Analyzing the Value of Big Data Analytics in Suppl Chain Management

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Supply chain management is a methodology of improving the business processes by making them more effective and efficient resulting in more customer satisfaction and cost effectiveness The primary job of SCM is to enhance the product or service competitiveness. This paper is an endeavor to study the value of data and analytics in Supply Chain Management (SCM).

I. INTRODUCTION

The supply chain is a very wide term covering lot of activities , right from procurement of raw material, processing , transportation, warehousing till the final product reaches to the end user . All these activities of the supply chain generate big data and hence for more effectiveness and efficiency this data need to be analyzed , so that accurate and real time insight could be extracted to achieve the ultimate goals , as Supply Chain industry is a tech oriented and data intensive industry .

WHAT IS BIG DATA IN SCM

First lets understand what is big data- Big Data is a huge amount of data which can be processed , unprocessed , structured or unstructured . and correct analysis generate correct insights from this data leads any business to establish and understand the trends and patterns of the market/ customers. Hence the final analytics can be used for better decision making .

Big data in SCM - SCM process involves various stake holders i.e. suppliers, manufacturers, retailers, end consumers. hence there could be different trends of these parties , environment, market in different time, place, seasons ,years etc. Hence consumer buying behaviors, supplier behaviors, facility trends etc all these are big data in SCM and it is vast .

WHY ANALYTICS IS IMPORTANT - This Big Data is of no use without analytics hence the usable information out of this data could only be extracted once this gold mine of DATA is analyzed and proper patterns, trends and information is extracted out of it.

Advantage Of Big Data And Analytics -

This fine technology of Big Data Analytics is changing the way companies operate. Many companies are able to acknowledge that the competition is not among the quality of product or service but the SCM of a company . The better data is analyzed the better it is able to perform in SCM. Big Data Analysis is enabling smart decision making and eliminating the risk associated with the behaviors/ trends of various parties involved in SCM.

it provides the data for analysis not only from available internal data of a firm but also expand the horizon with available secondary data. It applies efficient statistical tools to both primary and secondary data. This will not only improve the front line operations but also helps in decision making such as selection of right suppliers, manufacturers, transportation modes, sourcing etc.

EFFECTS OF BIG DATA ANALYTICS ON DRIVERS OF SCM
MANUFACTURNG
- To avoid excessive inventory the manufacturing could be controlled according to the trends. Example - Seasonal trends , festive trends etc.
- If at a particular time of year the consumption of a product goes up according to the trends of last few years, the procurement , assembling and order generating could be done accordingly t avoid delay or unresponsiveness .

WAREHOUSING
- Big Data analytics helps the warehousing to achieve flexibility , leading to responsiveness and efficiency .
- It helps to avoid excessive inventory from piling up .
- With the help of proper analytics high rackbay warehouse can automatically reshuffle pallets for the next day schedules .

- Not only this but forklift trucks also act as a big data hub that collects all sort of data which could be used with ERP and WMS data to acknowledge and eliminate waste in warehouse process.

TRANSPORTATION

- Logistics companies are using big data analytics to improve their year round operations.
- with the available data they can choose the routes of their vehicles based on cost effectiveness, safety , timing etc.
- They also uses GPS technologies to avoid waiting time consumed in warehouse queue.

SOURCING

- Depending on the trends available after analytics it will be easy to decide which task should be performed in-house and which should be outsourced .
- Also after analyzing the time and quality of deliver of a outsourced task it would be easy to decide on suppliers and alternate options available .

II. CONCLUSION

There are many companies which are already working on Big Data analytics in SCM. The industry is acknowledging its importance as it is quite evident that not opting for Big Data and analytics will result in losing the competitiveness . Lack of trained manpower and structure approach towards Supply chain Big Data is the main constraint lot of Companies are Facing .

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