2005) and as a performance enhancer (Lewis, 1993). A number of research initiatives focused on the measurement of service quality and the use of comparisons became pivotal in the same way (Nadiri & Hussain, 2005). Parasuraman et al. (1985, 1991, 1994) observed that customers compare their expected level of service performance with the perceived level as a measure of service quality. However, “expected level of service” as a comparison benchmark remains inconclusive across heterogeneous service transactions (Liljander & Strandvik, 1993) in spite of its significant implications. SERVQUAL (Parasuraman et al., 1985; 1988; 1991) was introduced as a measuring instrument for service quality based on the gap model consisting of five dimensions, namely tangibles, reliability, responsiveness, assurance and empathy. However, the suitability of this five-dimension model in different service set-ups has been questioned (Ekinci, Prokopaki, & Cobanoglu, 2003; Karatepe & Avci, 2002; Angur, Natarajan, & Jahera, 1999; Babakus & Mangold, 1992; Babakus & Boller; 1992).

Following the development of measurement instruments, namely SERVQUAL and SERVPERF (Cronin & Taylor, 1994), researchers focused on the heterogeneity that exists in accepting services. In 1994, Parasuraman et al. modified the SERVQUAL model to measure two different levels of service quality:

- (a) service superiority (MSS) – the gap between perceived and desired service
- (b) service adequacy (MSA) – the gap between perceived and adequate service

The modified model drew criticism about the nature of computation of the perception-expectation gap. Parasuraman et al. (1994) produced three propositions to measure MSS and MSA:

- (a) the first proposition was a three-column format using three identical scales to capture ratings regarding perceived, desired and adequate service levels. The proposition was almost identical to that of SERVQUAL except that it did not feature repetition of items
- (b) the second proposition was a two-column format using two identical scales to generate direct ratings for service-superiority gap (MSS) and service-adequacy gap (MSA)
- (c) the third proposition was a single column format with split questionnaire using repetitive SERVQUAL items generating ratings for both MSS and MSA

The expectation-based comparison process used in SERVQUAL was criticised (Boulding, Kalra, Staelin, & Zeithaml, 1993) as expectation was conceptualised as a non-static cognitive state governed by situation and experience. To counter this criticism, Zeithaml et al., (1993) put forward the theory of dual perspectives of service expectation: narrow and broad. The broad perspective of service expectation was observed as a multidimensional construct and was bifurcated into desired and adequate levels. Zeithaml et al. (1993) defined the desired level as the service a customer hopes to receive and is reflective of evaluated service quality. The adequate level was defined as the minimum level of acceptable service performance. The stretch between the desired and adequate level of service was called “zone of tolerance” (ZOT) representing the range of service performance that would be tolerated by customers. The concept of ZOT can be attributed to the expectancy-disconfirmation paradigm proposed by Oliver (1977, 1980). The theory conceptualised a cognitive comparison between expectations and perceived performance with deviations deemed as disconfirmation of beliefs. Positive disconfirmation results from superior perceived performance compared to expectation, while negative disconfirmation is associated with inferior perceived performance. The extent to which customers are willing to accept this variation in service performance is the ZOT. The ZOT also has its roots in the perceived-value theory (Chen & Dubinsky, 2003; Monroe, 1990) which describes the net benefits gained by customers in exchange of costs incurred to maximise such gains. Spreng, Andrea & Richard (1993) talked about a cognitive trade-off in which customers accept a transaction based on its future benefits or outcomes. ZOT has the “satisfaction/ dissatisfaction” element embedded in it. In 1990, Hart, Heskett & Sasser examined the impact of service recovery, following a service-failure, on the satisfaction-dissatisfaction polarity and found that satisfactory service recovery may elevate the level of satisfaction, thereby, hinting towards an upward stretch of ZOT. Later, McCollough & Bharadwaj (1992) termed the phenomenon as “service recovery paradox” which was conceptualised as a reinforcement in service satisfaction following an apparent dissatisfaction resulting from service failure. Service

recovery-paradox, yet again, confirmed the situational flexibility in the bandwidth of ZOT. The inherent criticalities in service transaction inhibit homogeneity in terms of delivery and vary across service touch points involving the provider and recipients. ZOT has never been studied from tourists' point of view; as a result of which, the contribution of social theories explaining the cognitive makeover of consumers was never tested in the context of the same.

Destination attributes are critical inputs of service expectations for tourists. Dann (1977) introduced a "pull-push" framework to understand the considerations for a visitor to choose a destination based on certain exogenous attributes (termed as 'pull'), namely physical landscape, heritage & culture, religious imperatives, scope of leisure-related activities, recreational value etc. (Klenosky, 2002) and endogenous forces, focusing on the internal desire of tourists, namely escape from monotony, relaxation, rest, experience, social interaction etc. Researchers have also studied the impact of individual destination attributes on the choice and decision making related to specific destinations. Cost (Christie & Crompton, 2001; Dwyer & Kim, 2003; Gooroochurn & Sugiarto, 2003); culture (Smith, 2003; McKercher, 2002); entertainment & relaxation (Formica, 2000); physical landscape (Hu & Ritchie, 1993; Formica, 2000); climatic conditions (Martin, 2005); accessibility (Zhang & Lam, 1999; Crouch & Ritchie, 1999); safety & security (Pizam & Mansfeld, 1996; Dimanche & Lepetic, 1999), attitude of locals (Dwyer & Kim, 2003; Andriotis & Vaughn; 2003) and services (Haber & Lerner, 1998) were found to be critical destination attributes influencing tourists' decision regarding choice & preference of destination. Further, these destination attributes were found to play a significant role in building the expectation-perception continuum of quality associated with tourism services. Mehrabian and Russel (1974) expanded the stimulus-organism-response (SOR) paradigm to understand an individual's assessment of physical environment towards framing service expectations. Researchers have empirically tested the effect of emotions evoked from physical environment on behavioural outputs in various settings, namely hotels (Barsky & Nash, 2002), museums and theme parks (Bigne & Andreu, 2004, Bigne, Andreu & Gnoth, 2005; Bonn, Joseph-Mathews, Hayes & Cave, 2007) and festivals (Lee, Lee, Lee, & Babin, 2008). The physical environment or atmospherics (or servicescape) of a destination has been found to have antecedent impact on destination attachment (Baksi, 2015a; Baksi, 2015b). Atmospherics in service environment was observed as triangulation of ambiance conditions, spatial layout and signs and social service environment (Bonn et al., 2007). Richins (1997) found that the prevailing scales capturing cognitive emotions of customers, namely the pleasure-arousal-dominance (PAD) (Mehrabian & Russell, 1974) and destination-emotion-scale (Izrad, 1977) are inadequate to map cognitive response to a service performance as the context of service transaction may vary. She developed a consumption emotion set (CES) to measure emotions elicited through service interactions. Researchers

working on leisure and tourism have identified atmospheric variables pertaining to destination attachment and satisfaction of tourists (Kyle, Graefe, Manning & Bacon, 2003, 2004a, 2004b) which are perceived to determine zone of tolerance. Varying destination atmospherics tend to alter the preferential orientation of tourists as they bank on their past experience and/ or search for alternatives (Hammit, Backlund, & Bixler, 2004, 2006; Lee, 2001; Hammit & McDonald, 1983). Support drawn from past experience often plays an antecedent role in tourist satisfaction and somehow determines the stretch of zone of tolerance. Tourist satisfaction has been used as an assessment tool to evaluate destination atmospherics, travel and shopping experience, recreation setting and decision to return (Alegre & Juaneda, 2006; Bigne et al., 2005; Bramwell, 1998; Ross & Iso-Ahola, 1991). Destination atmospherics, namely crowd level, quality of entertainment, uniqueness of activities, feeling safe, visually appealing sites, affordability, visibility of signages etc. were found to have a profound impact on the expectation level of visitors (Baker & Crompton, 2000; Pritchard, Havitz, & Howard, 1999) and therefore is perceived as forming a critical component of tourists' zone of tolerance.

ZOT at destinations that present heritage, scenic beauty, ethno-cultural experience and festivals as major attractions should not be measured in terms of service providers, namely hotels or logistics companies (as shown by research thus far) only, but should also take into account, atmospheric inputs. Researchers, thus far, have only taken into account destination attributes and tried to correlate them (in terms of antecedent effect) with decision making such as destination choice, destination preference (Baksi, 2015a), travel plan and travel behaviours such as satisfaction (Kyle et al., 2003, 2004a, 2004b), repeat visitation (Alegre & Juaneda, 2006; Bigne et al., 2005), destination attachment (Baksi, 2015a; Baksi, 2015b) and destination loyalty etc. Therefore, only partial understanding about the impact of tourism-service quality and destination-attributes on the behavioural pattern of tourists were observed as they were treated in isolation. Literature remains inconclusive regarding a comprehensive approach to integrate service-atmospherics to map ZOT for tourists. The models, PAD by Mehrabian & Russell, 1974 and DES by Izrad (1977) were also found to be inadequate in explaining the formation of the cognitive bandwidth reflecting acceptance of services. The expectancy-disconfirmation paradigm by Oliver (1977, 1980) tries to explain the expectation-perception continuum in terms of disconfirmation of beliefs but fails to provide a comprehensive model to understand how the acceptance-limits are placed by synthesising services and atmospherics together. This study expands the realm of conventional service-expectation-based measurement of zone of tolerance by integrating cognitive expectations arising out of destination atmospherics. The study also takes into consideration, theories like expectancy-disconfirmation, perceived-value, customer expectation-perception continuum, customer satisfaction etc. to frame the gap in the study.

## Methodology

A quantitative research approach was adopted to obtain a measure of ZOT based on destination-atmospheric elements. The methodology is grounded on identification of relevant constructs from past research to propose a theoretical model for empirical examination on the basis of field survey. The study conceptualised TOURZOT, a model to measure zone of tolerance of tourists. The model re-examined the study by Nadiri and Hussain (2005) and expanded it to include destination atmospherics as a measurement criterion. The study also measured the MSS and MSA level of tourists visiting destinations using TOURZOT. The initial measurement constructs of TOURZOT were identified from the studies of Parasuraman et al (1988), Zeithaml et al (1993), Parasuraman et al (1994) and Lovelock and Wright (1999). The desired level of service quality is expected to remain stable over time while the adequate level may change based on destination atmospherics. ZOT is perceived as the difference between these two levels of service quality and is in line with the definition put forward by Zeithaml et al (1993) that ZOT is the reflection of tourists' cognitive stretch towards acceptance and recognition of the heterogeneity involved in service quality. Dimensions of SERVQUAL were used to test the TOURZOT model. The study initially used three specific constructs for destination atmospherics as proposed by Bitner (1992), namely ambiance conditions, spatial layout and signs, symbols & layouts. Destination atmospherics were further ratified from the studies of Lee et al. (2008), Crompton (2003), Baker & Crompton (2000) and Crompton & Love (1995). Adequate modifications were made in the construct by incorporating destination-specific attributes as suggested by Baker (1986), Christie & Crompton (2001), Dwyer & Kim (2003), Gooroochurn & Sugiarto (2003), Smith (2003), McKercher (2002), Formica (2000), Hu & Ritchie (2003), Martin (2005), Zhang & Lam (1999), Crouch & Ritchie (1999), Pizam & Mansfeld (1996), Dimanche & Lepetic (1999), Andriotis & Vaughn (2003), Haber & Lerner (1998) and Baksi (2015a; 2015b). The major destination attributes that are considered to provide destination atmospherics include physical landscape, culture & heritage, safety & security, relaxation, scope of leisure and other activities, accessibility, services, local hospitality and climatic condition. A total of 27 items were used to assess the dimensionality of destination atmospherics.

Considering the nature of the study and the universe to be incorporated, the convenience sampling method was used to generate responses from tourists visiting Santiniketan, West Bengal, India. The cross-sectional data were collected in two phases, namely July to December, 2015 and January to June, 2016 covering two specific festivals, namely the *Poush-Mela* (winter fare) and *Basantotsav* (spring-fest) apart from the regular inflow of tourists. The study was restricted to domestic tourists only. The survey instrument, a structured questionnaire, was used for the purpose of collecting primary data. The questionnaire was designed to measure "service expectations"

and “service perceptions” using SERVQUAL items (Parasuraman et al, 1991). The questionnaire further incorporated items related to destination atmospherics to identify their role in shaping visitors’ ZOT. It provided three columns to capture expected, desired and perceived level of services. The questionnaire was put through the refinement protocol (pilot test using focus group) to get rid of ambiguity and was redrafted to fit the study. The revised instrument was intended to measure ZOT based on service quality and destination atmospherics and hence represented the proposed TOURZOT. A total of 800 questionnaires were distributed out of which 614 were retrieved. 565 questionnaires were found usable thereby providing a response rate of 70.63%. A seven-point Likert scale (Likert, 1934) was used for data collection with “1” being “strongly disagree” and “7” being “strongly agree”.

The theoretical model proposed for testing is represented in Figure 1.

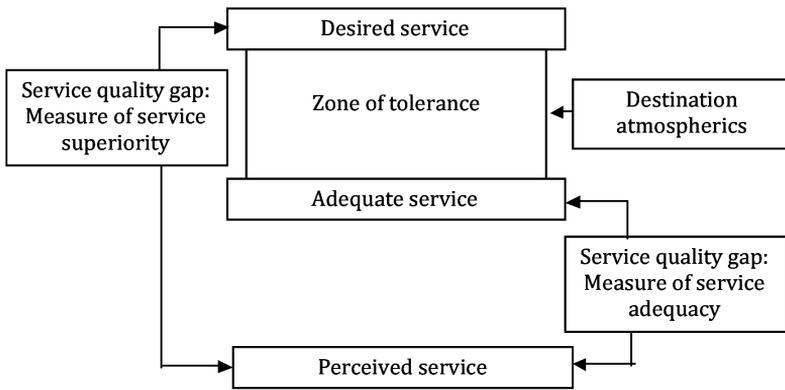


Figure 1. TOURZOT model

### Findings

The dimensionality and internal reliability of TOURZOT were tested using exploratory factor analysis (Table 1). TOURZOT was not found to assume all conventional dimensions of SERVQUAL. The significant factor loadings were then renamed into “tangibles”, “intangibles” and “atmospherics”.

Table 1. Results of exploratory factor analysis

Assigned dimension	Scale item	Eigenvalue	% of variance	Cumulative variance	Factor loading	$\alpha$
Tangibles	The service providers have modern-looking equipment	2.23	7.16	7.16	.795	0.91

**Table 1** (cont)

	The service providers' physical facilities are visually appealing				.766	
	The employees of the service providers are well-groomed				.860	
	Visual display of takeaway materials are appealing				.703	
	The service providers comply with the committed time of delivering service				.620	
	The service providers insist on error-free records				.699	
	Employees of the service providers inform about the exact time when the service will be delivered				.840	
Intangibles	Employees of the service providers are always willing to help	12.65	12.87	20.03	.910	0.95
	Employees of the service providers instil confidence				.832	
	I feel safe regarding transactions with the service providers				.740	
	Employee of service providers are consistently courteous				.753	
	Employees of service providers are not too busy to respond to queries				.776	

**Table 1** (con't)

	Employees of service providers are knowledgeable enough to answer my queries					.748	
	Employees of service providers understand my specific needs					.739	
	The service providers have employees who give individual attention					.728	
	The destination has visually appealing decor					.707	
	The destination has easy to access parking space					.729	
	The destination has adequate restrooms					.751	
	The quality of entertainment associated with the destination is extremely satisfactory					.763	
Destination atmospherics	The destination hosts unique festivals and rituals	15.08	47.86	67.89		.949	0.93
	The destination has heritage & cultural significance					.891	
	The destination provides opportunities to collect local artefacts & souvenirs					.902	
	The destination provides quality dining facilities					.867	

**Table 1** (cont')

The destination appears to be safe for travelling	.820
The destination ensures cleanliness of the visiting sites	.817
The destination is easily accessible	.654
The destination has a serene and tranquil environment	.912
The destination offers adequate engagement opportunities through activities	.818
The destination offers satisfactory local hospitality	.779
The local community at the destination is accommodating and willing to help	.748
The destination offers knowledgeable local forums that act as a guide	.659
The destination offers acceptable crowd level	.682

Extraction method: Principal component analysis

Rotation method: Varimax with Kaiser normalisation

KMO: .947

Barlett's test of sphericity: Chi-square: 4568.327, df: 267, sig:  $p < 0.000$

Exploratory factor analysis with varimax rotation was deployed to assess the dimensionality and internal reliability of the data. The aggregate reliability of the dimensions, namely tangibles, intangibles and atmospherics were also found to be significant as  $\alpha$ -values ranged from .872 to .919 ( $>.700$  as per Churchill, 1979; Nunnally, 1978). The three dimensions identified have eigenvalues greater than 1

and the cumulative variance derived was 67.89%. The items' factor loadings of  $>.600$  (Hair, Anderson, Tatham, & Grablovsky, 1979) were accepted and the rest were discarded. The Kaiser Meyer-Olkin value of .947 and Barlett' sphericity statistics (chi-square: 4568.327, df: 267, sig:  $p < 0.000$ ) were also found acceptable as per Norusis (1985).

ZOT was calculated by obtaining the mean scores of expected, perceived and desired service levels. The perceived service level was found higher than the adequate service level and desired service level was found to be higher compared to perceived and adequate service level (Table 2). This implies that perceived service is within the ZOT continuum of tourists. MSS was found within the zone of tolerance but MSA was found below the zone of tolerance for all the dimensions. It can, therefore, be concluded that TOURZOT effectively measured tourists' ZOT on the modified SERVQUAL which had been aggregated with destination atmospherics. The internal consistency of the service level was found to be at an acceptable level,  $>.70$  (Churchill, 1979; Nunnally, 1978). A high alpha value also confirmed convergent validity (Parasuraman, 1991).

**Table 2.** Zone of tolerance for tourists

	Mean	Standard deviation	Cronbach's $\alpha$
<b><i>Adequate service</i></b>	<b>4.54</b>	<b>0.62</b>	
Tangibles	4.65	0.73	<b>0.91</b>
Intangibles	4.87	0.71	
Atmospherics	4.23	0.69	
<b><i>Desired service</i></b>	<b>6.23</b>	<b>0.58</b>	
Tangibles	6.11	0.66	<b>0.85</b>
Intangibles	6.52	0.72	
Atmospherics	5.98	0.77	
<b><i>Perceived service</i></b>	<b>5.03</b>	<b>0.71</b>	
Tangibles	4.91	0.73	<b>0.90</b>
Intangibles	5.14	0.82	
Atmospherics	5.04	0.77	
<b><i>MSA</i></b>	<b>-0.49</b>	<b>0.53</b>	
Tangibles	-0.26	0.61	<b>0.92</b>
Intangibles	-0.27	0.59	
Atmospherics	-0.81	0.62	
<b><i>MSS</i></b>	<b>1.20</b>	<b>0.69</b>	
Tangibles	1.20	0.77	<b>0.91</b>
Intangibles	1.38	0.73	
Atmospherics	0.94	0.72	

**Table 2** (cont)

<i>Zone of tolerance</i>	<i>1.69</i>	<i>0.52</i>	
Tangibles	1.46	0.53	<i>0.93</i>
Intangibles	1.65	0.55	
Atmospherics	1.75	0.54	

The distribution of TOURZOT values were calculated on the basis of “gap-analysis” using a paired sample t-test to assess whether there is a significant difference between the expectation and perception levels of respondents. The dimensional gap-analysis was done using the extended and modified SERVQUAL instrument with two dimensions, namely tangibles and intangibles (confirmed by Nadiri and Hussain, 2005) and atmospherics. The total number of variables used for the comparison was 32. Table 3 captured the results of the paired sample t-test. The results reveal that respondents gave relatively high expectation scores (mean  $\geq 5.5$ ) for “destination having unique festivals and rituals”, “destination having heritage significance”, “opportunity to collect souvenirs”, “satisfactory local hospitality”, “quality of entertainment”, “convenient access to visiting sites”, “serene and tranquil environment” and “adequate engagement opportunities in events and activities”. Similarly, high expectation scores (mean  $\geq 5.5$ ) were observed for “employees willing to help”, “safety in transactions”, “courteousness of employees” and “timely service”. These results indicate that respondents were relatively more sensitive to atmospherics and intangibles. As far as tangibles were concerned, high expectation score (mean  $\geq 5.5$ ) was observed only for “visually appealing physical facilities”.

Perception score were higher compared to expectation scores for “destination having unique festivals and rituals” (mean=6.21), “destination having heritage significance” (mean=5.79), “opportunity to collect souvenirs” (mean=5.81) and “courteousness of employees” (mean=5.62). The perception of respondents did not match their expectations for the remainder of the variables, implying, major shortfall in service quality and representing cognitive dissonance about atmospherics. The largest gap-mean score, confirming cognitive satisfaction (based on atmospherics), favouring perceived service level superior to expected level was displayed for “uniqueness of festival and ritual” (gap-mean=0.61). Similarly, service quality was proven to be superior (i.e. perception score > expectation score) for “courteousness of employees” (gap-mean=0.12). On the other hand, respondents suffered from maximum cognitive setback in terms of “timely delivery of service” (gap-mean=-1.65).

The paired sample t-test was taken up to locate differences between the expectation and perception levels of respondents with regard to service quality and atmospherics. Except for some variables such as “modern-looking equipment”, ‘knowledgeable local forum’ and “error-free records”, all other variables significantly differed in

terms of expectation-perception continuum. The results (Table 3) confirmed the robustness of the TOURZOT model in substantially identifying tourists' ZOT and the cognitive gap related to service quality and atmospherics.

**Table 3.** Comparison of TOURZOT variables across expectation-perception continuum using paired-sample t-test

Variables	Expectation		Perception		Gap mean score	t	Sig. (2-tailed)
	Mean	SD	Mean	SD			
The service providers have modern-looking equipment	5.12	0.77	4.88	0.91	-0.24	1.03	.301
The service providers' physical facilities are visually appealing	5.69	0.73	5.12	0.92	-0.57	5.62	.000
The employees of the service providers are well-groomed	5.37	0.79	4.10	0.94	-1.27	8.78	.000
Visual display of takeaway materials are appealing	4.98	0.80	4.65	0.89	-0.33	6.53	.000
The service providers comply with committed time of delivering service	5.52	0.81	5.01	0.87	-0.51	5.91	.000
The service providers insist on error-free records	5.02	0.76	4.76	0.91	-0.26	1.15	.276
Employees of the service providers inform about the exact time when the service will be delivered	4.67	0.74	3.02	0.90	-1.65	7.66	.000
Employees of the service providers are always willing to help	5.77	0.79	5.41	0.94	-0.36	8.19	.000
Employees of the service providers instil confidence	4.55	0.81	4.32	0.89	-0.23	6.74	.000

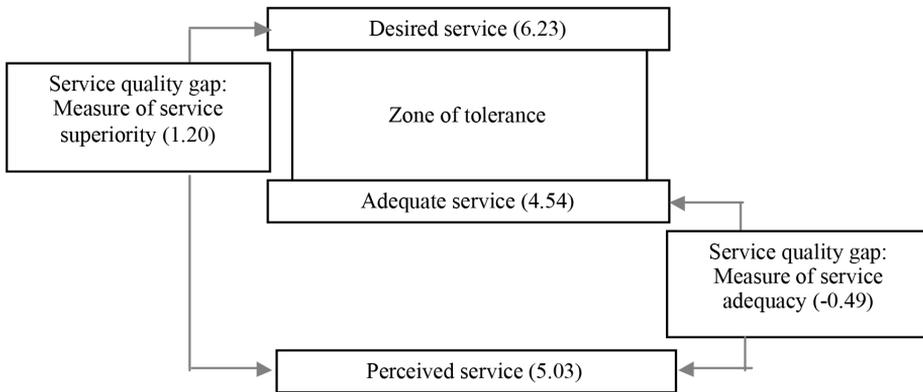
**Table 3** (con't)

I feel safe regarding transactions with the service providers	5.56	0.87	5.38	0.96	-0.18	7.62	.000
Employees of the service providers are consistently courteous	5.50	0.75	5.62	1.09	0.12	7.45	.000
Employees of the service providers are not too busy to respond to queries	5.01	0.73	4.81	1.10	-0.2	7.66	.000
Employees of the service providers are knowledgeable enough to answer my queries	5.43	0.77	5.38	1.07	-0.05	6.89	.000
Employees of the service providers understand my specific needs	4.99	0.78	4.71	0.98	-0.28	7.12	.000
The service providers have employees who give individual attention	4.87	0.82	4.62	0.97	-0.25	7.02	.000
The destination has visually appealing decor	5.12	0.84	4.78	0.92	-0.34	8.19	.000
The destination has easy to access parking space	4.89	0.78	4.32	0.88	-0.57	6.28	.000
The destination has adequate restrooms	4.75	0.79	4.11	0.86	-0.64	7.11	.000
The quality of entertainment associated with the destination is extremely satisfactory	5.72	0.81	5.68	0.92	-0.04	7.81	.000
The destination hosts unique festivals and rituals	5.50	0.72	6.21	0.95	0.71	7.38	.000

**Table 3** (con't)

The destination has heritage significance	5.61	0.81	5.79	1.08	0.18	6.65	.000
The destination provides opportunities to collect local artefacts & souvenirs	5.53	0.77	5.81	1.03	0.28	6.45	.000
The destination provides quality dining facilities	5.28	0.74	4.94	1.02	-0.34	9.01	.000
The destination appears to be safe for travelling	5.21	0.79	5.01	1.07	-0.2	8.72	.000
The destination ensures cleanliness of the visiting areas	4.79	0.74	4.55	0.99	-0.24	8.43	.000
The destination is easily accessible	5.64	0.76	5.59	0.91	-0.05	8.38	.000
The destination has a serene and tranquil environment	5.54	0.82	5.33	0.94	-0.21	8.10	.000
The destination offers adequate engagement opportunities through activities	5.50	0.83	5.18	1.04	-0.32	7.88	.000
The destination offers satisfactory local hospitality	5.51	0.80	5.35	1.08	-0.16	7.38	.000
The local community of the destination is accommodating and willing to help	5.42	0.81	5.26	1.03	-0.16	7.62	.000
The destination offers knowledgeable local forums as a guide	4.51	0.78	4.41	1.09	-0.1	1.02	.310
The destination offers acceptable crowd level	4.87	0.79	4.39	1.06	-0.48	6.99	.000

The TOURZOT model is shown in Figure 2.



**Figure 2.** TOURZOT results

### Conclusion

The objective of this study was not limited to assessing the expectation-perception paradigm as an antecedent for ZOT of tourists visiting destinations with specific atmospherics. Instead, it focused on expanding the realm of ZOT by incorporating destination atmospherics as determining factors of the same. The TOURZOT model proposed in the study holds good as the model contributed significantly in mapping not only the ZOT of tourists visiting Santiniketan, a heritage destination in the state of West Bengal, India, but also the MSS and MSA levels. Destination atmospherics were also found to play a significant role in moulding ZOT. The findings concur with previous studies (Nadiri & Hussain, 2005; Karatepe & Avci, 2002) that measurement of service quality spanned across the dimensions of tangibles and intangibles.

The findings reveal that tourists visiting Santiniketan display a moderate zone of tolerance which suggests that service-variations across quality parameters (tangibles and intangibles) would not be tolerated. The observations also revealed that ZOT is shaped by destination atmospherics. Tourists assimilate atmospheric variables to reduce cognitive dissonance and enhance visit experience and hence ZOT assumes a complex range of acceptable service experiences. The findings are also in line with the propositions put forward by Zeithaml et al. (1993) whereby expectation was considered as the comparison standard with polarisation as “desired” and “adequate”. The empirical findings, although, did not favour a positive notion for tourists’ perception regarding service quality across the dimensions of modified SERVQUAL as in most of the cases the gap-mean score for tangibles and intangibles resulted in a negative score. The findings are in agreement with the findings of Nadiri & Hussain (2005). Expectation-based measurement of service quality seemed to be an

adequate proposition for the construct of ZOT thereby nullifying the superiority of performance-based scales, namely SERVPERF (Cronin & Taylor, 1994; Boulding et al, 1993). This confirmed the criticism of SERVPERF by Parasuraman et al. (1994). The expectancy-disconfirmation theory (Oliver, 1977, 1981) was reinforced as acceptable levels of transactions were evaluated by incorporating new variables, namely destination atmospherics.

The study expanded to include the uncharted domain of destination atmospherics towards shaping the tourists' ZOT. The variables show that the "destination atmospherics" are well integrated with the TOURZOT model in explaining the narrow to moderate zone of tolerance of tourists visiting the heritage destination of Santiniketan.

The study has some serious implications for tourism service providers as the perception of service quality and the stretch of zone of tolerance are believed to have a direct impact on the behavioural pattern of tourists. The findings are critical for service providers as the gap-analysis revealed serious negative perceptions of tourists visiting Santiniketan regarding the quality of services rendered. The narrow to moderate ZOT would be a guiding frame for managers to pitch their services at an acceptable level. The intangibles associated with the perception of service quality must be taken care of as they are the dominating variables. The destination atmospherics, to a certain extent semi-controllable in nature, have emerged as critical factors for determining ZOT.

The study had a few limitations. First, it is confined to a particular geospatial location (Santiniketan) that has specific significance and connotations for the visitors. Therefore, to obtain a robust and generalised version of TOURZOT, other destinations with similar specific destination atmospherics, must be considered. Secondly, the study did not consider factors such as "switching cost", "relationship inertia", "word-of-mouth" etc. to understand service quality and framing of zone of tolerance. Lastly, the impact of TOURZOT on the behavioural pattern of tourists, namely satisfaction, destination loyalty, destination image perception and advocacy should be examined as well.

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