Abstract: Third party logistics (3PL) is a business dynamic of developing significance everywhere throughout the world. In any case, it is at an incredibly starting stage in India, anyway some family unit and multinational associations are attempting to develop themselves in this section. This paper focuses on problems faced by a 3 PL logistics company in its day to day operations and its solutions. It reveals around the major problem faced like 100% delivery is not achieved due to lack of vehicles, lengthy process flow of the materials, greater involvement of human being and lack of automation in the process. So major focus will on improving the some of the factors like how to reduce the waiting duration of the vehicles, process modification for both inbound and outbound logistics which will reduce the loading and unloading duration and in turn delivery time. And also how to reduce the inventory management duration and also duration for picking up the materials for the specified location by modifying the process flow. If all these constraints are improved then 100 % delivery can be achieved.

Keywords: Third Party logistics (3PL), Automation, Vehicles, inbound logistics, outbound logistics, and delivery time.

I. INTRODUCTION

SCM is an arrangement of methodologies used to productively incorporate providers, makers, and stockrooms and stores with the goal that the stock is delivered and circulated at the correct amounts, to the correct areas and at the ideal time. Logistics management is a supply chain management component that is utilized to meet client requests through the arranging, control and usage of the compelling development and capacity of related data, merchandise and ventures from origin to destination.

Logistics management enables organizations to decrease costs and upgrade client benefit. In logistics management, impulsive choices make numerous issues. For example, deliveries that fail or are delayed lead to buyer dissatisfaction. Harm of products because of reckless transportation is another potential issue. Poor logistics arranging continuously builds costs, and issues may emerge from the usage of incapable coordination’s programming. The vast majority of these issues happen because of ill-advised choices identified with outsourcing, for example, choosing the wrong seller or completing conveyance errands without adequate assets.

Warehouse is a part of firm’s logistics system that stores products (raw materials, parts, goods-in-process, finished goods) at and between purpose of-beginning and purpose of-utilization and gives data to administration on the status, condition and mien of things being put away.

Inventory management is a discipline primarily about specifying the shape and placement of stocked goods. It is required at various areas inside an office or inside numerous areas of a supply system to go before the customary and arranged course of generation and load of materials.

The idea of stock, stock or work-in-process has been stretched out from assembling frameworks to benefit organizations and projects, by generalizing the definition to be "all work within the process of production- all work that is or has occurred prior to the completion of production." With regards to an assembling creation framework, inventory alludes to all work that has happened - raw materials, partially finished products, finished products preceding deal and takeoff from the assembling framework. With regards to administrations, inventory alludes to all work done before deal, including incompletely process data.

Recently Indian logistics market is in great shape with the opening of many new manufacturing firms. The International Monetary Fund (IMF) reaffirmed on India will be the quickest developing real economy in 2018, with a development rate of 7.4 for every penny that ascents to 7.8 for each penny in 2019 with medium-term prospects staying positive. Assembling has developed as one of the high development divisions in India.

According to, 3PL involves "the utilization of outer organizations to perform coordination’s works that have customarily been performed inside an organization. The functions performed by the outsider can envelop the whole coordination’s process or chose exercises inside that procedure” [1]. In a comparable vein, recommend that 3PL includes an outer organization “that plays out all or part of an organization's logistics functions” [2]. These “broad” definitions appear to suggest that 3PL includes any form of outsourcing of logistics activities previously performed “in-house”. Outsourcing of logistics work is a business flow of developing significance everywhere throughout the world. A developing mindfulness that upper hand originates from the conveyance procedure as much as from the item has been instrumental in overhauling logistics from its conventional private cabin capacity to a key meeting room work[3]. With a particular ultimate objective to manage its logistics practices sufficiently and successfully, an association may consider the going with decisions – it can give the limit in-house by...
making the organization, or it can guarantee logistics auxiliaries through setting up or acquiring a logistics firm, or it can outsource the capacity and purchase the administration. Starting at now, there has been a creating eagerness for the third decision, i.e. outsourcing of logistics abilities to logistics capacities to outsider logistics specialist organizations.

Third party logistics services are widely prevalent in North America [1] and Europe [5] and have been examined in a number of previous studies [1][5]. Comparative examinations have concentrated on logistics issues in Bulgaria, South Africa, Australia, Korea, Asia Pacific, Singapore, and Indochina. [5][6][7][8][9][11]. These nations have profited substantial advantages of 3PL services throughout the most recent couple of years. Anyway to date there has been no exhaustive examination detailed in the writing that hosts concentrated on third gathering logistics benefits in India. There are many isolated cases of individual organization and their separate logistics abilities. Subsequently, it was viewed as vital to complete a far reaching overview on 3PL practices in India.

II. INDIAN LOGISTICS MARKET

The recent Indian logistics sector comprises of inbound and outbound segments of themanufacturing and service supply chains. The country's logistics industry which is worth around USD 160 billion is likely to touch USD 215 billion in the next two years with the implementation of GST, Economic Survey today said. "With the implementation of GST, the Indian logistics market is expected to reach about USD 215 billion in 2020, growing at a CAGR of 10.5 per cent," Economic Survey 2017-18 tabled in Parliament said.

Companies in India currently outsource an estimated 52% of their logisticsrequrement. The industry has moved from being just a service provider to provider of end-to-end supply chain solutions to their customers.

Government initiatives to boost logistics industry are big thrust on highways build-up, dedicated freight corridor, goods and services tax,make in India, e way bill.

III. LITERATURE REVIEW

Outsourcing, third party logistics services (3PL) and contract logistics for the most part mean a similar thing [12]. It incorporates the usage of external associations to perform logistics capacities, which have generally been performed inside an affiliation. The capacities performed by outsider logistics associations can incorporate the entire logistics process or select activities inside that technique.3PL appears to be distinguished from the “traditional” outsourcing of logistics functions on a transaction-by-transaction basis presupposing that several features are fulfilled before the relationship between buyer and provider of logistics services can be characterized as 3PL. A kind of pacification between the option more extensive and smaller perspectives of 3PL can be found in the definition offered by, which portrays 3PL as "connections between interfaces in the supply chains and third party logistics provider, where logistics services are offered, from essential to modified ones, in a shorter or longer-term relationship, with the point of adequacy and productivity" [13]. It is to be noticed that considers 3PL as a set of three dyadic relationships linking seller, buyer and logistics service provider in a supply chain [14].

A key reason for outsourcing of logistics capacities is the elevated globalization of associations. In the midst of the latest two decades, globalization has ascended as an important intensity of shaping business frameworks, driving firms to make things proposed for an overall market and to source parts all around [15].

Logistics is along these lines rising as a key boondocks of rivalry later on. Great logistics performance execution requires a tradeoff between the need to diminish in general production network stock and lead times, while at the same time catching economies of scale and enhancing client benefit for improved business execution. Flexibility of outsider coordination specialist co-ops empowers them to keep up this exchange off by transforming settled expenses into variable expenses for organizations utilizing their administrations [16]The utilization of third party logistics service organizations has picked up unmistakable quality in this unique circumstance. The examination on supply chain management practices in India has recognized that outsourcing of logistics exercises is developing in fame for Indian associations and there has been an expansion in the quantity of outsider coordination’s suppliers in the course of the most recent few years [17]. The real reasons referred to for utilization of 3PL administrations incorporate – cost decrease (27 percent), vital reasons (26 percent), process viability (24 percent), and absence of inner ability (11 percent).In this main focus is on how to improve the service level of a 3PL company and for this some of the area are considered (both for inbound and outbound logistics) like length of the vehicles, number of items, waiting duration of the vehicles, loading or unloading duration of the materials. Improvement in the inventory management process so that it takes less time for matching the materials.

IV. FINDINGS

✓ Strong room contains approx. 500 small elements but there is no proper location specified to the items. So if a new person is employed to the room he will find it difficult to find anything. And also duration for cycle count inventory is approx. 45 mins and the duration for wall to wall count inventory is approx. 2 hrs.
✓ Two types of inventory management technique are followed i.e. Cycle count on daily basis and Wall to Wall count on monthly basis.
✓ Cycle count inventory duration is approx. 45 mins and Wall to Wall inventory duration is approx. 4 hrs. 15 mins.
✓ Vehicle waiting duration is on an average 35 mins.
✓ Sap process flow chart for Invoice, GRN, etc are not there so new people find it difficult to learn and do the work.
✓ There is no SAP flow diagram for process.
✓ Cut off time for outbound process is 2pm to 4 pm.
✓ Materials are stacked by following FIFO (First in First Out) according to the manufacturing date i.e., the material with April manufacturing dates is kept first, then the material with May manufacturing date. This stacking helps during picking up of the materials as thematerials with April manufacturing date is picked first then with the May manufacturing date.
✓ Invoice and GRN are made in SAP EPR.
✓ Two types of scan process is followed for outbound process. First one is for local transfer
  • In which scanner is used for scanning the materials after its being stacked and its being
  • Connected to the system and for generating invoice. And second one is for Inter Branch Transfer
  • Transfer in which the materials are scanned after being stacked, scanner here used is of Wi-Fi type so it need not to be connected with system for invoice generation.
✓ There is no scanning in inbound process.
✓ Outbound process duration for inter branch transfer loading is approx. 1 hrs. 43 min.
✓ Outbound process duration for local transfer loading is approx. 51 mins.
✓ There are seven bays in the warehouse out of which only four are functional.
✓ There is no proper stacking area for the pick-up products.
✓ Market vehicle and fixed vehicle are used for local transfer.
✓ Rates vary for both market vehicle and lease vehicle.
✓ For lease vehicle cost is being calculated on the basis of per trip of the vehicle while formarket vehicle cost being calculated on the basis of per kilometer of travel.
✓ On an average 9 lease vehicle are used per day other are market vehicle.

V. RECOMMENDATIONS
✓ Proper location mapping of the strong room: So, the suggestion is to implement a pictorial representation according to racks which will include material code, material description, MRP, and a photo.
✓ Scanning process should be implemented in the inbound logistics: After the materials are being unloaded it should be scanned before stacking in the location.
✓ Manual checking of the material need to be avoided both in IBT and Local Transfer for Outbound delivery: Manual checking of the materials takes approx. 51 mins on an average for Inter Branch Transfer and approx. 22 mins for local transfer of the materials.
✓ Proper stacking area need to be specified for the products after pick up of the products: Products need to be stacked in proper stacking area like for ‘A’ customer line 1 can be used if product is more line 2 can also be used and so on for other customers. Such ten lines can be used for proper operation.
✓ All the six loading bays need to make functional: At present there is only four bays are functional due to which average waiting duration of inbound vehicle is of 2 hrs. 30 mins.
  • It can be reduced if we make all the bays functional.
✓ SAP process flow chart should be prepared and made visible to others: Invoice and GRN etc process flow chart should be made visible.

VI. CONCLUSION
From this research it can be concluded that logistics market is one of the booming sectors for India. Indian government has taken many initiative to boost this sector. So to increase the delivery ratings 3PL companies must involve into complete automation process and reduce dependency on humans. Proper location mapping need to be put on process for faster pick up of the materials and to reduce the inventory management duration.

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REFERENCE


AUTHOR BIOGRAPHY

Manish Mohan Baral is a Research Scholar in Department of Management at Birla Institute of Technology, Mesra, Ranchi, Jharkhand, India. He has received his B.Tech in Civil Engineering from KIIT University, Bhubaneswar, Odisha, India and MBA in International Business from GITAM University, Visakhapatnam, Andhra Pradesh, India. He is currently pursuing his PhD in Management from Birla Institute of Technology, Mesra, Ranchi, Jharkhand, India. His research interests include Supply Chain Management, Information Technology, Decision Support Systems, Statistical Modelling, Cloud Computing, Artificial Intelligence technologies.

Subhodeep Mukherjee is a MBA student in Birla Institute of Technology Lalpur, Mesra, Ranchi, Jharkhand. He has received his B.Tech in Electronics and Communications Engineering from WBUT University, Kolkata, West Bengal.