

The emergence of e-procurement as an important tool used by businesses to achieve & sustain their strategic objectives: A *macroeconomic perspective on Pakistan's supply chain sector*

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Abstract

The paper explains the reasons behind e-transformation that has taken place in global supply chains in the recent past. It further highlights the renewed importance of e-procurement systems as many businesses have now shifted from conventional procurement practices to e-procurement through the use of modern enterprise resource planning (ERP) systems and network exchanges. It also includes an overview of the developments and breakthroughs in e-procurement which have helped businesses in achieving and sustaining their strategic objectives. Lastly, a macroeconomic perspective is presented on Pakistan's supply chain sector through an in-depth analysis of an industrial success model.

Keywords: Supply Chain Management (SCM), E-procurement, Strategic Objectives

I. Introduction

Over the years the world has seen a massive change in the management of businesses; from conventional multipurpose service functions we have seen organizations replying more on specialized in-house service functions or on outsourced services. It is quite evident that the focus of many organizations has now changed its focal point and it has now shifted towards the improvement, development and integration of support functions to achieve strategic business objectives such as operational efficiencies, profitability and sustainability.

The global economic downturn has also indeed played a pivotal role in bringing this change to the grass-root levels of business dynamics and it can now be clearly seen in almost all public and private sector organizations including those in the services sector. This change in business environment has highlighted the importance of operational efficiencies which has resulted in the revitalization of a concept called 'supply chain management (SCM)' as many businesses are now focusing on reducing inputs costs to gain marginal benefits. SCM is now believed to be becoming one of the main stepping stones for business growth.

Practically speaking there are so many examples of successful businesses in the services and manufacturing sectors where efficient supply chains have immensely contributed their part for the businesses to be able to achieve their strategic objectives through the improvement of common key performance indicators (KPIs) such as procurement efficiencies, stock-turns, maintaining operating working capital targets, inventory management, reduction in operational expenditures and overall increase in profitability. Supply Chain Management has now become an integral part of business operations it has shaped into a strategic tool and many large organizations are beginning to recognize its importance by taking additional measures such as restructuring of supply chain functions, improving infrastructures or even acquiring outsourced services.

The paper gives a brief overview of the factors leading to the renewed importance of supply chain management. It also highlights the emergence and the benefits of e-procurement. In the latter half of the paper the significance of e-procurement is also discussed and how it has helped businesses in achieving their

strategic objectives. It concludes by presenting an industrial success model where the use of e-procurement has helped the organization in improving its systems and benefiting from it in various areas of business.

II. E-commerce: The emergence of e-procurement and its importance

The information technology (IT) sector has very ably responded to the ongoing change in the needs of businesses. It has helped many businesses in improving their operational efficiencies by providing electronic solutions and internet based solutions for their supply chain networks.

With the continuous advancement in technologies and the transformation of business dynamics the world has seen an easy accessibility to reliable electronic support services available worldwide with an equal demand in almost all the sectors. Many large organizations in various sectors have immensely benefited from e-commerce solutions; the international trade requirements, easy accessibilities, stresses on cost cuttings, language and cultural barriers are some of the major factors that have indeed highlighted the importance of e-commerce. We have seen that in the pursuit

of gaining competitive advantage through cheap labor and low energy costs many European and American origin businesses who have set up their manufacturing units in emerging 'BRIC' (such as Brazil, Russia, India & China) countries and are running the businesses very successfully, this has only been possible due to the presence of e-commerce systems which have helped these firms to manage their operations efficiently from locations very far away from the manufacturing sites. Procurement being an important function in any organization with its direct impact on the profitability of any business has also had its share in the global e-transformation and has very quickly changed its form to a new concept called 'e-procurement'.

E-procurement which is one of the major instruments of e-commerce is still very new to many businesses around the world however it is now catching up in the race as many business managers and practitioners are beginning to realize its importance. 'According to Swaminathan, J. M. & Tayur S. R. (2003) The e-business paradigm has created an immense opportunity for firms to consolidate their buying processes (also called e-procurement)'. E-procurement has now

opened new horizons for managing and operating businesses and it has given the stakeholders copious options to make appropriate decisions on the procurement of feedstock, engineering items, utilities or services. At present, worldwide e-procurement is being majorly carried out on web-based portals or exchanges managed by professional companies. In some cases manufacturing and services businesses have established their own online portals or web pages for the purpose of carrying out their procurement activities without the need to involve third-party commission agents, trading companies or retailers. It has also helped businesses to carry out procurement activities through business-to-business (B2B) and business-to-customer (B2C) transactions on web-based exchanges or enterprise resource planning (ERP) systems. 'According to Subramanian, C. & Shaw, M. J. (2002) Web-based applications for business-to-business (B2B) electronic commerce are expected to enhance inter organizational coordination and improve relationships among business partners'.

With the increasing importance of e-procurement and its demand around the world there are so many examples of very reliable web-based e-commerce portals or

web-pages which facilitate e-procurement also and are being operated by large business groups. One of the much known e-commerce companies is owned by the Alibaba Group, which is operating its webpage by the brand name of Alibaba.com (<http://www.alibaba.com>). Alibaba.com was founded in the Hangzhou, China in 1999; it is now one of the leading companies in e-commerce which provides internet based business to business trade solutions to more than 50 million registered users on its portal in around 240 countries and regions. It provides services such as retailing, e-procurement, e-trading and e-payments.

Another very famous example of e-commerce portal is the company owned by the Middle Eastern Tejari group called Tejari.com (<http://www.tejari.com>). It was established in Dubai, United Arab Emirates during 2002. Since its inception, it has shown a strong performance and has emerged as a leading e-marketplace in the Asian and Middle East regions. With its more than 200,000 online users from almost all the sectors it has a strong regional presence and has expanded its operations to more than 18 countries around the world. It gives its members the facilities to use all

types of e-procurement services through the use of a specially designed system.

In addition to numerous benefits, e-procurement systems have also enabled fast and low cost communications between businesses and their associate partners, they have increased the abilities of users to carry out their business activities and maintain commercial relationships in the most cost-effective and efficient ways.

III. Significance of e-procurement for businesses to achieve their strategic objectives

The global economic recession has immensely hit the turnovers of businesses around the world which has indeed forced many large ventures to rethink on their business strategies and it has also changed the shape of their strategic objectives. In the past we have seen that businesses were always concentrating more towards boosting their sales however due to the current economic conditions persisting in the world it has now become one intricate task to do so. The trend has now changed towards the reduction in operational expenditures and other overheads through focusing on strategic objectives and targets of the business. 'According to Irfan, D., Xiaofei,

X. & Chun, D.S. (2008) Competitiveness in today's marketplace depends closely on the ability of a firm to grip the challenges of reducing lead-time, cost estimation, increasing customer service levels and improving product quality'.

It is a widely known fact that procurement is one of the important sub-sections of business supply chain functions which have a direct relationship with the 'profitability' of any business, the most important strategic objective of any business. The transformation from conventional procurement to e-procurement has done a world of good to businesses in achieving their strategic objectives and targets. In many countries e-procurement is now a widely preferred option and it is believed that besides improving efficiencies it has also given businesses a better chance to reach the unexplored markets. Through e-procurement businesses have reduced their high-spending on their manufacturing costs and have had a positive impact on their profitability in such way as now with the aid of web-based portals or exchanges many businesses can easily post their requirements or request for quotations (RFQs) online and in turn they get quotations from suppliers around the world without any hassle giving

them so many options to choose the best and the most cost-effective one. It even gives them an opportunity to save on order-processing and associated costs.

In some cases businesses have also benefitted from the special retail prices offered to them by establishing direct relationships with the original equipment manufacturers (OEMs) or the producers through e-procurement mechanisms. E-procurement has also helped many businesses to keep a track of all the purchase transactions and carryout operations in a much more transparent and controlled way. It has given businesses the option of evaluating bids or offers online against their requisitions on the portals or exchanges by creating their own virtual auction platforms to get best possible prices for the required items.

Alongside helping businesses to improve profitability, e-procurement has also helped many businesses in improving on another very important strategic objective and that is 'operational efficiency'. E-procurement with its fast and efficient mechanisms has helped businesses in reducing their 'procurement cycles'. It has directly or indirectly impacted on the management of inventories as well and

through this it has given businesses the options of reducing their inventories hence giving a relief to their operating working capitals (OWC). The response time to both internal and external customers has also decreased with the use of e-procurement. To further improve operational efficiencies e-procurement portals or web-pages have also given options to businesses such as evaluating the performance of critical suppliers, standardizations, optimization of their procurement processes and rationalizing their supplier bases according to their own needs. 'According to Mukhopadhyay T. & Kekre S. (2002) Advanced EDI also significantly reduces the probability of rework and delay, thus lowering the supplier's and customer's order-processing costs. The simplification of the process by reducing the complexity of orders or increasing the fraction standard items sold also improves business performance'.

Another very important aspect of business strategic objectives is the newly directed approach towards long-term 'sustainability'. To achieve long-term sustainability, businesses around the world have taken steps such as investing in their human capital, sustaining short-term profits,

maintaining brand equities and understanding their corporate social responsibility (CSR) etc. This important strategic objective has brought so many additional responsibilities on businesses, alongside earning revenues it has bounded businesses to be environmental friendly and socially responsible. With this the world has seen the birth of concepts called 'green supply chains' and 'green purchasing'. These two concepts are very vast and cover so many aspects of business operations; surprisingly e-procurement has played an important part in helping businesses to achieve such objectives and business requirements also. It has given businesses a chance to practice the 'green concepts' in real terms by introducing mechanisms to reduce or eradicate the use of papers and printing solvents.

Overall, it is very safe to say that e-procurement has been a major tool which has helped businesses in achieving their strategic objectives through; benefitting from the cost-effectiveness for increased profitability, improving on conventional procurement practices to automated processes through the use of enterprise resource planning (ERP) system or web-based exchanges for better operational

results, bringing a change in the outlook of business with more streamlined trade practices and responding to the social needs of surrounding environment.

IV. Industrial Success Model

'Industrial procurement' is a very complex process as it has so many limitations for a purchaser as every decision has a huge impact on the quality of finished product and the business profitability. It mainly involves the purchase of services, utilities, raw materials, engineering spares and machinery. In some cases companies procure goods and services on contracts and in other cases they negotiate deals on spot basis. As mentioned in previous sections also procurement can be an important tool for a company's strategy to reduce costs. Historically, individuals or departments responsible for purchasing goods and services have relied on various methods of doing so. The most basic methods used were, visiting the vendors personally to give hard copies of purchase orders on the spot or the use of telephones, fax machines or post mails to place orders.

Our industrial experience tells us that businesses of almost any size or structures

suffer in some way or the other due to their inefficient procurement processes. Inefficiencies occur at every stage throughout the procurement process, from the point when goods or services are initially requisitioned to the time of delivery and beyond.

In Pakistan, contrary to the country's overall economic growth in the last decade we have seen a remarkable growth pattern in the availability of specialized supply chain services through the provision of IT enabled systems being offered specifically to the supply chain sector. One very good example in the industrial sector of an organization benefitting after shifting on an ERP and e-procurement system is the Polyester Fibre Business, of ICI Pakistan Limited.

ICI Polyester Fibre business is one of the largest manufacturers of polyester staple fibre (PSF) in Pakistan today. Established in the early 1980's its annual spent is now more than 10 billion rupees. As we all know that polyester manufacturing is one of those processes in which procurement plays a truly important role in the outlook of finished products and the profitability margins. Before 2002, when the company shifted on SAP a very widely used ERP system, conventional system of purchasing

was in practice. It required a lot of paper work, there were a limited number of suppliers and there was no major access to foreign suppliers except for the few who were in business through their authorized local agents. The business used to procure spares directly from the third-party suppliers instead of the OEM's (original equipment manufacturers) which was really costing them in terms of high prices. Alternate sourcing was not possible, as options for finding alternate sources were very limited and confined to the local market only.

Another example that would clarify the above mentioned notion is, at the time of its inception the first three draw-lines (batch production plant) installed at ICI factory were supplied by a well known company called 'Fleissner'. In those days each and every spare required for maintenance purposes were only purchased from 'Fleissner' and the prices charged by the company could not be challenged as there was no other option available. This was just because due to conventional procurement systems direct dealing with the OEM's was not possible and hence the purchase team could only rely on one supplier.

Along side the prices issue another problem which the team faced at that time

was the average time required to complete the procurement cycle. The lead times of critical products increased massively as the request for quotations (RFQs) were posted to the genuine suppliers which were mostly in Europe and it took good 2 to 3 weeks for the mail to reach them and another 2 to 3 weeks for the quotations to come back. After the respective quotations were received the purchase orders process used to follow the same manual procedure. The whole process used to take around 4 to 6 weeks to be completed and at times there were further delays also if either of the parties committed any error in the paper work.

ICI, Polyester Fibre Business shifted its operational database on SAP (Systems, Applications and Products) in 2002, since then it has enjoyed numerous benefits through the use of this specialized ERP system. The use of SAP has helped the business in streamlining its processes and improving its KPI's such as lead times, inventories, stock turns, procurement cycle etc. Capitalizing on the benefits achieved through the implementation of an ERP system, the business also launched its e-procurement website (<http://www.e-procurement.icipakistan.com>) a few years back.

The introduction of e-procurement website has dramatically improved the overall efficiency of the procurement process at the plant. The business's e-procurement portal has helped in numerous ways such as decreasing the lead times of imported and local materials significantly, helping the purchase team to develop multiple sources from around the world for critical products and even giving them an option of introducing VMI's (vendor managed inventories). Furthermore, it has eliminated the additional costs that were previously being incurred on the processing of purchase related documents. It has also helped in decreasing the 'order cycle times' from an average 2 weeks to almost 2 days. Compliance levels have gone up from 60% to 95% with the purchase efficiency (i.e. the PR to PO conversion ratio) reaching almost a 100 % now.

With the help of its efficient e-procurement system and purchase process this year alone, till date the business has been able to save around 9.5% on its total spent of around 200 million rupees on engineering spares and mechanical items through use of alternate sourcing, purchasing from the OEM's directly and savings on the logistical and processing

costs. These are just the primary savings calculated in monetary terms however if we also consider the working hours the team has saved over time then it would paint a bigger picture of the benefits e-procurement has given to the business.

Apart from the above mentioned benefits it has also helped the business from the point of view of audit requirements and procedures. Being an ISO certified company, the introduction of ERP system and e-procurement website has helped the business to comply with all the types of procedural requirements to manage the operations in a more controlled and transparent manner.

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