# *Market Orientation and Service Innovation: Examining the Linkages to Organisation Performance*

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**Abstract**

Market-oriented service firms are becoming more creative and innovative in their pursuit of delivering superior customer value. Though the impact of innovative practices on a firm's performance is sufficiently acclaimed by previous studies, there still remains a void with respect to the distinctive impact of the dimensions of market orientation on types of service innovation, especially in the context of emerging economies such as India. The present study addresses this gap by examining firms in four select service sectors for their role and impact on the type of innovation and organisation performance. Using survey method, primary data was collected from 353 managers and statistical techniques such as Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM)were used for analysing the hypothesized relationships of the research model. The results revealed that only customer orientation exertsa strong and positive influence on incremental and radical innovation. Service innovation is also found to be strongly associated with organisation performance. The findings further suggested that service innovation mustperform a mediating role in the relationship between market orientation and organisation performance. The study draws useful implications for market-oriented service firms and outlines the scope for future research in this pertinent domain.

**Key Words:** Market orientation, Incremental service innovation, Radical service innovation, Organisation performance

## 1. Introduction

With the impressive growth of the service sector in a highly competitive market era, the demands of service management are increasing significantly (Bates et al., 2003; Camison, 1996; Yavas et al., 1997). Service firms are becoming market oriented in their pursuit to create and deliver superior customer value. This requires creative ideas and continuous innovation for long term customer retention and sustenance in the market place. For firms and economies which function in an environment of intense competition, slow growth and decreased spending, more apprehensive innovative approaches may be needed. It is therefore not surprising that service innovation is regarded as a critical component for the economic viability of firms. It is also a key driver for the long term success and competitive advantage ofnations (Baker & Sinkula, 2002). In an emerging country like India too, innovation is one of the significant parameters for growth and development in the service sector.

As such, innovative practices have become a central means for gaining competitive advantage, enabling companies to provide distinctive services. The degree of innovativeness further reflects the firm's knowledge and its capability to increase organizational performance through application of new methods and processes. The process of turning opportunity into new ideas and their implementation not only provides customers with different options to satisfy their needs on a sustainable basis, but also becomes an effective way ofincreasing the firm's financial and non-financial performance.

Though the concept of innovation in services has gained importance, empirical research with a market oriented perspective still remains an under-researched area(Grawe et al., 2009). The contribution of market orientation to new services and its impact on firm's performance empirically is equivocal (Manzano et al., 2005; Zhou et al., 2005). But a component-wise analysis

of market orientation in relation to its impact on types of service innovation and organisation performance is majorly lacking (Cheng & Krumwiede, 2012). Further, majority of the innovation studies have been conducted for products and that too in the context of developed nations (Alam, 2007; Alam, 2006; Storey & Easingwood, 1999). The present study addresses this gap in existing literature by examining market oriented service firms of four select service sectors i.e., Hospitality, Healthcare, IT and Banking services, for their role and impact on types of innovation and organisation performance in the context of an emerging economy like India.

## 2. Objectives of the Study

As suggested by previous studies, the present study conducts a dimension-wise analysis related to three primary constructs namely, market orientation, service innovation and organisation performance. The hypotheses formulated are subsequently tested to determine a deeper understanding of the linkages between each of these constructs. More specifically, the objectives of the study can be outlined as follows:

- To examine the independent effect of two dimensions of market orientation (i.e. customer orientation and competitor orientation) on two dimensions of service innovation i.e. incremental innovation and radical innovation, for firms in four select service sectors.
- To assess the independent effect of two dimensions of market orientation on two components of organisation performance i.e., financial and non-financial performance.
- To investigate the mediating role of service innovation in impacting the relationship between the dimensions of market orientation and the dimensions of organisation performance.

## 3. Conceptual Framework and Formulation of Hypotheses

### 3.1 Market Orientation and Service innovation: Components and Linkages

Market orientation, defined as an organisation's responsiveness towards consumer needs and tastes, necessitates intelligence about the market, customers and competitors and thus is considered as an important component of organisational culture (Baker & Sinkula 1999; Lonial et al., 2008; Narver & Slater, 1990). Existing literature has dominantly conceptualized market orientation as being composed of three interactive dimensions: Customer orientation, competitor orientation and inter-functional orientation. However, due to lack of presence of inter-functional orientation in actual practice, the present work has confined itself to the examination of the remaining two dimensions for their distinct relationship with innovation practices. According to Narver & Slater (1990), the dimension of customer orientation can be understood as a collection of knowledge and intelligence about customers in order to satisfy their needs and desires. The continuous change in needs and preferences of the customers requires firms to pay special attention to creation or development of new ideas which bring new opportunities and superior value for target customers (Joshi & Sharma, 2004; Nasution et al., 2011). Competitor orientation, on the other hand, is understood as a firm's ability to identify, analyse and respond to competitors' actions (Kohli & Jaworski, 1990). This allows firms to deliver services which are distinct from those of its competitors, thereby confirming the role of competitor's strategy as another source of innovation in the form of differentiation (Han et al., 1998).

Services marketing literature conceives service innovation as the development of new service offerings and concepts, including how to generate new ideas for service offerings and develop customer-oriented options (Nijssen et al., 2005; Olsen & Sallis, 2006). Later, it was regarded as the set of innovations in service processes i.e., service-logic innovation for the existing service products of an organization (Gadrey et al., 1995). The varied classifications of service innovation suggested by past studies are breakthrough innovation, continuous and discontinuous innovation, exploratory and exploitative innovation, and incremental and radical innovations (Chan et al., 1998; Jansen et al., 2006).The typology of incremental and radical innovation is considered important (Cheng & Krumwiede, 2012). While incremental innovations connotes minor

adaptations or improvements of an incremental nature that are regularly made in modern business houses to continually improve their products or services (Garcia & Calantone, 2002; Griffin, 1997 ), radical innovations are technologically new to the market as well as to the innovating firm (Oerlemans et al., 2013) and brings in abrupt changes in technology usage and are based on unique knowledge sources.

Despite sufficient studies being conducted in the area of marketing orientation and service innovation, effective research has not been conducted by marketing practitioners so far for examining the relationship between dimensions of market orientation and types of innovative service practices (Jaworski & Kohli, 1993). Some of the related studies examining the linkages between these constructs too fail to provide a consensus. For instance, though studies show a positive effect of market orientation on innovation (Athuahene-Gima, 1995), there exists a parallel view which suggests that customer orientation in the form of placing a greater reliance by firms on customer feedback may have a negative impact on the degree of innovation (Christensen et al., 2005). Propagating this view, Christensen (1997) argues that many large organizations fail because listening to customers places stringent limits on the strategies firms can and cannot pursue, resulting in failure of radical innovation. Similarly, though an imitation of competitor's strategy is regarded as a logical source for bringing new services in so far as minimisation of cost and risk are involved, many scholars (Bennett & Cooper, 1981; Hayes & Abernathy, 1980) have argued that businesses following their competitors too closely can make only small improvements in the existing services and ignore radical changes. Further, Day &Wensley (1998) also stressed that focussing too much on competitor's strategy may distract marketer's attention towards changes in existing market segments, and reduces their capability to innovate radically. Against this background, the present study envisages the following hypotheses to test the dimension-wise relationship between market orientation and service innovation:

H1a: Customer orientation significantly relates to incremental service innovation.

H1b: Customer orientation insignificantly relates to radical service innovation.

H2a: Competitor orientation significantly relates to incremental service innovation.

H2b: Competitor orientation insignificantly relates to radical service innovation.

### 3.2 Relationship of Market Orientation and Service Innovation with Organisation Performance

Previous studies have addressed the performance of business or service firms from varied perspectives such as, financial performance, business unit performance, or organizational performance, (Venkatraman & Ramanujam, 1986), subsequently providing consensus to the view that a firm's innovation performance should be considered broadly in terms of its financial and non-financial performance (Avlonitis et al., 2001; Gounarisetal., 2003).Following this line, the present study considers organisation performance to be composed of two broad components: Financial and non-financial. Financial performance reflects the ability of a firm to use its current assets for generating revenue. It includes parameters such as,increase in profitability of the company, more revenue generation, sales, cost reduction, and expansion in market share (Avlontis et al., 2001; Menor et al., 2002). The non-financial component, on the other hand, may be understood in terms of enhanced customer loyalty, increase in new customer base, improved image and reputation of the firm (Blazevic & Lievens, 2004; Lievens & Moenaert, 2000).

A number of previous studies have regarded market orientation as an essential factor for generating innovative service and improved organisation performance (Dawes, 2000; Manzano et al., 2005; Song et al., 2009; Tsiotsou, 2010). A pioneering study by Kohli&Jaworski (1990) argued that clarity of focus and firm's vision are facilitated through market orientation. However, assessment across dimensions of market orientation has provided mixed findings where studies (Chao et al., 2007; Deshpande & Farley, 1998) suggest

customer orientation as an important aspect of market orientation to business performance, but have found competitor orientation to be detrimental to profitability (Sin et al., 2005).

In addition to market orientation, literature emphasises that service innovation, whether incremental or radical, also significantly contributes towards firm's financial and non-financial performance (Venkatraman & Vasudevan, 1986). Studies examining the relative influence of innovation on a firm's financial success (Lievens & Moenaert, 2000; Thompson et al., 1985) showed that the process of new service development improves quality of service, in-turn providing benefits to the company in the form of increased profit, cost savings, increase in sales performance and expanding market. In relation to non-financial outcomes too, researchers have opined that adoption of service innovation practices such as providing ease of buying process and prioritising customer's needs result in customer retention, value generation, and firm's superior image and reputation (Avlonitis et al., 2001).

Furthermore, some of the studies propound the direct contribution of market orientation on organisation performance (Kumar et al., 1998; Langerak, 2003) while others suggest the mediating role of service innovation in impacting the relationship of a market oriented firm with its overall performance. More specifically, a study by Tsiotsou (2010) provides the strong view that market orientation can not make a direct impact on firm performance without service innovation. However, research on the direct or indirect relationship between market orientation and organisation performance remains largely inconclusive. The hypotheses formulated on the basis of the aforesaid discussion can be stated as follows:

*H3: Market orientation (customer and competitor) significantly influences organisation performance.*

*H4: Service innovation (incremental and radical) significantly influences financial as well as non-financial organisation performance.*

*H5: Service innovation mediates the relationship between market orientation and organisation performance.*

## 4. Research Methodology

### 4.1 Selection of Sample

Adopting the questionnaire design, primary data for the study were collected from key personnel of firms/ companies in four service industries namely, hospitality; healthcare, information technology and banking services. These industries are generally engaged in innovative activities and hence were found to be suitable for the purpose of the present research. For instance, hospitals like Medanta have introduced new dedicated telemedicine centres across the country and all over the world to deliver the best health-care facilities even in remote areas. The world class budgeting and planning system offered by one of the IT companies (TCS) enabled government offices to process data fast. Lemon Tree hotels provide new human resource practices such as employing and training deaf and mute people in the organisation. Banking sector is also moving ahead with its cost-effective financial and technological innovations such as online utility billing and online filing of Income-Tax returns.As majority of representative firms from these four sectors are situated in the National Capital Region, covering major industrial areas of Gurgaon, Faridabad and Noida, the sampling frame for the study consisted of the medium and large service firms situated in three areas of Delhi-NCR.The details of these service firms were obtained from websites and the database maintained by Confederation of Indian Industries (CII), with prior approval of its human resource department. While a total of 667 companies were found in IT enabled / Telecom services, 257 hospitals including clinics, nursing homes, and other health care organisations comprised of the health care sector. The hospitality industry accounts for 563 hotels, which includes rating from one star to five star. The total number of banks was 70, including private and public, national and multinational banks operating in India. All the sources, including official websites and database of CII, provided the pool of 1557 firms from four service sectors. Assuming that only firms having more than 100 employees and an annual turnover of more than 2 crores usually have formal organisation of functional departments, firms not meeting the reference criterion were excluded from

the sample. Information pertaining to annual turnover of organisations was obtained from their respective official websites. Following a similar approach for hospitality services, hotels with less than 3 star rating were removed from the sample list. The reduced sample of 1059 service firms (comprising of 372 firms from hospitality services, 447 firms in IT and telecom sector,170 hospitals and 70 banks) formed the final sample of firms that were approached for the purpose of data collection.

In the second phase, pretesting was conducted on 50 respondents including 10 respondents from each of the four service industries and remaining 10 comprising of marketing professors, marketing practitioners and head of the concerned sectorial divisions from CII. Interview method was adopted during pretesting. The contact details of top level management were obtained from the database provided by Confederation of Indian Industries (CII) and also from the respective official websites of the responding firms. Key officials having access to information about innovation service activities and performance, and possessing familiarity with customers were approached for the survey. The respondents were further screened on three parameters: First, for their experience as practicing managers in the service development or a related position; second, for their involvement in new service development process; and third, the firm having introduced a new service and/ or a new method of service delivery to the customers in the last three years. In addition to the online survey, personal visits were made to collect the responses. The follow-up mails, phone calls and regular personal visits provided the final response set from 353 service firms, yielding a response rate of 33 percent.

### 4.2 Measurement of Constructs

The primary constructs examined in the study include market orientation, service innovation and organisation performance. The scale items for these constructs and their sub-dimensions have been largely adapted from previous studies. However, since these studies pertained to varied service settings of more developed western countries, some of the statements were modified to make them more suitable for the chosen service sectors in the context of emerging economies such as India. The scales developed by Narver and Slater (1990) and Paladino (2007) were used to measure the construct of market orientation. The adapted scale comprising of 15 items captured the two dimensions of market orientation, namely competitor orientation and customer orientation. While radical service innovation was measured using a five-item scale adapted from Avlonitis et al. (2001), a merged scale of six items suggested by Abernathy and Clark (1985), Benner and Tushman (2003) and Lewin et al. (1999) was used to operationalise incremental service innovation. Organization performance, both financial as well as non-financial, was measured through a scale consisting of 10 items derived from O'Sullivan and Abela (2007), Zou and Cavusgil (2002), Avlonitis et al. (2001) and Voss and Voss (2000). The responses for all underlying constructs under study were obtained using a seven-point Likert scale with response categories ranging from 'strongly disagree' (1) to 'strongly agree' (7).

The final questionnaire was pre-tested with 50 respondents from the mix of four service sectors (hospitality, healthcare, information technology and banking) chosen forthe study. Informal discussions with researchers, academicians and top-level management experts of service sector organisations located in Delhi-NCR helped in further pruning the instrument, which was finally tested for reliability, validity and multicollinearity. Table 1 provides the details of item statistics and estimated loadings of the measures. The responses generated from the final questionnaire were coded in SPSS 16.0 and the study hypotheses were tested through structural equation modeling (SEM) using AMOS 16.0.

## 5. Analysis and Discussion

The two-stage analysis of the present study assessed the measurement model using confirmatory factor analysis (CFA) and examined the hypothesized relationships of the proposed research model using path analysis.

### 5.1 Measurement of Reliability and Validity

The study examines reliability through computation of Cronbach alpha values. The values above the accepted value of 0.70 for all the items (see Table 1) indicate good internal consistency of scale items (Gerrard & Cunningham, 2003). In addition, composite reliability above 0.90 for all the constructs in the present work further confirms the reliability of data (Fornell & Larcker, 1981). The majority of loadings above 0.70 and AVE values above 0.50 for all the constructs indicate convergent validity of the scale. Following the approach of Fornell and Larcker (1981), discriminant validity has beenassessed on six factors by comparing square root of AVE with the correlations between constructs. Results provided in Table 2 indicate the presence of discriminant validity as the square-root of average variance extracted is greater than the correlation between the pair of constructs in almost all the cases.

### 5.2 Confirmatory Factor Analysis

After testing the data for reliability and validity, CFA was performed for the three primary constructs namely, 'market orientation', 'service innovation', and 'organisation performance'. The approach suggested by Fang et al. (2005) and Joshi (2009) was followed in this regard. The first CFA model was estimated for 'market orientation' with its two first-order dimensions: customer orientation and competitor orientation. Of the fifteen-itemscale that was used for measuring the construct and its underlying dimensions, four items were subsequently deleted due to their regression weights (or factor loading) less than 0.50. The final model with eleven items has been found to have a good fit (Chi-square/df=2.171, RMSEA=.05, GFI= .96, AGFI= .92, CFI=.98, NFI=.966 and TLI=.966) and so was accepted in the present work. Separate CFA models were similarly examined for 'service innovation' with its two first-order dimensions: incremental innovation and radical innovation(Chi-square/df=2.27, RMSEA=.06, GFI=.97, AGFI=.93, CFI=.99, NFI=.98 and TLI=.98) and for 'organisation performance' with its two dimensions i.e., financial performance and non-financial performance (Chi-square/df=3.448, RMSEA=.08, GFI=.98, AGFI=.90, CFI=.99, NFI=.99 and TLI=.97).The results, summarized in Table 3, demonstrate an acceptable fit with these indices for all three models.

### 5.3 Hypotheses Testing

Taking market orientation as an independent variable, service innovation as a mediating variable, and organisation performance as the final outcome variable, the hypothesized relationships of the study were examined through structural path analysis. The overall fit measures suggest that the data provides a good fit for the hypothesized model (Bagozzi et al., 1991; Baumgartner & Homburg, 1996). The goodness-of-fit index (GFI=0.983), adjusted goodness-of-fit index (AGFI=0.917), root mean square error of approximation (RMSEA=0.07) and standardised root mean square residual (SRMR=0.011) are within acceptable range. The values for other indices like normed-fit index (NFI), comparative- fit index (CFI) and Tucker- Lewis index (TLI) are also found to be above 0.90, thereby reflecting a reasonable fit to the data as well as for the overall structural model ($X^2$/df =2.993; GFI=.983; AGFI=.917; CFI=.995; NFI=.992; TLI=.995; RMSEA=.07).The SEM results (see Figure 1) reveal strong association, with customer orientation significantly influencing both incremental service innovation ($\beta$ =.78, p<0.00) as well as radical service innovation ($\beta$ =.73, p<0.00), thereby lending support to the acceptance of H1a and rejection of H1b in the present study. The findings contradict previous studies (Cheng & Krumwiede, 2012) that have suggested customer orientation to be significantly related with incremental service innovation only. With respect to competitor orientation, the results in Table 4 show an insignificant relationship with both incremental innovation ($\beta$=.04, p=.20) and radical innovation ($\beta$=.01, p=.45). The study thus rejects H2a and accepts H2b.

An assessment of the impact of market orientation on organisation performance provides interesting results when component-wise analysis is performed. While customer orientation is found to be exerting a positive and significant influence on financial ($\beta$=.23) as well as non-financial performance ($\beta$=.21),the study found the effect of competitor orientation to be negative and insignificant for both the dimensions of organisation performance. In all, the findings provide partial support

to H3. The next stage of analysis was conducted to examine the impactofthe two dimensions of service innovation on two components of organisation performance. The findings reveal a positive and significant impact of incremental service innovation on both financial (β=.23) and non-financial performance (β=.54). The direct impact of radical service innovation on financial performance (β=.32) and non-financial performance (β=.23) too is found to be positive and significant. The present study thus accepts H4 (see Table 3).

The four-step approach of Baron and Kenny (1986) was used to examine the mediating role of service innovation in influencing the relationship between market orientation and organisation performance. The mediation was checked separately for all the relationships between market orientation and organisation performance (i.e., customer orientation-financial performance, customer orientation-nonfinancial performance, competitor orientation-financial performance, competitor orientation-nonfinancial performance). In Step 1 of the mediation model, the regression of market orientation total scores on organisation performance, ignoring the mediator, was significant, (β=0.65, p<.001). Step 2 showed that the regression of market orientation on service innovation was also significant (β=0.70, p<.001). Step 3 of the mediation process revealed that the regression of service innovation on the organisation performance, controlling for the market orientation, was significant (β=0.81, p<.001). Step 4 of the analyses showed that after un-constraining all the paths, market orientation scores remain significant but with decreased regression weights i.e., the significance of the relationship between market orientation and organisation performance decreased after mediator service innovation (β=0.16, p<.001). The results presented in Table 5 indicate partial mediation of service innovation, thereby providing only partial acceptance to H5.

## 6. Discussion and Conclusion

The study makes an attempt to contribute to the existing literature by providing useful insights with respect to the component-wise linkages between market orientation, service innovation, and organisation performance, in the context of four major service sectors namely, hospitality, healthcare, information technology and banking services. The results of the study can be used by market oriented innovative service firms to understand better the differential impact of two dimensions of market orientation (i.e., customer orientation and competitor orientation) in bringing about either incremental or radical innovation of the service firms and subsequently affecting its financial and non-financial outcomes. The results at the outset reveal customer orientation to be significantly associated with both incremental as well as radical innovation. This implies that due to continuous change in needs and preferences of the customers, firms should give special attention towards innovation efforts. A proactive customer-oriented approach with a clear understanding of customers' latent needs may enable the firms to deliver value through service innovations that can either be incremental or radical in nature. On the other hand, the findings did not show any impact of competitor orientation on either type of service innovation. This may be due the fact that competitor orientation is a source for imitation. Easy imitation of new services by competitors may thus fail to influence any innovationpositively. Keeping this in mind, it may be inferred that too much focus on competitors may reduce the innovative capabilities of a service firm and hence should be avoided. In all, the findings lend support to the superior diagnosis ability of the component-wise measurement model tested in the present research.

Results of the study indicate the significant and positive influence of each type of service innovation (i.e., incremental and radical) on the two components of organisation performance. However, while the contribution of incremental service innovation towards non-financial performance is relatively greater, radical innovation is found to be influencing financial performance more than non-financial performance. The firms should therefore focus on continuous innovation to derive advantage of superior image and customer loyalty, but at the same time should also strive to develop new services so as to outperform competing firms in terms of profitability and market share.

In addition to establishing the direct impact of market orientation on organisation performance, the present research also found service innovation to be partially

mediating the relationship between market orientation and organisation performance. It may thus be inferred that market-oriented innovative service firms would provide greater impetus to their organisation performance in comparison to firms that choose to be either market-oriented or innovative in their approach. To sum up, it can be suggested that a balanced focus towards introduction of totally new innovations as well as continuous improvements in the existing ones is the key ingredient for an improved overall performance of market-oriented service firms.

As is true with majority of studies, the present work too has certain limitations which may be addressed by future researchers. First, the study has been undertaken in the context of only four select service sectors in Delhi-NCR. Inclusion of other service sectors and geographical locations may provide better understanding of the constructs under investigation. Second, the research can be extended to incorporate the views of customers as well as managers to examine the differences in the perception towards innovation for both groups of stakeholders. Third, non-availability of empirical studies in the context of emerging economies may have resulted in the exclusion of some of the other sub-dimensions of the primary constructs. Future studies can attempt to make the model more exhaustive by identifying additional dimensions. Lastly, there always exists a possibility to improve the reliability and validity of scale items for future use.

**Table 1: Item Statistics and Estimated Loadings**

| Constructs/Items | Mean | Std. Dev | Cronbach Alpha | AVE | Composite Reliability | Item Loadings |
|---|---|---|---|---|---|---|
| **Market Orientation** | | | | | | |
| **(a) Customer Orientation** | | | 0.88 | 0.66 | 0.96 | |
| • Taking corrective actions | 6.32 | .942 | | | | .922 |
| • Taking efforts to modify a service | 6.04 | 1.145 | | | | .778 |
| • Spending time in discussing customers' future needs | 6.08 | 1.125 | | | | .750 |
| • Periodically circulating documents (such as reports) related to customer information | 6.07 | 1.068 | | | | .720 |
| • Meeting customersatleast once a year | 5.73 | 1.285 | | | | .517 |
| • Disseminating information about customer satisfaction | 5.88 | 1.279 | | | | .549 |
| • Knowledge about major customer/ market | 5.73 | 1.315 | | | | .565 |
| **(b) Competitor Orientation** | | | 0.79 | 0.54 | 0.98 | |
| • Information about competitors generated independently by all departments | | | | | | |
| • Sharing information about competitors by top management | 5.88<br>5.87 | | | | | |
| • Quick response to competitors' actions | 6.01 | | | | | |
| • Rapid response to competitors' campaignfor target customers | | | | | | |

| Constructs/Items | Mean | Std. Dev | Cronbach Alpha | AVE | Composite Reliability | Item Loadings |
|---|---|---|---|---|---|---|
| **Service Innovation** | | | | | | |
| **(a) Incremental Innovation** | | | 0.80 | 0.60 | 0.98 | |
| • Regular adaptation of existing services | 5.87 | .828 | | | | .623 |
| • Improved efficiency of providing services | 6.29 | .774 | | | | .916 |
| • Expanding services for existing clients | 5.36 | 1.675 | | | | .886 |
| • Using improvised ways of providing services | 5.99 | 1.025 | | | | 0.928 |
| • Introducing continuous improvements in services for local markets | 6.29 | .837 | | | | .859 |
| **(b) Radical Innovation** | | | 0.83 | 0.52 | 0.97 | |
| • Using advanced technology to produce service | 6.24 | .914 | | | | .738 |
| • Creating totally new services | 5.44 | 1.53 | | | | .807 |
| • Changing customers' buying behaviour through their usage of new services | 5.51 | 1.229 | | | | .609 |
| • Using new ways of evaluating quality of services | 5.79 | 1.040 | | | | .709 |
| • Prompt addition of new service features in comparison to that of competitors | 5.68 | 1.078 | | | | .741 |
| **Organisation Performance** | | | 0.94 | 0.77 | 0.98 | |
| (a) Financial Performance | | | | | | |
| • Enhanced sales and profitability | 6.12 | .862 | | | | .842 |
| • Organisation meeting its sales objectives | 6.22 | .738 | | | | .833 |
| • Successful attainment of market share objective | 6.19 | .878 | | | | .876 |
| • Good return on investment | 6.25 | .821 | | | | .916 |
| • Attainment of profit targets | 6.15 | .828 | | | | .937 |
| (b) Non-Financial Performance | | | .93 | 0.75 | 0.97 | |
| • Significant number of new customers | 6.00 | .759 | | | | .891 |
| • Increased loyalty of existing customers | 6.14 | .905 | | | | .913 |
| • Strong market reputation | 6.30 | .846 | | | | .932 |
| • Gainingcompetitive advantage over other service providers | 6.19 | .820 | | | | .889 |
| • Improved organisation image | 6.28 | .875 | | | | .706 |

**Table 2: Correlation Matrix and Discriminant Validity**

| Variables | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1. Customer Orientation | (0.81) | | | | | |
| 2. Competitor Orientation | .27 | (0.73) | | | | |
| 3. Incremental Innovation | .63 | -.01 | (0.77) | | | |
| 4. Radical Innovation | .73 | .01 | .91 | (0.72) | | |
| 5. Financial Performance | .73 | -.03 | .76 | .77 | (0.87) | |
| 6. Non- Financial Performance | .63 | .04 | .75 | .78 | .87 | (0.86) |

Note: Values on the diagonal are the square-root of the average variance extracted for each construct (AVE).

**Table 3: Summarized Results of CFA and SEM**

| | Model 1 | Model 2 | Model 3 |
|---|---|---|---|
| **Construct** | Market orientation (second-order construct) | Service Innovation (second order mediator variables) | Organizational Performance (second-order construct) |
| **Sub-Dimensions (first-order constructs)** | Customer Orientation and Competitor Orientation | Incremental Innovation and Radical Innovation | Financial Performance and Non-Financial Performance |
| **Number of items** | 11 | 10 | 10 |
| $X^2$ | 67.9 | 38.7 | 31.0 |
| df | 33 | 17 | 9 |
| $X^2$/df | 2.058 | 2.276 | 3.448 |
| GFI | .966 | .979 | .983 |
| CFI | .983 | .993 | .995 |
| TLI | .971 | .982 | .975 |
| RMSEA | .055 | .060 | .083 |

**Table 4: Results of Hypotheses Testing**

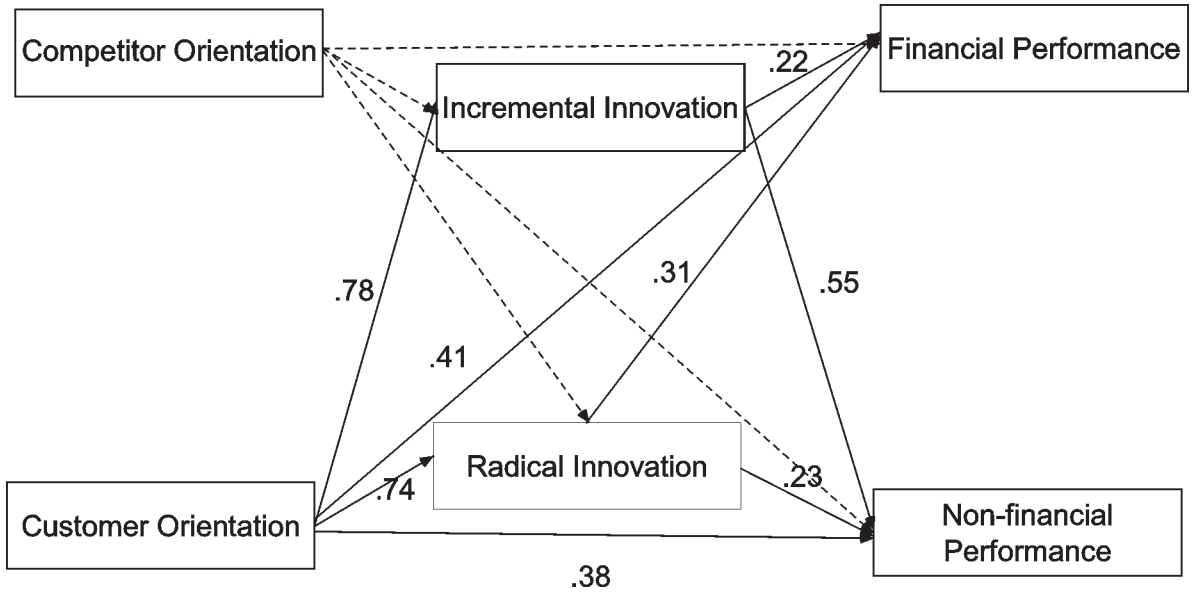
| Direct effect | βPath Coefficients | Hypotheses Testing |
|---|---|---|
| **Market Orientation → Service Innovation** | | Partially accepted |
| Customer orientation-Incremental SI | .781* | Accepted |
| Customer orientation-Radical SI | .732* | Rejected |
| Competitor orientation-Incremental SI | NS | Rejected |
| Competitor orientation-Radical SI | NS | Accepted |
| **Service Innovation → Org Performance** | | Accepted |
| Incremental SI -Financial Performance | .474* | Accepted |
| Incremental SI -Non-Financial Performance | .611* | Accepted |
| Radical SI - Financial Performance | .375* | Accepted |
| Radical SI - Non-Financial Performance | .233* | Accepted |
| **Market Orientation → Org Performance** | | Partially accepted |
| Customer orientation- Financial Performance | .413* | Accepted |
| Customer orientation- Non-Financial Performance | .386* | Accepted |
| Competitor orientation- Financial Performance | NS | Rejected |
| Competitor orientation- Non-Financial Performance | NS | Rejected |

*Notes: *p<.001, NS: Not Supported*

**Table 5 Mediation Results-Four Step Procedure**

| Steps | Model | Linkages | Effects |
|---|---|---|---|
| **Step 1- Step 3** | Constrained Model | **MO----------OP**<br>(IV) (DV)<br>**MO----------SI**<br>(IV) (M)<br>**SI----------OP**<br>(M) (DV) | **.65***<br><br>.70*<br><br>.81* |
| **Step 4** | Unconstrained Model | After mediator SI<br>MO----------OP<br>(IV) (DV) | .16*(Significant but lower SRW, SI partially mediates the relationship between MO and OP) |
| | | **MO-SI-OP** | Partially accepted |

*Notes: *p<.001, IV: Independent Variable, DV: Dependent Variable, M: Mediating Variable, MO: Market Orientation, SI: Service Innovation, OP: Organisation Performance*




**Model Fit Indices**

| $X^2$/df | GFI | CFI | IFI | RMSEA |
|---|---|---|---|---|
| 2.857 | .992 | .997 | .986 | .078 |

**Figure 1: Path Model Results**

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