Chapter 1

Introduction
1.1 Background
The decade of 1990 has witnessed paradigm shifts in business practices and evolution of various new business trends like lean manufacturing, outsourcing, downsizing, and strategic partnership and so on. With growing customer awareness all businessmen have to align themselves with the above trends to ensure survival, sustainability and growth in the market. One of the most important and pertinent progression to all these new business adaptations is the emergence of value chains (Chen and Paulraj, 2004, Lambert et al., 1998). The businessman started focusing on their core competency and outsourced the secondary processes and competencies to business partners. The dependency on business partners increased and it was soon realized by all businessman, that the transacting firms, were not rivals but were strategic partners in the value chain to deliver the best to the customer. The individual firm level competition was replaced by competition between value chains. As every business entity in the value chain supplied goods or/and services to its subsequent partner, the term value chain was cogently replaced by a more comprehensive term supply chain. All business today is characterized by supply chain. Supply chains are like the circulatory system that encompasses all flows of product services, information & finances between entities. The traditional modes of doing business as reciprocal exchange at arm’s length have been replaced by synergistic relational transactions where each transacting entity is treated as customer (Stank et al., 2001). As a natural progression to this thought, every entity in the supply chain focuses on contributing quality, value, and satisfaction to the immediate customer and in turn makes profit (Shemwell et al., 1998). The manufacturer, supplier, distributer, retailer, logistic provider and the end consumer are the entities that constitute supply chain. The phenomenon of globalization along with information technology revolution has transformed the world into a global village and metamorphosed the arms length tradition of business transactions into close knit business networks.

1.2 Evolution of Supply Chain
Supply chains that emerged as new business face in the 1990's attracted the attentions of researchers and businessman simultaneously. While the business man were trying to get used to
this new way of business, researchers were interested in conceptualizing, defining, modeling and developing the various nuances of supply chain. Exploring the early researches on supply chain gives useful insights into the genesis of supply chain. While no conclusive verdict may be passed on, yet there are two basic schools of thought that concurrently led to the establishment of this stream. Researchers belonging to the first school of thought, emphasize that supply chain originated in purchase and materials managements (Cox, 2001). It concentrated on optimizing material/inventory flow from the supplier to the end customer. While the researchers of the second school of thought assert that supply chain was established in logistics and distribution networks (Giannakis & Croom, 2004). The task of availability and timely delivery of goods in proper physical conditions fostered the need of backward integration to channelize the flow to customer. These were the two extreme and opposite school of thoughts that emerged when supply chain was in its nascence. Later the stream was enriched with contributions from scholars of operations management, production management, inventory management, marketing management, information technology etc. Supply chain as seen today is a vast and eclectic mix of various domains but still lacks a rigid and definite structure to stand on its own.

The various islands of supply chain that have emerged till date are- SCM strategy, SCM framework, trends & challenges, purchasing management, supply management, vendor management, information technology, logistics & distribution management, internal supply chain, alliances/relationship/partnering, organizational dynamics, HR issues, network integration and coordination, customer relationship management, quality in supply chain, performance measurement and so on (Carter & Elram, 2003; Croom et al., 2000; Rangtusanatham et al., 2003). While most of these areas of supply chain have attracted the attention of research scholars, some of the areas of supply chain are still relatively untouched with immense potential for research.

Lambert et al., (1998) in their seminal paper, define & develop supply chain framework and also bring about the complexity involved in supply chains due to the network structures and relationships. Relationships and alliances was an area that had caught the attention of researchers. Having realized the complexity involved in the SCM structure, the researchers have highlighted the need for long term relationship, trust and commitment with the business partner.
for developing cost effective and profitable supply chain practices. The subject of supply chain partnership was also given due importance in initial research, various conceptual and empirical papers had been published to define patterns, frameworks and construct in partnership. Giunipero et al.,(2008) in their review of supply chain management literature that stretched across a decade, reports SCM strategy, SCM framework, trends & challenges, alliances & relationships to be the most popular research areas. Vigorous efforts were made to integrate SC strategy as a part of business strategy as to enhance profitability of business. The possibility and alternatives of integrating SCM and purchasing in the fabric of corporate business strategy was explored theoretically and empirically in various research papers. SCM is a pot pourri of various subjects and it is necessary to define and develop the boundaries, scope and gamut of this subject so that it does not collapse as another management fad.

Umpteen researches have been conducted to study trends, challenges, issue in SCM with the focus to comprehend and develop sound theory and constructs for the subject. Although researchers are at the task of exploring this newly established orthodox of supply chain but they seem to work on only a part of supply chain. Whether it is research on strategy, structure, alliances or relationships in SCM the research seem to address only a part of the supply chain—either a single unit firms or dyads. A comprehensive, holistic approach where the entire supply chain/network with all business partners is considered has yet to be studied (Chen & Paulraj, 2004). Most of the research in supply chain is exploratory and non empirical in nature. As the subject is relatively new researchers are interested in developing useful insights in the discipline and in defining the domains. Once the insights have been developed, the researchers have taken up empirical validation of the same but the quantum of existing research is far from being conclusive or sufficient. Given to the vastness, complexity and the networks involved in the supply chain, the researchers have approached the supply chain in figs, fragments and fractions. They have taken one or the other areas or subareas of supply chain and restricted the research to firm level or dyadic levels. But the supply chain stretches much beyond the dyads, analysis of the networks, chains, tier levels etc is required to develop and deeper insights into the subject.
1.3 Quality in Supply Chain

It is interesting to note that researchers in their quest to demystify the newly established trends and fads in supply chain have still not explored some of the important areas of supply chain. Quality being such a fertile area for research has surprisingly not attracted much research in supply chain stream till date. There is a need for developing, defining and modeling this domain systematically and studying its effect on business performance of supply chain. It is also important to define the antecedents and the consequents and the construct of service quality in the supply chain and the methodology to measure service quality (Seth et al., 2006a,b).

The concept of quality in itself is very well established in literature. The discipline is well structured defined, modeled, measured and analyzed by researchers in the plethora of research work that one finds about quality. The gradual shift of economy from manufacturing to service base and the fight for survival in razor sharp competition all of a sudden brought quality of service in focus (Shemwell, 1998). In the seminal works of Parsuraman (Parsuraman et al, 1985) in the decades of 1980’s service quality has been conceptualized, defined and measured using the gap model. The construct Servqual that is used to measure service quality has been empirically validated and universalized over subsequent researches across a spectrum of service industries. Since then Servqual has been used by several other researchers to measure service quality in various business settings on account of its universality. Servperf (Cronin & Taylor, 1992) is another such universal construct that measures the service quality in various service settings. Servqual and Servperf are the two scales that dominate service quality researches, as they are simple and easy to administer and requires minor semantic modification to customize it to industry specific settings. Researchers who have designed their own constructs for measuring service quality have often followed methodology similar to that followed by Parsuraman (Parsuraman et al, 1985) while developing Servqual.

Due to increasing domain of services and its classification into IT based services, technology based services, capital intensive services, labor intensive services etc. the researchers have not stopped at Servqual or Servperf but have gone beyond to develop IT based models, Behavioral model, Attribute model, Antecedent-consequence model and so on to measure service quality (Philip and Hazlett, 1997; Sweeney et al., 1997; Dabholkar, 2000; Zhu et al.,2002;Santos,2003).
Service quality has always been a fancy amongst the researchers and the literature has been replete with service quality frameworks, models, factors, constructs, antecedents, consequents, determinants etc. Research in the area of service quality has given important insights to managers for improving quality by judiciously using their resources. The critical factors that affect the quality in a specific service settings can be identified, measured and controlled to improve the overall service quality delivered to the customer. An obvious reason that may be accrued to the systematic evolution of research in this area is the well established link between service quality and business performance (Newman, 2001; Sureshchander et al., 2002; Guru, 2003). Several researchers have dedicated their time and efforts to study the nexus between service quality and business performance.

When it comes to service quality in supply chain there is a dearth of sound research. The iota of research that exists is suggestive of the immense research potential underlying here. The research till date that exists focus on dyads or micro units measure service quality, the supply chain perspective is seriously missing.

1.4 Performance Measurement in Supply Chain

Measurement of performance of supply chain is yet another challenging area that needs the attention of researchers. It calls for developing definite models, metrics and constructs to measure the performance of supply chain and empirical validation of the same.

As such performance measurement in itself is a well developed stream in research. Several frameworks, models and metrics have been developed to measure the performance of business. Most of the research paper emphasize on financial constructs to measure the business performance. The financial constructs, differ across industries and managerial levels. But considering only financial parameters for assessing the business performance has been criticized by several research cohorts as myopic (Neely, 2005). They suggest other indicators like operational effectiveness, customer orientation, human resource orientation, learning and innovation to be included in performance assessment of firms to give a comprehensive estimate of the business performance (Radnor & Barnes, 2007). Research papers are found that suggest
model, metrics and methodology that focus on measuring the cost or the non cost aspects of performance. A step further to this, several research scholars have suggested framework, model and measures that comprehensively consider all the aspects of business performance like the BSC suggested by Kaplan and Norton (1992).

This area is rich in theoretical as well as empirical contributions, yet due to the ever evolving challenges in business and change in business objectives, practices and philosophies, continuous research is going on in this area. Practitioners and researchers are interested in finding ways to enhance business performance. Various empirical studies can be found that study the effect of various business practices on business performance. The effect of customer satisfaction, customer loyalty, service quality and various other marketing constructs on business performance & profitability have often been studied in research (Gummesson, 1998; Lasser et al., 2000). The positive relationship between service quality and business performance has been established theoretically as well as empirically time and again in research. From the extant literature of performance measurement it can be summarized that it is a multilevel task, involving decision at three levels- (i). Deciding upon the set metrics to be used to measure the performance, it can be cost based or the non cost based metrics, (ii). Performance measurement system what set of constructs to be used to measure the performance, (iii) Aligning the performance management system to the strategic objectives of the firm (Neely, 2005). The literature does not claim or generalizes any model, framework or construct as the best or most comprehensive method of performance measurement. It may be rather claimed that performance measurement system has to be tailored to the requirement of the individual firm and aligned to the strategic goals of the firm.

While the above can be asserted for performance measurement of micro units or singular ones, when it comes to measuring the performance of the entire supply chain, the literature is absolutely missing. This may be due to complexity in the supply chain network, that, this herculean task has still not been vehemently taken up by researchers
1.5 Service Quality and Supply Chain Performance

With the insurgence of customer sovereignty and customer awareness, delivering the right quality to the customer has become an imperative. Since technology and latest state of art craftsmanship has made differentiating product quality difficult, it is the service quality to the customer that is ultimately used by all businessmen to create differentiation and ensure survival. As competition between single monocots has been replaced by competition between supply chains, the service quality perspective now has to be reframed covering the entire supply chain gamut. Managers and practitioners of supply chain today are facing the behemoth challenge of delivering quality to customer, especially when quality is built over the successive stages in the supply chain and not just at a single point. They are interested in knowing the critical factors affecting quality in supply chain at various junctions and how it affects the overall performance of the supply chain. While there is a wide array of research that contributes to performance measurement in business but that same research findings cannot be extended to the supply chain networks. In order to measure the performance of supply chain various models have been developed or modified yet the findings in this stream of supply chain are again far from being absolute and conclusive. There is no study that relates the service quality of the supply chain with the overall performance of supply chain. Although the relationship between quality and performance have been asserted time and again in literature (Sureshchander et al., 2002).

1.6 Need to relate Service Quality & Business Performance in Supply Chain

If the factors that constitute the service quality of various firms in the supply chain can be identified then service quality can be measured also. If service quality can be measured, then it can be controlled. The critical factors and the non critical factors affecting service quality may be separated. The business firms may be able to use their resources strategically to control the critical factors. The factors that commonly affect the quality of entire supply chain as whole are known, the businessman can then focus on them from the very beginning to avoid deviations. The quality consciousness in the supply chain has to start right from the initiation of supply chain and diffuse downwards. Quality starts building from the upstages of supply chain and gets
successively built up till point where actually the product reaches the final consumer. Any lacuna in quality in any stage of the supply gets amplified in successive stages further. If all firms on supply chain, leaving aside their monocot goals align themselves to the quality requirement of the supply chain, quality can then be maintained across the supply chain as a whole and not just at one or two places. An advantage of measuring service quality of the supply chains is that the service quality then can be compared across the supply chain competitors, across various sectors and even against the industry benchmarks. This will foster healthy competition against supply chain and help in ameliorating service quality of the supply chain (Seth et al., 2006a,b).

The concept of performance measurement should also be extended across the entire supply chain and the performance of entire supply chain should be gauged against other supply chain. The traditional practice where each and every firm focuses on measuring and being complaisant with its own performance limits the potential of supply chain. For reaping the benefits of supply chain, it is necessary that each firm sees itself as a part of supply chain and thinks of overall optimization and not just local gains. If the performance of the supply chain can be measured than it can be controlled too. The critical determinants of performance can be monitored and deviations can be corrected so that the overall performance of the supply chain can be maintained. Comparative and cross sectional analysis of performance can be carried out across the supply chain to understand the industry trends. This will help in chalking out improvement programs at industry level, at network level and at cluster level too. When firms align themselves in a supply chain and lose their individual identity, it becomes facilitative for the business. The firms when aligned as supply chain are able to serve the customer better and hence deliver better quality. The connection of performance and quality is close and direct. When service quality of the supply chain improves the performance of the supply chain will also improve (Mentzer et al.2001, Stanley and Wisner 2002).

1.7 Conclusion

As the relationship between service quality and performance is well asserted, it is time now that the concept may be extended across supply chains. There is a need to define the service quality of supply chain, identify the constructs to measure it, develop model and methodology to
measure it. Similarly it is needed to define performance measurement in supply chain, identify suitable metrics and develop the model and methodology to measure it. Having identified these gaps in the supply chain, the author has taken up to work on the service quality aspect of supply chain and attempted to link it to the performance of supply chain as a part of doctoral research. The topic of research work is ‘Development of measure of service quality across supply chain and its impact on overall supply chain performance’. The subsequent chapters deals with the literature review, proposed model, data analysis, findings and conclusion respectively.