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Synergizing Business Process Reengineering with Enterprise Resource Planning System in Capital Goods Industry

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Abstract

Business Process Re-engineering (BPR), a concept to business strategy, made its impact in industrial sectors with the advent of liberalization, privatization and globalization of the Indian economy. But, BPR alone can't fetch the desired benefits in terms of profitability and sustainability of an organization without properly addressing the issues and problems of external stakeholders throughout the supply chain. Introduction of Information Communicated Technology (ICT) driven cross functional concepts like Enterprise Resource Planning (ERP) seamlessly integrated all functional areas and brought about significant improvement in business process as well as the productivity of the companies. With service operation growing rapidly, ERP expanded its scope to synergize back office function automation with front office functions.

Customer centric business environment like capital goods in manufacturing sector, it is always paramount importance to critically analyze the flow of business process with changing market scenario. Functionality like planning of an ERP system provides business enterprises the much sought after means to manage production capacity, material availability and shipment schedules. Forward looking Company is on serious lookout of realigning its business strategy to strengthen its market base while making forays into new business areas. Of the many initiatives taken so far, the one that holds the key to its long term sustainability is the successful implementation of BPR. Integrating all facets of business activities with a cost-effective manner both in 'front' as well as 'back' office automation is a real challenge today. Synergizing the two, however, is the challenge to the stakeholders at large; as multiple issues, both technical and non-technical, need to be addressed concurrently while putting a strategic model to work. Interestingly, not much work has been done in this area....further study is envisaged. Here an attempt has been made in orchestrating a scenario building exercise in order to break the jinx that capital goods industry has not been able to achieve despite best of its efforts.

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1. Introduction

Development of strong and vibrant engineering and capital goods sector has been at the core of industrial strategy in India with the initiative taken by the Central Planning Commission after Independence. Emphasis that this sector received was primarily influenced by the erstwhile ‘*Soviet Union model*’, which had a definite role to play in the rapid state-led industrialization through the development of core engineering and capital goods sector. Thereafter, ‘*Mahalanobis model*’ - a ‘supply oriented’ model with basic emphasis on increasing rate of capital accumulation and saving, gave engineering and capital goods sector a prime importance and pace. Concurrently, huge industrial base created for the purpose also helped to become self-reliant with indigenous manufacturing of wide range of import substitute products. Owing to all these factors, India has become a strong engineering and capital goods base and is now characterized by a large variety of products - a legacy and output of import substitution policy.

Performance of capital goods industry reveals that its fortunes are inextricably linked with that of overall industry scenario. High association between performances of two sectors is further accentuated by high elasticity of capital goods industry to changes in its industrial growth. Value addition of capital goods contributes a fairly constant proportion (10-12%) of total manufacturing value added. This establishes manufacturing as a key to end-user sector of capital goods. Consumption of capital goods constitutes a constant share of 18 to 20% of total Gross Domestic Investment in India. Output of capital goods in supply side is determined by investments in this sector. Investments in capital goods sector have declined with decline in relative profitability of capital goods sector vis-à-vis the other sectors. Capital Goods industry shows slightly low result as evinced by low value of Revealed Comparative Advantage ($RCA < 1.0$), which has taken a downward dip in recent years. The RCA index 1 compares national export structure with that of world export structure, and is calculated by dividing a country’s share in the exports of a given commodity category by the share in world exports of that category.

2. Business Process Re-engineering

Business Process Re-engineering is defined as a radical redesign of processes in order to gain significant improvements in cost, quality, and service (Hammer and Champy, 1993). Firms have been re-engineering various business functions throughout the years, ranging from strategic sourcing to order fulfilment to customer relationship management. BPR projects, by nature, entail major changes in business processes that may lead to organizational instability and failure (Abdolvand et. al., 2008). It is reasonable to expect business process re-engineering projects to have a significant and measurable effect on firm’s performance.

Anecdotal evidence suggests many companies to be benefitted from BPR projects round the globe. In eighties, CIGNA Corporation successfully completed a large number of BPR projects and realized a significant saving of more than \$100 million by improving its customer service base and reducing operating expenses. Similarly, re-engineering of ‘accounts payable’ process at Ford Motor Company increased speed of payment operation and improved company relations with suppliers via collaboration in BPR strategy. Arguably, some BPR projects fail to meet expectations. A survey conducted by Arthur D. Little consulting firm found that more than 80% of executives surveyed were not satisfied with the outcome of their BPR projects. Such poor outcomes are attributed to several factors in literature support (Davenport, 1993; Ahmad and Zairi, 2007) including much expectation in minimum time, undertaking / starting projects without comprehensive cost-benefit analysis, lack of expertise on redesigning on work breakdown structure, lack of co-ordination / integration within all departments and finally shortcomings in information technology communication.

Intense world-wide fierce competition forced organizations to re-engineer their old fashioned processes to accrue new heights of success (Belmiro et.al. 2000). Through re-organizing, eliminating some processes and finding new ways of doing things, BPR helps organizations to change their old fashioned structures into innovative processes. Successful implementation of BPR brings many benefits to the organization (Cao et. al., 2001). According to Hammer, 1990, customer satisfaction, increased productivity, higher flexibility, improved coordination and improved competitive advantage are some of significant benefits of successful BPR implementation.

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