Measurement Of Supplier Service Quality Dimensions In The Supply Chain  
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Abstract  
Purpose of this paper is to highlight the importance of supplier service quality in the supply chain and present framework for its measurement. Supplier service quality dimension is important because it includes sensitivity to customer needs dealing with the products and services regularly. We collect the data from all the suppliers of the industry like cutting tools supplier, oil suppliers, job work supplier, raw material supplier etc. all the respondent were asked to assess supplier service quality in supply chain based on expectation and perception. We wish to identify the extent of which awareness of supplier service quality through all the members of supply chain.

Introduction  
With the fast developing world economy and global market place there has been a drastic increase in the pressure on organization to find new ways to create and deliver value to customer through supply chain management. It is well known that improved service quality enhance productivity and reduces costs as well as increasing customer loyalty, market share and general benefits for the company. Service quality aims to confirm the requirements of the customers, to meet their expectation and satisfy them. It is evident that supplier service quality has impact overall business growth of the organization, present days purchasing functions has been receiving increasing importance as a critical function in the supply chain (Sakis and Talluri 2002) Today manufacturer and service provider are seeking ways to co-operate with the supplier to improve purchasing management (Lee et al.2003) and supply chain performance for better control.

Most of successful organization seeks to achieved competitive advantage primarily through their direct and indirect network of supplier(Hines 1997)

To understand the performance of supplier service quality firms must first examine whether the service provided will meet with customer’s requirement and expectation. Therefore firms should focused on
- Knowing customer requirements
- Fulfilling customer requirements
- Investigating where the service performed is satisfactory to customers and where it is not
- Taking appropriate actions to correct or improve in case where quality is poor

Objectives
- To derive its dimensions for better measurement and control for higher productivity and profitability for all the members of supply chain
- To identify different barriers that affect the supplier service quality in the supply chain
- To identify customer satisfaction level respect to supplier service quality

Literature review

Definition of Service, Quality and Service Quality  
Service- Service is an activity of intangible nature which is take place in interaction between customer and service provider to provide solution of the customer problem.  
Quality- Fitness for use  
Service quality- Service quality aims to confirm the requirements of the customers to meet their expectation and to satisfy them. 

There has been considerable progress as to how service quality should be measured, there is little advancement as to what should measured?

Researchers generally have adopted one of two perspectives
1) Nordic perspective
2) American perspective (Brady and Cronin, 2001). The “Nordic perspective” was proposed by Gronroos (1984) and the “American perspective” was proposed by Parasuraman et al. (1985, 1988).
In the “Nordic perspective”, Gronroos (1984) identified 2 dimensions of service Quality
A) Technical quality and
B) functional quality
He defined technical quality as “What the consumer receives as a result of interactions with a service firm” and
Identified employees technical ability, employees knowledge, technical solutions, Computerized systems and machine quality as its 5 attributes.
Functional quality defined as “The way in which the technical quality is transferred” and identified behavior, attitude, accessibility, appearance, customer contact, internal relationships, and service-mindedness as its 6 attributes.
He concluded that the technical and functional quality of service built up the corporate “image” of the company.
The “Nordic perspective” of service quality was the first to be published in scholastic literature. However, the first seriously dedicated program of research to answer the questions “what’s the best way to define service quality?” and “what’s the best way to measure it?” was launched by Parasuraman et al. (1985,1988) (Schneider and White , 2004). This program developed the “American perspective” of service quality.

In the “American Perspective” Parasuraman et al.(1985) built up a 34-item service quality scale comprising 10 Dimensions (reliability, responsiveness, competence, access, courtesy, Communication, credibility, security, understanding/knowing the customer and Tangibles).
Subsequent work by Parasuraman et al. (1988) resulted in the service quality measurement scale with 22-items on 5 dimensions. The dimensions reliability, responsiveness and tangibles were retained as identified in 1985 whereas Communication, competence, credibility, courtesy and security merged as a new Dimension “assurance”. Access and understanding / knowing the customer merged to form the dimension “empathy”.
Parasuraman et al. (1988) codified this scale as SERVQUAL and defined its 5 dimensions as:

**Tangibility:** Appearance of physical facilities, equipment and communication

**Reliability:** The consistency of service, this is often seen to be the most important part of service quality.

**Responsiveness:** Willingness to help customers and provide prompt service.

**Assurance:** Sufficient competence to perform the service, courtesy of supplier behavior credibility of supplier and security of the service.

**Empathy:** Ease of access to the supplier, effective communication between customer and supplier.

However, the service quality measurement scale developed by Parasuraman et al. (1988) has been the subject of criticism since its development (Johnston, 1995). Buttle (1996) provides a detailed critique of the issues surrounding the 5 dimensions of the Parasuraman et al. (1988) service quality scale, mainly on the basis of number of dimensions and contextual stability.

**Methods of service quality**
A) SERVQUAL is based on the gap model of service quality
B) Customer surveys
C) Customer interviews
D) Internal audits

**Dimensions of service quality reported in the literature**

<table>
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<tr>
<th>RESEARCHERS</th>
<th>SECTOR STUDIED</th>
<th>ATTRIBUTES</th>
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<tbody>
<tr>
<td>Parasuraman et al. (1985)</td>
<td>Banking, credit card, security brokerage, product repair and maintenance</td>
<td>Credibility, access, reliability, communication, understanding the customer, courtesy, competence, responsiveness, tangibles, security</td>
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Methodology

This study is focused on Gathering Information related to Supplier service quality dimensions in supply chain on the basis of SERVQUAL by taking following criteria:

<table>
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<th>Dimensions</th>
<th>Criteria</th>
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<tr>
<td>Reliability</td>
<td>Delivery on Time Consistency and regularity in delivery</td>
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<td>Accuracy Record keeping</td>
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<td>Tangible</td>
<td>Physical facilities/Stock Equipments</td>
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<td></td>
<td>Technology Employees</td>
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<td>Responsiveness</td>
<td>Problem resolution</td>
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<td>Complaint handling</td>
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<td></td>
<td>Attention to request, questions</td>
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<td></td>
<td>Willingness to help</td>
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<td></td>
<td>Flexibility</td>
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<tr>
<td>Empathy</td>
<td>Information provided</td>
</tr>
<tr>
<td></td>
<td>(Clear, appropriate, timely)</td>
</tr>
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<td></td>
<td>Understanding the needs</td>
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<tr>
<td>Assurance</td>
<td>Staff knowledge and competence</td>
</tr>
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<td></td>
<td>Safety and security confidentiality</td>
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Parasuraman et al. (1988) - Appliance repair and maintenance, retail banking, long-distance telephone, securities brokerage, and credit cards.

Gronroos (1984) - Bank, insurance companies, hotels, restaurants, shipping, airlines, cleaning and maintenance, car rental, travel, consultants, architects, advertising, public sector.

Johnston (1995) - Banking

Literature Review

Developing the list of measurements on the basis of criteria decided

Exploratory interview regarding suppliers from the concern departments

Collect data as required

First level purification of the data collected

Development of final list of measures

Data Analysis

Final scale to measure supplier service quality

Conclusion

Understand the performance of service quality by examining the service provided will meet with the customer requirements and expectations with respect to the improved service quality. Results higher productivity and reduces cost as well as increasing customer loyalty, market share and general benefits for the company.

References

By a. parsuraman, valarie a. zeithaml, leonard l. berry
[2] Refinement and reassessment of the servqual scale
By a. parasuraman, leonard l. berry
[3] Establishment and applications of the integrated model of service quality measurement
By Ching- Chow yang
[4] Service management
By james a. fitzsimmons, mona j. fitzsimmons

[5] SSQSC: A tool to measure supplier service quality in supply chain
By Nitin Seth, S.G. Deshmukh, Prem Vrat
[6] Service quality models: a review
By Nitin Seth, S.G. Deshmukh, Prem Vrat
By Nitin Seth, S.G. Deshmukh, Prem Vrat
[8] Prioritizing Service Quality Dimensions
By Nimit Chowdhary and Monika Prakash
[9] Measuring Service Quality in Retail Supply Chain in India
By Subas Chandra Das; Satendra Dash
[10] Integrated Customer relationship management for service activities
By Sergios Dimitriadis; Eris Stevens