

The Mediating Effect of Tourists' Feedback Information on the Relationship between Interaction and Service Innovation in Tanzania

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Abstract

Studies on feedback information and interactions among tourists and tourism services are limited to residents, service providers, and mostly business-to-business. Little remains unknown about the relevance of tourists' feedback information and interactions to service innovation. This study examined the mediating effect of tourist feedback information in the relationship between tourists' interactions and service innovation. A survey of 290 Tanzanian tourism firms gathered the scale data that was analysed using Structural Equation Modelling in the Partial Least Square method. Tourist feedback information and tourists' interactions were found to positively affect service innovation. While tourists' interactions exhibited a strong positive effect on service innovation, there is a partial mediation of feedback information between the two. These results inform the service industry to capitalize on customer feedback information in enriching new service designs. As a result, practitioners in service firms are at a high point to set strategies to improve interactions as good practices in service innovation. Specifically, the tourism industry actors obtain insights into handling customers and benefiting from their actions and information. Theoretically, the study offers an understanding of interactions as applied in the service dominant logic such that apart from the exchange focus, feedback and interactions can also be considered as information sources for service innovation across firms. These results suggest that tourist interactions and feedback should be treated as key information points for enabling service innovation.

Keywords: Tourists information, feedback information, service innovation, tourism

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Introduction

Experience-based information empowers many tourism businesses and tourists in drawing up touristic key travel decisions (Dalimocon, Igcasama, & Quimbo, 2022). Studies on feedback information reveal significant and relevant relations to improved business performance, goal achievement, and value creation (Romero, 2017). Feedback informs businesses' service improvement measures based on previous tourist experiences. Feedback information has enhanced businesses to improve, co-create and highly resonate. In services, feedback

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information intends to improve customer experience and invites other customers when positive experience is shared (Wang, & Majeed, 2022). The growing role of feedback information in the experience industry has not been fully explored in tourism.

Interaction is another aspect through which customers share important information based on their real actions during service delivery. Interactions are the in-service communications and actions among customers or between customers and service providers. They are a medium for service exchange (Vargo & Lusch, 2008), facilitating conversations and dialogues in the service sphere reflecting customer involvement (Alam, 2018). In doing so they facilitate information exchange and knowledge generation that leads to dynamic service design and delivery processes (Storey & Larbig, 2018). It also generates useful conversations for future service innovation (Lamers *et al.*, 2017).

The process of innovation involves diverse actors engaged in resource integration (Lusch & Nambisan, 2015) to create new or modify existing services. Innovation aims to meet new customer demand, respond to customer preferences, and build a firm's innovative capacity (Matthing *et al.*, 2004; Eide & Mossberg, 2013; Hjalager, 2015). The service innovation process requires high customer contact in the service provision as well as defined customer after-service information (Goffin & Mitchell, 2017). It thus creates new value through attitudes, skills, and competencies from the customers and the service providers (Vargo & Lusch, 2008). However, the growing importance of customer-centricity as a relationship strategy (Palacios-Marques *et al.*, 2016) makes customer information in service settings important. Such that, through interactions and feedback information, various service organizations receive relevant customer information for service modification (Ordanini *et al.*, 2011).

Tourism industry activities across the globe are characterized by high levels of interactions and massive feedback information (Luo *et al.*, 2019; Ramanathan & Meyyappan, 2019). Despite that, research on interaction resources is limited to tourists' interactions with local residents and service providers (Goffin & Mitchell, 2017; Lin *et al.*, 2017; Styliadis, 2020; Buonincontri *et al.*, 2017). Studies on human interactions have already revealed interesting results about tourist interaction behaviours with frontline employees which drives travel motivation (Prayag & Lee, 2019). Other studies witness tourists' information-sharing as essential to the innovation process (Busagara *et al.*, 2020). Yet, feedback information and interactions among customers in tourism are mostly overlooked in literature. In addition, the role of feedback information is only directed to overall firm performance (Wang, & Majeed, 2022) without addressing firm-specific issues such as innovation. Understanding the customer-to-customer interactions and their useful feedback information remains relevant for service innovation. Therefore, this paper examined the mediating effect of tourist feedback information on the relationship between tourists' interactions and service innovation with a broader research question, "Do tourists' feedback information and interactions matter in service innovation?"

The literature reveals that tourist feedback is indispensable to service innovation although the extent of use of such information with their respective results may vary across industries (Alam, 2013; Taghizadeh *et al.*, 2018). In the service-dominant logic, interactions are explained by the mutual exchange of skills, information, and knowledge among members in the service-related locations, who in the end receive a mutual benefit from the shared resources (Vargo & Lusch, 2008). Interaction in this study is defined as an overall communication set in the service sphere while feedback information is referred to as specific information that is provided by the tourists after attaining the tourism experience. Within the feedback information context, it is believed that tourists can give specific service-related information that carries different values to service organizations (Luo *et al.*, 2019; Ramanathan & Meyyappan, 2019). Besides, this study assumes that the quality of feedback

information depends on the extent to which tourists and service providers can comfortably communicate. As a result, feedback information is facilitated by the member's level of interactions.

This paper proceeds as follows; the follow-up session offers a literature review, followed by a narration of the research methodology. This is further followed by the analysis and results section, discussion, conclusion, implications, and limitations.

Literature Review

Theoretical foundation on Service Innovation

The exchange of information in the service economy has been known as key for the overall service value creation. The service-dominant logic (SDL) describes the exchange process of information as among the main attributes and means through which parties generate values, and this depends on the level at which these parties share their information through interactions (Vargo & Lusch, 2008; Buonincontri *et al.*, 2017). The motive explained in SDL is how the exchange of services occurs by applying knowledge and skills derived from various actors to meet the required needs in service offerings. As services become the centre of information exchange, it further argues that individuals share their competency when they believe they have an equal portion of the benefit that will be attained (Alam, 2018). In this sense, customers are obliged to interact for the fact that the service delivery process requires them to take part due to the intangibility nature and high level of customer contact with services (Goffin & Mitchell, 2017). On the other hand, organizational employees interact with their customers to provide them with services which will have to account for future customer satisfaction (Prayag & Lee, 2019; Biswas *et al.*, 2021). Indeed, the logic details how both the customer and the employees are central to the service delivery process and the overall value creation (Buonincontri *et al.*, 2017). As a result, through such interactions, these organizations access knowledge and skills about customer needs, as key inputs for service innovation (Lusch & Nambisan, 2015; Lamers *et al.*, 2017). Furthermore, such information exchange activities are revealed to foster innovativeness (Dambiski Gomes de Carvalho *et al.*, 2020).

Meanwhile, the customer-dominant logic (CDL) contradicts the centrality nature of the service and the exchange process being core issues. This logic contemplates that the consumer is at the centre of the exchange process and is the reason why services experience changes. The customer experience, emotions, and overall way of life reflect these changes (Heinonen & Strandvik, 2015). Through this logic, value can be created in multi-contextual settings, highly dynamic based on customer information and practices (Heinonen *et al.*, 2010). The logic further argues that value does not only depend on the actual and visible life settings of the customer but may include among all other the accumulated life experience of the customer.

Both theoretical stands (CDL & SDL) look at services, customers, and competencies (information, skills, and knowledge) as information-sharing centers that generate value, in the context of service innovation. This would mean that the customer-related information and interactions that enable the exchange of information may have an ultimate effect on the service experience and its properties. Hence, service-dominant logic is relevant since it accentuates the importance of service in the exchange process and offers a great need for interactions as a medium of service delivery between the firm and the customers, who exchange their skills and information for value. Similarly, the customer-dominant logic embraces the customer's activities, experiences, and life context to deliver more value in the

service delivery process and related service activities. As a result, both theories contribute to managerial strategies that look at customers and the firm from a wider perspective.

Hypotheses Development

Interaction and Service Innovation

Interaction is by far compulsory in the service industry. According to Ballantyne and Varey (2006), interactions are interpersonal communications taking place in the service delivery process between employees and customers. This is due to the inseparability nature of services from service providers which results in high customer involvement (Buonincontri *et al.*, 2017). As a result, to achieve a sustainable service exchange process there is a high need for and use of interactions (Alam, 2013). Ballantyne and Varey (2006) show that interactions exist in informational, communicational, and dialogical contexts. The latter includes concrete discussion among parties while the former just considers the listening and informing aspects. In this matter, interactions act as the medium for service delivery and value transfer among actors (Vargo & Lusch, 2008). In most cases, services are exchanged through interactions, and so interactions enable actors to share their competencies. As a result, Lusch and Nambisan (2015) argue that service innovation is a collaborative process in which actors share these competencies through interactions of the members in the service ecosystem, and where there are limited interactions and exchange of information among actors it results in minimum value creation.

Studies on interaction have revealed some of the effects on service innovation. These studies showed that interactions are multi-context and dynamic as a result they bear differences. According to Alam (2018), interactions with customers are intense at the initial stages of idea generation in the service development process. At this point, several information and customer ideas are extracted and sorted to obtain visible ideas to pass on to the next step. At several stages, customers are involved in the whole process of service generation and value creation. Similarly, special customer interaction and involvement through lead users' approach in specific stages of new product development reveal a positive impact on new services (Franke, Von Hippel & Schreier, 2006). Commonly, customer-to-customer interactions in tourism-related activities produce more social and effective value (Rihova *et al.*, 2018), and different modes of interactions result in specific types of innovation, whether product, market, process, or organizational (Eide & Mossberg, 2013).

Alam (2013) observed that interaction with the customers in the service development process brings about superior and differentiated services and ease of service use. This is because customers can be educated on the use of services with rapid service diffusion and finally the likelihood of provider-customer relations in the long run. Likewise, Alam (2018) argues that, if customers are well involved in the early stages of innovation through interactions, they reveal more needs. When a firm effectively leverage on interactions, it is likely able to discover the unknown and undiscovered customer needs which in most cases hinder service innovation. In addition, Prayag and Lee (2019) and Lin *et al.*, (2017) suggested that interactions are relational; they facilitate individuals to build their emotional bonds with each other and increase attachments and informational inputs through their social practices. Similarly, it was noted that interactions enable the creation of new services through personal customer behaviours and their overall information-sharing experiences (Busagara *et al.*, 2020). So, this study hypothesizes that;

H1. Tourists' interaction with service employees has a direct positive relationship to service innovation



Feedback Information and Service Innovation

Tourist feedback is broadly described as all information provided by the customers during and after service delivery (Nguyen Hau & Thuy, 2016). This information is specific to the firm, employees, services, products, and service process based on their own service experience. The information is vigorous for improving firms' services and other marketing decisions (Chang & Taylor, 2016). Such information happens due to either service consumption; or firms' interaction experience in the service delivery process to create information and actions that customers offer to the service provider or others regarding their service experience (Heinonen *et al.*, 2010). Meanwhile, Yi and Gong, (2013) describe this as an extra role of customer behaviour in the service industry which provides information related to service improvement, complaints, compliments, and appraisal towards the service and its service providers (Groth, 2004). Through such behaviour, customer information reaches organizations with significant benefits (Wang, & Majeed, 2022). According to Fang *et al.* (2008), customer information enhances product diffusion to the market, whereas Chang and Taylor, (2016) and Morgan *et al.*, (2018) acknowledge customer information in facilitating the performance of the new product. Moreover, Belkahlia and Triki, (2011) argued that customer knowledge improves organization's innovative capacity and leads to increased internal knowledge.

According to Cosma, Bota, and Tutunea, (2012) customers as users of services, share their needs and preferences to meet their desired wants; in a way, they offer organization information related to the services. As such this external information offers organizations innovative ideas for both product and organizational innovations (Ramirez *et al.*, 2018). Not only that, it further increases the success of the product development process and enhancing the level of customer involvement (Laage-Hellman *et al.*, 2014). Similarly, Urban and von Hippel (1988) argued that contacting and working in collaboration with customers enhances product performance as it explores the understanding of user needs and brings about low development costs.

Feedback information from customers can be obtained in various ways. According to Heinonen *et al.*, (2010), customer information is obtained through customer activities, experiences, and dialogues. Recently Nasr, Burton, and Gruber (2018) found that customer feedback appropriately collected through surveys in open-ended questions has more power to attract positive feedback which in the later stages is thought to be an indirect way of seeking customer positive experience and determines future customer purchase behaviour. Moreover, Alam (2013) had as well acknowledged the strong use of customer interactions as a means through which information can easily be collected from customers in a specific way. This is by involving customers in the innovation teams and making them accountable for the service output.

From this perspective, service innovation not only relies on internal firm resources (Ramirez *et al.*, 2018) but also on other three aspects. The first is the effectiveness and the ability of the firm to integrate its customer information. Second, its interactions and modes are built to capture the information within the service context. Third is the relationship with the external parties (Vargo & Lusch, 2008). Thus, the more the firm links with its external parties the more it realizes its innovation (Laursen & Salter, 2006). And so, based on the relevance of feedback information and ways through which this feedback can be accessed, this study hypothesizes that;

H2. Tourists' interaction with service employees has a direct positive relationship with feedback information;

H3. Feedback information mediates the positive relationship between tourists' interaction and service innovation.

Methodology

Data and Measures

Data was collected from the purposely selected tour operators and cultural tourism enterprises operating in Tanzania. These businesses are topmost in direct contact with tourists from their booking stage to the service delivery stage. They are responsible for the whole travel itinerary and implementation and, thus are the most interactive businesses in the tourism value chain. These enterprises were the units of analysis while the unit of inquiry from each company was managerial personnel. The selected businesses were from Arusha, Kilimanjaro, and Mjini Magharibi-Zanzibar; the places with the most and diverse tourism activities experienced in Tanzania. These are wildlife tourism which occupies more than 36.5% of all tourists in Main Land Tanzania by tourists visiting Tarangire, Serengeti, and Ngorongoro. The beach tourism in Zanzibar which occupies 38.4%, and cultural tourism occupies 25.1% of all tourists visiting Zanzibar (National Bureau of Statistics, 2022).

A total of 960 firms were identified to operate in the selected areas, 514 operating in Arusha, 221 operating in Kilimanjaro, and 225 operating in Mjini Magharibi-Zanzibar (Trip Advisor, 2022). A questionnaire data collection strategy was adopted in which a total of 480 questionnaires were physically administered in the regions. The researcher recovered 290 filled questionnaires, equivalent to the response rate was 61.5% which is generally good (Story & Tait, 2019) and adequate for Structural Equations Modelling (Hair *et al.*, 2014). The collected data was cleaned for the missing values and outliers for all variables to avoid unbiased results.

All the variables of the study were measured in the five-point Likert scale. Service innovation was measured in six items (Knowles *et al.*, 2008) that captured the extent to which firms seek information and implement service innovation. Interaction was measured in seven items (Rindfleisch & Moorman, 2001), focused on how close customers and service providers feel to one another during and after service delivery and consumption. Lastly, feedback information was measured in seven items (Belkahla & Triki, 2011; Yi & Gong, 2013) that captured the extent to which the firm seeks and acts on customer after-service information.

Analysis and Results

The Partial Least Squares (PLS) was used to estimate the proposed model and the measurement scale. This technique was chosen over LISREL and AMOS for its ability to estimate the structural model by the use of the previously developed scales, but also due to its ability to deal with non-normal data (Hair *et al.*, 2014). In the study the hence the use of PLS was also used for its ability to handle slightly non-normal data.

Descriptive Results

In a sample of 290 tourism firms about 77% were tour operators and 23% were cultural enterprises. It can be observed that tour operators represent a large group of the respondents; however, compared to their overall population this was only 27% of its population (816). While cultural enterprises represent the minority group 23% was equivalent to 47 % of its overall population (144). This suggests that by representation, cultural enterprises were highly represented compared to the tour operators. Moreover, the sample was geographically diverse in all three tourism regions; Arusha (45%), Zanzibar (30%), and Kilimanjaro (25%).



Among these firms 68% offer between 4 to 6 services and 32% offer equally below and above 4 and 6 services respectively. In these firms, about 43% are between 7 to 14 years which represents the largest age group. However, there was one firm that was older than the rest aged 68 years. Generally, the sample was characterized by small and medium-size firms to the extent of 60%. These firms employ around 5 to 20 employees however one case in the sample was a firm with a high number of employees which was 800 employees. The average number of customers received by these firms ranges between 100 to 700 customers per year (45%), while 32% receive up to 999 customers and a few firms receive above 10,000 customers a year.

Table 1: Correlations and Descriptive Statistics

Variables	Mean	SD	1	2	3	4	5	6	7	8
Service Innovation	3.88	.608	1							
Tourist Interaction	4.01	.576	.557**	1						
Tourist Feedback	4.11	.603	.568**	.617**	1					
Firm Age	11.57	8.432	.097	.137*	.077	1				
Number of Employees	22.88	53.201	.048	.124*	.078	.399**	1			
Number of Tourists	737.47	1500.82	.346**	.361**	.274**	.315**	.209**	1		
Number of Services	5.00	1.618	.232**	.261**	.297**	.275**	.180**	.407**	1	
Number of New Services	2.88	1.377	.260**	.206**	.250**	.293**	.150*	.427**	.422**	1

** ; *. Pearson Correlation is significant at $p < 0.01$; $p < 0.05$
 SD. Standard Deviation

Validity and Reliability Results

Validity was measured by Average Variance Extracted (AVE) whereas all values were above 0.5 which is the minimum required value, while construct reliability value were all above 0.7 which indicates convergence/internal consistency (Hair *et al.*, 2014). Discriminant validity was checked by the squared values of construct correlations whereas all correlation values were lower than the Average Variance Extracted (AVE) this is according to Hair *et al.* (2014). See Table 2 which indicates the results on convergent validity by the values of AVE and reliability by the values of composite reliability as a measure of internal consistency meanwhile Table 3 portrays the results of discriminant validity as a measure which indicates the construct items diverge from one another each entailing unique meaning.

Table 2: Variables and Measures

Variable and items	Factor Loading	AVE	CR
Service Innovation		0.690	0.93
Our company actively seeks new service processes from outside this organization.	.821		
Within our company, we can implement new service processes used by other companies.	.782		
Our company actively seeks new products from outside this organization.	.832		
Our company actively seeks new business systems from outside this organization.	.854		
Within our company, we can implement new business systems used by other companies.	.839		
Within our company, we can implement new services used by other companies.	.852		
Tourist Feedback		0.675	0.936
Tourists' feedback helps us rectify new products/services after their	.762		

diffusion.			
Collecting information about and from tourists allows us to be accurate in developing new products.	.775		
We adapt and modify our new products/services based on tourists' feedback.	.778		
We draw upon tourists' suggestions to launch new products and services.	.875		
When tourists encounter a problem during service, they let the service provider know.	.874		
When customers receive good service from the employees, they comment on it.	.817		
If customers have useful ideas on how to improve service, they let the employee know.	.861		
Tourist Interaction		0.673	0.935
Customer knowledge is generated through focus groups with tourists interacting sessions	.764		
We communicate knowledge about new products/services with the tourists	.834		
Tourist databases are used to facilitate the traceability and transparency of customer knowledge	.788		
Tourists feel indebted to our services and for what we have done for them.	.886		
Our relationship with our customers can be defined as "equally rewarding."	.806		
We share close social relationships with the tourists	.825		
We expect that we will be working with our customers far into the near future	.834		
Average Variance Extracted (AVE) was calculated according to Hair <i>et al</i> , 2014: $p > 0.5$; CR= Construct Reliability			

Table 3: Discriminant validity

Construct	Feedback	Interaction	Service Innovation
Feedback	<i>0.675</i>		
Interaction	0.626	<i>0.673</i>	
Service Innovation	0.583	0.568	<i>0.690</i>

Average Variance Extracted values are indicated diagonal in the table

Hypotheses Test Results

The hypotheses were tested from the Structural Equation Modelling (SEM) in Smart PLS. SEM was appropriate because of its ability to test both the direct and indirect relationships between variables and to properly confirm the significance of the results through bootstrapping. The analysis of the structural model was done by assessing variance explained R^2 and path coefficients. The direct relationship between tourist interactions and service innovation was positive and significant at $p < 0.001$. Tourist interaction explains service innovation by 32% with a 0.568 path coefficient. The result indicates that there is a positive and significant relationship between tourist interactions and firm service innovation and can be interpreted as interactions increasing the rate of new services due to the assumed greater information input that comes from tourists. Thus, the direct relationship is supported by such a result which responds to the first research question which stated; do tourist interactions result in service innovation? Figure 1 gives a pictorial presentation and more details on the direct relationship results from the Smart PLS;

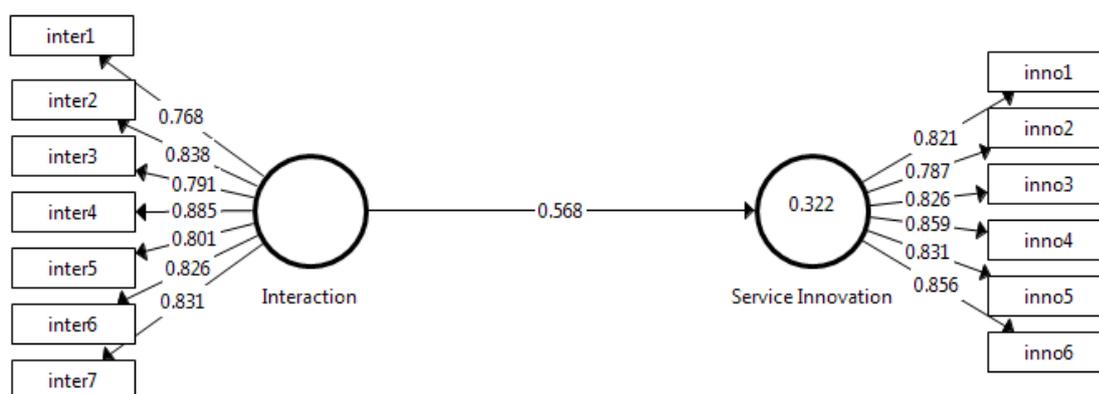


Figure 1: The Direct relationship results between interaction and service innovation

The indirect relationship tested whether tourist feedback is a result of tourist interactions and thus tourist feedback information mediates the relationship between tourist interaction and service innovation. The Path coefficient on interaction and feedback information was significant at 0.000 with a path coefficient of 0.626 and variance explained of 39.2% which indicates a positive relationship from interaction to feedback information. At the same time, the relationship between interaction and service innovation through feedback is positive and significant with 0.374 path coefficient, $p < (0.000)$ and total of 40.7% variance explained. At this point, the direct relationship between interaction and service innovation remains positive and significant at the 0.333 path coefficient. Further significance of the indirect relationship was examined through bootstrapping. The results from bootstrapping confirmed that tourist feedback partially mediates the relationship between tourist interaction and service innovation indicating that there is an indirect relationship between these variables. The indirect effects result is significant on two-tail bootstrapping confidence (0.235; $p < 0.001$) to indicate the indirect relationship and the occurrence of partial mediation since the direct relationship remains significant with reduced effect from 0.568 to 0.333. Figure 2 indicates the pictorial presentation and the path coefficients for both the indirect and direct relationships during mediation analysis while Figure 3 indicates the bootstrapping results for the mediation testing.

Table 4: Summary results for the mediation indicating direct, indirect and total effects

Hypothesis	Direct	Indirect	Total effect	(R ²)	Result comments
Inter - Innovation	0.568(sig)	Na	Na	32%	Significant
Inter- Feedback	0.626(sig)	Na	Na	39%	Significant
Inter-Feedback-Innovation	0.333 (sig)	0.235 (sig)	0.568	41%	Partial Mediation

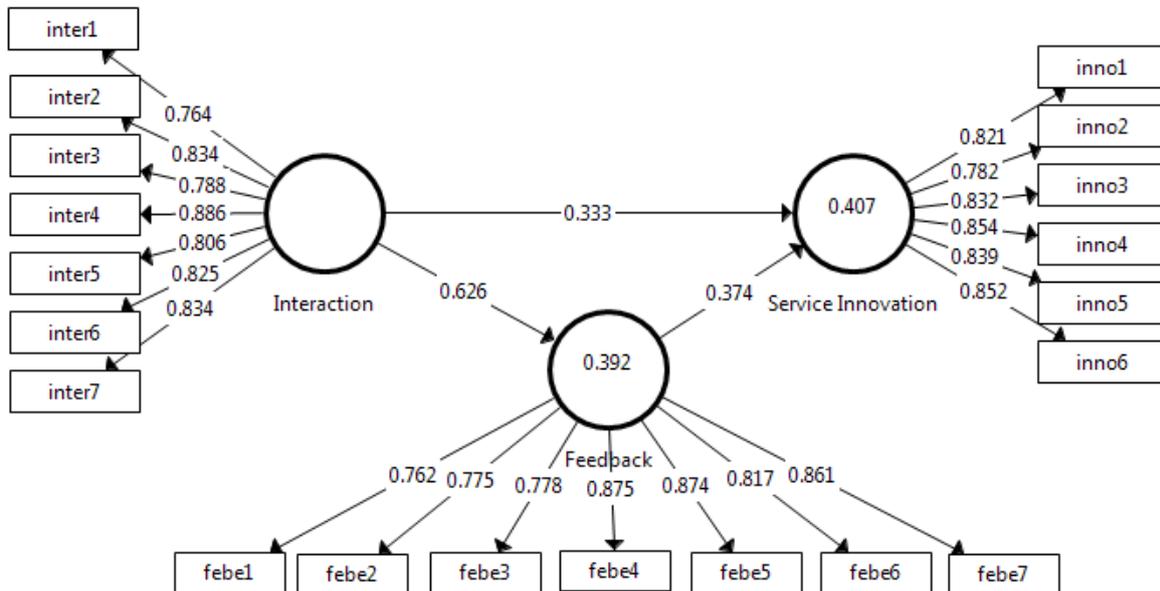


Figure 2: The indirect relationship results: The mediating effect of feedback information on the relationship between interaction and service innovation

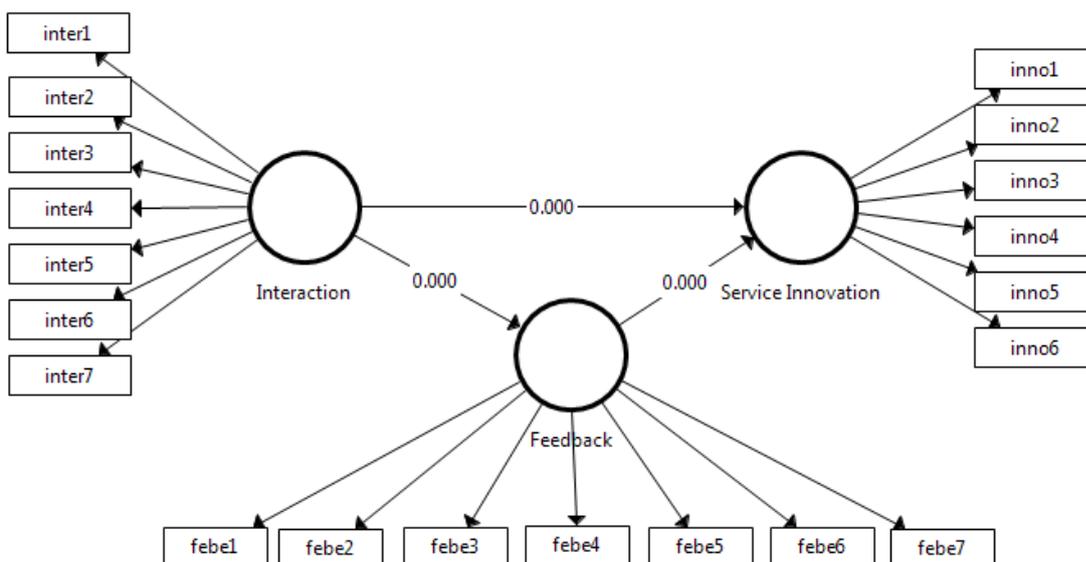


Figure 3: Bootstrapping results

Discussion of the Findings

The study tested the relationship between tourist interaction and service innovation with the mediation of customer feedback information. The findings have shown all studied variable relations to be positive and statistically significant. Moreover, in the presence of tourists' feedback, the relationship between interactions and service innovation yields appealing results. The explanatory power of interaction increases in the presence of tourist feedback information by 9%, meaning that interactions have a greater effect on feedback compared to service innovation which further enhances its effect on service innovation. This effect was also witnessed in the path coefficient where there was about 6% difference in path

coefficients between the two paths. Hence the study argues that, as interactions generate a desire for tourists to share more feedback; they also stimulate further information during and after the service process. The analysis and the results indicate that service innovation is well explained when a firm emphasizes feedback rather than its mere dependency on basic interactions. The results imply that firms that focus on preparing their customers to provide more information on their service process have greater access to more service information after the service delivery process.

The result is confirmed by Dalimocon *et al.*, (2022) that tourist feedback information serves many tourism businesses as a source of destination information for various purposes. Social media act as a marketing tool, a bridge of information for both businesses and tourists, in this way both actors get the information to use for their purposes. Similarly, Matthing *et al.* (2004) demonstrate the development of new services being a result of learning activity and the act of co-working with customers to uncover complex customer needs through active customer involvement. Furthermore, they argue that both interactions and customer involvement are principal considerations to take on board as firms intend to generate new services by exhausting all the learning platforms for immense customer information and overall knowledge (Wang & Majeed, 2022). Also, in Fang *et al.*, (2008) similar customer participation aspects have been noticed to improve products' performance and their ability to be known in the market through customers. This further appreciates the double-edged role of customers as both information sources and co-producing participants, whereas this study claims various ways customer contribution accounts for different effects. Along with such remarks, Taghizadeh, Rahman, and Marimuthu, (2018) also suggest that both internal and external idea-generation opportunities make a great contribution to creating value, as such customer ideas become useful for service restructuring and redesigning.

At the same time, interaction studies also emphasize the usefulness of interactions as a source of information to the service innovation process. For instance, Alam (2013) suggested that as customers interact with the innovation team, they offer new service ideas for better services. Also, customer information during interactions can be used to reconcile some redesigning conflicts in the innovation process. As a result, Busagara *et al.*, (2020) also argue that there is a close link between customer information sharing and new service development whereas more information exchange activities reveal to enhance innovativeness across small and medium enterprises as well (Dambiski Gomes de Carvalho *et al.*, 2020). Therefore, in this study, it is concluded that both interactions and feedback information generated from customers are termed as among the issues that support service innovation. The key matters to take into account in the whole process of innovation, more specifically when interaction is used as a means to stimulate customer feedback information. Conclusively in this study, it was observed as a combination effect that enables service innovation.

Uplifting these results to the current tourism industry, the trend shows that previous customers who have attained some services from certain firms are willing to offer their information experiences to other new or expected customers through reviews in such a way they explain all about what has happened in the destinations. Their information has been useful to potential customers who rely on previous customer's information to make travel decisions. Hence these results have a significant contribution to managers in the tourism industry as one of the sectors that is greatly driven by customer reviews, information, and overall tourist ability to respond online about their experiences for service improvement. Their information is significant as it has a pure feeling of the firm's services and these customers represent a true picture of exactly what exists in the services. As a result, tourist feedback information and their interactions yield information for tourist travel decisions as

well as provide necessary information for firms to lead in service improvement. Therefore, all activities at the service encounters should be a point of concern to managers.

Conclusion

This paper has responded to its key questions on whether tourist interactions and their feedback information matter in service innovation. Since the art of service innovation is inter-customer interaction and information-intensive (Matthing *et al.*, 2004; Alam, 2013), both interactions and feedback are useful for service innovation. The significance of these variables has been tested through a survey of relevant and key tourism firms in Tanzania and structural equation modelling.

The descriptive results indicate a positive relationship among variables. Both interactions and feedback are related to the number of new services and the extent of customers received within the firms. The number of customers correlates with the number of new services which indicates the extent of use of customer information in the ability to design and introduce new services. In general, these firm characteristics indicated a positive relationship with service innovation. To these firms, the ability to design new services has been greatly contributed by tourists' information's, requests, and recommendations. The art of listening to customers and working together with them accounts for more service designs and abundant information which in turn motivates, and ignites the power to establish services due to their opened customer needs.

Furthermore, having tested the hypotheses, the findings reveal that in the presence of tourist feedback, interaction has a strong and significant positive effect on service innovation. Yet the direct relationship was a so positive and significant to a greater extent but slightly weaker than the indirect relationship. With a focus on the main research objectives, interaction remains a key agenda during service delivery as it enhances both service innovation and enriches customer feedback. Thus, this study argues that interactions are essential for both service innovation and tourist feedback and hence there is a need to design favourable interaction mechanisms and environments to have enormous feedback that will ultimately produce better new services.

Implications

The study offers both theoretical and empirical contributions by understanding interactions and customer information output as applied in the service and customer-dominant logic. In the context of service-dominant logic, this study acknowledges the relevance of interaction to service innovation. Moreover, the study bridges the use of two theoretical instances by the indirect relationship that they both facilitate service innovation. Recalling from the service dominant logic, interactions are means through which services are exchanged and value creation is enhanced (Vargo & Lusch, 2008; Lusch & Nambisan, 2015). In addition, the customer-dominant logic suggests that customers are the key resource in the service process as they facilitate value formation. That is to say, firms with a strong link with their customers and know how to leverage it can access useful ideas through suggestions and comments for service improvement to better fit customers' needs. These results give an insight into the use of interactions between the firm's employees and the customers to facilitate the provision of after-service customer information. This helps the process of making new services an easy task since the services developed reflect the customer experiences that come from their related interactions. In this way, firms end up creating quality services and offering their customers the required satisfaction.

Practically, the study informs tourism enterprises to leverage interactions in generating more customer feedback which are instrumental for service improvement.



Therefore, this study adds to the customer interaction literature to bring about the combination of factors that work best in the development of new services and complement the service innovation literature. Therefore, companies that strictly capitalize on interactions have a high possibility of obtaining more after-service customer information to assist in service innovation. Since service innovation involves understanding customer needs and preferences (Matthing *et al.*, 2004), managers need to consider the proper means of improving the interaction quality and create strategic mechanisms that will gather more information from their customers. Such strategic approaches may include enhancing active customer support systems which are easily tracked for information processing. Moreover, managers may be informed through interactions to create a set of procedures that may help in shaping the overall customer experience and satisfaction.

Limitations

Despite the findings, this study is limited to the measurement of interaction which was drawn from several different scales which may indicate inconsistency in the measure of interaction. As a result, the study recommends the development of new scales to measure interactions as it has become one of the key concepts in innovation. Also, the study was sector-specific yet the tourism sector under the study is highly diverse with many business lines, such as accommodation, travel, food, and entertainment. These sub-sectors have different settings that may result in different business practices that may affect the study results. Therefore, future studies can focus on specific tourism sub-sectors or businesses, and make concrete similarities and differences.

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