

# A Comparative Study of Factors Influencing the Choice Decision of Mobile Network Operators between Large and, Small and Medium Enterprise (SME) Customers



ISBN: 978-1-943295-14-2

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*The purpose of this study is to identify the key factors that influence the choice decision of Mobile Network Operators and compares the varying level of importance of the factors between large enterprise and, Small and Medium Enterprise customers. The survey instrument was developed through in-depth interviews and a focus group discussion with industry experts and enterprise customers. The descriptive and single cross-sectional survey research design was adopted. The two-stage convenience sampling method was chosen to collect the primary data. The participants of the survey were selected based on non-probability purposive sampling technique to gather information. The Confirmatory Factor Analysis generated ten factors, namely: network service, billing system, service encounters, technology, convenience, reputation, brand image, word-of-mouth recommendation, pricing, and switching costs. Brand image was identified as the key factor that influences the choice decision. Switching cost was found to be the low important factor. The findings will help the practitioners to understand the large enterprise and, Small and Medium Enterprise customers' buying behaviour and to devise appropriate marketing strategies to acquire new customers, and also to formulate relevant tactics for existing customers that will result in customer satisfaction.*

**Keywords:** Mobile Network Operator, Choice Decision, Telecom Service Provider, Large Enterprise, Small and Medium Enterprise

## 1. Introduction

It is perceived in services marketing that the selection of the right service provider is an important task for the customers as they have numerous choices to make a decision. A customer makes choice decisions at different levels within a hierarchical progression of decisions (Dorsch, Grove & Darden, 2000). The choice decision is a challenging task for the customers as each characteristic of services poses specific challenges on the nature of services delivered. In the highly competitive, complex and customer-oriented Indian mobile telecommunications service market, understanding large enterprise and, small and medium enterprise (SME) customers' choice behaviour is essential for Mobile Network Operators (MNOs) that want to compete effectively, whether they are in the manufacturing or service sector. Exploring such information and understanding their priorities would help the MNOs to devise appropriate marketing strategies for optimum allocation of available resource to acquire new customers and also to formulate relevant tactics to retain existing customers satisfied and loyal.

In general, the mobile telecom service provider–customer relationship is broadly classified on the payment terms, namely prepaid and post-paid. The post-paid mobile telecom services are offered to both commercial enterprises and non-commercial customers. The large enterprises and, Small and Medium-sized Enterprises not only represent a viable and lucrative market segment but that their mobile telecommunications service needs are multiple and heterogeneous. The commercial enterprises are any firm, institution, government or other organisation that engages in buying and selling activities for the purpose of making a profit. The industry experts opined that the share of large enterprise and, SME business is around 35-40 percent of the total post-paid market of the telecom industry. By the end of March 2019, the mobile telecom post-paid subscriber base stood at 64.81 million (TRAI, 2019). This paper attempts to deepen the understanding of the different factors that influence the choice behaviour of large enterprise and, SME customers in the process of selection of an MNO.

### Large Enterprise and, Small and Medium Enterprise (SME)

The mobile telecommunications service industry recognises an enterprise customer as a company which necessarily has bulk mobile connections and may demand any type of end-to-end solutions for their business. A review of the literature indicates that a consensus does not exist as to what constitutes an SME, in this sense it is critical to specify how the current study defines the term. In India, Section 7 of the Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 (Press Information Bureau, Government of India, Ministry of Micro, Small & Medium Enterprises, 2018) define units producing goods and rendering services in terms of annual turnover as follows: A micro enterprise will be defined as a unit where the annual turnover does not exceed five crore rupees; A small enterprise will be defined as a unit where the annual turnover is more than five crore rupees but does not exceed Rs.75cr.; A medium enterprise will be defined as a unit where the annual turnover is more than seventy five crore rupees but does not exceed Rs.250cr. For the purposes of this study, Small-to-Medium-sized-Enterprise is defined as non-subsidiary independent firms of proprietorship and partnership firms that employ fewer than two hundred full-time employees or their part-time equivalent and does less than Rs.250cr. annual turnover. It was also observed from experts interviews that the MNOs segmented enterprise customers into large enterprise (more than Rs.250cr. annual turnover), small & medium enterprise (less than Rs.250cr. annual turnover), government bodies and public

sector undertakings for better focus of services, and to rise from being a pure mobile service provider to an end-to-end communications solution provider.

## 2. Need of the Research

The large enterprise and SME customers form a lucrative market segment for the MNOs. The multiple needs and heterogeneous requirements of enterprise customers demand a complex services proposition at a competitive price. This segment generates higher ARPU (Average Revenue per User), which is critical for the success of an MNO. The industry data (Table 1) shows that the scope of adding new subscribers is shrinking as the market has matured and churning of existing subscribers is widening due to Mobile Number Portability. Subsequently, the process of expanding and maintaining the subscriber base has become a great challenge for the MNOs. Therefore, it becomes imperative for MNOs to understand the buying behaviour, especially the information seeking behaviour and the factors which influence the decision of the selection of an MNO by SMEs and Large business customers. Hence, this research focuses on the choice behaviour of enterprise customers (buying firms) of MNOs (selling firms) in Rest of Tamilnadu telecom circle

**Table 1** Wireless Subscriber Addition and MNP Request

Fiscal Years	Wireless Subscribers Addition (in million)	MNP requests received (in million)
2013-14	36.71	27.30
2014-15	65.38	36.84
2015-16	63.74	55.28
2016-17	136.55	63.63
2017-18	13.23	98.07
2018-19	31.82	57.58

Source: TRAI Annual Reports - for Fiscal Years 2014, 2015, 2016, 2017, 2018 and 2019

## 3. Literature Review

Though there is a limited body of knowledge regarding the enterprise customers' choice behaviour, many studies (Grigoriou, Majumdar, & Lie, 2018; Calvo-Porràl, Faiña-Medín, & Nieto-Mengotti., 2017; Thaichon, Sharma, Raina, & Kapoor 2016; Hosseini, Bahreini Zadeh, & Ziaei Bideh, 2013; Kugyt & Šliburyt, 2007) were carried out on the different critical factors that influence the buying/switching behaviour of consumers and on the quality of service delivery in mobile telecommunications service sector.

Pasha and Masoom (2012) have studied 'network service quality' as a critical factor to measure customers' perceived mobile telecom service quality, satisfaction and loyalty. Haryadi (2018) has discussed contents such as network availability, connection establishment – accessibility, connection maintenance – retain ability for determining the key performance indicators of telecommunication services. Santouridis and Trivellas (2010) have identified that the billing system has a more significant positive influence on customer satisfaction, which in turn positively impacts customer loyalty. The billing system related scale items used by researchers in Information Technology Enabled Services like mobile telecom and online services are: accuracy of billing (Butt & de Run, 2009), accurate and error-free billing system - precision of billing, and timely receipt of bills (Kothari, Sharma, & Rathore, 2011; Seth, Momaya, & Gupta, 2008), accurate and easy to understand bills (Nasr, Eshghi, & Ganguli, 2012; Eshghi, Roy, & Ganguli, 2008), flexibility in payment of bills (Kothari et al., 2011), convenient payment methods (payment options like cash, cheque, and electronic fund transfer), locations for bill payment (Liang, Ma, & Qi, 2013; Kugyt & Šliburyt, 2005), and payment confirmations (Agrawal, Shah, & Wadhwa, 2007) to customer via phone or e-mail or a printed receipt.

In the mobile telecom business relationships, most service encounters occur with the designated company representative. The human interactions with the employees of customer care/help service system rarely occur for enterprise customers. Hence, the researcher has reviewed the behavioural qualities of the designated company representative reflected during service encounters. Ahearne, Jelinek, and Jones (2007) have examined the effect of salesperson's service behaviour in a competitive context and found five unique dimensions namely: diligence, information communication, inducements, sportsmanship, and empathy. To measure service quality of staff competence during a service encounter Nasr et al. (2012) have studied the following qualities - efficiency, competency, knowledge, approachability, willingness to help, politeness, respect shown, courteousness and friendliness.

Today, most business transactions and interactions are either directly or indirectly supported by mobile phone technology for end-to-end quality of service. Davis (1989) has specified the causal linkages between perceived usefulness and perceived ease of use, and users' attitudes, intentions and actual adoption behaviour in his technology acceptance model. The technology used by the service provider in service delivery is expected to be accurate, consistent error-free (or error levels can be

maintained below a specified reliability threshold) and reliable especially during the crisis time (Nasr et al., 2012). Kugytė and Šliburytė (2005) have referred the completeness of services in a telecommunication service industry as the capability of an MNO to offer services like mobile, fixed, and internet etcetera that is all services from one service provider. The questionnaire was developed avoiding mobile telecommunication technology terms such as EDGE, UMTS, HSDPA etcetera as some respondents have found it difficult to understand these terminologies and, focused on the behavioural intention and facilitating conditions to use technology.

'Convenience is many things to many people' (Yale & Venkatesh, 1986) as the perception of convenience varies from industry to industry, product to product, service to service as well as from person to person. Seiders, Voss, Godfrey and Grewal. (2007) have explored five categories of convenience namely: decision convenience – relate to perceived time and effort cost that are associated with service purchase or use decisions; access convenience – initiating service delivery; benefit convenience – experiencing the core benefits of the offering, transaction convenience – finalising the transaction and, post benefit convenience – reestablishing subsequent contact with the firm. Being strategic accounts the enterprise customers have accessibility to their respective account manager throughout the day via mobile or email. The provision of customer service through widespread geographic presence influences customer satisfaction (Aydin & Ozer, 2005). Kugyte and Sliburyte (2005) have proposed elements like convenient location of main office, adequate number of branches, convenient location of branch offices and possibility to manage the accounts on internet/mobile in the process of selection of an MNO.

The general reputation of a firm is closely linked to the consumers' subjective evaluation of the company's performance and its ability to satisfy diverse criteria (Lange, Lee, & Dai, 2011). Researchers have noted that positive corporate reputation enhances consumers' purchase intention, attitude towards the company and its products, and brand loyalty (Jung & Seock, 2016). Xu, Thong, and Venkatesh (2014) have defined 'service leadership' as consumers' perceptions of an Information and Communication Technology (ICT) service provider's service innovation efforts. Xu et al. (2014) have defined 'technology leadership' as consumers' perceptions of an ICT service provider's technology innovation efforts. Kugyte and Šliburyte (2005) have identified 'class of customers' as an important criterion in the selection of service provider. Consumers prefer stronger brands to minimise the perceived risks (Webster & Keller, 2004) and to simplify the selection process and save time. Aaker and Keller (1990) have mentioned that a brand with high awareness and good image can promote brand loyalty to consumers, and the higher the brand awareness the higher is brand trust and purchase intention of consumers. Brands with a higher level of trust can result in higher purchase power and greater sales, revenue, and market share (Morgan & Hunt, 1994). Aaker (2013) has elaborated that an organisation can energise its brand by having a continuous flow of successful innovations that create interest and visibility, with motivated efforts, talented people, creative processes and healthy budgets. The tangible dimensions identified by Parasuraman, Zeithaml, and Berry (1985) such as the appearance of physical facilities, equipment, personnel, and communication materials influence the perceived evaluation of service delivery. Corporate Social Responsibility has more positive effects on corporate image or reputation, increased purchase intentions among consumers, or consumer loyalty (Huang, Yen, Liu, & Huang, 2014) and can enhance customer satisfaction and maintain good customer relationships (Loureiro, Sardinha, & Reijnders, 2012).

Lutz and Reilly (1974) have noted that consumers use various amounts and types of information sources when faced with increasing levels of perceived performance risk and that consumers' relative preference for various information sources shifts dramatically, depending on performance risk factors. To cope with perceived risks, consumers use both internal and external information sources to gather information about the services (Murray, 1991). WoM recommendation is generally found to be focused on brand, product, service and organisation in a business market context. The members of the buying centre obtain information from different sources to reduce the amount of information that must be processed to make a decision. Duhan, Johnson, Wilcox and Harrell (1997) have stated that WoM recommendation sources can be categorised according to the closeness of the relationship between the decision maker and the recommendation sources. Dissatisfaction on pricing is found to be a major churn determinant in the service industry (Wong, 2010). Grigoriou et al. (2018) have explored the higher perceived value of pricing plans provided by the MNOs result in lower consumers switching intention. Sheng, Parker, and Nakamoto (2007) have stated that when the difference is sufficiently small among service providers, the price discounts, product complementary and bundle components may dominate consumers' choice decisions. Kugyte and Sliburyte (2005) have identified scale items such as subscription price, charge for using and promotional offers (Paulrajan & Rajkumar, 2011), attractive prices for mobile phones, financial incentives (Calvo-Porrall et al., 2017), loyalty programs and perceived cheapness under the 'price' factor while developing a service provider selection model. Burnham, Frels and Mahajan (2003) have defined switching cost as the one-time costs that customers associate with the process of switching from one provider to another. Burnham et al. (2003) have developed a switching cost typology that identified three types of switching costs: Procedural switching costs, primarily involves economic risk costs, evaluation costs, setup costs, learning costs; Financial switching costs, involves benefit loss costs, monetary loss costs; and Relational switching costs, involves personal relationship loss costs and brand relationship costs.

The current research study has been undertaken based on the review of previous researches in the area of business-to-business consumer buying behaviour in the mobile telecommunications services industry. This initiative has identified different factors namely: Network service (NS), Billing system (BS), Service encounters (SE), Technology (TL), Convenience (CV), Reputation (RP), Brand image (BI), Word-of-Mouth Recommendation (WoMR), Pricing (PR) and Switching Costs (SC) that influence the choice behaviour in the process of the selection of a mobile network operator.

#### 4. Research Hypotheses

There is a positive relationship between

H <sub>1</sub>	-	The construct Network Service and 'Selection of an MNO'.
H <sub>2</sub>	-	The construct Billing System and 'Selection of an MNO'.
H <sub>3</sub>	-	The construct Service Encounters and 'Selection of an MNO'.
H <sub>4</sub>	-	The construct Technology and 'Selection of an MNO'.
H <sub>5</sub>	-	The construct Convenience and 'Selection of an MNO'.
H <sub>6</sub>	-	The construct Reputation and 'Selection of an MNO'.
H <sub>7</sub>	-	The construct Brand Image and 'Selection of an MNO'.
H <sub>8</sub>	-	The construct Word-of-Mouth Recommendation and 'Selection of an MNO'.
H <sub>9</sub>	-	The construct Pricing and 'Selection of an MNO'.
H <sub>10</sub>	-	The construct Switching Costs and 'Selection of an MNO'.

#### 5. Research Methodology

This descriptive research study adopted non-probability purposive sampling technique and single cross-sectional survey research design. The sampling unit was the large enterprise, and SME customers of MNOs who have subscribed for bulk post-paid enterprise mobile connections in Rest of Tamil Nadu (RoTN) telecom circle and exhibit certain similar behaviours. The non-probability purposive sampling technique with a two-stage and convenience sampling method was adopted to collect the data. The samples were drawn from the pre-existing group that is the large enterprise and SME customers of MNOs in RoTN telecom circle, and then the key contact persons in the organisations were used for the study.

The semi-structured one-to-one in-depth interviews were conducted with two industry experts and seven key persons from large enterprise and, SME customers with a clear plan. Later, the structured in-depth interviews were conducted to judge the applicability of the instrument items. To the nature and complexity of the research topic and objectives, the data saturation, for the most part, occurred by the time analysed eleven structured interviews with large enterprise and, SME customers. A focus group discussion was conducted with large enterprise and, SME customers who share key characteristics pertinent to the study. Observations from expert interviews and focus group discussions led to a few changes and a little modification to increase the clarity of the questionnaire with seven point scale where 1 was highly unimportant and 7 was highly important. The questionnaire was pre-tested in a pilot study with 37 large enterprise and, SME customers.

The finite universe of the population that is the complete list of companies (sample frame) in the master database was obtained for Tamil Nadu state from [www.mca.gov.in](http://www.mca.gov.in). (Accessed on September, 07<sup>th</sup> 2018 at 8:20 pm). Then the list of companies situated in RoTN (other than Chennai telecom circle) was prepared to reach a population figure of 58,279 companies from a total of 1, 14,428 companies. The companies that were not in operation and who had not availed the post-paid enterprise mobile services were eliminated as these were the key parameters required to define the sampling frame of this study. The researcher took the help of direct employees of MNOs to prepare a reliable source list to derive the sample size and to achieve the set objectives. The final source list contained proprietorship, partnership, private ltd., and public ltd. firms that represented the population and totalled 5136 from Rest of Tamil Nadu telecom circle. The minimum number of sample size 355 was derived from the formula  $N = Z^2p(1-p) / e^2$ . The primary data was collected following a non probability convenience sampling technique.

The soft form of the questionnaire was deployed to 980 e-mail addresses. The respondents who have an existence in current business for more than ten years and obtained mobile enterprise services were chosen with the help of industry experts with an aim to meet the objectives of this study. This procedure yielded 219 responses in the first invitation. The first reminder improved the response rate to 33.15 percent. The second reminder improved the overall response rate to 38.04 percent. A total of 291 responses were qualified for this study after vetting 52 unusable responses. Another 72 more responses were collected through personal visits to the premises of the organisations and a total of 363 responses qualified for further analyses. The research survey has been undertaken during the period of October 2018 to February 2019.

#### Data Analysis and Interpretations

The raw data collected were coded, tabulated and transferred into the statistical software program, SPSS statistics – version 23. The reliability coefficient ( $\alpha$ ) achieved for different constructs are: NS – 0.898, BS – 0.878, SE – 0.945, TL – 0.917, CV – 0.897, RP – 0.908, BI – 0.927, WoMR – 0.887, PR – 0.915, SC – 0.846. The normality of distribution is asymptotic, where Mean  $\approx$  Mode  $\approx$  Mode and skewness is closer to zero. The Confirmatory Factor Analysis (CFA) was carried out for the dataset. All 51 scale items were found to be highly significant enough to establish constructs namely NS, BS, SE, TL, CV, RP, BI, WoMR, PR and SC. The 'Average Variance Extracted' value that is the average of the R<sup>2</sup> values of items within a factor was computed: NS – 0.700, BS – 0.759, SE – 0.714, TL – 0.699, CV – 0.763, RP – 0.676, BI – 0.706, WoMR – 0.685, PR – 0.696, SC – 0.655.

The Pearson  $r$  correlation statistic was adopted to measure the degree of the relationship between linearly related variables by applying the correlation test. It is observed from Table 2 that the value of correlation coefficient ( $r$ ) is significantly

different from zero. This means that the value of correlation coefficient varies between -1 and +1 and there is sufficient evidence from the correlation test to suggest that the ten different constructs and the latent factor ‘Selection of an MNO’ are correlated well with each other. All the different constructs are positively and significantly correlated with each other either at 99.99% or 99.95% confidence levels.

**Table 2. Correlation between constructs**

	NS	BS	SE	TL	CV	RP	RI	WAMR	PR	SC	Selection of MNO
NS	1										
BS	0.962**	1									
SE	0.939**	0.989**	1								
TL	0.977**	0.936**	0.917**	1							
CV	0.179**	0.208**	0.218**	0.144**	1						
RP	0.239**	0.162**	0.170**	0.248**	0.216**	1					
RI	0.178**	0.174**	0.139**	0.270**	0.194**	0.518**	1				
WAMR	0.193**	0.201**	0.162**	0.241**	0.235**	0.267**	0.150**	1			
PR	0.242**	0.272**	0.172**	0.344**	0.174**	0.297**	0.192**	0.301**	1		
SC	0.167**	0.090	0.169**	0.159**	0.091	0.193**	0.162**	0.143**	0.118**	1	
Selection of MNO	0.571**	0.461**	0.494**	0.544**	0.468**	0.547**	0.579**	0.496**	0.398**	0.319**	1

\*\* Correlation is significant at the 0.01 level (2-tailed). \* Correlation is significant at the 0.05 level (2-tailed). N = 363  
 † Pearson Correlation  
 ‡ Sources: Primary data

The CFA and the correlation test have prompted the researcher to build up the directionality of significant relationships among all the determinants and the latent factor, and to test the hypothesised theoretical propositions using Structural Equation Modelling technique. Thus the latent factor ‘selection of a Mobile Network Operator’ was added in the SEM model to arrive the AMOS output as shown in Figure 1. The model fit indices for the overall enterprise customers group are: Chi-square – 1818.992, Degrees of freedom – 1220, CMIN/DF – 1.491, Probability level – 0.000, GFI – 0.838, NFI – 0.893, RFI – 0.884, IFI – 0.962, TLI – 0.958, CFI – 0.962, RMSEA – 0.037 and SRMR – 0.0406. Then the data set of overall enterprise customers was divided and grouped into large enterprise and SME customers. The factor loading for each item were derived from CFA of large enterprise, and SME customer groups, and are listed in Table 3. The higher the absolute value of the beta coefficient ( $\beta$  value), the stronger the effect of independent variable on the dependent variable (Whitley & Kite, 2012). It was also observed from the standardised regression weight estimates that all fifty-one items directly, positively and significantly influenced their respective constructs. The regression weight for each construct in the prediction of the latent factor ‘selection of an MNO’ is significantly different from zero at the 0.001 level (two-tailed). That is the factor ‘selection of an MNO’ is directly, positively and significantly influenced by all the constructs. Later, the SEM models were built for both large Enterprise and SME customers group. The model fit indices for large enterprise customers group are: Chi-square – 1608.733, Degrees of freedom – 1220, CMIN/DF – 1.319, Probability level – 0.000, GFI – 0.781, NFI – 0.842, RFI – 0.829, IFI – 0.957, TLI – 0.952, CFI – 0.956, RMSEA – 0.040 and SRMR – 0.0494. The model fit indices for SME customers group are: Chi-square – 1696.111, Degrees of freedom – 1220, CMIN/DF – 1.390, Probability level – 0.000, GFI – 0.728, NFI – 0.803, RFI – 0.786, IFI – 0.936, TLI – 0.929, CFI – 0.935, RMSEA – 0.050 and SRMR – 0.0532.

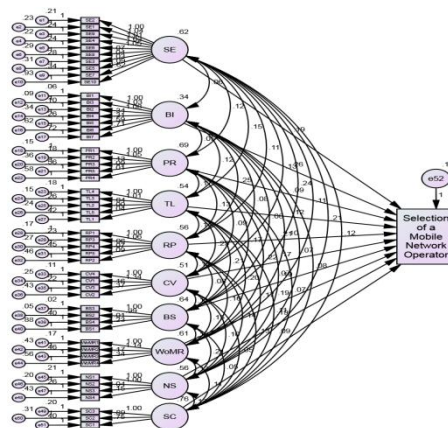


Figure 1 The Overall Enterprise SEM Model

Table 3 Standardised Regression Weights Derived from CFA

Sl. No.	Item Code	Construct Items	Loading	
			Large Ent.	SME
<b>I</b>				
<b>Network Service (NS)</b>				
1	NS1	Availability - Sufficient geographic coverage	0.883	0.838
2	NS2	Accessibility - Connection establishment	0.822	0.908
3	NS3	Reliability - Connection maintenance and retainability	0.818	0.854
4	NS4	Network service recovery / Correcting mistakes or faults	0.798	0.791
<b>II</b>				
<b>Billing System (BS)</b>				
5	BS1	Timely delivery of bills	0.704	0.741
6	BS2	Transparency and accuracy in billing	0.982	0.935
7	BS3	Providing readable and understandable bills	0.993	0.982
8	BS4	Different payment methods and payment confirmation	0.773	0.806
<b>III</b>				
<b>Service Encounters (SE)</b>				
9	SE1	Provides dependable and accurate services in a timely manner	0.886	0.845
10	SE2	Responsiveness of customer contact personnel	0.899	0.831
11	SE3	Communicating information	0.841	0.843
12	SE4	Interest and concern for the welfare of the customer	0.861	0.880
13	SE5	Professionalism during client interactions	0.820	0.830
14	SE6	Knowledge of customer contact personnel	0.869	0.855
15	SE7	Sportsmanship of customer contact personnel	0.823	0.853
16	SE8	Ease of access to customer contact personnel	0.846	0.842
17	SE9	Demonstrating good social judgment	0.850	0.857
18	SE10	Professional appearance	0.799	0.800
<b>IV</b>				
<b>Technology (TL)</b>				
19	TL1	Completeness of products and services	0.770	0.771
20	TL2	Customisation of technology applications and solutions	0.853	0.814
21	TL3	Ease of use and benefits of technology	0.873	0.892
22	TL4	Communication based business solutions	0.852	0.905
23	TL5	Up-to-date and reliable technology/equipment	0.835	0.830
<b>V</b>				
<b>Convenience (CV)</b>				
24	CV1	Sufficient geographic presence - local/national/global	0.890	0.875
25	CV2	Ease of subscribing/switching	0.812	0.853
26	CV3	Possibilities to manage mobile accounts on internet/mobile	0.879	0.861
27	CV4	Managing through a single point of contact	0.926	0.896
<b>VI</b>				
<b>Reputation (RP)</b>				
28	RP1	General reputation of the company	0.860	0.899
29	RP2	Reputation of class of customers	0.729	0.796
30	RP3	Reputation as service leader	0.854	0.857
31	RP4	Reputation as technology leader	0.828	0.855
32	RP5	Reputation as price leader	0.767	0.867
<b>VII</b>				
<b>Brand Image (BI)</b>				
33	BI1	Familiar brand in telecom industry	0.907	0.938
34	BI2	Trust of the corporate brand	0.888	0.908
35	BI3	Integrity of the corporate brand	0.861	0.925
36	BI4	Energy of the corporate brand	0.814	0.781
37	BI5	Influential communication and marketing campaign	0.846	0.829
38	BI6	Appearance and modern nature of products/facilities	0.750	0.777
39	BI7	Socially responsible corporate brand	0.755	0.787
<b>VIII</b>				
<b>Word-of-Mouth Recommendations (WoMR)</b>				
40	WoMR1	Internal WoMR - Top management	0.883	0.889
41	WoMR2	Internal WoMR - Middle/Lower Management	0.822	0.768
42	WoMR3	External WoMR - Vendors, associates, principals, customers	0.818	0.776
43	WoMR4	External WoMR - Friends, family and relatives	0.798	0.901
<b>IX</b>				
<b>Pricing (PR)</b>				
44	PR1	Subscription price	0.895	0.901
45	PR2	Usage charges	0.878	0.905
46	PR3	Financial incentives	0.820	0.845
47	PR4	Promotional offers	0.722	0.745
48	PR5	Subscription and maintenance cost	0.767	0.769
<b>X</b>				
<b>Switching costs (SC)</b>				
49	SC1	Procedural cost	0.643	0.803
50	SC2	Financial cost	0.783	0.841
51	SC3	Relational cost	0.853	0.918
Extraction Method: Principal Component Analysis.; a. 1 components extracted.				
Source : Primary data				

**Table 4** Regression Weights and other Associated Test Statistics

LARGE ENTERPRISE						
Structural Path	Regression Weights Estimate		S.E.	C.R.	P	Remark
	Std.	Un.Std				
BI → Selection of an MNO	0.222	0.241	0.051	4.729	***	Sig.
WoMR → Selection of an MNO	0.207	0.191	0.040	4.771	***	Sig.
NS → Selection of an MNO	0.194	0.194	0.047	4.146	***	Sig.
SE → Selection of an MNO	0.193	0.183	0.043	4.265	***	Sig.
RP → Selection of an MNO	0.188	0.245	0.058	4.249	***	Sig.
CV → Selection of an MNO	0.145	0.150	0.044	3.410	***	Sig.
PR → Selection of an MNO	0.120	0.104	0.037	2.801	0.005	N.Sig.
TL → Selection of an MNO	0.110	0.111	0.049	2.278	0.023	N.Sig.
BS → Selection of an MNO	0.091	0.088	0.046	2.235	0.019	N.Sig.
SC → Selection of an MNO	0.083	0.081	0.04	2.647	0.010	N.Sig.
SMALL and MEDIUM ENTERPRISE						
BI → Selection of an MNO	0.210	0.268	0.069	3.894	***	Sig.
NS → Selection of an MNO	0.205	0.205	0.047	4.337	***	Sig.
SE → Selection of an MNO	0.199	0.194	0.042	4.585	***	Sig.
WoMR → Selection of an MNO	0.186	0.197	0.051	3.878	***	Sig.
RP → Selection of an MNO	0.175	0.166	0.055	3.037	0.002	N.Sig.
CV → Selection of an MNO	0.170	0.187	0.053	3.546	***	Sig.
PR → Selection of an MNO	0.129	0.141	0.049	2.876	0.004	N.Sig.
BS → Selection of an MNO	0.113	0.120	0.052	2.294	0.022	N.Sig.
TL → Selection of an MNO	0.098	0.091	0.042	2.184	0.029	N.Sig.
SC → Selection of an MNO	0.096	0.082	0.035	2.323	0.020	N.Sig.
Std. - Standardised; Un.Std - Unstandardised; Sig - Significant; N.Sig. - Not Significant						
S.E. - Standard Error; C.R. - Critical Ratio; P- Probability						
Source : Primary data						

The fit indices are very close to the unit value one, and RMSEA value is very close to zero. The upper confidence interval value of RMSEA and SRMR are less than 0.080. CMIN/df. value is very much within the acceptable limit. The indices favoured the model validity. In addition, the model was found adequate to justify the theoretical concepts as the modification indices ascertained that no further model modifications are required. So, it can be concluded that the hypotheses testing based on this model is reliable for both large enterprise and SME customers groups.

Then, the significance test was performed to test the hypotheses for both the groups. The AMOS output of regression weight estimates and other associated test statistics are shown in Table 4. It is observed that the critical ratio (C.R.) that is the  $t$  value is greater than 1.96 for structural relationship paths (BI, WoMR, NS, SE, RP and CV) → Selection of an MNO for large enterprise and (BI, WoMR, NS, SE, and CV) → Selection of an MNO for SME customers. The three asterisks (\*\*\*) indicate that the probability (p-value) is smaller than 0.001. That is the probability of getting a critical ratio value greater than 1.96 for all the structural relationship paths in absolute value is less than 0.001. It is implied that the entire structural relationship paths are directly – positively – statistically significant, and there is no significant difference. So, the null hypothesis is retained. The structural paths (PR, TL, BS and SC) → Selection of an MNO for large enterprise and (RP, PR, TL, BS and SC) → Selection of an MNO for SME customers are significant at 99.95% confidence level. Thus it is termed that the hypotheses  $H_1, H_2, H_3, H_4, H_5, H_6, H_7, H_8, H_9$  and  $H_{10}$  are proved. This has revealed that the regression weights for constructs BI, WoMR, NS, SE, RP and CV of Larger enterprise, and BI, WoMR, NS, SE, and CV of SME customers group in the prediction of the variable selection of an MNO is significantly different from zero at the 0.001 level (two-tailed). For instance, the structural path, 'BI → Selection of an MNO', it represents that the construct BI directly – positively – significantly influences (22.2% for large enterprise) the variable selection of an MNO. Thus, the observed SEM model provides a strong support to validate the direct – positive – significant relationship between the ten constructs and the latent factor.

## 6. Key Findings and Discussions

It is found from the SEM model that all factors namely NS, BS, SE, TL, CV, RP, BI, WoMR, PR and SC influence the large enterprise and SME customers' choice decision of an MNO at varying levels. Brand image emerged as the most important

determinant for both group of customers that supports the following – ‘customers prefer stronger brands to minimise their perceived risks’ (Webster & Keller, 2004). Brand trust and integrity can be interpreted as a fundamental for a service provider that is being created and developed by direct experience of consumers. It is found that these customers do not visit the service providers’ offices or physical facilities and hence the company related tangibles are considered low importance by both large enterprise and SME customers. But, the intangible benefits and values matter even in rational and systematic decision making (Mudambi, Doyle, & Wong, 1997). Though ‘corporate social responsibility’ does not play any major role in the choice decision of an MNO (Thaichon et al., 2016), the SME customers have given higher importance when compared to larger enterprise customers. The factor reputation was not considered as more important by SME customers because it is essentially the external assessment of an organisation held by external stakeholders (Cagin 2018). They also have given higher importance to the intangible values such as reputation as leader in price, service and class of customers as these elements link the overall perception of reputation to identity, image and brand. The SME customers have expected their service providers to be a price leader in the industry.

The perceived importance of the role, attitude and behaviour of the representatives and/or the employees of MNOs during an encounter positively, directly and significantly influence the choice decision of an MNO (Kugytė & Šliburytė, 2007). The large enterprise customers have given higher considerations for the elements Responsiveness of customer contact personnel and, Provides dependable and accurate services in a timely manner whereas the SME customers have given higher importance for Interest and concern for the welfare of the customer, and Demonstrating good social judgment. These elements of service encounter influence the most the behavioural outcome of the enterprise customers. The interaction between the service provider and enterprise customers is an essential determination of customer satisfaction (Bitner, Booms, Tetreault, 1990). The enterprise customers have least perceived importance towards the element ‘professional appearance’ of the representatives of the selling firms as they rarely meet them officially on a one-to-one basis, and most interactions happen over the mobile phone and/or through e-mails.

‘Network service’ has been identified as the core service of the selling firms and one of the most important factors that influences the choice decision of an MNO. The large enterprise customers have given higher importance for NS availability and accessibility whereas the SME customers have give higher importance for NS accessibility and reliability. These elements determine the performance of the critical factor ‘network service’ and have more significant impact on both pre-purchase and post-purchase behaviour of enterprise customers. This finding falls in line with Thaichon et al. (2016) and Hosseini et al. (2013) that the key quality dimensions critically influence the ‘selection of an MNO’. NS is the second most important determinant for SME customers whereas WoM recommendation is the second most critical factor for large enterprise customers. It is generally perceived that the large enterprise customers’ choice decisions are relatively more rational than SME customers. The WoM recommendations of ‘top management’ have the highest level of influence on choice decision of an MNO as they are the final authorities to approve the purchase. As the wireless telecom service buying decisions are taken without the actual consumption, the large enterprise customers are interested in WoM recommendations with ‘external WoMR - Vendors, associates, principals, customers’ and the SME customers are interested in ‘external WoMR - Friends, family and relatives’ that influence the pre-purchase behaviour of the choice decision of selection of an MNO.

The element ‘managing through a single point of contact’ has contributed highly to the factor ‘convenience’ for both large enterprise and SME customers. The possibility of managing the enterprise accounts by internet, mobile or other advanced technologies has a higher influence on the quality of perceived experience (Kugytė & Šliburytė, 2007). In this situation, it is found that the MNOs’ have to interact and manage through a single point of contact person who may involve in the buying of MNO’s services and coordinates the post-purchase transactions. This will benefit both the large enterprise and SME customers by optimising the utilisation of telecommunications services by their employees at different hierarchies. Sufficient direct/indirect representation of the MNOs such as an adequate number of branches, retailers, business associates, kiosks (Liang et al., 2013; Kugytė & Šliburytė, 2007) may form a positive opinion on service convenience. The SME customers have perceived that the subscription/switching process is not easy and have given lower importance in determining the factor convenience. The element ‘ease of use and benefit of technology’ is perceived to be an important element that determines the actual service experience of the factor ‘technology’. This may impact the post-purchase affective state of satisfaction. The ‘communication based business solutions’ is a critical element for SME customers ‘completeness of products and services’ is not perceived as an important element in the process of choice decision of an MNO for both large enterprise and SME customers. This indicates that the enterprise customers have availed several kinds of telecommunications services from more than one MNO. The large enterprise customers have relatively given higher importance for ‘customisation of technology applications and solutions’ as their business requirements are complex. The competitiveness of telecommunications services providers is in offering enough choice of pricing plans to customers (Eshghi et al., 2008; Santouridis & Trivellas, 2010) as their preferences are heterogeneous and multiple. The element that influences the most the choice decision for large enterprise is ‘subscription price’, and ‘usage charges’ for SME customers. Both large enterprise and SME customers rather prefer financial incentives than promotional offers.

The elements ‘providing readable and understandable bills’ and ‘transparency and accuracy in billing’ (Hosseini et al., 2013) are found to be high important to determine billing system for both large enterprise and SME customers. The SME customers have given higher importance to ‘different payment methods (Liang et al., 2013) and payment confirmation’ (Agrawal et al., 2007) as these elements have a direct effect on the post-purchase affective states of satisfaction (Santouridis & Trivellas, 2010). The element ‘timely delivery of bills’ (Kothari et al., 2011) is relatively an unimportant element to both large enterprise and SME customers since it is perceived as a fundamental responsibility of a service provider. Operators of



mobile networks who manage to communicate the complex billing procedures for different pricing schemes (tariff plans) will be able to strengthen the ties of their customers (Gerpott, 1998; Knauer, 1998). The 'Switching Cost' has been relatively perceived as an unimportant factor by both large enterprise and SME customers. The perceived importance of 'relational costs' have a greater influence on switching costs, and this implies that the enterprise customers are motivated to stay in the current relationship to minimise the risks of switching. The overall economic risks (worthiness of switching) involved in switching become salient and evident when consumers are faced with a reason to consider switching.

### **Implications of the Study**

This study has identified a comprehensive set of attributes that formed the different factors considered by large enterprise and SME customers in the choice decision of an MNO. All the ten identified factors directly influence the choice decisions at varying levels. This study makes a contribution to the consumer buying behaviour literature, specific to services buying of business customers by adapting scales from literature review and validating adapted scales for the ten identified constructs. This study provides a theoretical research framework that identified direct, positive and significant relationships between the factors that were developed as influencers of the selection of an MNO.

### **7. Limitations of the Study**

First, the data collection for this study was limited by resource constraints. The response rate of the electronic survey could be increased only by phone calls, follow-up emails, and personal contacts. Upper middle level or top management support is needed to get the responses from these organisations. Second, the individual respondents of private limited and public limited companies were from IT and systems, finance, human resource, sales and marketing functions. The profile of the owners of proprietorship and partnership firms were also with different education and functions. Third, this study is limited to enterprise customers of Rest of Tamil Nadu telecom circle.

### **8. Conclusion**

This study has successfully created a conceptual relationship model through SEM technique that fits well with the observed dataset and confirmed a positive – significant – direct relationship between the various identified determinants and 'selection of an MNO'. This model has also indicated that no certain individual factors solely influenced the choice decision of an MNO. Consequently, it was found that there exists an interrelationship among the various determinants, and all factors interact at varying capacity to influence the likelihood of choosing an MNO. The industry experts have opined that the large enterprise and SME customers of other telecom service areas also adopt similar purchase process, exhibit comparable buying behaviour and consider alike or the same factors which have been studied in this research work carried out in RoTN telecom circle. Further, the experts conveyed that the multiple needs and heterogeneous requirements of enterprise customers of other telecom circles are very similar. Subsequently, the researcher has recognised the study limitations and discovered the common factors that evolved from this empirical study, which enhanced the general ability of findings beyond RoTN telecom circle.

'Brand image' has emerged as the 'high important' determinant that influences the pre-purchase behaviour in the choice decision of an MNO for both large enterprise and SME customers. The determinants 'network service', 'billing system', 'service encounter' and 'convenience' are often considered as the primary and essential facilities offered to customers by MNOs and a positive perceived experience of these factors would lead to a positive and higher post-purchase affective states of satisfaction. These factors found to create a positive impression in the minds of the enterprise customers about the MNOs' 'brand image' and 'reputation' which in turn will generate a positive 'word-of-mouth recommendation'. The determinant 'pricing' plans, which generate revenue to an MNO, has been relatively perceived as 'low importance' by both large enterprise and SME customers. But, the quality of value proposition experienced is reflected through the 'billing system' that directly influences the switching decisions of customers. The capability to customise the application of a particular technology or to provide a business solution to enterprise customers will strengthen the competitiveness of an MNO. Since 'technology' forms the base for core services and, other technical and functional service deliveries, it is essential for an MNO to follow up the technological investments strategically with the correct service provisions to customers. Thus selling business solutions to enterprise customers will help MNOs improve margins and increase customer connects. A positive and healthy long-term relationship created with an MNO eliminates the other switching behaviour related factors and establishes a favourable environment to the continuance of a satisfied and loyal relationship.

### **9. Future Research Directions**

Future research can test the hypothesised structural relationship across different customer segments in the wireless telecom service industry and examine for possible segment-specific determinants that can influence the choice decision of an MNO. A comparison of the factors that influence the choice decision of an MNO can be undertaken industry-wise (automobile, Textile, IT etcetera.) to identify the most common and industry-specific important factors. Moreover, comparisons can be made between Mobile Network Operators to identify the strengths and weaknesses of each service provider and can identify the best performing areas and the areas which need to be concentrated for improvements. The emergence of newer technology and the dynamics of the telecommunications industry have also expanded the scope for future research. For example, a

longitudinal study can be attempted with a sample population of enterprise respondents to observe whether technology innovations in the deliverance of technical and functional services will affect the acceptance of this research model.

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