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Impact of service quality and satisfaction on employee loyalty: An empirical investigation in Indian SMEs

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A B S T R A C T

This study uses a hybrid scale to identify the factors contributing to internal and external service quality at employer-employee interface in the SMEs of emerging economies like India. 144 shop floor workers and executives working in different SMEs situated in northern India participated in an interview schedule to rate the quality of services being offered to (and delivered by) the employees in such units on 1-5 Likert scale. Application of factor analysis followed by Structural Equation Modelling developed a model showing how organization's HR practices influences employee service quality which consequently leads to Satisfaction and Loyalty which are the established indicators of competitive advantage for such firms. The model is empirically validated using model fit indices and is found satisfactory. This paper thus proposes an empirical framework for the measurement of employee *service quality* in a relatively less explored sector. This study finds support for strengthening relationships with employees to achieve a culture of achievement in SMEs. The two scales proposed in this study can be used as benchmarks by SME practitioners for evaluation of services being offered to (and delivered by) their employees. The methodology used may be applied in more such settings for evolving a generic and tailor-made scale.

1. Introduction

Service quality (SQ) is a tactic that companies adopt to satisfy both internal and external customers to gain a competitive advantage over others (Jain *et al*., 2013). From the internal functioning perspective of an industrial organization, SQ needs to be ascertained across the value chain and must include employees of the manufacturing unit (Gupta & Singh, 2017). While revisiting and accepting 'happy-productive worker hypothesis', Seth *et al*. (2006) identified employee function as a major driver of the manufacturing supply chains. Prakash (2014) categorized the factors influencing service quality of a manufacturing unit as-internal and external. He argued that a high level of 'manufacturer's working for welfare and felicitation of its employees (internal service quality)' will yield a high degree of 'employee (external)

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service quality in delivering services to the manufacturing unit". For this to be accomplished, a manufacturer's policy must be able to meet the expectations of its employees and work towards their welfare (Donavan *et al*., 2004). However conventionally, a manufacturer's strategy, particularly in SMEs has rarely considered understanding and fulfilling specific needs of its employees (Mulki *et al*., 2006). Elahi *et al*. (2013) reported that SQ efforts should first focus on what goes on within the organization in terms of the design of the workplace and its employees that allow the organization to function and positively influence productivity by reduction in waste and cost, thereby resulting in improved employee service quality (Hicks *et al*., 2000). Employee service quality (ESQ) refers to the manner in which employees of the manufacturing unit serve the unit, and how much enthusiastic and involved they get with colleagues-including superiors and subordinates during delivery of services.

It has been argued that by thinking about expectations of employees and actually caring for them, making their safety a personal fetish – a higher priority than profits, a strong culture intended to strengthen internal relationships and using enlightened workplace policies result in higher level of employee satisfaction, increased performance, lower departure rate, raised productivity and finally increased profitability (Kaynak & Hartley, 2008). Starting the service profit chain (Sasser *et al*., 1997) with internal organizational functioning emphasizes the point that the delivery of quality service does not simply happen on its own. Rather, efforts must be made to facilitate employees in their efforts to deliver quality service. Thus if management wants its employees to deliver an outstanding level of service to customers, then it must be prepared to do a great job with its employees. Furthermore, employees must receive good service from others within the organization in order to deliver good service to external customers (Gandhi *et al*., 2018a). The Small and medium size enterprises (SMEs) have been presented as a hidden giant in the economic growth of India, and it is not an exaggeration. They employ nearly 80% of manpower and create 95% of all companies (Saranga, 2009). Recognizing the market potential, many of the global leaders are shifting their manufacturing units to the developing countries like India (Singh & Khanduja, 2009). A pool of 'motivated, willing, and technically sound manpower makes the backbone of these units. However, in recent times, these enterprises, the growth of these enterprises has sharply slowed down and their survival is at stake. To remain competitive, the need for such units is to develop into a relationship-focused bond with its workforce (Lusch *et al*., 2007). Studies on Indian SMEs are largely confined to competitive priorities, manufacturing strategies, capacity building, and innovation trends. However, the 'relationship dominance perspective' that establishes the importance of service quality function with employees is barely explored (Sahay *et al*., 2006). Researchers suggest that service quality is positively associated with employee satisfaction (Dehnavi, *et al*.; Lenka *et al*., 2009). Studies establish a positive relationship of service quality with loyalty too (Ganesan, 2007; Ehigie, 2006), which forms the main outcome parameter in this study.

It is thus realized that SMEs need a reliable metric to identify various determinants of employee service quality, so as to integrate their manufacturing strategy with the HR strategy to yield synergy effect. In order to achieve this objective, an extensive review of extant literature, coupled with focus group discussion with practitioners was carried out to develop a 'structured interview schedule'. EFA, CFA and SEM were then applied to bring out a model to answer these questions. Finally, some limitations, which may become future research directives along with the concluding remarks, are presented in the concluding section of the paper.

2. Literature review

It is well established in marketing literature that, quality is to be ensured across all echelons of the supply chain to achieve the satisfaction and loyalty of stakeholders. TQM philosophy too emphasizes on *relationship-based marketing* (Chumpitaz & Paparoidamis, 2007). With relationship marketing, organizations try to form long-term alliances with customers by using "a combination of customized products, customized communication, and customized service and delivery- in effect, treating each customer as a unique segment of one". Marinova *et al*. (2008) maintain SQ as an evolutionary process that begins prior

to transaction takes place and continues even after the exchange. Taris and Schreurs (2009) emphasized customer satisfaction as the result of value creation by satisfied and loyal workforce of the unit. To keep employees happy and productive, managements must keep a high degree of SQ of the organization. The prevailing industry scenario strives for zeal, efficiency, and innovation of its employees. To keep employees motivated and loyal, organizations need to implement effective plans with respect to employee function and provide a pleasant work climate (Singh, 2000; Arasli et al., 2005).

The service quality tactic is particularly applicable to SMEs, where it is easy to visualize a total system view of how businesses operate. In the total system view, all components of service production and delivery process are important and all come into play simultaneously when a customer visits a service facility-from the nature of the internal organization to the nature of the organization's customers, to the relationship between customers and employees, to the physical space in which customers are served, to the tactics used for moving customers in and through the service delivery facility. Table 1 presents a brief summary of the salient studies in the area of service quality at employer-employee dyadic relationships since year 2000.

Table 1
Key studies pertaining to Service Quality at Manufacturer-Distributor relationships

S. No.	Authors (Year)	Focus area and select contributions
1.	Frost and Kumar (2000)	• Proposed organization's internal SQ model based on GAP theory of PZB (1985). • Gap results because of seeker's perception and provider's expectation; service quality specifications and actual service delivered and receivers expectation and providers perception.
2.	Soteriou and Stavrinides (2000)	• Analysis of internal service quality through data envelopment analysis (DAE) • Optimum utilization of inputs such as consumable resources and work volume and its transformation into output – service quality.
3.	Behra and Gundersen (2001)	• Suggested 'Focus or Falter' model for reduction of organizational gaps that influence customer satisfaction. • Concluded that value of improving the quality of external service encounters is highly important and leads to a holistic orientation. • Results showed for high levels of SQ, benefits are found to include higher profitability, cost reduction and increased market share.
4.	Fine *et al*. (2002)	• Internal service quality is a potential source of sustainable competitive advantage and indicated that 'external customer satisfaction' is a function of an 'excellent internal customer satisfaction'. • Asserted that a sound service quality strategy results in cost savings financial gains over the long-term. • In reality, most employees do not interact with external customers but rather support a company's ability to satisfy these external customers.
5.	Beth *et al*. (2003)	• Postulated that profitability and revenue result from customer loyalty, which is a consequence of customer satisfaction. • Tested the relation of organizational service quality, service capability and customer satisfaction, which were found to be significant upon testing using SEM.
6.	Lev (2004)	• Intangible assets - a skilled workforce, patents and know-how, strong customer relationships, brands, unique organizational designs and processes generate most of corporate growth and shareholder value. • Globally organizations are transforming themselves for competition that is based on information, and their ability to tap the manpower has become far more decisive than their ability to invest in and manage physical assets.
7.	Hartog and Verburg (2004)	• Recognized that an internal customer-supplier chain as an enabler of good (external) customer service. They stress the strong relationship between management practices and organizational performance in firms. • Most of the firms believe that service quality improvements enhance the images of the organization. This is followed by increase in profitability, customer satisfaction, competitive position, decrease in rework, increase in employee satisfaction and decrease in employee turnover.
8.	Sheffi and Rice (2005)	• Though redundancy involves cost however, manufacturing organizations build redundancy as it enables flexibility and helps an organization to enhance its ability to recover from disruptions. • SQ processes enable supply chain to build organic capabilities that can sense environment and respond quickly and helps in moving from forecast driven supply chains to a demand driven supply chains.
9.	Narayandas (2005)	• The major issue emerging from the study is the identification of internal and external customers. From service point of view, one needs to clearly understand distinction between these two classes of customers. • This further gains strength, as it is expected that the key to the success of any organization depend on the dedicated employee base represented by the internal customers. Unless, internal customers are satisfied, it may be difficult to visualize good quality service for the external customers.
10.	Seth *et al*. (2006)	• Defined the internal customer as anyone who receives products or services by others in the organization. • The measurement and modeling of internal service quality seems to have from external service quality. Took the dimensions/models of external service quality (SERVQUAL) as the starting point.
11.	Verburg *et al*. (2007)	• Building strong, synergistic relationships is a time and resource intensive process. • Employees bring a distinctive value-adding ability to the supply chain. Any breakdown in the supply chain escalates costs and reduces the value-creation capability of the supply chain. In order to remain synchronized and create value, organizations use tools such as scorecards, benchmarking diagnostics, and periodic review.

Table 1 (Continued)
Key studies pertaining to Service Quality at Manufacturer-Distributor relationships

12.	Bellou & Andronikidis (2008)	• Coordination, collaboration, commitment, communication, trust, flexibility, dependence, joint engineering, and information technology based integration are feasible only with the most valued employees. • an organization must adopt a process perspective and enable its employees to see themselves as part of a system, and work in tandem with preceding and subsequent stages.
13.	Liao *et al*. (2010)	• Consistently high levels of employee loyalty can not only create tremendous competitive advantage, but also boost employee morale and productivity. • Developing and maintaining customer loyalty or creating long-term relationship with customers is the key to the survival and growth of service firms. • The value of improving the quality of external service encounters is clearly important and leads to a supply chain management or holistic orientation. When service quality levels are high, benefits are found to include greater profitability, cost savings and increased market share.
14.	Yee *et al*. (2010)	• Suggested that successful internal service encounters are directly linked to external customer satisfaction and internal service operations are essential elements of any service quality strategy. • However, organizations have been slow to recognize the impact of their internal service quality on organizational performance, and sustainable competitive advantage.
15.	Prakash (2011)	• In order to achieve results in the supply chain, it is crucial to address people issues through providing a nurturing and proactive work environment, performance related compensation, a flexible work place, family-friendly policies, and invest in employee competencies.
16.	Theodosiou *et al*. (2012)	• Building employee competencies and developing a systems thinking can help tear down functional silos, develop a process perspective, and direct employees towards integrative efforts. • Leading manufacturing organizations also invest in skill upgradation of employees, by providing on-site training on quality, lean operations, process improvement and product design to develop a flexible and efficient service/product customization.
17.	Menguc *et al*. (2013)	• Narrated few changes that have taken place wrt employee function at global level like horizontal business processes replacing vertical functional approach, greater sharing for information with all connected links, greater emphasis on organizational and process flexibility, employee empowerment and the need for rules–based real time decision support systems.
18.	Prakash (2014)	• Studied three different types of organizations and found that employee motivation increases the market share through sales growth.
19.	Gupta and Singh (2015)	• Enumerated the disadvantages of low service quality such as decreased morale, reduced wages, increase in employee turnover, inflexibility to change, poor co-ordination, fragmentation of information across various function in the organizations, and poor motivation. • Brought out index value of service quality across the supply chain using Fuzzy ANN.
20.	Kamakoty and Sohani (2016)	• Measured the SQ of both immediate upstream and downstream supply chain partner firms using EFA, CFA and SEM.
21.	Saleh *et al*. (2017)	• Confirmed the role of employee motivation to provide a direction towards achieving for better coordination and improving effectiveness and on the other hand side tested positive linkages with performance and organizational efficiency. • Taking cue from these results, SMEs should formulate a strategy of undertaking of an integrative paradigm in implementing SQ practices in conjunction with HR practices.
22.	Gandhi *et al*. (2017)	• Highlighted the role played by service quality towards employee productivity and identified the service quality attributes to facilitate the workforce. • This research offers managers with a practical framework for service quality improvements and suggests the ways to achieve employee loyalty and focuses on sustained growth differentiation strategy for supply chain.

Though, the output delivered by employees is a well explored area in literature but there are hardly any studies are seen on the applicability of service quality determinants at employee–employer interface in dual directional manner. This justifies the motivation for developing the metrics of employer (internal) service quality, and employee (external) service quality and further proposing a model to establish their linkages with satisfaction and loyalty.

Selection of hybrid scale

PZB (1985, 1988) in their pioneering work identified five components of service quality *viz*. reliability, assurance, tangibles, empathy, and responsiveness. These five dimensions used to evaluate service quality are called SERVQUAL dimensions. Carr (2007) pointed a major limitation of SERVQUAL scale by stating that it does not consider equity theory for selection of SQ determinants, though it is well established that small manufacturers do evaluate service by way of 'fairness' in business encounters. Similarly, the distributors expect 'equitable contributions' from distributors to facilitate their working. The hybrid scale comprising FAIRSERV, in conjunction with SERVQUAL, is considered suitable for this study, since its outcome parameters are satisfaction and loyalty intensions. The preliminary questionnaire is based on 'five attributes of SERVQUAL scale' and 'Systematic Fairness dimension of FAIRSERV model'. Taking cues from both these scales to measure service quality, we have made a modest attempt

at designing a new scale by combining the two metrics. The research is carried out in exploratory framework using structured interview schedule. The framework shown in figure 1 represents the possible relationship among the variables, which will be tested.

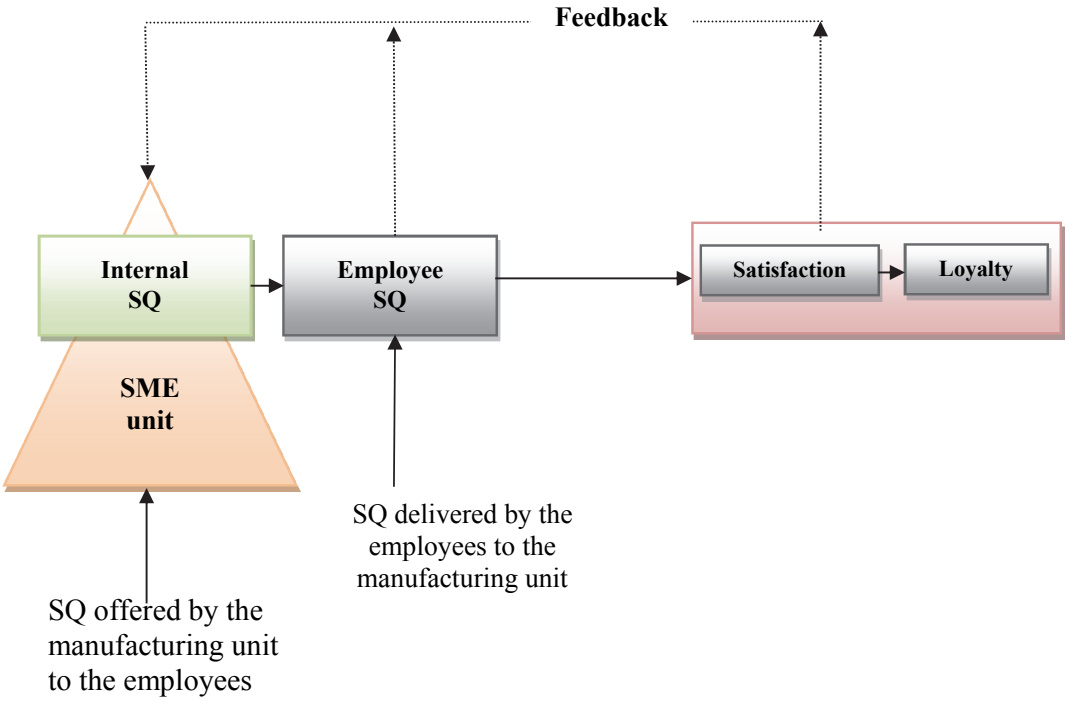

Fig. 1. Conceptual Research Framework

3. Research methodology

Fig. 2 shows the research methodology used for determining factors of internal service quality and employee service quality followed by establishing their linkages with satisfaction and loyalty. This methodology is based on the work of Seth *et al*. (2006) and Prakash (2011).

3.1 Survey design

A survey instrument was developed based on an extensive review of literature on different aspects of service quality with a focus on distributor related issues using a combination of SERVQUAL and FAIRSERV scales. The pilot test of the initial questionnaire was conducted during August, 2017 and the survey was administered during September-December, 2017. The questionnaire was modified discussion with focus group who were a pool of five information rich and willing industry experts and three academicians serving in nearby universities with work published in the area of 'service quality'. The snowball sampling (Kureshi *et al*., 2009) was used for selection of industry experts and academicians. The industry experts highlighted the issues in practice that the researchers had missed. The academicians provided the feedback on the understandability of the contents of the questionnaire.

After receiving the feedback from these two groups, improvements were made in the questionnaire to enhance the comprehensibility and understandability of its items. Both groups finally concurred that the questionnaire accomplishes the study objectives.

Based on the review and synthesis of relevant literature of service quality and focused group interviews, an initial pool of 43 items (See Appendix 1) was identified that explained the 6 dimensions of service quality.

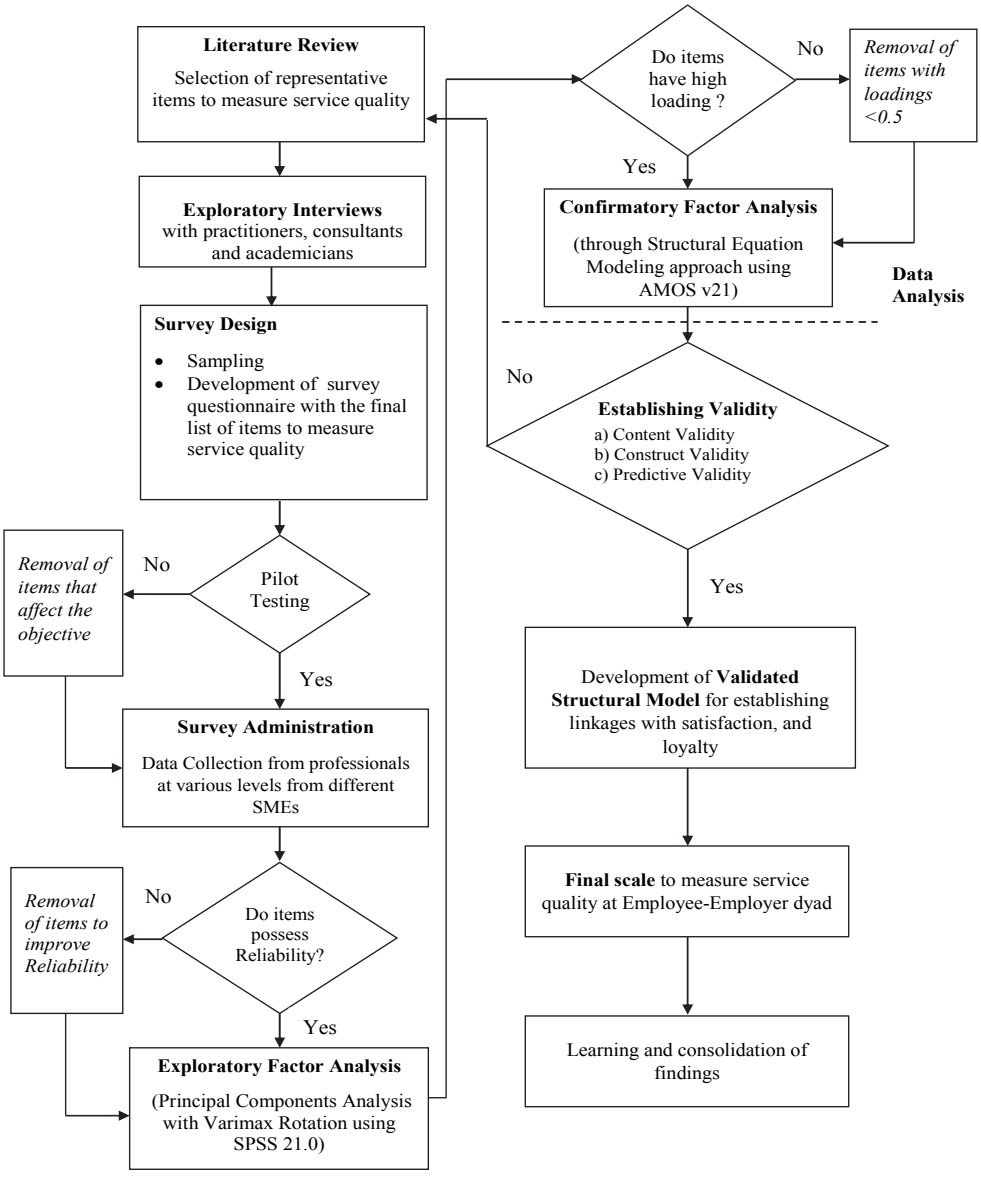

Fig. 2. Flow chart of research methodology adopted for measurement and modeling of service quality at Employer-Employee interface

The questionnaire thus emerged comprised four sections as follows:

- Section-A comprises 21 items related to service quality offered by the manufacturer towards its employees (internal service quality, ISQ); and 1 item measuring overall internal service quality (OISQ).
- Section-B consists of 22 items related to service quality delivered by employees, ESQ; and 1 item measuring overall employee service quality (OESQ).
- Section-C contains two outcome variables namely 'Satisfaction' (mapped by 2 items- 'getting desired value for the price' and 'general satisfaction with services' and Loyalty (mapped by 3 items - 're-purchase/re-order intent', 'resistance to switching, and 'recommendation of services to others').
- Section-D focuses on gathering the demographic information.

3.2 Sampling Frame and data collection

Sampling frame in survey research covers clear understanding of terms: population, sample, and subject (Karlsson, 2009). In the present case small-medium manufacturing firms in northern India can be attributed as the total population for the survey. The method of snowball sampling was adopted for reaching the right respondent and collecting the data. This subject being quite new to SME units, it is essential to reach the right respondent and therefore the use of snowball sampling for collection of data is justified. The individual respondent working at shop floor level (Only one per SME) formed the subject for conducting the survey. Data was collected by personally visiting the respective units. Respondents were asked to respond their perceptions of service quality that was being offered by/delivered to them on 5-point Likert scale. Respondents were asked to enter their perceptions of service quality on 5-point Likert scale. Prior to the commencement of the data collection, introductory e-mails were sent out to plant heads of respective units. Plant head referred the researcher to the key respondent, who could be contacted for filling-in the questionnaires. The researcher approached 200 respondents serving in different small-medium manufacturing units and was able to elicit data from 144 respondents, thus fetching a response rate of 72% which is considered satisfactory by Robson (2002) and Saunders *et al*. (2011).

3.3 Appropriateness of Sample Size

Since EFA is to be conducted on the collected data, number of observations must not be fewer than 50 whereas samples of 100 or more units are preferable (Hair *et al.*, 2015). In the present case, sample size exceeded 100 observations as suggested, and hence is suitable for data analysis.

3.4 Demographic distribution of respondents

The demographic distribution of respondents is presented in Table 2. The respondents have been categorized on the basis of number of years of experience, qualifications, and functional area of work. We find that most of the respondents have work experience in the range 2 to 10 years, hold engineering qualification, and work in varied operational areas.

Table 2
Demographic distribution of respondents

Experience			**Qualification**			**Functional Area of work**		
Distribution	n	%	Distribution	n	%	Department	n	%
2-5 years	52	36	MBA/M.Tech./M.Sc.	26	18	Human Resource	49	34
6-10 years	26	18	BBA/B.Tech./B.Sc.	55	38	Procurement/Store	30	21
11-15 years	29	20	MA/BA/B.Com.	25	17	Marketing/Sales	26	18
16-20 years	23	16	Technical Diploma	29	20	Production	20	14
above 20 years	14	10	Intermediate/below	10	7	Quality Control	19	13

The type of manufacturing activity being carried by the respondent units is shown in Table 3.

Table 3
Type of product being manufactured by respondent units (N = 144)

Type of Manufacturing Unit	**Small Scale**		**Medium Scale**	
	n	%	n	%
Number & Percentage	103	72	41	28
Type of Product				
Auto Parts	30	21	13	9
Hand Tools	18	13	7	5
Casting Components	12	8	5	3
Valve manufacturing/Casting	10	7	4	3
Rolled Products	9	6	4	3
Machine Tools	8	6	3	2
Sheet Metal Components	6	4	3	2
Fasteners	6	4	2	1
Multi Products	4	3	0	0

4. Data Analysis

Since the indicator items (sub-dimensions) used in the scale along with their underlying dimensions used to measure ISQ and ESQ, have been taken from the literature, the imperative is first to assess the scales. To achieve this objective, reliability analysis, Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) have been performed.

4.1 Reliability Analysis

The reliability of both ISQ and ESQ scales was analyzed using Cronbach alpha coefficient. Coefficient alpha is defined as the proportion of a scale's total variance that is attributed to a common source (Cronbach, 1951). Output of this analysis is provided by IBM SPSS v21 and indicates significantly high reliability of data and is depicted in Table 4.

Table 4
Reliability Analysis of items in ISQ and ESQ scale

Service Quality Measurement	ISQ items (n = 21)	ESQ items (n = 22)
Value of α	0.877	0.904
Finding	Quite Good (Nunnally, 1978).	

4.2 Exploratory Factor Analysis (EFA)

EFA is a multivariate statistical technique widely used in social and behavioral science and commonly used to explore the dimensionality of a measurement. The SPSS v21 was used for this purpose. The main objective of using EFA in this paper is to group the factors into various sub-groups to make calculations simpler. The following steps was used during performing then EFA:

i. Identify the variable from the available literature and from the discussion with industry experts.
ii. Reliability test to be performed to check the internal consistency. For this Cronbach's alpha should be greater than 0.7.
iii. To check whether the sample size is adequate or not, KMO (Kaiser-Meyer-Olkin) sample of adequacy and significant value test were performed. If the value of KMO is greater than 0.6 and the value for significant is less than 0.005, indicate that data size is sufficient for grouping the various relevant factors otherwise sample size is not adequate.
iv. Extract initial factors (via principal component analysis).
v. Group the factors having highest values.

The scores of Bartlett test of Sphericity and the KMO value are provided by SPSS v21 and they are depicted in Table 5. The results are significant, thus, providing indication of suitability for factor analysis (Hair *et al*., 2015).

Table 5
KMO and Bartlett's Test of Sphericity

		ISQ scale	**ESQ scale**
KMO Measure for Sampling Adequacy		.826	.819
Bartlett's Test of Sphericity	Approx. Chi-Square	2344	2221
	df	210	231
	Sig.	.000	.000

The objective is to summarize the information asked in the questions into a smaller set of new attributes that attempt to bring out the constructs for measurement of service quality offered to employees by the manufacturing unit. EFA resulted in the extraction of five factors each for ISQ and ESQ scale, explaining 78.239 and 73.551 per cent of the variance respectively. Output of EFA using SPSS v21 is presented in Table 6 and Table 7. As shown in above Table 6, the factors were named as Credibility, Servicescape, Friendliness, Competence and Compensation. The values of communalities for all indicator items are ≥

0.50 and the values for factor loadings are also ≥ 0.55 which are significant (Hair *et al.*, 2015). Internal reliability of the sub-dimensions of the various factors of the ISQ scale is evaluated using the Cronbach alpha coefficients. In this analysis, reliability values for each factor ranges from 80.6% to 90.4% as shown in Table 7 and hence is acceptable (Nunnally, 1978).

Table 6

Communalities, Factor Structure and Loadings for items of Scale for measuring ISQ

S. No.	Factors and associated items	Communalities	Factor Structure & loadings				
			F1	F2	F3	F4	F5
Credibility							
1.	The unit welcomes employees' involvement	.616	.714				
2.	Delegates responsibility to employees	.815	.861				
3.	Keeps faith and trust in employees	.826	.868				
4.	Honest in dealings with employees	.820	.868				
5.	Can be easily contacted	.625	.748				
Servicescape							
6.	Provides adequate resources & equipment	.755		.864			
7.	Pays individual attention to employees	.857		.925			
8.	Provides a pleasant work environment	.859		.919			
9.	Provides protection to employees	.882		.927			
Friendliness							
10.	Supportive supervision & behaviour	.815			.866		
11.	Fair and impartial treatment	.839			.897		
12.	Shows willingness to help employees	.837			.897		
13.	Promptly solves employees' problems	.842			.894		
Competence							
14.	Has knowledge & expertise to run the unit	.802				.871	
15.	Provides training to employees	.765				.835	
16.	Provides useful information & feedback	.726				.843	
17.	Employees are accepted by all in the unit	.661				.797	
Compensation							
18.	Excellent compensation to employees	.716					.788
19.	Excellent service terms & conditions	.814					.816
20.	Manufacturer works for employee welfare	.829					.802
21.	Has a positive attitude towards employees	.731					.700
Reliability (Cronbach Alpha Value) of identified factors			**.904**	**.806**	**.863**	**.875**	**.879**

*Cutoff point for loadings is 99% significant and is calculated by 2.58/√n (Pitt *et al.*, 1995) where n (=21) is the number of items in the scale. F1-F5 represent individual factors. Principal Components Method with Varimax Rotation Loading ≥ .56*

Table 7

Communalities, Factor Structure and Loadings for Items of Scale for measuring ESQ
Principal Components Method with Varimax Rotation Loading ≥ .55*

S. No.	Factors and Associated Items	Communalities	Factor Structure & loadings				
			F6	F7	F8	F9	F10
Dependability							
1.	Employees possess knowledge, expertise & skills	.512	.700				
2.	Employees deliver high quality products	.809	.867				
3.	Employees possess technical competence	.633	.739				
4.	Employees deliver correct quantity in right time	.660	.760				
5.	Employees are honest and trustworthy	.654	.740				
6.	Employees maintain confidentiality	.740	.778				
Agility							
7.	Employees are innovative in operations	.677		.876			
8.	Employees are flexible & adaptive to change	.685		.704			
9.	Employees share operational information	.762		.840			
10.	Employees provide timely feedback	.624		.877			
11.	Employees are courteous & have positive attitude	.781		.882			
Professionalism							
12.	Employees have willingness to work for the unit	.848			.781		
13.	Employees fix quick solutions to complaints	.814			.861		
14.	Employees demand just wage & salary	.691			.812		
15.	Employees demand fair terms & conditions	.748			.837		
Understanding							
16.	Employees use right tools & equipment	.804				.792	
17.	Employees make proper use of physical facilities	.788				.902	
18.	Employees understand requirements of the firm	.789				.859	
19.	Employees care for convenience of co-workers	.737				.745	
Assurance							
20.	Employees are prompt in action	.836					.772
21.	Employees use latest ICT tools	.754					.844
22.	Employees have strong market reputation	.834					.690
Reliability (Cronbach Alpha Value) of identified factors			**.894**	**.910**	**.913**	**.900**	**.754**

*Cutoff point for loadings is 99% significant and is calculated by 2.58/√n (Pitt *et al.*, 1995) where n (=22) is the number of items in the scale. F6-F10 represent individual factors.

Likewise, as shown in Table 7, the five factors were named as: Dependability, Agility, Professionalism, Understanding, and Assurance. All the items have significant communalities and factor loadings. The reliability score for each factor ranges from 75.4% to 91.3% as shown in table 8 and hence is acceptable.

4.3 Confirmatory Factor Analysis (CFA)

CFA is undertaken to further validate the scales for measuring ISQ and ESQ. CFA is a theory testing mechanism in contrast to a theory generating method like EFA. CFA is a statistical technique used to verify the factor structure of a set of observed variables. CFA allows to test the hypothesis of a relationship between the observed variable and their underlying latent construct(s). To perform CFA, Structure Equation Modeling (SEM) is one statistical test to determine the significance of the analysis to determine the adequacy of the model fit to the data. CFA model is run using SPSS AMOS v21, for 5 individual factors each describing ISQ and ESQ scales, with respective items. Based on the methodology of Singh and Khamba (2016) and Parmata (2016), the model fit was examined for each factor. Table 8 shows the key model fit indices for the individual factors.

Table 8
Key fit Indices for measurement model of ISQ and ESQ scale

ISQ scale Factors	**Cmin/df**	**RMR**	**GFI**	**NFI**	**CFI**	**RMSEA**
Credibility	.224	.006	.998	.985	1.000	.000
Servicescape	.243	.001	.999	1.000	1.000	.000
Friendliness	.566	.000	.996	.998	1.000	.000
Competence	.480	.002	.998	.998	1.000	.000
Compensation	.033	.002	1.000	1.000	1.000	.000
ESQ scale						
Dependability	1.337	.025	.981	.985	.996	.077
Agility	.051	.002	1.000	1.000	1.000	.000
Professionalism	1.777	.012	.988	.991	.996	.074
Understanding	1.739	.008	.989	.990	.996	.072
Assurance	---	.000	1.000	1.000	1.000	---

All the goodness-of-fit (GFI) values being > 0.9 provide validation of CFA model (Hair *et al*., 2015).

4.4 CFA matrix development and scale purification

In order to develop the measurement scale, the covariance matrices between the factors identified for service quality scales were created. For purification of service quality scales, multiple iteration runs of CFA were performed to obtain satisfactory goodness of fit indices.

4.4.1 CFA matrix development at Employer-Employee interface

4.4.1.1 ISQ Scale

During purification of ISQ scale, one dimension viz. Competence, was completely dropped. In total, 8 out of an initial 21 items were deleted due to low variance. The eight deleted items were:

- the unit provides adequate resources and equipment to employees;
- the unit pays individual attention to employees;
- the unit assures supportive supervision and behavior with employees;
- the unit treats its employees fairly and impartially;
- the manufacturer has knowledge and expertise to run the unit;
- the unit provides training to employees;
- the unit provides useful information and feedback to employees; and
- employees are recognized and accepted by all functions in the unit

The decision for deleting above items was taken in consultation with the members of focus group. All members concurred that remainder 13 items with four associated factors were sufficient to capture the construct of ISQ. The final model consisting of 4 factors and 13 sub-factors is depicted in Fig. 3.

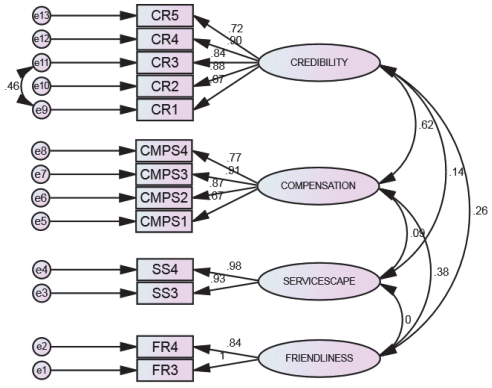

Fig. 3. CFA Model Development for measuring ISQ

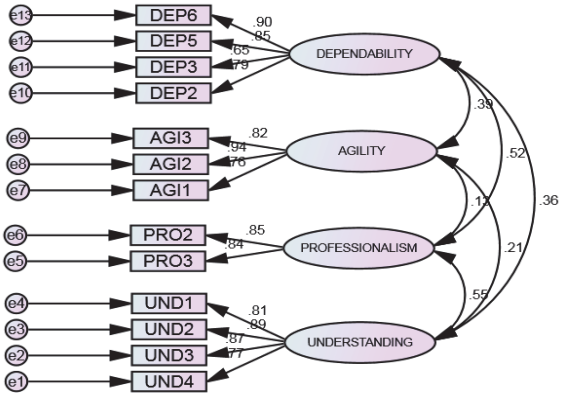

Fig. 4. CFA Model Development for measuring ESQ

Various fit indices are obtained by running the model using AMOS v21. The Normed Chi-square (Cmin/df) value for this model is 1.620, which represents a good fit (Tabachnick & Fidell, 2007). The GFI, the Comparative Fit Index (CFI) and the Normed Fit Index (NFI) values for this model were 0.912, 0.972, and 0.930 respectively. The RMSEA value of 0.066 too indicates a reasonable fit. These fit indices collectively indicate that overall fit of the measurement model is acceptable.

4.4.1.2 ESQ Scale

During purification of ESQ scale, one dimension viz. *Assurance*, was completely dropped. In total, following 9 out of an initial 22 items were deleted:

- employees possess knowledge, expertise & skills;
- employees maintain confidentiality;
- employees provide timely feedback;
- employees have positive attitude towards the unit;
- employees have willingness to work for the unit;
- employees demand fair terms & conditions;
- employees are prompt in action;
- employees use latest ICT tools; and
- employees have strong market reputation

The decision for deleting above items was taken in consultation with the members of focus group. All members concurred that remainder 13 items with four associated factors were sufficient to capture the construct of ESQ. The final model for ESQ consisting of 4 factors and 13 sub-factors is depicted in Fig. 4. The Cmin/df value for this model is 1.748, which represents a good fit. The GFI, CFA, and NFI values for this model were 0.907, 0.958, and 0.908 respectively. The RMSEA value of 0.072 too indicates a reasonable fit. These fit indices collectively indicate that overall fit of the measurement model is acceptable.

4.4.2 Validity of Construct

a. Face Validity

Face validity is assessed by looking at the measures ‘on-its-face’, which gives a good reflection of both ISQ as well as ESQ (in line with Trochim, 2009).

b. Content Validity

In order to achieve content validity, it is necessary to demonstrate that the empirical indicators are logically and theoretically related to the construct (Pedhazur & Schmelkin, 1991). Content validity is determined through subjective analysis (Kaplan & Sacuzzo, 1993), meaning thereby that a survey would have content validity if researchers and participants agreed that the items in the survey adequately covered the domain of the research. In the present research, we assessed content validity through discussions with scholars, practitioners, and insights derived from the literature. The instruments for both ISQ as well as ESQ thus has strong content validity.

c. Construct Validity

Construct validity is the extent to which an observation measures the concept it is intended to measure (Schwab, 2013) and comprises unidimensionality, reliability, convergent and discriminant validity. Construct validity is assessed through following three steps:

i. Unidimensionality: Unidimensionality implies establishing that a set of empirical indicators relates to one and only one construct or trait (Gerbing & Anderson, 1988), and this is a matter of empirical necessity (Bagozzi & Phillips, 1982). EFA and CFA are common methods for assessing unidimensionality (Pedhazur & Schmelkin, 1991). In the present research, we used CFA to assess unidimensionality by examining the closeness by which the individual items in the model represent the same construct (Ahire *et al*., 1996). A comparative fit index (CFI) of 0.90 or above for a model represents strong evidence of unidimensionality (Byrne, 1994). CFA model developed in this analysis indicates CFI value (0.972 for ISQ scale and, 0.958 for ESQ scale) which implies a strong unidimensionality (Hooper *et al*., 2008).
ii. Convergent Validity: Convergent validity relates to the degree to which multiple methods of measuring a variable provide the same results (Schreiber *et al*., 2006). Convergent validity can be established using Normed Fit Index (Bentler and Bonett, 1980). A value of 0.90 or above reflects evidence for strong convergent validity. A value of 0.60 or higher for all factor loadings in CFA model developed demonstrates strong convergent validity (Kline, 2004). In the CFA models developed, NFI values (0.930 for ISQ scale and, 0.908 for ESQ scale) indicate the scales developed have strong convergent validity.
iii. Discriminant Validity: Discriminant validity is the degree to which two conceptually similar concepts are distinct (Jenatabadi, 2015). For discriminant validity, we examine the inter-construct covariance. After standardization, the covariance are expressed as correlations. Discriminant validity is said to be achieved if the square root of the average variance extracted is larger than implied correlation coefficient. This indicates the measured variables have more in common with the construct they are associated with than they do with the other constructs. The square root of AVE for each of the factor is shown in the diagonal cells, and the Correlation Coefficient of a factor with the other factors is shown in the non-diagonal cells of the Table 9.

Table 9
Result of Discriminant Validity for ISQ and ESQ scale

ISQ scale Dimensions	**Credibility**	**Compensation**	**Servicescape**	**Friendliness**
Credibility	**0.790**			
Compensation	0.075	**0.871**		
Servicescape	0.191	0.111	**0.881**	
Friendliness	0.345	0.091	0.398	**0.810**
ESQ scale Dimensions	**Dependability**	**Agility**	**Professionalism**	**Understanding**
Dependability	**0.845**			
Agility	0.506	**0.783**		
Professionalism	0.128	0.390	**0.840**	
Understanding	0.547	0.359	0.208	**0.835**

The √AVE is depicted in the diagonal cells and the correlation in other cells

Since, the square root of AVE for each of the factors was greater than the Correlation Coefficient of that factor with the other factors, and this supported the discriminant validity of the scale.

d. Nomological (Predictive) Validity

Nomological refers to principles that resembles laws, especially those laws of nature which are neither logically necessary nor theoretically explicable, but just are so. Nomological (Predictive) validity can be supported by demonstrating that the constructs are related to other constructs included in the model in a manner that supports the theoretical framework. We modeled service quality as an exogenous construct that influences the higher order constructs of *Satisfaction* and *Loyalty*. Consistent with extant theories, we modeled *Service Quality* as an antecedent of *Loyalty*. The three constructs were treated as latent constructs in the structural model.

The predictive validity of the four dimensions of ISQ and ESQ were measured by finding the correlation of each of them with mean scores of *overall service quality* and *overall satisfaction* perceived (both being external criteria) using Pearson correlation. The result of correlation analysis is shown in the Table 10.

Table 10
Correlation between factors of scales with Overall Service Quality and Satisfaction

ISQ scale: **Factors underlying ISQ**	**OISQ**	**Overall Satisfaction**
Credibility	.528*	.507*
Compensation	.616*	.452*
Servicescape	.531*	.515*
Friendliness	.642*	.543*
ESQ scale: **Factors underlying ESQ**	**OESQ**	**Overall Satisfaction**
Dependability	.717*	.674*
Agility	.507*	.566*
Professionalism	.567*	.603*
Understanding	.596*	.592*

* Correlation is significant at the 0.05 level (2-tailed).

All the correlation coefficients were positive and significant at a significance level of 0.05. The successful execution of the structural model in developing feasible structural model coefficients leads to the predictive verification. This assured the predictive validity of the newly developed scales.

5. Conceptual model and analysis

The measurement model is conceptualized to understand the relationship between ISQ and ESQ leading to Satisfaction and Loyalty at manufacturer-employees interface.

5.1 Research Hypotheses and theoretical background

Proposition 1: The *internal service quality* at employer-employee interface in SMEs is positively linked to *employee service quality*.

Translating this statement in empirical terms, the following set of null and alternative hypothesis is proposed:

Hypotheses 1

S. No.	**Null Hypothesis (H_0)**	**Alternative Hypothesis (Ha)**
H_1	Path coefficient from *ISQ* to *ESQ* is not significantly different form 0.	Path coefficient from *ISQ* to *ESQ* is positive.

Employee development involves providing a fair compensation, a pleasant work environment, an attitude of friendliness, and imparting training (Gandhi *et al*., 2017). *Employee service quality* delivered by employees of manufacturing unit comprises performing the promised service honestly, dependably, accurately and working with others in a productive manner (Babakus *et al*., 2003; Bell & Menguc, 2002).

There has been a consensus amongst researchers and practitioners (Frost & Kumar, 2000; Parasuraman *et al*., 1991) on the recognition of an internal customer-provider chain as an enabler of good (extrinsic) customer service. Spohrer *et al*. (2007) also agree that superior SQ leads to customer satisfaction which in turn leads to retention and satisfaction. Good customer care in conjunction with communication and employee demeanor can influence customer satisfaction with services. Thus, realizing a strong need for research in exploring the relation between *ISQ* to *ESQ*, the development of present hypothesis is justified.

Proposition 2: *Employee service quality* positively influences *satisfaction* in the supply chain of a manufacturing SME unit.

The following set of null and alternate hypothesis is developed for assessing the relationship between various constructs.

Hypotheses 2

S. No.	Null Hypothesis (H_0)	Alternative Hypothesis (Ha)
H_2	Path coefficient from *ESQ* to *Satisfaction* is not significantly different form 0.	Path coefficient from *ESQ* to *Satisfaction* is positive.

Customer satisfaction is one of the leading criteria for determining the quality actually delivered to customers (Cronin Jr & Taylor, 1992; Cronin *et al*., 2000). Various researchers (Kassim & Abdullah, 2010; Chaniotakis & Lymperopoulos, 2009; Chiou & Droge, 2006) contend that service quality is an antecedent of the broader concept of customer satisfaction. Services are means to deliver a tangible product. Manufacturers base their competitive strategies on services and the processes through which this is achieved. Kuo *et al*. (2009) and Chang *et al*. (2009) also point to this link by suggesting that service experience involves three dimensions of pre-dispositions (inputs), interactions (transformations), and reactions (outputs) and social, cultural and environmental contexts. In this light, there is a merit in attempting to define the relationship between service quality and customer satisfaction.

Proposition 3: *Satisfaction* of stakeholders in a supply chain positively influences *loyalty*.
Moving from this conceptual level statement to the empirical level, the following set of testable hypothesis is proposed:

Hypothesis 3

S. No.	Null Hypothesis (H_0)	Alternative Hypothesis (Ha)
H_3	Path coefficient from *Satisfaction* to *Loyalty* is not significantly different form 0.	Path coefficient from *Satisfaction* to *Loyalty* is positive.

Customer satisfaction is considered as a necessary condition for customer retention and loyalty and therefore helps in realizing economic goals like turnover and revenue (Izogo & Ogba, 2015). Nor and Musa (2011) also contend that customer satisfaction leads to customer retention and favorable post-consumption behavior. Various scholars (Devaraj *et al*., 2001; Mittal & Kamakura, 2001) have shown that value chain network links all the stakeholders who in turn are required to adapt with changing environment so as to provide customized services. The review highlights positive relationship between 'Satisfaction' and 'Loyalty'; and thus provides the base for development of H_3 in present case.

Proposition 4: Employee *service quality* positively influences *satisfaction* in the supply chain of a small-medium manufacturing unit.

The following set of null and alternate hypothesis is developed for assessing the relationship between various constructs.

Hypotheses 4

S. No.	Null Hypothesis (H_0)	Alternative Hypothesis (Ha)
H_4	Path coefficient from *employee service quality* to *Loyalty* is not significantly different form 0.	Path coefficient from *employee service quality* to *Loyalty* is positive.

Customer loyalty has been largely treated by researchers as either 'repurchase behavior' (Butcher *et al*., 2001) or 'repurchase behavior combined with an attitudinal component' (Čater & Čater, 2010). Many studies have also found a direct positive link between SQ perceptions (arguably a cognitive evaluation) and customer behavioral intentions (Chao, 2008). Cronin *et al*. (2000) advocated service failures are seen as opportunities to improve service delivery processes. Customers appreciate compensations and organizational willingness to improve. Service recovery process is the action in response to service failures and create loyal and satisfied customers. Assurance and commitment towards recovery processes enhance understanding and trust of employees. Service innovations are adaptive as well as dynamic capabilities for simultaneous exploitations and explorations. Various value propositions may be explored to deliver innovations for maintaining competitive advantage. The review highlights positive relationship of 'Service Quality' with 'Loyalty'; and thus provides the base for development of H_4 hypotheses in present case.

Following 4 hypotheses shown in table 12 have been formulated in this context:

Table 11
Hypotheses formulated

S. No.	Null Hypothesis (H_0)	Alternative Hypothesis (Ha)
H_1	*ISQ* is not significantly linked to *ESQ*.	*ISQ* is positively linked to *ESQ*.
H_2	*SSQ* is not significantly linked to *Satisfaction*.	*ISQ* is positively linked to *Satisfaction*.
H_3	*Satisfaction* is not significantly linked to *Loyalty*.	*Satisfaction* is positively linked to *Loyalty*.
H_4	*SSQ* is not significantly linked to *Loyalty*.	*ESQ* is positively linked to *Loyalty*.

5.2 Model Analysis

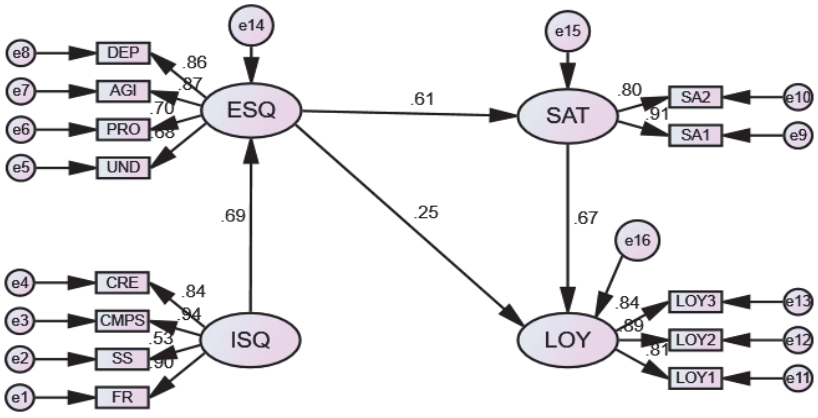

Fig. 5. Path estimates of Model-II

Fig. 5 depicts the pictorial representation of various path estimates of the proposed model. The Cmin/df value for this model is 2.222, which represents a good fit. The GFI, CFA, and NFI values for this model were 0.923, 0.962, and 0.911 respectively. The RMSR value of 0.035 and RMSEA value of 0.055 indicate a reasonable fit. These fit indices collectively indicate that overall fit of the measurement model is acceptable. Various path estimates among latent variables of the model are depicted in Table 12.

Table 12
Results for Structural Relationship in the Model

Path	Estimate	t value*	Conclusion
ISQ-ESQ	0.69	7.848	Supported*
ESQ - Satisfaction	0.61	6.881	Supported*
Satisfaction - Loyalty	0.67	7.331	Supported*
ESQ - Loyalty	0.25	6.016	Supported*
Squared Multiple Correlations			
Parameter	ESQ	Satisfaction	Loyalty
Value of R^2	0.43	0.59	0.73

*-1.96 < t < 1.96 indicate that parameter is not significantly different from zero at 5% level of significance.

The Standardized Regression Weight for the path linking ISQ to ESQ was 0.69 which was found to be significant at a significance level of .05. Therefore, the alternative hypothesis H_a1 of ISQ positively impacting the ESQ is accepted. The Standardized Regression Weight for the path linking ESQ to Satisfaction was 0.61 which was found to be significant at a significance level of .05. Therefore, the alternative hypothesis H_a2 of ESQ positively impacting the Satisfaction is accepted. The Standardized Regression Weight for the path linking Satisfaction to Loyalty was 0.67 which was found to be significant at a significance level of 5%. Therefore, the alternative hypothesis H_a3 of *Satisfaction* positively impacting the *Loyalty* is accepted. The Standardized Regression Weight for the path linking ESQ to Loyalty was 0.25 which was found to be significant at a significance level of 5%. Therefore, the alternative hypothesis H_a4 of ESQ positively impacting the Loyalty is accepted. The values of squared multiple correlations (R^2) vary from .43 to .73, which can be rated as moderate and acceptable (Tabachnick & Fidell, 2007). The remaining variation might be explained by other several factors not contained in this study and are difficult to surmise.

5.3 Descriptive Statistics

Mean scores and SDs of the items finally used in scales for measuring service quality with their underlying factors are calculated using MS Excel and are depicted in Appendix 2. It comes out from the analysis that enhanced level of service quality is a source of satisfaction which is critical for achievement of loyalty at employer-employee dyadic relationships. Managers working in the surveyed units under study also believe that they are providing good service quality to their workers. These findings are in line that of Sedmak (2016); Kamakoty and Sohani (2015); Yoo and Donthu (2001); and who compared quality management practices of Indian manufacturing organizations with those of global firms and found that Indian manufacturing units do not lag behind these industrialized countries in term of valuing long-term relationship with their supply chain stakeholders. The results are not only interesting but also are significant. SMEs in India are relatively small. Most of them are locally owned. And yet, our results suggest that 'service quality' is one of the important drivers for in such firms.

At this point it is essential to offer a caveat that survey has suggested that SME managers, instead of building relationships with employees, still adhere to practices such as paying below par salaries, and using "hire-and-fire at will" policy with employees. Grant (2005) has suggested that in the case of industrial services, there is often a dichotomy in what manufacturers say that they consider as desirable (relationship with partners), and what they actually practice (transaction-specific behavior). However, this dichotomy has so far not been resolved in research or practice.

6. Significance of results

The present study was intended to study a) *internal service quality* offered by the manufacturing unit towards facilitation of working and wellbeing of its employees; b) *external service quality* delivered by employees; and c) the relationship of these constructs i.e. ISQ and ESQ with *satisfaction* and *loyalty* measures. The insights provided by this study can help managers and researchers in further understanding the service quality issues relating to HR factors in SMEs. This paper also comes out with a set of four hypotheses related to service quality at the employee-employer interface. The model is analyzed using data collected from 144 small-medium manufacturing units situated in North India and it is found that data fits the model. Some of the typical benefits are:

i. The proposed structure fills the gaps that exist in the conceptualization of service quality issues related to human factor in small-medium enterprises of emerging economies like India. The study brings out useful determinants (four each) to measure both internal as well as employee service quality. The scores on individual sub-dimensions indicating suggestions for improvements to managers along those areas.
ii. The ISQ and ESQ scales can also be used as a diagnostic tool for identifying poor and/or excellent performance to benchmark across multiple departments within a single manufacturing unit. Furthermore, any of these situations can also be compared across time. These scales can be enlarged to take care of other industries too.
iii. The study also derived linkages between *internal* and *external* service quality with *satisfaction* and *loyalty* based on structural equation modeling. SME practitioners must realize that their ability to provide good service quality to employees reflects in their enhanced level of service delivery which inspires their loyalty to the unit. These findings are in line with those of Saleh *et al*. (2017) who conducted their study in a small engineering firm and found that employee loyalty is one of the enablers of competitive advantage.
iv. Findings of this paper demonstrate that the flow of service elements embedded in the flow of products is a source of value addition at Employee-Employer interface. However, these findings can be extended to add supplier, distributor, retailer and end user's perspective. Traditionally, service quality driven operations have been overlooked in such units with an understanding that transaction specific opportunistic approach may work best for SMEs.

This paper highlights the importance of service quality related elements (relational as well as functional) keeping human factor in focus. The operational definitions of various dimensions identified at employer-employee interface with relevance from recent literature of supply chain are used for are summarized in Table 13.

Table 13
Independent variables and their operational definitions

Employer-Employee junction		
A. Internal service quality offered by the employer (ISQ)		
Credibility	the management's ability and intent to provide honest, trustworthy, and dependable service	Kamakoty (2016); Wu *et al*. (2012); Lepmets *et al*. (2012)
Compensation	the management's aspect of providing appropriate salary and other benefits	Gandhi *et al*. (2018b); Fischer *et al*. (2010)
Servicescape	the management's support by way of pleasant physical surroundings and a hygienic and positive work environment	Ahrholdt *et al*. (2017); Grönroos and Voima (2013); Ganguli and Roy (2010)
Friendliness	the management's attitude to foster team work and a sense of security amongst employees	Sahoo and Mishra (2013); Subha and Archana (2013); Pugh (2001)
B. Service quality delivered by the employees (ESQ)		
Dependability	ability to perform error free, and reliable service with integrity	Bakti and Sumaedi (2015); Prakash (2014); Nenadal (2015)
Agility	ability to respond to sudden changes in requirements and external disruptions in an efficient manner	Gupta & Singh (2015); Izogo and Ogba (2015); Gremyr *et al*. (2014); Prakash (2011)
Professionalism	the keenness and enthusiasm of employees for serving the unit and value they place on the operations performed by them	Gandhi *et al*. (2017), Åkesson *et al*. (2016); Parmata (2016); Jain *et al*. (2013)
Understanding	the knowledge and competence of employees regarding working of the unit	Ismail and Aziz (2013); Wilkins and Balakrishnan (2013)

7. Implication for practice

This paper should be of interest to manufacturing industry practitioners interested in service quality improvement w.r.t. their employees to win loyalty of workforce. Service quality has been operationalized contextually at employer-employee interface. Towards this, models embodying relationship among variables have been defined to co-create value for the employer and employees. These models may help in identifying contextual issues and facilitate planning and implementing of quality improvement programs. Though theory building mostly remains a primary objective of this research, the study has developed and proposed a set of relationships based on theory. The study has applied the model development strategy which is proposing a basic model framework, and then through modelling effort improving this framework with modifications of the structural or measurement models. The paper also provides a thorough documentation on value creation by workforce and advises SME managers to rationally manage the workers, reward their efforts adequately and keep channels of communication wide open. The manufacturing function is evolving from materials orientation towards the service driven manufacturing. This recognition is important given the scope of such units in emerging economies across the world and the market size whose potential is still untapped.

8. Limitations and scope for future study

This study suffers from the limitation that it tests the fit of the fit of the model within the limits of manufacturing SMEs only. The geographical this study limited to northern India also affects its generalizability. The study further suffers from methodological limitations associated with snowball sampling and anonymous survey-based research. The sampling unit for analysis has been one respondent per organization, while few case studies taking single organization as a unit might complement validating the results. This research ignores the functional view of SQ attributes and uses unweighted "performance only" measures. The research leading to the development of the model was carried out at a particular time and in a particular context. These two are other visible limitations of the paper. The above limitations suggest further research to expand and supplement what could not be captured in this study. Exploratory, causal, and descriptive findings of service quality modelling and conclusions related to the relationship among service quality, employee satisfaction, and patronage intension could be used as the foundations for the further research. Additional implications of this study for the further research could include the following:

- Although the results of this research represent the first validated SQ model in the manufacturing SMEs in Indian context, it remains to be seen whether or not target populations in other countries perceive service quality in the same fashion. Hence, further research is required to establish the practical international relevance of the proposed SQ model in SMEs
- Based on the indications in the survey, it appears that the nature and extent of deployment of service quality tools depend on strategic disposition of a manufacturing unit. The linkage between **manufacturer strategy** and **service quality** is an important area for academic research.
- Further, outcome variables beyond loyalty like **financial performance, growth, sustainability, and competitive advantage** may be considered.
- Another area of interest would be the use of **7-point Likert scale** rather than 5-point Likert scale for measurement of service quality items and inferring their suitability.

In future, same study may be repeated over a period to gain the changes in perceptions of the executives.

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Appendix 1

Item Generation for Questionnaire

S. No.	Item	Literature support	Focus group support
A. Internal Service Quality, ISQ			
Reliability			
1.	Pay excellent salary and allowances	Praksh *et al*. (2011)	Yes
2.	Provide excellent service terms and conditions	Jain *et al*. (2013)	Yes
3.	Consistent in working for employees wellbeing	Seth *et al*. (2006)	Yes
4.	Show respect and positive attitude	Gandhi *et al*. (2017)	
Assurance			
5.	Knowledge, expertise and skills	Singh *et al*. (2013)	Yes
6.	Provide training/education in specific work skills	Ahmad *et al*. (2009)	Yes
7.	Maintain proper communication	Parasuraman *et al*. (1988)	Yes
8.	Employees are accepted by all	Ranaweera and Sigala (2015)	Yes
9.	Effective employee involvement programs	Prakash (2014)	Yes
10.	Employees are made responsible for the output	Gupta and Singh (2015)	Yes
11.	Faith and trust in working of employees	Mathieu (2001)	Yes
12.	Honesty in dealings with employees	Neely (2009)	Yes
13.	You can be easily contacted by employees	Meena and Thakkar (2014)	Yes
Tangibles			
14.	Provide right tools and equipment to employees	Parasuraman *et al*. (1988)	Yes
15.	Provide pleasant work environment	Cronin and Taylor (1992)	Yes
Empathy			
16.	Pays individual attention to employees	Das *et al*. (2010)	Yes
17.	Protect your employees in case of emergency	Gupta and Singh (2015)	Yes
Responsiveness			
18.	Willingness to solve employee problems	Ganguli and Roy (2010)	Yes
19.	Supportive supervision and behaviour	Parasuraman *et al*. (1988)	Yes
Fairness			
20.	Fair treatment	Carr (2007)	Yes
21.	Fair terms & conditions	Kelkar (2010)	Yes
B. Employee Service Quality, ESQ			
Reliability			
22.	Consistently deliver quality products	Hazra and Srivastava (2010)	Yes
23.	Deliver correct quantity at right time	Gupta and Singh (2016)	Yes
24.	Technically sound & competent	Tejpal *et al*. (2015)	Yes
25.	Prompt in action	Seth *et al*. (2006)	Yes
26.	Trustworthy & honest in operations	Seth *et al*. (2006)	
27.	Maintain confidentiality in operations	Gandhi *et al*. (2017)	
Assurance			
28.	Knowledge/skills/expertise to perform	Parasuraman *et al*. (1988)	Yes
29.	courtesy and positive attitude	Singh *et al*. (2018)	Yes
30.	Share relevant information with colleagues	Parmata *et al*. (2016)	Yes
31.	Fast in informing progress/feedback	Jain *et al*. (2013)	Yes
32.	Your employees are innovative in operation	Meena and Thakkar (2014)	Yes
33.	Flexible to adapt as per requirements	Prakash (2014)	Yes
34.	Strong market reputation	Gupta and Singh (2016)	Yes
35.	Use latest ICT tools	Ahmad *et al*. (2009)	Yes
Tangibles			
36.	Use right tools and equipment	Parasuraman *et al*. (1988)	Yes
37.	Make proper use of physical facilities	Cronin and Taylor (1992)	Yes
Empathy			
38.	Understanding of the requirements	Hazra and Srivastava (2010)	Yes
39.	Care for the convenience of co-workers	Gupta and Singh (2015)	Yes
Responsiveness			
40.	Willingness to work	Ganguli and Roy (2010)	Yes
41.	Prompt in handling complaints	Parasuraman *et al*. (1988)	Yes
Fairness			
42.	Demand just salary and allowances	Carr (2007)	Yes
43.	Demand just service terms & conditions	Kelkar (2010)	Yes

Appendix 2
Descriptive Statistics

Summary Statistics of Factor Scores of Service Quality

Manufacturer-Employee interface (N = 144)	Measurement on 5-point Likert Scale		Overall Score of Factor	
	Mean	S.D.	Mean	S.D.
A. Scores of Internal Service Quality, ISQ				
Credibility				
The unit welcomes employees' involvement	4.01	0.757	3.96	0.722
Delegates responsibility to employees	3.96	0.718		
Keeps faith and trust in employees	3.92	0.753		
Honest in dealings with employees	3.90	0.717		
Can be easily contacted	4.01	0.664		
Compensation				
Excellent compensation to employees	2.73	0.838	2.87	0.905
Excellent service terms & conditions	2.88	0.923		
Manufacturer works for employee welfare	2.76	0.924		
Has a positive attitude towards employees	3.12	0.935		
Servicescape				
Provides a pleasant work environment	2.31	0.865	2.36	0.932
Provides protection to employees	2.41	0.999		
Friendliness				
Shows willingness to help employees	4.06	0.650	4.07	0.670
Promptly solves employees' problems	4.08	0.690		
B. Scores of Employee Service Quality, ESQ				
Dependability				
Employees deliver high quality products	2.86	0.850	2.89	0.882
Employees are polite and courteous	2.69	0.865		
Employees deliver correct quantity in right time	3.04	0.876		
Employees are honest and trustworthy	2.98	0.935		
Agility				
Employees are innovative in operations	2.33	0.860	2.24	0.850
Employees are flexible & adaptive to change	2.26	0.916		
Employees share operational information	2.13	0.774		
Professionalism				
Employees fix quick solutions to complaints	4.04	0.958	4.05	0.944
Employees demand just wage & salary	4.05	0.929		
Understanding				
Employees use right tools & equipment	3.44	0.719	3.49	0.722
Employees make proper use of physical facilities	3.43	0.708		
Employees understand requirements of the firm	3.44	0.751		
Employees care for convenience of co-workers	3.65	0.710		
C. Scores of outcome parameters at Manufacturer-Employee junction				
Satisfaction				
Getting desired output for wages paid	2.81	0.887	2.92	0.884
Satisfied with employees-in general	3.03	0.880		
Loyalty				
Would continue with employees	2.93	0.906	2.89	0.950
Recommend employees to others	2.84	0.973		
No compromise on quality for salary	2.90	0.970