Enhancing Traditional Academic Processes Using Analytics

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ABSTRACT

Server Virtualization plays a vital role to reduce hardware cost, as well as it enhances scalability and availability of resources, this technology become the foundation for cloud computing. Server virtualization, implemented by sharing available resources efficiently, hence resource sharing strategies plays a crucial role in performance management in Virtualization. In This paper, we have concentrated on processor sharing policy applied in open source Xen virtualization that is CPU (Central Processing Unit) scheduling algorithms.

CPU shared among multiple Virtual machines with the help of Scheduler implemented in it. We have analyzed Xen’s CPU scheduling algorithm and its performance, and we have suggested optimization in this algorithm in the form of reduction of waiting time and turnaround time.

Our findings are, based upon existing credit scheduler of Xen 3.0 (and onward). We have verified our results through demonstrative examples that are representing existing algorithm and its enhancement. To measure waiting time and turnaround time of VCPU. We implemented algorithms in Java, finally it proves that waiting time of VMs while allocating PCPUs to VCPUs can be reduced;

Keywords: Virtualization, Credit Scheduler, VMM, VM, PCPU, VCPU, Waiting Time, Turnaround Time.
Concept Used In Operations To Improve Key Performance Indicators

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ABSTRACT

Today all organizations have tighter budgets and scarse resources than ever. Organizations are experiencing ever increasing pressures to improve security, comply with regulations, and continuously improve availability. The OEMs (original equipment manufacturer) are operating in strong global competition environment with markets is more turbulent and with complex scenarios. Different concepts are used by OEM’S to improve on their KPI’s (Key Performance Indicators). In today’s world automotive industry offers rapid increases in the number of models and model variants that are available on the global market. To cater to the needs of the growing challenging requirements, the scope of Operations Management (OM) has changed significantly in the last several decades. To cater to this growing requirement, fragmentation and segmentation of vehicles results in a more complex supply chain that needs to be managed. Starting from Re-order Point (ROP) to Enterprise Resources Planning (ERP) and Supply Chain Management (SCM), OM has gone through a long way in terms of scope and techniques being used. Lean production, JIT philosophy and agile manufacturing have significantly changed the ways how we design and analyze the operations. Also OEMs are continually pushing supply-chain pressures on their suppliers to reduce costs, increase output, increase quality, and provide more frequent deliveries. Suppliers, in position as strategic partners of automobile producers, must be able to quickly respond to changing demands in the market because OEMs are keen on improving their Key Performance Indicators (KPIs). Sourcing and planning and vehicle component makers must demonstrate that they can deliver the required design, quality, service and price. This leads to standardization of the key trend in the automotive industry for the components and modules. The main aim is to implementing all the processes to improve Key Performance Indicators (KPIs) of the organization. Also OEMs are continuously improving supply-chain process internally and with their suppliers to reduce costs, increase output, increase quality, and provide more frequent deliveries. OEM’s and suppliers must be able to quickly respond to changing demands in the market in order to support Key Performance Indicators (KPIs).

Keywords: Enterprise Resources Planning (ERP), Key Performance Indicators (KPIs), Supply Chain Management (SCM)
Breakthrough Disruptions in Supply Chain Management of Auto Component Industry in India

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ABSTRACT

Auto component Industry is considered as backbone of Automotive Industry. Both Automotive and Auto Component Industry is going through a transformation phase in last 10 years. The transformation is majorly driven by three factors as below:

1. Changing customer expectations in QCD
2. Regulatory compliance for environmental protections (Sustainability)
3. Integration of supply chain through digitization.

The above factors have impacted the automotive world in India and most of the OEMs have redefined their products and processes to comply to these expectations.

Since Auto OEMs are largely dependent on Auto component suppliers, it was imperative for tier 1 suppliers to align with OEMs on these factors.

Many multinational and Indian Auto components SMEs have sensed the need for the change which was must for its survival. On one side this was the challenge being faced by SMEs which can impact on its survival and on other hand there was a tremendous scope and opportunities of business growth, if they comply to these factors through innovative solutions. This was the tipping point for Indian Auto component SMEs where breakthrough disruptions are create.

These disruptions have not only helped as solutions to the challenges being faced by SMEs, it also helped SMEs developing a competitive edge and new benchmarks.

The SMEs who have created these disruptions have proved themselves a long term players and have enjoyed the fruits of higher growth and sustained profits.

In this research paper, 3 breakthrough disruptions created in last 5 years in Indian Auto component SMEs will be discussed. These disruptions are in the areas as mentioned below:

1. Optimising the Inventory levels in the entire value chain ensuring on time delivery to customers - Disruption in Planning
2. Optimising the packaging and freight cost through Innovative Inbound and Outbound logistics – Disruption in Freight and Packaging.
3. Creating a visible supply chain through digital Integration – Disruption in Data sharing

Key Words: Disruption, Supply Chain, Automotive, Auto Component, Challenges.
Is Disruption the new norm? A perspective from Operations Management view in IT/ITES especially KPO/BPO

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ABSTRACT

Current era of globalization and digitization is creating transformative forces and disruption in every industry. This paper depicts how this transformation presents both challenges and opportunities to operations managers within IT/ITES sector especially BO/KPO. Operations managers must be sensitized to the external forces to understand their impact on their customers. This can enable them to devise appropriate strategies to leverage these transformative forces and stay competitive. A fundamental shift is needed by Operations managers from a traditional inside out mindset to an outside in mindset. Using suitable strategies (lean, agile, six-sigma, etc.) they can align their operations to customer and business requirements. This paper explores use of lean operations management approach through case study method. Study of this approach in context of KPO/BPO (part of ITES) is not widely researched and published leading to incomplete understanding. Case demonstrates successful use of lean operations management model to improve and sustain a finance process. It reinforces the use of service operations theoretical framework with certain limitations.

Keywords: Lean Operations Management, Operations Management Innovation and Digitization and, BPO and KPO, Case Study in KPO BPO, Service Operations Case Study
Revisiting, Reanalyzing and Maintaining Flexibility in improving probability of success for projects in India

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ABSTRACT

This study deals with exploration, identification and study of some Critical Success Factors (CSFs) that influence the project performance with particular reference to large infrastructure / construction projects and start up projects in select sectors such as engineering, infrastructure, construction, telecom and software projects, especially in India. It is clear that the ‘strategic intent’ that gives birth to a project, is to bring about certain changes that are necessary for organizational effectiveness. Thus, the projects, particularly the startup projects, must have a strong link with the “Business Strategy” of an organization. In practice however, the “Project Performance” is influenced by the business environment, notably the market factors and the expectations of a variety of stakeholders.

The research undertaken is based on 30 case studies across a few industry verticals. The analysis indicates that there is a strong case for incorporating two additional CSFs namely, “Flexibility in Planning” and “Dynamic Feasibility Study”. Inclusion of “Flexibility in Planning” envisions multiple levels, namely organizational, strategic, and operational levels. “Dynamic Feasibility Study” is essential since the current static; one time approach to feasibility assessment is no longer valid when the project environment undergoes major changes. Additionally it is seen that ‘Risk Management’ needs specific formal attention from the project teams. It is also noticed that it is essential to give lot of emphasis on understanding ‘Scope of the Project’ (that appears to tentative and incomplete in many projects) in relation with ‘requirements’ specified and the core need for which the project was initiated in the first place. It is hoped that the findings of this study will help future project managers to ensure ‘Successes’ in their projects.

Keywords: Startup Projects, Project success, Success Criteria, Critical Success Factors, Engineering projects in developing economy, Flexibility, Dynamic Feasibility Study (DFS), Preliminary Project Feasibility Study (PPFS).
Prediction of Financial Distress and Insolvency for Industrial Firm (Case study)

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This paper aims to redress some of the incorrect decisions practiced by management in "Al-Hayat Firm for Manufacturing Durable Products", for the period (2013-2015) bringing the firm to the edge of collapse. In this paper, the focus lies on the benefits of the financial analysis in the economy to help the decision makers become more aware and how to gain a competitive advantage for their firms. The aim of this paper also is to shed light on the negligence practices in some firms and the associated problems of a financial analysis system implementation.

The evidences suggest that the firm suffered a heavy burden of debts and going bankrupt in the near future. Financial ratio's analysis has been used to assess profitability and risk of the concerning firm. In liquidity ratios the percentage of the working capital is less than (1), indicate the increase in the liabilities over the assists. In the leverage ratios the total liabilities to total assets was increased from (38.69%) to (53.73%). In the activity ratios the inventory turnover decreased by (1.10 times) through the given period. In the profitability ratios the net profit to total sales became negative amount to (-80.01%) from (-33.61%) for the same period. Also, the net profit to total assets percentage declining to (-9.29%, -2.10%) in the given period, and the stock book value declined from (85$) to (57$), through the given period.

The researcher used one of the different measure used to predict the firm's insolvency and probably its bankrupt (i.e. Altman, Z-score analysis). The study result indicated the weakness of "Al-Hayat Firm for Manufacturing Durable Products" for the period (2013-2015). In calculating the "Altman, Z-score" the result suggest that (Z) value for the given period was less than 1.81, (Z-score <1.8). The main features give a gloomy picture and inefficiency of firm's financial position.

Keywords: Insolvency, Financial analysis, Industrial firm, financial reporting, Working capital