Research Article

Co-creation and service innovation as performance indicators in the hospitality industry

Journal of Tourism, Hospitality & Culinary Arts (JTHCA)
2020, Vol. 12 (2) pp 76-95

Reprints and permission:
UiTM Press
Submit date: 19th February 2020
Accept date: 12th May 2020
Publish date: 30th June 2020

Vivek Sharma*
Dada Ab Rouf Bhat
University of Jammu, Jammu, INDIA
sharmavivek19@gmail.com

Proposed citation:
Sharma, V. & Bhat, D.A.R. (2020). Co-creation and service innovation as performance indicators in the hospitality industry. *Journal of Tourism, Hospitality & Culinary Arts, 12* (2), 76-95.

Abstract
This study aims at assessing the impact of co-creation on service innovation and also explores the dimensions of service innovation in the hotel industry as a performance indicator. The study was carried out through self-administered questionnaires to collect the data from 317 managers and frontline staff members of the luxury hotels using non-probability convenient sampling method. Structured equation modeling (SEM) was used to test the hypothesized relationship. The study outcomes revealed an imperative knowledge about co-creation and service innovation by determining its impact on hotel's overall performance in the hospitality industry. Further, there was a significant impact of co-creation on service innovation which in-turn positively contributes to financial and non-financial performance and lastly, the technological innovation and organizational innovations were found as the key dimensions of service innovation. Finally, this study establishes a foundation for future research and offers managerial guidance in this increasingly important area as it can be widened to different service sectors that may lead to a more generalized outlook of the whole service industry.

Keywords:
Co-creation; hospitality; organizational innovation; service innovation; technological innovation

1 Introduction

In today's competitive environment the hospitality market is flooded by many similar, often substitutable service offerings, so the customers have to decide on to stand by hotels which propose the exceptional value proposition under current budgetary limits (Olsen & Connolly, 2000; Sharma & Bhat, 2019). Besides, the customers also possess higher expectations for service quality and accommodation experience from the international tourist hotels (Hu, Horng & Sun, 2009) as they want to taste more innovative and exclusive experiences than what they were expecting earlier (Sharma & Bhat, 2020) which becomes the source of teething troubles for hotel managers as they always attempt to segregate an individual hotel from its rivals (Reid & Sandler, 1992) as one elucidation to this encounter may be to propose such solutions which offer novel features to visitants which are both desired by customers (Sharma & Bhat, 2020) and are economically beneficial to the firm (Andotra & Bhat, 2017) which also requires managers to make pre-emptive modifications which enables to focus strongly on customer likings, quality, and technological edges in order to stay competitive in such changing environment (Karmarkar, 2004) and hence proper implementation of the service innovation in hotels is of crucial importance which can induce higher market share and thus higher financial gains.

Further, the growing complication of social relations between the providers and consumers can change the value of products or services strongly against the purpose they were tailored for. However, by understanding these steady market changes and cut-throat competitive forces, the service industries can constantly come across with new ways of designing services which are unique from competitor's point of view and bring exceptional value to the customers (Valjakka et al., 2013). One way is to involve customers in the production of goods and services, i.e, co-creation. Bettencourt, Lusch, nd Vargo (2014) described co-creation as the interaction and actions of firms, customers and other stakeholders to take part and work on available resources to come at an intentional and agreed value-in-context. Further, the engagement in co-creation practices boosts customer satisfaction, especially the involvement of customers in shaping an offering brings more likely results in value-in-context (Hoyer et al., 2010; Vargo & Lusch, 2008) for all interested parties. Coviello and Joseph, 2012 and Ramani and Kumar (2008) proposes working together with clients would offer eye-catching chances to develop innovative products and services that suit customer necessities, generate worth for all interested stakeholders (Ramani & Kumar, 2008) and sooner or later contribute towards firm's success (Coviello & Joseph, 2012).

Prahalad and Ramaswamy (2004) suggested that co-creation is a way to "partition some of the work done by the firm and pass it on to its customers", which in this way help in designing products, services, or experiences. Therefore, co-creation is a first-order notion that embraces all means of collaboration practices (co-concepts) and customer contribution (Reniou, 2009) as the service literature exhaustively debated the customer's role in building value (e.g. Gronroos & Voima, 2013; Vargo & Lusch, 2008;

2004) and similarly, the service management gradually strives for understanding the way in which the value is created by means of markets to augment value creation (Archpru et al., 2014) through customer co-production of goods and services which offer them ample benefits including better preference fit and satisfying experiences (Jaakkola, Helkkula, & Aarikka-Stenroos, 2015; Verleye, 2015).

Research studies in the hospitality sector have categorically pointed out about the positive impact of service innovation on business performance and sustainability of hotels in varied geographical areas (Damanpour, Walker, & Avellaneda 2009; Zhou, Yim, & Tse, 2005; Durst, Mention, & Poutanen, 2015). However, research studies on co-creation and service innovation and their impact on the financial and non-financial performance of the hospitality industry are rarely available. Besides, an extensive review of literature pointed out that the literature on co-creation (Brodie et al., 2011; Im & Qu, 2017; Mainardes et al., 2017; Diaz et al., 2016; Kasnakoglu, 2016; Ranjan & Read, 2016) and service innovation is theoretical, short & fragmented in developed economies namely, Europe, United Kingdom, Spain, China, United States etc. These studies also cover different service sectors but a limited in term of the co-creation dynamics and innovation potentials of the hotel industry from the perspective of hotel employees and unique experiences of customers. The review of literature also revealed that very rare studies had related the concept of co-creation with service innovation (Chen et al. 2017; Hamidi & Gharneh, 2017; Oertzen et al., 2017; Raeisi & Lingie, 2017). However, these studies were either conceptual or were disseminated in other industries like business companies and tour/travel business, although there are some empirical studies linking co-creation with service innovation, e.g. (Sarmah et al., 2017) and co-creation with hotel technologies, e.g. (Kamboj et al., 2018; Morosan & DeFranco, 2018). Nonetheless, these studies have been carried out, taking into account the perception of customers but ignored the perspective of managers.

Kasnakoglu (2016) studied co-creation in the health and education sector and advocated to apply the same concept in other industries. Thus, there is a growing demand to empirically build and explore a complete framework in business to customer co-creation so as to deliver a healthier understanding of how companies co-create value through their customers in the hospitality industry. Therefore, the present study is a significant attempt to bridge this gap by not only examining the impact of co-creation on service innovation and service innovation on firm performance but also exploring the important dimensions of service innovation in the hotel industry which significantly determines the very existence of various state economies' as tourism being the top contributor in terms of employment generation and GDP contribution worldwide.

2 Literature Review

2.1 Co-creation

Co-creation denotes to a collaborative connection between the supplier and the customer in the course of value creation where the purchaser exhibits an enthusiastic role in the process of innovation (Chathoth et al., 2013). Despite the fact that businesses give proper consideration to the experiences shared by the customers, it may consider and involve these experiences to renovate its products or services so as to meet and satisfy the customer preference in a superior way (Vargo & Lusch, 2008; Suntikul & Jachna, 2016; Andotra & Bhat, 2017). In order to cope with the flexible nature of market situations and continuously altering customer needs, the constant dialogue and interactions between the organization and its customers are required for co-creation (Grissemann & Stokburger-Sauer, 2012). It is stated to be an experience-concentrated notion highlighting the cooperation between the business concern and the customer (Ramaswamy & Gouillart, 2010). Therefore, co-creation encompasses three imperious aspects to it which includes customer, firm and the interaction between the customer and the firm.

2.2 Service Innovation

Toivonen and Tuominen (2009) suggest that service innovation is a new service or such a renewal of an existing service which is put into practice which provides benefit to the organization that has developed it and the benefit usually derives from the added value that the renewal provides to the customers. Synder et al. (2016) as prior studies have used different methods to explain and define service innovation, although some studies used an overall definition to state the meaning of service innovation. Whereas, other studies include dimensions or categories to define the concept (Gallouj & Weinstein, 1997; Sharma & Bhat, 2020). However, overall definition explains service innovation by describing the innovation's core characteristics for instance (OECD, 2005) defines service innovation as an initiation of a first-hand or considerably upgraded product (good or service) or process, a new marketing routine, or a new organizational method in business practices, workplace organization, or external relations. Further, Gustafsson et al. (2020) define service innovation as a new process or offer that is put into practice and is adopted by and creates value for one or more stakeholders and urged by the innovation attention, service firms have developed massively over the preceding decade.

2.2.1 Technological Innovation

Technological innovation can be described as the use of better arrangements that fulfil new requirements as well as unstated or existing business sector needs (Maranville, 1992 & Camilleri, 2018). Thus, technological innovation (including digital media) can give economic value by means of the adoption and diffusion (Garcia and Calantone, 2002) of new products. Technological innovation support firms with equipment and technologies which put forward new and improved tools/machines that boost the production as well as enhance the success of management (Sheldon, 1983) it also leads to high economic output and delivers new goods and services that have the ability to revolutionize human lives and capabilities (Naude & Szirmai, 2013). Therefore, technological innovation is the process of implementing technical knowledge in the form of improved tools/machines with improved performance characteristics so as to find a viable solution to the perceived need of customers.

2.2.2 Organizational Innovation

Organizational innovation is the introduction of something new in the form of an idea, product, service, technology, process, and strategy to an organization (Lam 2006) defines organizational innovation as the creation or adoption of an idea or behaviour new to the organization. Demircioglu (2016) also defined it as the organizational capability to refurbish ideas and knowledge into new products, services or processes uninterruptedly for the benefit of the organization as well as its stakeholders. Organizational innovations are not a new marvel, but due to their increased importance for the worldwide rivalry, they have turn out to be a centre of attention for scholars (Lynch, 2007) which may be understood as an effective means to upsurge in-house service quality. It is also diligently linked to employees' contentment and absolutely can guide to competitiveness (Steiber, 2012; Armbruster et al., 2008). Furthermore, it shows a significant impact concerning the internal service quality of the organization (Fadila et al., 2016) and is fundamental to success in the evolution of new products, new services and prosperous processes (Zaied et al., 2015).

2.3 Firm's Performance

Firm's performance is the potential and ability of a business to efficiently utilize the available resources to achieve targets in line with the set plans of the company bearing in mind their relevance to the users (Peterson et al., 2003; Taouab & Isor, 2019). The firm's performance has to turn into appropriate notion in strategic management research and has been often used as a dependent variable which refers to the extent to which business goals have been attained within a specified period of time and is the procedure of gauging the outcomes of a company's strategies and actions in budgetary terms. The firms require adopting innovative practices in its service distribution processes in order to aid their ability to cultivate varying types of customer service so as to ensure better competitive advantage and greater financial performance (Chen et al., 2009). Further, (Tugores & Garcea, 2015) argued that investing in innovative activities, whether, in overheads or differentiated strategy, innovation is regarded as the central element which in both instances result in better performance indicators for the firm. Others argue that innovation in service delivery process would augment superior financial performance (Chen et al., 2009; Lin, 2013; Lilly & Luma, 2014).

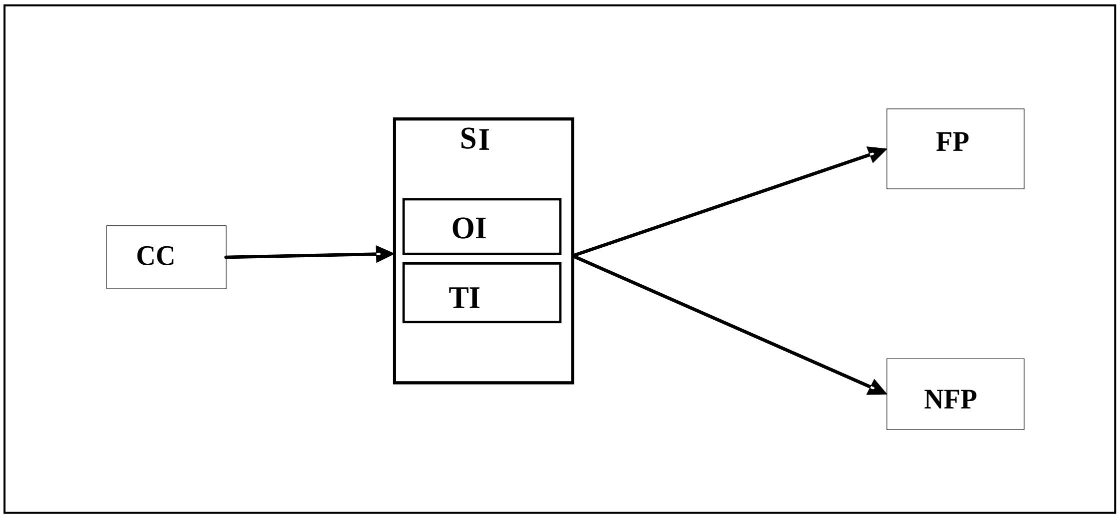

Figure 1: Structural Model: CC- Co-Creation; SI- Service Innovation; OI- Organisational Innovation; TI- Technological Innovation; FP- Financial Performance; NFP- Non-Financial Performance.

Figure 1 represents the conceptual model, and accordingly, the hypotheses have been framed where the model proposes co-creation as an antecedent to service innovation. It also depicts the dimensions of service innovation in the form of technological innovation and organizational innovation, and lastly, this model also proposes a path in the form of outcomes from service innovation to financial and non-financial performance.

2.4 Co-creation and Service Innovation

Co-creation involves a particular method of user contribution whereby active consumers play a part with the organization and willingly contribute input in the form of knowledge, informed views, experience or wealth into an innovation process resulting in the better and more market-focused outcome (Hamidi & Gharni, 2017; Russo-Spena & Mele, 2012). Lusch, Vargo and O'Brien (2007) advocated co-creation with customers for the sake of innovation as a foundational portion of present marketing besides involving shared inventiveness. Similarly, Michel et al. (2008) advocated that service innovation can be seen as a modification from the part of the customer in the value creation processes. Customer involvement in service innovation is viewed as providing imperative value for both the organization and customer (Gustafsson, Kristensson, & Witell, 2012; Raeisi & Lingjie, 2017). Mathieu (2001) stated that more the company is inclined towards augmenting its relations and interactivity with customers, the more it has the opportunity for creating service innovation. Thus, most of the research reached a conclusion that customer involvement and its resulting co-creation within the cooperative sphere leads to the creation of ideas, which often prove to be of original and unanticipated nature (Essen & Ostlund, 2011; Witell et al., 2011). Thus, we hypothesize that

H_1: Co-creation has a positive impact on service innovation.

2.5 Service Innovation and Financial Performance

Financial performance means the act of carrying out financial action which refers to the extent to which financial goals have been attained within a specified period of time and is the procedure of gauging the outcomes of a company's strategies and actions in budgetary terms. Further, it acts as the barometer, which is brought into practice to gauge the organization's overall financial fitness over a specified period of time. As a result, a firm is required to adopt innovative practices in their service distribution processes in order to aid their ability to cultivate varying types of customer service so as to ensure better competitive advantage and greater financial performance (Chen, Tsou, & Huang, 2009). Tagores and Garcea (2015) argued that investing in innovative activities, whether in overheads or differentiated strategy is regarded as the central element, which in both cases result in better performance indicators for the firm. Further, innovation in service delivery process would augment superior financial performance (Chen et al., 2009) and has a positive impact on financial performance in the travel business (Lin, 2013; Lilly & Luma, 2014). Therefore, we hypothesize that:

H_2: Service Innovation has a positive impact on financial performance.

2.6 Service Innovation and Non-Financial Performance

Hospitality firms like hotels are the best examples of a market which possibly gain from service innovation (Victorino et al., 2005). Businesses having a good grip in innovation will emerge as a technology front-runner, a prospect leaning company and as fascinating as modern brands in the market place (Pedersen & Nysveen, 2010). Market orientated firm mostly considers innovation, which eventually paves the way for greater firm performance (Agarwal, Erramilli & Dev, 2003). Service innovation is also having an impact on market-level aspects as it is due to this the competitive power gets changed between the major players in the market, if the business concern expects to be a leader, it is recommended that it must innovate its services unceasingly to build up its capability and gain a sustainable advantage which is best suited for the tourism industry where service innovation is crucial for gaining and sustaining competitive advantage (Camison & Monfort-Mir, 2012; Hjalager, 2010). Further, Auken, Madrid-Guijarro, and Garcia-Perez-de-Lema (2008) also confirm that companies which develop innovative practices are able to avail better the possibility to attain maximum customer response (Dotzal, Shanker, & Berry, 2013). Further, a number of organizations are significantly intensifying the assortment of their services in order to boost value creation and customer retention opportunities (Mina, Bascavusoglu-Moreau, & Hughes, 2014). Thus, we formulate the hypothesis that,

H_3: Service innovation has a significant influence on non-financial performance.

3 Methodology

The assessment of this research is evaluated by examining the relationship between co-creation and service innovation, and at the same time, it also validates the dimensions of service innovation in the form of technological innovation and organizational innovation. Furthermore, the study examines the impact of service innovation on financial performance, and non-financial performances and below mentioned phases had been carried out to style this research in an objective and rational manner.

3.1 Generation of Scale Items

The constructs in the model have been measured with the assistance of multiple-items on a five-point Likert scale, varying from 1 (strongly disagree) to 5 (strongly agree) to attain the uniformity. The items included in co-creation have been extracted from the literature review of Diaz, Giner, and Marin (2016) and Mathis et al. (2016). Meanwhile, the service innovation construct was measured with the items extracted from the literature of Chen et al. (2009) and Brochado, Rita and Margarido (2016) for technological innovation and Rajapathirana and Hui (2018) items for organizational innovation. Similarly, the items for financial and non-financial performance were extracted from the scale of Rajapathirana and Hui (2018) and Chen et al. (2009). Furthermore, it is pertinent to mention that these scale items are considered best for the study since these measures are more likely to reflect how an organization takes in consideration the views and suggestions of customers, develop its service innovation capability in designing and modifying new and existing services in order to perform better at a particular point in time.

3.2 Sample Design and Data Collection

The primary data is based on the first-hand information collected personally from the managers and frontline staff of luxury hotels located in the Union Territory of Jammu and Kashmir, India. The questionnaires were prepared after a thorough discussion with the managers and subject experts, thus determining its content validity, non- probability convenient sampling technique has been used in distributing 317 questionnaires to the respondents of 35 luxury hotels of which 309 were found to be valid and the data was checked for normality through inspection of box plots which revealed 5 hoteliers were excluded from the sample (Hair et al., 2009) indicating that only 304 responses have been used for the analysis.

4 Findings

A two-phase approach to structural equation modeling (SEM) using AMOS as suggested by Anderson & Gerbing (1988) was applied, and thus exploratory factor analysis was conducted on the constructs with the maximum likelihood method to excerpt the initial factors which employed an oblique method in the rotation phase to take into account any correlation among factors, and all the items were extremely loaded except few who were deleted, and the eigenvalues for all the components were more than one whereas Confirmatory factor analysis was used to gain an insight about the proposed measurement model fit and construct validity (Table 1) while, step two intended to develop and assess the structural model for testing the significance of the theoretical relationship.

Table 1: Factor analysis results

Construct	Items	FL	SRW
Co-creation (Alfa=.785; CR=.821)			
CC1	What hotel provides is due to joint work between the hotel and guest.	.801	.801
CC2	Guests contribute actively to the final solution in the service hotel provide	.795	.783
CC3	Hotel experience enhanced because of guest participation in the activity	.838	.810
CC4	Guests felt confident in their ability to collaborate with the hotel professional	.849	.838
Service Innovation (Alfa= .796; CR=.832)			
Organizational Innovation			
OI1	Hotel introduces novel business practice	.851	.821
OI2	Renewal of organizational structure from time to time	.825	.802
OI3	New policies of maintaining external relationship	.810	.753
OI4	Hotel distributes responsibilities and decision making	.813	.829
OI5	New knowledge management system has been inducted	.835	.809
Technological innovation			
TI1	Well-developed sophisticated internet applications	.849	.919
TI2	Hotel offers new technological channels for customers to order new services	.819	.842
TI3	Easier to pay bills through e-billing	.835	.919
TI4	Self-service check-in and check-out kiosks are available	.844	.832
TI5	In-room Interactive mirror/wall with a host of applications (to go to the internet, to see movies, to personalize room with photos, etc.)	.848	.798
Financial Performance (Alfa=.792; CR= .852)			
FP1	Return on investment has increased	.829	.919
FP2	Increase in sales due to innovation	.736	.738
FP3	Profitability has increased	.822	.815
FP4	There is a significant increase in market share	.789	.797
Non-financial performance (Alfa=.809; CR= .849)			
NFP1	Customer loyalty has increased	.937	.965
NFP2	Quality of service has increased	.953	.879
NFP3	Competitive advantage over rivals has been achieved	.947	.922
NFP4	There is an increase in occupancy rate	.838	.877

4.1 Measurement validation

Validity and reliability of the constructs were assessed with the help of CFA. However second-order factor models have been designed for co-creation, service innovation, financial performance and non-financial performance constructs after EFA, the fit indices of measurement models are found to be in line with the set criteria (Table 2) and the goodness of fit indices like GFI, CFI and AGFI are all greater than 0.90 and the badness of fit criteria like RMSEA came to be less than 0.80 which is acceptable as indicated by Hair et al. (2010). Further, in order to test the internal consistency among the items, Cronbach's alpha was used (Cronbach, 1951) and the assessment of scale reliability was done by examining composite reliability measure and the average variance extracted (AVE) the results of which are mentioned in Table 3 and by means of confirmatory factor analysis (CFA), the convergent validity was established by the magnitude standardized estimates (> 0.5) and significance of the factor loadings i.e < 0.05 (Segars, 1997). Further, to check the discriminant validity variance extracted was compared with squared correlation of diverse scales as suggested by Fornell & Larcker (1981), which came to be significant (Table 3). Furthermore, all the threshold estimates are noteworthy (SRW > 0.50, P <0.05), presenting a good value of the measurement items.

Table 2: Results of Various Fit Indices

Constructs	χ^2/df	GFI	AGFI	RMSEA	TLI	NFI	CFI
Co-creation	1.320	.986	.945	.054	.986	.960	.988
Service Innovation	1.312	.955	.953	.049	.972	.948	.978
Financial Performance	1.665	.912	.985	.031	.969	.929	.989
Non-Financial Performance	1.710	.985	.947	.053	.978	.987	.975
Structural model	2.189	.965	.973	.065	.937	.948	.958

Table 3: Descriptive statistics, reliability coefficients, and correlations among the variables extracted (AVE) for data (n = 304)

Constructs	Mean	CR	A	b	C	d
Co-creation	3.62	.821	(.692)			
Service Innovation	3.48	.832	.45**	(.670)		
Financial Performance	3.43	.852	.29**	.42**	(.659)	
Non-Financial Performance	3.59	.849	.26**	.40**	.29**	(.707)

Note: Parentheses numbers denote reliability coefficients

4.2 Hypotheses Testing

Structural Equation Modelling (SEM), a multivariate technique was used to test the hypothesized relationships in the model where the overall fit measures suggest that the data provide a good fit for the hypothesized causal model and the results demonstrated in Figure 2 indicated that the data sufficiently supported the projected model and the results of the structural model (Figure 2; Table 4) indicated that all the hypotheses were supported as a result of values being statistically significant ($p<0.05$ or greater) (H1, H2, H3 all supported). On the whole, the fitness of the structural model evidenced a significant fit with $\chi2/df$ (2.189), GFI (.965), NFI (.948), CFI (.958) and RMSEA (.065) also met the threshold criteria (Table 2), we firstly examined the relationship between co-creation and service innovation where the results revealed a substantial impact of co-creation on service innovation (SRW=.68, p=0.00) indicating that the goals and objectives of a firm need to be consistent with their customers and managers need to be proactive with respect to their innovation patterns and as such hypothesis H1 stands accepted (Table 4).

Table 4: Hypotheses Result (Direct Effect)

Parameters	SRW(β)	P-value	Hypothesis	Conclusion
Co-creation → Service innovation	.685	***	H_1	Supported
Service Innovation → Financial performance	.728	***	H_2	Supported
Service Innovation → Non-financial performance	.809	***	H_3	Supported

Note: **p< .01, ***p< .001

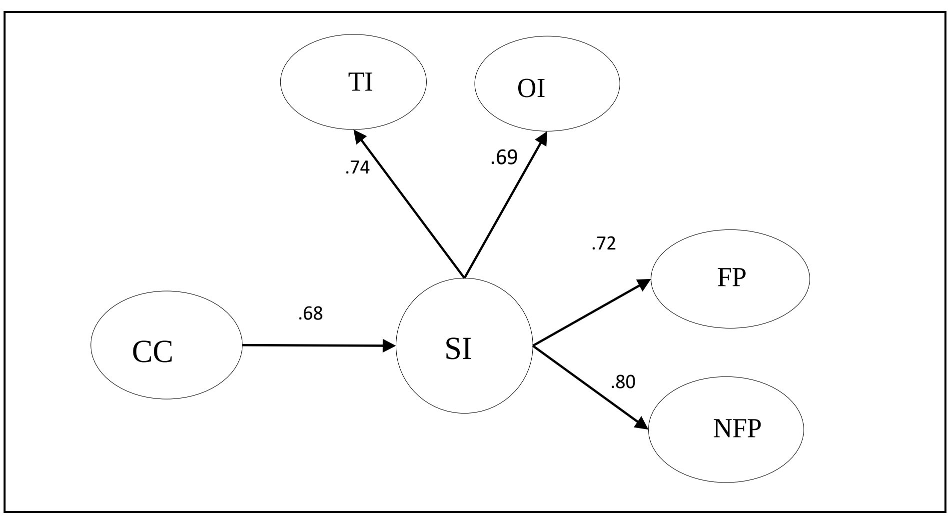

Figure 2: Final Model, Hypothesis and Results
Key: CC-Co-creation; OI-Organisational Innovation; TI-Technological Innovation; SI-Service Innovation; FP-Financial Performance; NFP-Non- Financial Performance

Similarly, a significant relationship was found between service innovation and financial performance (SRW=.72, p=0.00) indicating that firms require to adopt innovative practices through co-creation in their service distribution processes to aid their ability to cultivate varying types of customer service to ensure better financial performance and thus the hypothesis H2 stands accepted. Finally, a good and significant relationship was also found between service innovation and non-financial performance (SRW=.80, p=.000), and therefore, we accept H3 that service innovation positively affects non-financial performance (Table 4).

5 Conclusion

This study examines the role of co-creation and service innovation in improving the service innovation capability in the hotel industry and further explores the impact of service innovation on the overall performance of the industry in the form of financial and non-financial performance. Combining co-creation and service innovation into our investigation leads to a sufficient observation of the strategic activities of the hospitality industry, the path coefficient between the antecedent and outcomes of service innovation for hospitality industry were both positive and statistically significant. This study puts forth plentiful important outcomes which deliver insightful theoretical contributions and managerial implications specifically to the hospitality and tourism literature.

Firstly, the study explores the impact of co-creation on service innovation which elaborates how a firm would be able to attain a win-win situation by considering the ideas and expectations of customers in service design. The empirical results showed that co-creation positively contributes to service innovation, in this context the we can argue that the co-creation process introduced by hospitality industry, taking in view the suggestions and views from the customers have significant impact on service innovation and its outcomes as more the hotelier's focus on co-creating and innovating the services, the more productive results they experience (Ryzhkova, 2015). Further, the collaborative effect of learning orientation, updating of technology and service design helps to increase the level of productivity in the hospitality sector. Thus, the organizations can increase their capability to grip the complicated processes that complement change (Kimberly & Evanisko, 1981; Young et al., 2001) and generate new understanding (Nieves & Cipres, 2015).

Secondly, service innovation is established as a two-dimensional construct comprising of organizational innovation (novel business practice, renewal of organizational structure, new policies of maintaining the external relationship, distributing responsibilities and decision making) and technological innovation (sophisticated internet applications, new technological channels, e-billing, self-service check-in and check-out kiosks) in the hospitality sector. The results specify the projected dimensionality of the scale and disclose that both the dimensions are significantly related to service innovation which indicates how organizational innovation and technological innovation can be fruitful for the hospitality sector to gain an advantage from designing and implementing service innovation. Thirdly, the relationship between service innovation and financial performance also came to be significant. This study is unique in the sense that it empirically explored the impact of service innovation in the hospitality industry and is among the few to discuss its impact on financial and non-financial performance in the hospitality literature. Hospitality firms, like hotels, are the best example of a market which possibly will earn from carrying out service innovation activities (Victorino et al., 2005). Service innovation is expected to influence financial results positively, indicating that revenue and profit is having a positive correlation with the level of service innovation (DeJong et al., 2003; Pedersen & Nysveen, 2010).

Finally, the study explored the impact of service innovation on non-financial performance where the results clearly demonstrated that service innovation is positively related to non-financial performance where the study maintains that performance can be boosted by properly involving customers in service innovation activities both from the technological and organizational innovation point of view and also an investment in co-creation and services is crucial for hospitality managers to fulfil customer expectations and keep up competitive advantages over the rivals. Also, the businesses having a good grip in innovation may get a good spot in the marketplace as a technology front-runner, a prospect leaning company, a fascinating as well as the modern brand (Pedersen & Nysveen, 2010). Furthermore, due to service innovation, organizational structure turns flatter and elastic, co-workers get more empowered. Management becomes somewhat conscious of the need to implement practices of continuous enhancement to fulfill client expectations (Monteiro & Sousa, 2011). Service innovation and its accompanying dynamic capabilities are regarded as the key drivers for the modern-day hospitality business practices which include the restaurants, accommodation, entertainment and transportation businesses, so it is clear that service innovation when properly implemented brings a win-win situation and good impact on the overall performance of the business.

Further, the findings of this study have important implications for hospitality sector as the competitiveness of hotels is highly influenced by co-creation and timely implementation of innovation as more the hotelier's focus on co-creating and innovating the services, the more productive results they will get as the results suggested that involved parties should be listened and given consideration on a consistent basis and their ideas and suggestions require to be implemented more competently in order to survive and move in line with technological advancements and novel innovations in the hospitality sector where such tactics will not only be effective in reducing the customer complaints but will also give a boost to the organizational performance, the results also suggest that innovative services should be the priority of managers and that the development of such services should include co-creation approaches with allies and customers. So, based upon the elements proposed in the model, the management may possibly discover areas that might be lacking and build up capabilities for improving co-creation competency in the hospitality and tourism industry (Chen et al., 2017).

Additionally, a centre for service innovation with a focus on business-level challenges through applied approach should be established for trend monitoring activities for service innovation challenges, collect and share datasets, organize conferences, seminars, recognize best practices in the area of service innovation methodologies, service innovation process and business model innovations, thus in order to make possible the exact choice of technology. Managers must give priority to each project's new service notion, bearing in mind whether it matches the service innovation, then accordingly draft and improve the new client interface and develop the communication dais between service providers and users to facilitate new service delivery system. Finally, service innovation interchanges made by customers should be properly understood as a better understanding of customer's choices allows managers to better design their service offerings and formulate corresponding operational strategies around customer needs.

6 Limitations and Future Research

There are several limitations to the study, which can make some possibilities for future research as the present study is confined to the hotel industry of Jammu and Kashmir, India only. Thus restricting its scope in generalizing the results, whereas studying hotels in a number of states would increase the sample and would undoubtedly enhance the applicability of the results. Also, this study was limited to tourism and hospitality industry, relating the same research model in different sectors may possibly produce dissimilar results as future studies can hence be widened to different service sectors that may lead to a more generalized outlook of the whole service industry. Last but not least, future studies may also add antecedents like managerial commitment and external competition to service innovation construct to gauge the manager's attitude and the possibility of external threat to the business concern.

7 About the author

Dr. Vivek Sharma is a Senior Assistant Professor in the Department of Lifelong Learning, University of Jammu, Jammu and Kashmir, India. He has master's degree in Management and has completed Ph.D. in Management from the University of Jammu, Jammu. His areas of interest are hospitality and rural tourism and have written original research articles in various international journals and have presented papers in various National and International conferences.

Dada Ab Rouf Bhat is a Doctoral fellow in the Department of Commerce, University of Jammu, Jammu and Kashmir. He completed his Masters in Philosophy in commerce from University of Jammu, Jammu and Kashmir, India. His areas of interest are Hospitality, Tourism and Finance and have written original research articles in various

international journals and have presented papers in various National and International conferences.

8 References

Agarwal, S., Erramilli, M. K., & Dev, C. S. (2003). Market orientation and performance in service firms: Role of innovation. *The Journal of Services Marketing*, *17*(1), 68-82.

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin,103*(3), 411-423.

Andotra, N., & Bhat, D. A. R. (2017). Understanding customer experiences in destination building: A demographic analysis of Kashmir tourism development corporation customers. *Scholars World– International Refereed Multidisciplinary Journal of Contemporary Research*, 5(4), 93-102.

Archpru A, M., Corsaro, D., Kelleher, D., Maglio, P., Seo, Y., Lusch, R., & Vargo, S. (2014). The role of symbols in value co-creation. *Marketing Theory*, *14*(3), 311-326.

Armbruster, H., Bikfalvi, A., Kinkel, S. and Lay, G. (2008). Organizational innovation: The challenge of measuring non-technical innovation in large-scale surveys. *Technovation*, *28*, 644-657. doi: 10.1016/j.technovation.2008.03.003.

Auken, H. V., Madrid-Guijarro, A., & Garcia-Perez-de-Lema, D. (2008). Innovation and performance in Spanish manufacturing SMEs. *International Journal of Entrepreneurship and Innovation Management*, *8*(1), 36-56.

Bettencourt, L., Lusch, R. F., & Vargo, S. L. (2014). A service lens on value creation: Marketing's role in achieving strategic advantage. *California Management Review*, *57*(1), 44-66.

Brochado, A., Rita, P., & Margarido, A. (2016). High tech meets high touch in upscale hotels. *Journal of Hospitality and Tourism Technology*, *7*(4), 347-365.

Brodie, R. J., Hollebeek, L. D., Juric, B., & Ilic, A. (2011). Customer engagement: Conceptual domain, fundamental propositions, and implications for research. *Journal of Service Research, 14*(3), 252–271.

Camilleri, M.A. (2018). The SMEs' Technology Acceptance of Digital Media for Stakeholder Engagement. *Journal of Small Business and Enterprise Development* (Forthcoming).

Camison, C., & Monfort-Mir, M. R. (2012). Measuring innovation in tourism from the Schumpeterian and the dynamic-capabilities perspectives. *Tourism Management, 33*, 776-789. doi:10.1016/j.tourman.2011.08.012.

Chathoth, P., Altinay, L., Harrington, R. J., Okumus, F., & Chan, E. S. W. (2013). Co-production versus co-creation: A process-based continuum in the hotel service context. *International Journal of Hospitality Management*, *32*(1), 11-20. doi:10.1016/j.ijhm.2012.03.009.

Chen, J. S., Kerr, D., Chou, C. Y., & Ang, C. (2017). Business co-creation for service innovation in the hospitality and tourism industry. *International Journal of Contemporary Hospitality Management*, *29*(6), 1522-1540.

Chen, J. S., Tsou, H. T., & Huang, A. Y. H. (2009). Service delivery innovation: Antecedents and impact on firm performance. *Journal of Service Research*, *12*(1), 36-55.

COTEC. (2007). Innovation in el sector hotelero. Madrid: COTEC.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika,16*(1), 1-14.

Coviello, M. E., & Joseph, R. M. (2012). Creating major innovations with customers: Insights from small and young technology firms. *Journal of Marketing*, *76*(6), 96-104.

Dakhli, M., & Clercq, D. D. (2004). Human capital, social capital, and innovation: A multi-country study. *Entrepreneurship & Regional Development*, *16*, 107–128.doi: 10.1080/08985620410001677835

Damanpour, F., Walker, R. M., & Avellaneda, C. N. (2009). Combinative effects of innovation types and organizational performance: A longitudinal study of service organizations. *Journal of Management Studies, 46*(4), 650–675.

DeJong J. P. J., Bruins, A., Dolfsma, W., & Meijgaard, J. (2003). Innovation in service firms explored: What, how and why? Strategic study. EIM *Business & Research Policy*, Zoetermeer, Holland. 200-205.

Demircioglu, M. A. (2016). *Organizational innovation*. In A. Farazmand (Eds), Global Encyclopedia of Public Administration, Public Policy, and Governance pp. 1–5. Springer International Publishing.

Diaz, O. P., Giner, R, G., & Marin, M. R. P. (2016). The impact of co-creation on the student satisfaction: Analysis through structural equation modeling. *Hindawi Publishing Corporation*, 1-10.

Dotzal, T., Shanker, V., & Berry, L. (2013). Service innovativeness and firm value. *Journal of Marketing Research, 50*, 259-276.

Durst, S., Mention, A. L., & Poutanen, P. (2015). Service innovation and its impact: What do we know about?. *Economía de la Empresa*, *21*(2), 65-72.

Essen, A., & Ostlund, B. (2011). Laggards as innovators? Old users as designers of new services and service systems. *Journal of. Design, 5*(3), 89-98.

Fadila, H., Singh, K., & Joseph, C. (2016). The influence of organizational innovation towards internal service quality in MBKS. *Procedia-Social and Behavioral Sciences*, *22*(4), 317-324.

Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics.

Fox, G. L., & Royle, M. T. (2014). Human capital in service innovation strategy. *International Journal of Management and Marketing Research*, *7*(1), 29–48.

Garcia, R., & Calantone, R. (2002). A critical look at technological innovation typology and innovativeness terminology: A literature review. *Journal of Product Innovation Management, 19*(2), 110-132.

Grisseman, U.S., & Stokburger-Sauer, N. E. (2012). Customer co-creation of travel services: The role of company support and customer satisfaction with the co-creation performance. *Tourism Management*, *33*(6), 1483–1492.

Grönroos, C. (2011). Value co-creation in service logic: A critical analysis. *Marketing Theory, 11*(3), 279–301.

Grönroos, C., & Voima, P. (2013). Critical service logic: Making sense of value creation and co-creation. *Journal of the Academy of Marketing Science*, *41*(2), 133–150.

Gustafsson, A., Kristensson, P., & Witell, L. (2012). Customer co-creation in service innovation: A matter of communication. *Journal of Service Management*, *3*(23), 311-327.

Heidenreich, S., Wittkowski, K., Handrich, M., & Falk, T. (2015). The dark side of customer co-creation: Exploring the consequences of failed co-created services. *Journal of the Academy of Marketing Science, 43*(3), 279-296.

Hamidi, F., & Gharneh, N, S. (2017). Impact of co-creation on innovation capability and firm performance: A structural equation modeling. *Ad-Minister*, *30*, 73-90. doi: 10.17230/ad-minister.30.4.

Hjalager, A. M. (2010). A review of innovation research in tourism. *Tourism Management*, *31*(1), 1-12.
Hoyer, W. D., Chandy, R., Dorotic, M., Krafft, M., & Singh, S. S. (2010). Consumer co-creation in new product development. *Journal of Service Research*, *13*(3), 283-296.
Hu, M. L. M., Horng, J. S., & Sun, Y. H. (2009). Hospitality teams: Knowledge sharing and service innovation performance. *Tourism Management, 30*(1), 41–50.
Im, J., & Qu, H. (2017). Driers and resources of customer co-creation: Scenario-based case in the restaurant industry. *International Journal of Hospitality Management*, *64*, 31-40.DOI: 10.1016/j.ijhm.2017.03.007.
Jaakkola, E., Helkkula, A., & Aarikka-Stenroos, L. (2015). Understanding and advancing service experience co-creation. *Journal of Service Management, 26*(2), 182-205.
Karmarkar, U. (2004). Will you survive the services revolution? *Harvard Business Review*, *82*(6), 100-8.
Kasnakoglu, B. T. (2016). Antecedents and consequences of co-creation in credence-based service contexts. *The Service Industries Journal*, *36*(1-2), 1-20.
Kimberly, J. R., & Evanisko, M. J. (1981). Organizational innovation: The influence of individual, organizational, and contextual factors on hospital adoption of technological and administrative innovations. *Academy of Management Journal*, *24*(4), 689-713.
Lam, A. (2006). *Organizational innovation*. In Fagerberg J, Mowery, D. C (eds) The Oxford handbook of innovation. Oxford University Press, Oxford
Lilly, L., & luma, D. (2014). Influence of strategic innovation on performance of commercial banks in Kenya: The case of Kenya commercial bank in Nairobi County. *European Journal of Business Management, 2*(1), 336–341.
Lin, L. (2013). The impact of service innovation on firm performance. *The Service Industries Journal*, *33*(15-16), 1599-1632.
Lusch, R. F., Vargo, S. L., & O'Brien, M. (2007). Competing through service: Insights from service-dominant logic. *Journal of Retailing, 83*(1), 5–18.
Lynch, L. M. (2007). The adoption and diffusion of organizational innovation: Evidence for the U.S. economy. *IZA Discussion Paper* Nr. 2819, Bonn.
Maranville, S. (1992). Entrepreneurship in the Business Curriculum. *Journal of Education for Business, 68*(1), 27-31.
Mathis, E. F., Kim, H., Usyal, M., Sirgy, J. M., & Prebensen, N. K. (2016). The effect of co-creation experience on outcome variable. *Annals of Tourism Research*, *57*, 62-75.doi.org/10.1016/j.annals.2015.11.023
Mathieu, V. (2001). Product services: From a service supporting the product to a service supporting the client. *Journal of Business and Industrial Marketing, 16*(1), 39-61.
Mina, A., Bascavusoglu-Moreau, E., & Hughes, A. (2014). Open service innovation and the firm's search for external knowledge. *Research Policy, 43*(5), 4853-866. doi.org/10.1016/j.respol.2013.07.004
Mainardes, E. W., Teixeira, A., & Romano, P. C. D. S. (2017). Determinants of co-creation in banking services. *International Journal of Bank Marketing*, *35*(2), 187-204.
Monteiro, I. P., & Sousa, F. C. (2011). Understanding innovation in hospitality through the words of innovative managers. *Book of Proceedings*, *1*, 169-179.
Michel, S., Brown, S. W., & Gallan, A. (2008). An expanded and strategic view of discontinuous innovations: Deploying a service–dominant logic. *Journal of the Academy of Marketing Science, 36*(1), 54–66.

Naude. W., & Szirmai, A. (2013). Technological innovation, entrepreneurship and development, Working Papers 2013/17, Maastricht School of Management.JEL classification: F23, L52 L53, O25, O40, O33, O34.

Nieves, J., & Cipres, M. S. (2015). Management innovation in the hotel industry. *Journal of Tourism Management*, *46*, 51-58.

Oertzen, A. S., Odekerken, G., & Mager, B. (2017). Service innovation in value co-creation: A context and an outcome. *Conference paper*. https://www.researchgate.net/publication/318463601.

Olsen, M.D., & Connolly, D.J. (2000). Experience-based travel. *Cornell Hotel and Restaurant Administration Quarterly*, *41*(1), 30-40.

Pedersen, P. E., & Nysveen, H. (2010). Service innovation challenges at the policy, industry, and firm level: a qualitative enquiry into the service innovation system. www.snf.noFiles/Filer/Publications/A10_10.

Peterson, W., Gijsbers, G., & Wilks, M. (2003). An organizational performance assessment system for agricultural research organizations: Concepts, methods and procedures. *Research Management Guidelines* No. 7, International Service for National Agricultural Research, The Hague.

Pine, R. (1992). Technology transfer in the hotel industry. *International Journal of Hospitality Management*, *11*(1), 3–22.

Prahalad, C. K. & Ramaswamy, V. (2004). Co-creation experiences: The next practice in value creation. *Journal of Interactive Marketing, 18*(3), 5–14.

Prajogo, D. I. & Oke, A. (2016). Human capital, service innovation advantage, and business performance: The moderating roles of dynamic and competitive environments. *International Journal of Operations & Production Management*, *36*(9), 974-994. https://doi.org/10.1108/IJOPM-11-2014-0537.

Raeisi, S., & Lingjie, M. (2017). The importance of customer engagement and service innovation in value co-creation. *International Journal of Economics and Management Engineering, 11*(4), 813-818.

Rajapathirana, R. J., & Hui, Y. (2018). Relationship between innovation capability, innovation type, and firm performance. Journal of Innovation & Knowledge, 3(1), 44-55.

Ramani, G., & Kumar, V. (2008). Interaction orientation and firm performance. *Journal of Marketing*, *72*(1), 27-45.

Ramaswamy, R. & Gouillart, F. (2010). Building the co-creative enterprise', viewed 03 March 2011, from http://www.gsg.com.au/media/24460/r1010j-pdf-eng.pdf.

Ranjan, K. R., & Read, S. (2016). Value co-creation: Concept and measurement. *Journal of the Academy of Marketing Science,42*(4), 290–315.

Razavi, S. H., & Attarnezhad, O. (2013). Management of organizational innovation. *International Journal of Business and Social Science, 4*(1), 226-232.

Reid, R. D., & Sandler, M. (1992). The use of technology to improve service quality. *Cornell Hotel and Restaurant Administration Quarterly*, *33*(3), 68-73.

Reniou, F. (2009). Opérations participatives des marques: Pourquoiet comment faire participer les consommateurs. *PhD in Management Sciences*, Paris-Dauphine University, ESSEC, Paris.

Russo-Spena, T., & Mele, C. (2012). Five Co's in innovating: A practice-based view. *Journal of Service Management, 23*(4), 527-553.

Ryzhkova, N. (2015). Does online collaboration with customers drive innovation performance? *Journal of Service Theory and Practice, 25*(3), 327-347.
Segars, A. H. (1997). Assessing the unidimensionality of measurement: A paradigm and illustration within the content of information systems research. *Omega, 25*(1), 107-121.
Sharma, V., & Bhat, D. A. R. (2019). Empirical assessment of the role of human capital innovation in service innovation implementation in the hospitality industry. *Researcher: A Multidisciplinary Journal, 15*(1), 65-77.
Sharma, V., & Bhat, D. A. R. (2020). An empirical study exploring the relationship among human capital innovation, service innovation, competitive advantage and employee productivity in hospitality services. *African Journal of Hospitality, Tourism and Leisure, 9*(2), 1-14.
Sheldon, P. J. (1983). The impact of technology on the hotel industry. *Tourism Management*, *4*(4), 269–278.
Sirilli, G., and Evangelista, R. (1998). Technological innovation in services and manufacturing: Results from Italian surveys. *Research Policy*, *27*, 881-899.
Steiber, A. (2012). Organizational innovations: A conceptualization of how they are created, diffused, and sustained. Gothenburg: *Chalmers University of Technology.* ISBN 978-91-7385-669-0.
Suntikula, W., & Jachna, T. (2016). The co-creation/place attachment nexus. *Tourism Management*, *52*, 276-286. DOI: 10.1016/j.tourman.2015.06.026.
Taouab, O., & Issor, Z. (2019). Firm performance: Definition and measurement models. *European Scientific Journal, 15*(1),93-106.
Tseng, C. Y., Kuo, H. Y. and Chou, S. S. (2008). Configuration of innovation and performance in the service industry: Evidence from the Taiwanese hotel industry. *The Service Industries Journal*, *28*(7), 1015-1028.
Tugores, M. (2012). *Human capital and innovation as determinant factors of competitiveness*. In Homlong, N., ed, Tourism Destinations and Tourism Businesses: Issues of Competition and Cooperation, Athens Institute for Education and Research, Athens.
Tugores, M., & García, D. (2015). The impact of innovation on firms' performance: An analysis of the hotel sector in Majorca. *Tourism Economics 21*(1), 121-140.
Valjakka T., Kansola M., Hakanen T., & Valkokari K. (2013). *Antecedents of Value Co-Creation in B2B Networks*. In Shimomura Y., Kimita K. (eds) The Philosopher's Stone for Sustainability. Springer, Berlin, Heidelberg.
Van der Wiele, T. (2007). Longitudinal measurement in organizational transformation: A case of a Dutch Flex Company. *Service Business*, *1*(1), 25–40.
Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, *68*(1), 1–17.
Vargo, S. L., & Lusch, R. F. (2008). Service-dominant logic: continuing the evolution. *Journal of the Academy of Marketing Science*, *36*(1), 1–10.
Verleye, K. (2015). The co-creation experience from the customer perspective: Its measurement and determinants. *Journal of Service Management, 26*(2), 321-342.
Victorino, L., Verma, R., Plaschka, G., & Dev, C. (2005). Service innovation and customer choices in the hospitality industry. *Managing Service Quality*, *15*(6), 555-576.
Witell, L., Kristensson, P. Gustafsson, A., & Löfgren, M. (2011). Idea generation: Customer cocreation versus traditional market research techniques. *Journal of Service Management, 22*(2), 140–159.

Young, G. J., Charns, M. P., & Shortell, S. M. (2001). Top manager and network effects on the adoption of innovative management practices: A study of TQM in a public hospital system. *Strategic Management Journal*, *22*(10), 935-951.

Zaied, R. M. B., Louati, H., & Affes, H. (2015). The relationship between organizational innovations, internal sources of knowledge and organizational performance. *International Journal of Managing Value and Supply Chains*, *6*(3), 53-67.

Zhou, K. Z., Yim, C. K., & Tse, D. K. (2005). The effects of strategic orientations on technology- and market-based breakthrough innovations. *Journal of Marketing*, *69*(2), 42–60.