Abstract----

Globalization opens doors for industry to do business operation from multi locations. India allowed in 1990s foreign companies to set up their plant in India. This create environment of international standard in terms of quality and price. Domestic companies have to compete with international players in quality and cost. In order to cost reduction companies start to buy child parts (part components to assembly or raw material) from cheapest place irrespective of their geographical locations and install their plants either near to raw material source. Automotive industries look a balance of cheap raw material cost and low wages manpower skills. Even though all effort made to find ideal balance of cheap raw material and skill, but all range of raw material cannot be find at single place in terms of quality and price. So, out sourcing of raw material or child parts done to achieve best of quality and pricing. This situation makes supply chain more complex and higher delivery risk associated activity.

Customer buying power made him more choosey about product features and look. Customer expectation converts delighted features in to basic necessary features, means designs capability to present product with new delighted feature in new trend of emerging markets. This creates pressure on supply chain to be more responsive to supplier base development to meet customer requirement.

Traditional management approach which involve centralized decision power, non-delegation of power and authority, poor management, lack of trust, nonprofessional working style will no longer work in today scenario. Organization has to realize market demand of adopting latest and new technology which to enhance productivity, reduction in inventory, better systematic management. Traditional approach considered purchasing, storage, and production planning as separate functions. Initially purchasing is considered as clerical job, it get evolution in its role and function, name get change from purchase to procurement and supply chain is latest term to define this function which is combination of providing scheduling to supplier, releasing production schedule to plant based on customer demand, storage of parts and inventory management, logistic which perform to deliver products to customer. Adoption of supply chain automation is to place the organization with new technology.

India is emerging as future destination of manufacturing sector. Indian government also emphasis on it with theme “Make in India”. India has man power skills availability at lower price than European countries, technology draw backs need to be removed in some fields, which came with passage of time as manpower got new technology exposure during working in multinational firms. Some joint ventures also bring this change in existing technology and companies are now signing agreement with world technology leaders to support on technical front. Technical agreement provide knowledge & Collaborator Company can learn and create their own research and development center.
Business environment became more complex, industry has to maintain global standard in all aspects. International quality and productivity can be achieved through application of latest technologies. The management systems (tools & techniques) of international standard are to be applied to compete with international players. The business philosophy is emerged as find out best quality at lower price, put manufacturing facilities near to low cost raw material availability and low cost manpower availability. This philosophy trends made supply chain as more complex. Materials moved from various places considering world as home town.

Is there any tool or techniques available or someone should go his own ways. There are some tools and techniques available, but enterprise resource planning got remarkable position as world is now in computer era. Enterprise resource planning systems were designed before the birth of 24/7 global web economy. It is a software having linkage between all function of an organization like material resource planning software has linkage between material planning, manufacturing planning, and customer relationship management.

Enterprise resource planning require huge amount as investment in purchasing and implementation and as running cost as well. Investing money and getting fail is really pain full to company. Objective of this research work is to find out reason of failure in automation of supply chain management, to cope up these reason is big challenge to management.

Automation of supply chain system is desirable in many industries to maximize their efficiency. Generally the passenger car manufacturers implemented automation in early state of automation conceptualization. However their suppliers are in moderate stage of automation and their sub suppliers are not at desired level of automation. So, supply chain full automation is still struggling and raising question to the industry. Do they really justified capital expenditure done on automation as capital budgets are fixed and resources are limited? Now it raise another linked question that how automation giving better rate of return on investments. What are the challenging factor to initiates and sustain these benefits and how we can attain them.

According to experts of field complete automation of logistics significantly reduces number of manpower engaged. (Zonalogistics 2013). Industry is moving towards fourth revolution which is driven by network and internet. This technology making real world more closer to virtual growing in day by day. In coming day’s production and services grow in personalized manner to full fill the condition of the efficient and flexible system of production. It largely develop integration of business provider and informed, demanding customer for value added product and services and linking of quality service with production is termed as hybrid technology (Cutler 2013). 

ERP edition offer a range of variety for user data interfaces, user compatible and required access control, information security & protection, commercial business practice, integration of all process easily with common tool. Now the term ERP is of no worth to use in market application for hospitals, offices etc. other than manufacturing. In general area of application,
comprehensive and integrated software solutions offer are marketing as ERP solution.(Ge et al 2006).

The population under this research is suspension manufacturing industries existing in and around Delhi – NCR (national capital region).

The sample set comprises inputs from employees working in supply chain management at the level of executive, manager and Head of supply chain department, similarly executive manager & head of automation department of original equipment manufacturer and chassis suspension system supplier. Representative and plant heads of sub supplier and also included in some consultants and academic expert of subject total sample size 295 respondents. Out of 295 respondent total 262 had given reply to mail. 10 responses were found invalid. So, total 252 responses got to analysis The chassis suspension and its supplier’s employee through a questionnaire survey. This survey had taken place on line (electronics), delivery and collection of printed paper. Somewhere face to face interview had taken place. It included both close ended and open ended question as well as by interviewing and cover the employees of supply chain and automation department of passenger car manufacturer and their chassis suspension system supplier plants. For IT experts and academic experts and Plant heads, head of department open ended questionnaire will be part of data collection.

Responses measured on Likert five item scales from strongly agree to strongly disagree. Since data collected on Likert scale is of ordinal type (one score is higher than other). Therefore median is calculated instead of mean and non-parametric test to be conducted. It is endless debate on Likert scale regarding its nature as ordinal data or interval data. For ordinal data median and quartile test was conducted. To test it on nominal scale, data gathered is divided in two groups as agree and disagree to analysis it by chi square test of independence. Neither agree nor disagree observation is not considered in chi square test.

Results found that current status of automation is 69.4% has semi automation in supply chain. Automation solution providers have to work more towards more customization, user friendly and ability to tackle practical situation. 13.8 % have no automation in their supply chain. Only 8.3% claims that they have full automation of their supply chain and same percentage has little automation. Full automation percentage was observed low. It means automation of supply chain not implemented fully as desired by user.

Chi square test also performed with same set of data to test hypothesis at confidence level of 95%. Result of statistical testing find that automation of supply chain has significant effect on timely delivery to customer. It is necessary to became competitive (having edge over. Automation also increases satisfaction level of customer. Automation makes significant and positive effect on better coordination. Similarly automation makes positive effect on inventory turnover improvement, automation helps in finding obsolete and excess value and increase visibility of inventory flow. Automation reduces conflict between departments.
Conclusion is that automation of supply chain provides positive and significant change in the existing supply chain management system and improves actual performance. It proves that automation of supply chain improve supply chain performance and increase customer satisfaction through timely delivery to the customer. Automation also provides an organization a competitive edge to customer over other supplier to same customer.

From the point of return on Investment, automation of supply chain system does bring efficiency, accuracy in the system and reduce critical inventory levels and thus in long term is beneficial to the organization and becomes instrumental in success of an organization. It means that automation of supply chain reduces inventory level by identifying obsolete and excess inventory and increase accuracy and efficiency in system by better coordination, keeping optimum level of inventory.

Organization must go for automation and at the same time automation solution provider companies need to take steps to reduce automation implementation and operation cost. To increase success rate of automation the success model framed and discussed below helps to organizations in automation successfully.

Success model of pre-implementation stage is start with forming a team consists of IT experts internally or externally and user of concerning module as members. Accurately feeding of master data is taken care as second biggest challenge after operating cost. Then management has to lay down its objective and vision for automation and at organization level. This step is necessary as automation is considered as IT project which is evident from earlier research and projects get fails due to absence of management support. Organization specific need to be identified in all processes as every company has its own strength and weakness, which reflects on their systems and way of working. This activity also help to identified nonfunctional requirement of software, which may lead to cost saving. Based on these two inputs of management vision and organization specific need, system procedures and logic sequence is to be determined. This model approach covers all difficulties and concern raised by respondents of our study.

During implementation of automation of supply chain organization, must stress on issues as discussed here with-First step is checking accuracy of master data. Some minor correction can be carried out by running trial run of automation system. By trial run user will also came to know about practical difficulties. Therefore at later stage user say customization is poor (8% as in our current studies).Project leader must take care that user takes interest and give his feedback on output along with project team trail run. Proper training to all employees to be provided by IT expert and organization has to make a set up that trainer may create with in organization to trained new employees. Training is also necessary for easy understanding of employees about software and to make it user friendly. Human nature does not accept any changes easily and employees in organizations tend to follow same practice of manual procedures. Management should take care of this rigidity to change.
Success model in post implementation is start with the analysis of output of system automation and give feedback to project implementation team if any minor changes required. Management should keep track on problems faced by user and help to provide their solution. Automation of supply chain is a continual improvement process and organization that regularly works on improvements to overcome user problems get definitely success in automation of supply chain. This is also evident from our study that an organization has history of automation more than five year and still facing problem of customization (8% of respondents in current study).

Finally, automation of supply chain is beneficial in operational efficiencies of organization through effectiveness of supply chain and success model can be used to make automation project implementation successfully.