Changing Trends in Supplier Evaluation Criteria in Telecom Sector in Pakistan

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Abstract—**Telecom industry in Pakistan has evolved significantly specially after the induction of GSM operators and so has the supplier evaluation criteria employed by these companies to shortlist and select outsourcing of projects and products. This piece of research is focused on the exploration of changing trends in supplier evaluation criteria that Pakistani telecom companies have gone through, the drivers of the changing trends and recommendations are made to be incorporated in supplier evaluation. Interviews were conducted with head of departments, and participants of supplier evaluation in telecom operators. The research shows that there is an increase in focus towards customer satisfaction, competence of local partner of the supplier, corporate social responsibility, HSSE and green operations.**

Index Terms—**Changing trends, supplier selection, telecom market, vendor evaluation.**

I. Introduction

Telecom sector is the fastest growing industry of Pakistan. Tele-density in the country has risen from 4.31% in 2002-03 to 77.96% in 2014 with 2619% increase in customer base [1]. Upto 2002-03, Pakistan Telecommunication Company was the largest communication services provider in the country and a monopoly holder. Instaphone and Paktel were serving their customers with AMPS communication services. Mobilink was the first GSM operator established in 1994 followed by Ufone in 2001. Rates for even basic telephony services were high. The penetration of cellular devices was limited. Cellular services were offered only in major cities of the country. Both caller and called parties were charged in case of a call made on a cellular device. Extra roaming charges were incurred by the mobile phone bearer in case of calls received out of home station. But as the competition grew between different telecom companies, the tele-density in Pakistan grew at a very high rate becoming 79.89% in 2015. It dropped to 62.9% in first half of 2015 owing to the bio-metric verifications program by the government but are still on the rise, currently at 66.1%.

A. Background

Outsourcing in Telecom industry is a well-known and regular practice. Telecom operators solicit services of vendors for network roll-outs, network management and business operations. Over the years, the way the telecom companies operate and their culture have evolved and developed into new stages of maturity. The changing trends of business in telecom market have also affected the related processes in telecom industry. Our research is based on the

assumption that the changing business needs and trends lead to change in associated business processes that include sourcing and vendor selection.

B. Purpose

The purpose of this research is to provide an insight into changing trends over past fifteen years in supplier evaluation criteria being used in Pakistan's telecom operators, find the drivers of the changing trends and offer recommendations for improvement in the selection process.

C. Scope

In this research, we will briefly discuss current international supplier evaluation trends in telecom market, and then based on our research, will present trends prevailing in local telecom market with what has changed over the past fifteen years in supplier evaluation criteria. We will use open ended interviews to gather information from professionals and decision makers in the telecom industry. This research will offer improvement recommendations to the existing criteria for supplier evaluation.

D. Limitation

The scope of this research is limited to four telecom operators in Pakistan and their sourcing practices.

E. Research Methodology

Qualitative research is conducted using open ended interviews as research methodology.

II. Literature Review

Supplier evaluation criteria are the measures that are put in place for the qualification and quantification of supplier's products' attributes to make the purchase decisions easier for the buyer. The establishment and employment of these criteria in the sourcing process are meant to bring clarity and transparency in procurement process and remove prejudice and human factors affecting the supplier evaluation decisions if any. Shah *N. H.*, (*et al.*, 2012) conducted a research in 2012 to find the determinants of supplier selection and evaluation in Pakistan telecom industry with focus on major telecom operators and vendors, and their impact on business key performance indicators of buying companies. The findings were that strategic buyer supplier alliance can have potential positive effects on overall business performance of buyer firm as found in Pakistan Telecom Market. Commitment to the quality and technology expertise with each other's understanding of buyer and supplier is ranked as the high impact factor on enhanced business performance [2]. The study conducted provided an insight into six attributes of supplier evaluation and how they impact the supplier

evaluation decisions in telecom industry in Pakistan. The study revealed that buyer supplier strategic alliance has a favorable impact on overall business performance of both the supplier and the buyer. Common understanding between the two and commitment to their respective core businesses make them excel and establish reputation. The study was focused on six pivotal attributes, and how much those attributes are perspective in the consideration of industry practitioners, however, the research was only focused on the current supplier evaluation variables and does not shed light into the variables that affect changes in those criteria. This research is a leap forward in the available knowledge base in Pakistani telecom market.

III. INTERNATIONAL SOURCING EVALUATION TRENDS IN TELECOM SECTOR

Weber *et al.* concludes form his research that price, delivery, quality, production capacity and localization are the most important criteria in the evaluation of any supplier [3]. Accompanying parameters like cost and quality of the supplied system, security is an emerging concept in the evaluation of supplier for telecom equipment. U.K. government departments including the Home Office, Ministry of Justice, and Crown Prosecution Service were reportedly instructed to stop using the systems during internal meetings amid concerns they could be embedded with tapping devices [4]. As networking and computing become as much a part of ordinary life such as electricity and water, there is more talk about digital security, not only by experts, but also more and more in companies, governments and consumers. And if so many aspects of peoples' private lives and business rely on networks and computers, it is imperious that these systems function securely. It is also overbearing that safety be a well-thought process from system commencement and design via system execution to strategies and practices for system operation, deployment and use. In the development of standards, safety must always be a component of initial work, and not reconsideration - as it is in this stage that susceptibilities are born. The role of standards boards is to listen to the market and document known concerns, to provide solutions where possible and to issue stipulations or guidelines that help entrepreneurs and users in the duty of making communication systems and services sufficiently robust [11]. Government agencies in US forbid government agencies from buying products from industry giants like Huawei and ZTE over the security of Chinese telecom equipment. In lieu of cyber security concerns, Huawei was banned to bid for work on National Broadband Network in Australia. Green operations and corporate social responsibility are some other general criteria in international market including telecom industry [5]-[6]. The research provides customary supplier evaluation criteria and mentions the upcoming challenges faced by outsourcing to international vendors. The challenges of information security are faced while souring the telecom services or equipment from cross-border companies. Impact on the environment by the operations activities of the supplier are getting highlighted more and more as a result of awareness of industrialization effects on the environment. Corporate social responsibility is a growing concern among developed

countries and governments are pressing for regulations to make compliance of code of social responsibility mandatory for all industries, including the telecom market. This research has covered the stance on information security from the companies covered in the scope of the research. The focus of buyers on corporate social responsibility and environmental friendly operations has been accounted for and the perceptions of the suppliers of these compliance variables have been highlighted. [9], [10]. Supply Chain Sustainability is a key focus area for international telecom operators and companies work systematically with this on a day to day basis. The aim is to raise the standards and make a social impact in the local market. International telecom industry faces daily risks and challenges in an ever evolving sustainability environment.

Companies work for continuous improvement in their operations and towards their suppliers. Their daily supplier sustainability work is based on three main pillars; Risk assessments, Capacity building, Audits & inspections.

All suppliers and parties that have a direct contractual relationship with companies striving for sustainability in supply chain and offer products or services to them must comply with their Supplier Conduct Principles. These principles set out the minimum standards that are expected to be seen achieved over time.

Monitoring compliance to the set requirements is done in all markets by systematic monitoring (audits & inspections) and risk management. Any gaps identified are pointed out for the supplier for better improvement of the processes.

Companies believe that decent working conditions, respect for human rights and the environment as well as willingness to improve standards amongst their suppliers is the only viable route forward. By working together with their suppliers, they can raise the bar and build competitive edge. The main elements of Supply Chain Sustainability framework are organizational setup, international cooperation and supplier requirements [12].

In Pakistan, European operators have a policy in place to ensure sustainable supply chain and even that, in the perception of the industry itself and its suppliers is not complied with.

In most of the telecom companies in Pakistan, no measures are taken to bridge the gap between local and international practices. Responsible business conduct is made part of the evaluation program for the supplier but nearly no audits and compliance sessions are arranged, and no supplier is trained to achieve the sustainability goals. Items like waste management/recycling programs, no use of hazardous substances, compliance to National Environment Quality Standards, compliance with directives for electrical and electronic wastes, compliance with the code of conduct on energy consumption, optimized energy usage, compliance to ISO14001 etc., are added to the pre-qualification criteria documentation, but with the exception of few, none of the suppliers or buyers put in place the transparent audits to ensure sustainability in supply chain.

Transparency is deemed critical for the success of any business, and that includes one absorbed on sustainability in the supply chain. At international level, telecom companies view their supply chain through the lenses of responsibility and pellucidity with the view that, "what gets measured gets

done." Based on experience of companies, the key actions that provide a strong basis for a transparent and sustainable supply chain are establish goals, set clear expectations, measure your progress, communicate, take purposeful action and continuous improvement [13]. As per the respondents of the interviews, in Pakistan telecommunication industry, more than ever before, the companies are struggling for more transparent processes by setting clear goals and ambitions. Movement from rigid cultures to open ones and flat hierarchies of the advanced telecom companies, they have managed to achieve greater levels of transparencies and openness.

In developing countries, regulatory bodies make transfer of technology enforced on the telecom companies to make part of their contract. This transfer of technology helps the developing country progress on technological frontiers. India is one of the successful examples to benefit from transfer of technology [14]. In Pakistan, there seems a gap and an area that desires attention of both the local companies operating in the region as well as the government bodies. Pakistan is a developing country with very high tele-density. There have been huge foreign investments in telecom sector. The rapid progress witnessed by telecom industry in Pakistan is unprecedented. Despite all the progress, there have been very little done for the transfer of technology in Pakistan. Unlike India, where large Research and Development labs have been installed by incoming foreign companies and local production of the equipment started, Pakistan is far behind in this technological race.

Ethical sourcing policies are included in companies across industries in their principles and operational standards. With the prime objective as to ensure that goods/products and services are manufactured and supplied ethically, obligation spreads beyond the act of procuring goods and services. It also includes the procedures of gaging and engaging with a supply chain market through to handling relationships with suppliers.

Ethical sourcing has not only become a slogan to address operational risk and safeguard of brand reputation, it also signifies a means to achieving competitive advantage. If you are implementing best practice, your competitors' inability to source ethically can result in your competitive gain [15].

IV. CHANGING TRENDS IN LOCAL MARKET

Inception of telecom industry in Pakistan dates back to 1947 with the establishment of post and telegraph department. Since then, a lot has changed. The standard supplier evaluation takes place in two rounds, after the initiation of procurement that includes floating RFP to the pre-qualified vendors, clarifications of requirements, if required by the vendor and proposal submission followed by submission of technical and commercial evaluations. To pass the technical criteria set by the buyer is mandatory however; the weightage of technical evaluation to overall score of a supplier is usually lower than the commercial evaluation weightage. The technical evaluation is aimed to analyze the following questions, to what extent does the offer submitted by the supplier compliant to the needs of the buyer, does the technical design meet the specifications put forward for the solution, how viable the solution is, what will be the

solution's life. The commercial evaluation is based fundamentally on cost and comparison between alternatives.

Since the advent of telecom technology in Pakistan, the telecom industry has witnessed an exponential growth with high foreign direct investments, peaking in 2005-06 to USD $ 2 billion [1]. As per the respondents of the interviews and available data from industry regulatory body, the telecom sector has gone through record high growth in subscription and tele-density; meanwhile, the revenues of the cellular mobile operators have not grown in proportion to the customer base. Initially, in a monopoly environment, the operational expenses of the telecom operators were limited. With less customer base, they had fair profit margins. Over the period of time, the operational expenses of the telecom companies have increased owing to the economic condition of the country, so did the customer base of the telecom companies. But a call, that was charged at a rate of PKR 300/minute in 1994 is now charged at PKR 0.01 per second.

Unlike other consumer based industries, in telecom market in Pakistan, the revenues of the telecom operators have not gone as high as did the customer base. [1] It has come to observation through the responses of the interviewees in this study, that with high market competition and minimal profit margins, the capital expenditure amount that used to be available ten to fifteen years earlier, is no more available for the same amount of work. Furthermore, the energy crisis in the country poses a greater challenge for telecom operators. During the long hours of grid outage, the telecom companies need to fuel their base stations to maintain the network availability.

Over the length of time, the telecom operators have developed processes and have attained certain level of maturity contrary to the initial phases after launch that are high pressure and more of chaotic scenario.

Pakistan's largest telecom operator enjoyed monopoly for a long period of time. In July 2003, with the introduction of deregulation policy for the telecom sector by the Government of Pakistan, foreign companies were allowed and encouraged to invest in telecom sector in Pakistan. European and North American suppliers dominated in the telecom industry of Pakistan and made huge profits until the rise of China as the largest workshop of the world. In early 2000s, the suppliers were mainly evaluated on the basis of quality, cost, return of investment and services provided by those vendors. End of life and warranty of the equipment supplemented the base mandatory criteria of cost. Some vendors increased their local footprint by establishing and partnering in local manufacturing and Research and Development centers. In the absence of any competitor telecom network, there were no services to benchmark against and to evaluate vendor against those set parameters. Multiple suppliers were selected to provide same services to avoid risks associated with single sourcing and division was done on the base of geographic telecom regions.

In July 2003, after the introduction of deregulation policy for the telecom sector, 2 new cellular operators entered the telecom industry of Pakistan including Telenor and Warid; Zong was introduced later in 2008 by CMPak that acquired Paktel in 2007 [7], [8].

The cellular telecom companies opted to select the vendors based on the same criteria in early 2000s. With high foreign

investment and increasing thirst to provide the coverage without the optimum focus on the quality of the network, the efforts were mostly endeavored to provide cellular services at maximum possible locations to increase the footprint and match the competitors.

The supplier evaluation criteria in the telecom market have faced a continuous change since then. Focus has increase with time to quality related issues. In the beginning, immaturity in local telecom industry, lack of competition in vendors, scarce resource availability, high profit margins at operator end, detailed and in-depth selection criteria for the supplier remained ignored. As the industry began its development quest, the processes got matured and needs aroused for missing processes to be filled in.

Reduced profit margins in the telecom industry demanded efficient and effective practices to be in place to ensure positive business performance. The foreign investment reduced with time and companies starting focus more on the outcome of their initial investment. Processes were established to ensure formal evaluation of new initiatives based on quantitative methods. The payment terms of contracts got stricter. Availability of ready credit line at the vendor's end, as more expert resource became available in the market, they were set to mandatory for the supplier to have them, Quality audits and control are enhanced, health, safety, security and environment (HSSE) practices were introduced and set as mandatory in supplier evaluation and failing to comply with HSSE guidelines set forth by the companies resulted in disqualification from bidding process. The companies now perform audit of the potential supplier for minimum wages, labor conditions, HR policies in place and their compliance, compliance to local laws and regulators requirement. Benchmarking has become a regular practice.

V. CONCLUSION

The evaluation trends of suppliers in telecom market have been continuously changing, but the majority of the focus still remains the cost factor of the product. It has been observed that in typical telecom industry in Pakistan, factors like lack of participation of stakeholders and their education about their role in the supplier evaluation, absence of complete understanding of the end product/service a vendor is offering, unrealistic proposed timelines are still observed despite experience of the telecom operators in the local market. From this research, it has become evident, that main reason to shift from European vendors to Chinese vendors is Cost. Increase in market competition with five cellular mobile operators and one large telecom giant, without any communication services price regulation from the authority, the services offering prices went to bare minimum. Telecom market was no more a niche market by then. To cater this situation, the telecom companies initiated a drive of operational excellence and put their best efforts to cut their expenditures. The customer has so many options at its doorstep that it is not at all difficult for him to switch from one service provider to the other with every company eager to steal from the competition.

It has affected the supply chain dynamics of telecom industry to a large extent. Lead times, once of little importance became much more important over the period of time as the customer cannot wait for a service to be launched by his service provider. Non-compliance of agreements and evaluation criteria are a matter of great concern, but silence on the observations of these non-compliance issues impose a greater threat to the sustainability of the whole eco-system in which the customer to the industry owners exist.

VI. RECOMMENDATIONS

The existing processes should be ensured. There is a dire need of attention by regulatory and telecom buying companies to ensure the responsible business conduct by the supply chain. Without ensuring the health, safety and environment, labor rights protection, transparency of processes, supply chain industry will not be able to move towards sustainability. Audits to ensure compliance of responsible business conduct should be in place. There should be frequent, planned and surprise audits of all the partners in supply chain. Processes should be established and ensured to make these audits effective. More focus should be paid to corporate social responsibility and it must be verified that human capital policies submitted by the vendor are in place and vendor is complying the standards. To ensure the compliance of corporate social responsibility, international certifications like SA-8000 and other related certifications should be made compulsory for all supply chain partners and validity and renewal of all certifications must be ensured by the buying companies. Post evaluations of the sourcing practices and evaluation criteria must be put in place. If this is not feasible to perform on all sourcing activities, monetary and non-monetary criteria should be established that qualify a sourcing activity for post evaluation. Comments, remarks, results and feedbacks need to be incorporated in the sourcing evaluation process and souring practices. As the country is facing an energy crisis and it is the biggest challenge that telecom operators are facing at the moment, the telecom companies are making a shift towards greener operations with reduced carbon footprint and more eco-friendly procedures in place. The measure of green operations of a vendor should be added to the evaluation criteria, alignment of the supplier with company's core values. Legal proceedings against any vendor if any should be considered and must reflect negativity on supplier evaluation. Anti-corruption policies must be included in the supplier evaluation.

VII. FUTURE WORK

While this research has demonstrated the evolution of supplier evaluation criteria and internal and external factors that played pivotal role in this progression over time, many opportunities for extending the scope of this research remain. This includes impact of work culture on sourcing practices in telecom industry in Pakistan, benchmarking of supplier evaluation criteria in telecom industry in Pakistan, compliance to responsible business conduct in supply chain. Telecom companies bring in the culture of their origin at the market place. A qualitative study could be done on the impact of the cultural values and work cultures of these companies on their sourcing processes. Sourcing in Pakistan telecom

industry is performing on a perception based model with no set processes that define the benchmarks of supplier evaluation criteria for local industry. . There must be a start line for adopting the international standards which can be established through some research of current sourcing practices, international procedures, dynamics of local industry and its needs. In countries like Pakistan which are faced with economic challenges, high unemployment rate and poor living conditions, the compliance to responsible business conduct often gets neglected. Most of the buyer companies require their suppliers to sign an agreement on responsible business conduct. A research can be initiated to study the level of compliance in supply chain to responsible business conduct and the factors that affect the level of compliance.

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