E-PROCUREMENT IN INDIAN COMPANIES: NEW TRENDS AND CHALLENGES

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Abstract—*The adoption of e- procurement system is a very unique and beneficial for Indian companies. Therefore, e-procurement is constantly receiving a lot of attention from different companies of different sectors. A well-conceived cost reduction strategy enables managers to capture maximum value in the form of direct savings. Organizations must embrace strategic cost reduction to facilitate a systematic cost reduction and building a solid organizational foundation that promotes a culture of cost reduction and efficiency in a form of new trends. E-Procurement provides transparency, results in savings of time and money, shortening of procurement cycle, ease of operation to the implementing organization and to the vendors. This paper outlines the e- procurement process and all the challenges faced by the Indian companies at the time of e – procurement and shows result of delivery on time and within budget.*

KEYWORDS: *e-Procurement, new trends, adoption, Indian companies.*

1. INTRODUCTION

In present business scenario the competitiveness force companies to undertake drastic and strategic initiatives to boost sales, increase flexibility and cut costs without considering about long term gains or losses. E-Procurement is the process where in the physical tendering activity is carried out online using the Internet and associated technologies. Business organizations are now under a tremendous pressure to improve their responsiveness and efficiency in terms of product development.

Traditionally, procurement of supplier and material were done through paper and the current market with data security and advanced tools whose process of e- procurement is done through the internet with the emerging application of E-commerce technologies, companies are forced to shift their operation from conventional way to a virtual e - commerce .Most of the technological application have higher profitability and higher cost savings in procurement. E-procurement has had an increasingly important role in Business-to-Business (B2B) commerce. Use of e-procurement not only lowers the cost of procurement but also provides better coordination between suppliers, quicker transaction time and increases process efficiency. However, even if the benefits of using e-procurement are high, its adoption has been at a very low stage. Some reasons for this occurrence is due to problems associated with people within the organizations to lack of ability to adopt the system, overheads associated with implementation and problem with persuading suppliers to implement e-procurement. If e-procurement is to obtain a strategic approach, due consideration needs to be given to how it can be strategically, operationally and technologically integrated. Organizations operating in the new economy need to align themselves internally with the demands that the dynamic environment imposes on strategic behavior .E-procurement systems are generally used for buying and selling online maintenance, repair and operation (MRO) goods as it can easily be transformed into e -catalogue and e- procurement also used for purchasing and selling direct goods, but there is still lack of acceptance in the industry towards this form of transition.

2. LITERATURE REVIEW

Through a revolution the use of e-commerce, procurement is increase. Procurement is migrating from traditional paper-based process to e-procurement with the increasing use of internet and E-commerce technology (Chong *et al*., 2002). The main function of e-procurement system is that it allows individual employees to order goods directly from their personal computers through the web on a real-time basis. Requests and orders are channeled through various forms of hubs or database. It also allows individual employees to search for items, checks availability, place and track orders and initiate payment of delivery (Ovans, 2000). Significantly it includes purchasing, transportation, warehousing and inbound receiving. Strategically, the e-procurement changes the nature of procurement; from unskilled work to knowledge work, from meaningless repetitive tasks to innovation and caring, from individual work to teamwork, from functional-based work to project-based work, from single skilled to multi-skilled, from power of bosses to power of customers, from coordination from above to coordination among peers. Generally e-procurement system has two essential components:

- Internal processing which is corporate intranet
- External communication processing which is internet based platforms.

Definition of e-Procurement

According to Heck and Ribbers (1999), small firms with management that recognizes the benefits of the new system proposed will be more likely to adopt the system and enjoy higher impacts compared with firms with management that do not recognize the benefits of the system.

Carayannis and Popescu (2005) suggested that a high professional standard on legislation and administrative framework and a high level of training and information access on suppliers are important to improve the efficiency, competitiveness, and responsiveness of e-procurement.

E-procurement is a collaborative procurement of goods, works and services using electronic methods in every stage for bringing efficiency and transparency. E-procurement allows organizations to conduct the purchasing process over the Internet without the use of paper.

 "E-procurement or electronic procurement is an automated, Internet-based way for a company to purchase the goods and services it needs to conduct business."

Procurement Models

There are three types of E-procurement models in literature:

- Buy-side procurement
- Sell-side procurement
- E-marketplace and trading hubs

The first application is the buy-side procurement which refers to an organization using electronic systems to purchase goods, such as office stationary, from contracted suppliers. In short, this model is generally driven by the specific requirements of the buying organizations than other models. The second application is sell-side procurement which is used to describe how one supplier sells to a number of buying organizations using electronic systems. e-procurement systems, e-commerce technology. Sell-side procurement model is often used extensively in Business-to-Consumers (B2C). The last application is e-marketplace and trading hubs which is a combination of industry consortium and the trading exchanges. The marketplace model brings together many different buying and selling organizations in one trading community. The most popular e-marketplace function is auction used for variety of product category. This type of model often helps to increase collaboration between companies in a single industry sector or providing the opportunity of e-procurement to companies.

3.   E-PROCUREMENT PROCESS

These stages may vary in different organizations, depending on whether purchasing is sourcing a new or repetitively purchased item, and also whether there is a detailed approval process for purchases that exceed a specific dollar amount. Most firms have streamlined the document flow process to reduce the paperwork and handling required for each purchase. Companies are using e-procurement tools to manage the flow of documents by (1) automating the document generation process and (2) electronically transmitting purchase documents to suppliers.

1. User Need for Product or Service

The purchasing process begins with identifying a material or service needed by a user, and electronic documents may be used in any of the following forms:

- Purchase requisitions from internal users
- Forecasts and customer orders (electronically)
- Routine reordering systems (barcodes)
- Stock checks
- Material requirements identified during new product development

2. Evaluate Supplier

User need has been recognized, the system will check to see if an approved supplier has already been entered into the database. In many cases, for a repetitive purchase, purchasing may have already negotiated a contract with the supplier, with established terms for delivery, pricing, quality, etc., and the supplier has already been entered into the accounting system such as a e-procurement system, online catalog, or purchasing card (such as VISA or America Express). In cases when the dollar amount exceeds the users' permission to generate a purchase order, the purchase must then go through an approval process, to review the requisition, approve it, and allow a purchase order to be created. If the requests an item for a higher dollar amount with no existing supplier, then purchasing may obtain quotes or bids from potential suppliers. Purchasing forwards a request for quotation (RFQ) to suppliers inviting them to submit a bid for a purchase contract. When the size of the purchase dictates that a detailed evaluation is required for a new purchase, supplier evaluation may be required. The potential evaluation of suppliers begins after determining that a purchase need exists (or is likely to exist) and the development of material specifications occurs. For routine or standard product requirements with established or selected suppliers, further supplier evaluation and selection is not necessary, and the approval process may be generated. However, potential sources for new items, especially those of a complex nature, require thorough investigation to be sure that purchasing evaluates only qualified suppliers.

3. Select supplier

Final supplier selection occurs once purchasing completes the activities required during the supplier evaluation process. Selecting suppliers is perhaps one of the most important activities performed by companies. Errors made during this part of the purchasing cycle can be damaging and long-lasting. After bids have been received, and/or the negotiation has taken place, the sourcing team will select a supplier, and then

move on to authorize the purchase through the purchase approval process.

4. Purchase Approval

After the supplier is selected or a requisition for a standard item is received, purchasing grants an approval to purchase the product or service. This is accomplished through an electronic drafting of a purchase order (PO), sometimes called a purchase agreement, after supplier selection is complete. Purchasing must take great care when wording a purchase agreement because it is a legally binding document. Almost all purchase orders include the standard legal conditions that the order (i.e., the contract) is subject to on the reverse side of the agreement. The purchase order details critical information about the purchase: quantity, material specification, quality requirements, price, delivery date, method of delivery, ship-to address, purchase order number, and order due date. Note that firms are increasingly using computerized databases to perform these processes, and are moving toward a "paperless" office.

5. Release and Receive Purchase Requirements

This phase of the purchasing cycle involves the physical transmittal of purchase requirements. This should be a fairly routine, although not necessarily the most efficient, part of the purchasing cycle. Some organizations transmit orders electronically, while others send material releases through the mail or by fax. Electronic data interchange (EDI), which involves the electronic transfer of purchase documents between the buyer and seller, can help shorten order cycle time. EDI transactions, particularly through the Internet, will increase over the next several years. The shipping and receiving processes require several other important documents (which also can be electronic), including the material packing slip, the bill of lading, and the receiving discrepancy report.

6. Continuously Measure and Manage Supplier Performance

One way to identify the best suppliers is to track performance after awarding a contract. Supplier measurement and management is a key part of the purchasing cycle. As shown in the exhibit, buyers should not assume that the purchasing cycle ends with the receipt of an ordered item or the selection of a supplier. Continuous measurement is necessary to identify improvement opportunities or supplier non performance. A desired outcome from performance measurement is improved supplier performance. If no formal evaluation takes place, a buyer has little insight into supplier performance over time, and tracking any performance improvement that results from supplier development efforts is not possible.

4. BENEFITS OF E-PROCUREMENT

- A virtual elimination of paperwork and paperwork handling

- A reduction in the time between need recognition and the release and receipt of an order
- Improved communication both within the company and with suppliers
- A reduction in errors
- Lower overhead costs in the purchasing area
- Purchasing personnel spend less time on processing of purchase orders and invoices, and more time on strategic value-added purchasing activities.

5. NEW TRENDS IN E PROCUREMENT

Some trends that are frequently used by Indian companies are broader use of procurement automation software ,deeper analytics and reporting , supplier risk management , wider use of punch out catalogs ,e –invoicing ,understanding the product, more accurate demand planning , increase competition and price pressure , more outsourcing ,shortened and more complex life cycle.

• Broader use of procurement automation software-

In today's economy, we are at a stage where procurement software isn't a "Nice – to- Have "but a "Must – Have" . By developing cloud solutions for procurement ,vendors such as b-pack have been able to reduce the cost of acquisitions .Procurement software system are now easy to install and to reduce indirect cost.

• Deeper Analytics and Reporting

When budgets are getting tighter, it is important to monitor all your spending to make more informed purchasing decisions. In addition to working with IT, organization are now looking for solutions offering real time spend analysis and customizable reports to assists them in this initiative. Innovations like Big Data are becoming a big opportunity when it comes to improving financial monitoring and discovering purchasing and spending patterns. This will help in decision making. Tracking budgets used to be a priority only at the end of fiscal year.

• Wider use of punch out catalogs

Punch out catalogs, a way to connect directly to the supplier's catalog from a procurement system, will be widely used in 2014. As a quick reminder, using a punch out catalogs, you can enjoy your negotiated prices with prefer vendors and assists to update items details.

• E- Invoicing

We accelerate the invoice processing time by eliminating manual and redundant task.

• More accurate demand planning

Demand planning is a key function of large-scale production. Large vendors usually have a manufacturing plant in almost every major country, in every region, and it depends on labor,

materials and customer demand when and where they will manufacture the products most efficiently. Some vendors also outsource the actual manufacturing and don't hold stock themselves, but supply their partners on a per-order basis. Obviously, this makes it imperative to have the right amount of raw materials available at the right time and at the right plant, and to make sure there's adequate stock of these materials to service incoming orders.

• **Increased competition and price pressures**
In the logistics arena, fuel costs are a primary driver of price and a key focus when companies need to find ways of cutting down on expenses. There's no sign of relief for this yet; fuel costs are only set to keep rising. The mistake end-user organizations make is to see logistics expenses, in general, as the first place to try to reduce costs. One of the reasons for this is that it's expensive to move product across borders, and organizations immediately assume there's fat built into logistics costs, when the true expense actually lies in fuel surcharges that are beyond their control.

• **More outsourcing**
Outsourcing all, or part of, the procurement and logistics processes is a growing trend among all global organizations, particularly those re-focusing their attention on core competencies and cost-efficiencies in the current economic slump. This is true for organizations such as financial services providers that have minimal expertise in logistics, as well as for manufacturing businesses, such as pharmaceutical companies that have their own supply chains connected to their core business.

• **Shortened and more complex product life cycles**
Today's business world is all about speed to- market. So this applies to how quickly new and unique products can be designed, manufactured and delivered to end users via distributors and retailers, but also includes the discontinuation of 'old' products. Both processes place a great deal of pressure on logistics processes to adapt and change accordingly.

E -procurement challenges
Organizational challenges:
- Many users are resistant to change, simply due to human nature and habit
- Users may believe that e-procurement will make their job more difficult or cumbersome
- Current roles will change due to the impact of e - procurement
- Economic-Legal
- Level of economic development
- Regulatory framework
- Technological scenario
- Existence of private competitor services
- General Education level

Challenges in e-procurement implementation:
- An inability to integrate with existing ERP and procurement systems.

- An inability to on- board and support suppliers (in large numbers).
- Complex and unintuitive user interface.
- Software integration issues
- Difficulties with catalogue integration.

6. OBJECTIVE OF THE STUDY

- To identify the challenges faced by e- procurement.
- To explore the new trends in e-procurement.

7. RESEARCH METHODOLOGY

A survey technique was used in this study. Total of five companies were selected for the study from India. Only well-established companies were selected for the study which providing e-procurement services for at least five years or more. This criterion secured a higher possibility for better information regarding the research area. Data collection was done using e-mail questionnaire for respondents (50 from each company). Follow-up was conducted with the help of e-mails. Websites of each company was used as an important source for documentation and information.

8. FINDINGS AND ANALYSIS

Findings from Indian companies

Tangible Benefits

Cost saving is recognized in accordance with the findings presented by different authors. In company high purchase volume helps in getting better price and higher tangible cost savings from supplier. Company partially allied with the concept relating to process efficiency. It helps in getting market overview, transparency throughout the company and reduction in the overall purchasing. They also associated process efficiency with reduction in numbers of suppliers, i.e., in invoicing and other information from suppliers view was shared by company , establishing that process efficiency enables better business control, professionalism in work and clears up other processes within the company. Further, both firms suggested time convenience as a vital benefit, users can utilize their time at work rather than purchasing.

Tangible Risks

Company partially related information technology-process risks with the implementation of e-procurement, as suppliers have shown interest in integrating e-procurement but found it to be very expensive to integrate with their existing system. The company had to provide training and educate its employees on proper usage of e-procurement. However, there was no problem with the integration and uncertainty of its current IT solution. For company, information technology-process risks did not exist; this was due to technological advancements, training the employees and other services. Despite the security, measures good communication between

all players in the marketplace is essential. In contrast, company rated risks linked to security and control issues very low.

E-procurement Adoption

Company considered several business case studies and analysis before making decision to implement e-procurement system. Nevertheless, the company was positively implementing e-procurement system. The company felt that the transformation was due to change in company's overview regarding e-procurement, as it was not just a new software solution. Tangible risks have significantly reduced and the communication of e-procurement adoption has become easier than before.

Economic Improvement

Savings from sourcing can be improved and accelerated through category insights and improved visibility and compliance. Many procurement outsourcers participate in common category markets on an ongoing basis rather than the episodic involvement of many internal organizations. This provides real-time insight into market price points and the opportunity for continuous refinements of sourcing tools and processes specific to each market. Outsourcing often provides a reduction in operational costs of 15-20 percent or more through process standardization and improvement, staff right-sizing and realization of economies of scale. Outsourcers live or die by their ability to generate ongoing improvements to processes and workflows, are able to leverage their resources across multiple clients and can bring the benefits of labor arbitrage to many procurement activities.

Service Improvement

While many procurement departments are anecdotally recognized for providing —good and service, internal clients still believe that many procurement activities take longer than needed and often focus on —staying in the process over achieving business outcomes. In contrast, a good outsourcing contract will include an aligned set of service levels and an effective structure for measuring and reporting these service level agreements (SLAs) consistently. SLAs can measure cycle times, satisfaction and realization of benefits more consistently than is usually achieved internally.

Capability Improvement

As discussed previously, procurement outsourcers are often able to provide expanded supply market knowledge in many categories already mentioned and beyond what companies can afford to maintain internally, thus resulting in more effective sourcing. Some providers will bundle e-Procurement tools, such as spend analysis, e-RFX, reverse auctions, supplier enablement, e-Procurement and e -Invoicing. Budget-constrained procurement organizations often cannot afford to maintain valuable but expensive capabilities in certain areas (market research, risk measurement, analytics, etc.). Service

providers can deliver these skills at a lower price point with the additional benefit of offering measurable service levels.

9. CONCLUSION

E-Procurement provides transparency, results in savings of time and money, shortening of procurement cycle, ease of operation to the implementing organization and to the vendors. Firms are currently at their early stages of e-procurement use, while several organizational, environmental factors as well as e-procurement systems related characteristics can play a crucial role in e-procurement adoption. So, firms who perceive e-procurement as beneficial, non-complex, compatible and of low risk to use are more likely to adopt e-procurement. This is compatible with previous studies illustrating that the main barriers to Internet adoption are simply the concern that the Internet would not lead to more efficiency, lower costs or more revenues. To the extent that companies can lower their knowledge inadequacies, they can facilitate their e-procurement adoption. Cost reduction is the most important benefit with e-procurement. Intangible benefits were hard to observe but still they had significant influence on companies using or providing e-procurement services.

Indian companies identified all three strategic approaches within their industries. But they also recognized that companies had moved from one approach to another and currently had more positive outlook towards implementing e-procurement services. Although, in past the trend had been towards purchasing mainly indirect material using e-procurement, companies were also understanding benefits with purchasing direct material with this medium. Finally, buyer side model were most dominate in Indian companies. This might be influenced by the scenarios under study five companies were powerful buyers. The availability and accessibility of procurement information is critical in the monitoring and evaluation of procurement activities and as an input to strategic decisions surrounding procurement. This has been identified as a critical area requiring further investigation through in-depth case studies of organizational practices to understand the complex socio-technical change arising from IS-enabled innovations in procurement.

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