



Recent Trends in E - Supply Chain Management

Dr.P.Rajan Chinna

Recent Trends in E - Supply Chain Management

© Dr. P. Rajan Chinna

First Edition: September 2019

ISBN: 978-93-89146-71-4

Price: ₹550/-

Copy right

All rights reserved. No part of this book may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, mechanical, photocopying, recording or otherwise, without prior written permission of the author.

Publisher

SHANLAX PUBLICATIONS
61, 66 T.P.K. Main Road
Vasantha Nagar
Madurai - 625003
Tamil Nadu, India

Ph 0452-4208765,
Mobile 7639303383
email publisher@shanlaxpublications.com
web www.shanlaxpublications.com

RECENT TRENDS IN E – SUPPLY CHAIN MANAGEMENT

CHIEF EDITOR

Prof. M. Senthil

Head, Department of Logistics Management, Alagappa University, Karaikudi

EDITOR

Dr. P. Rajan Chinna

Assistant Professor, Department of Logistics Management, Alagappa University, Karaikudi

ASSOCIATE EDITORS

Dr. V. Sivakumar

Associate Professor, Department of Logistics Management, Alagappa University, Karaikudi

Dr. V. A. Anand

Assistant Professor, Department of Logistics Management, Alagappa University, Karaikudi

EDITORIAL COMMITTEE

Dr. C. Suresh

Adjunct Faculty, Department of Logistics Management, Alagappa University, Karaikudi

Dr. K. Subha

Adjunct Faculty, Department of Logistics Management, Alagappa University, Karaikudi

Mr. K. Aravindaraj

Adjunct Faculty, Department of Logistics Management, Alagappa University, Karaikudi

ADVISORY COMMITTEE

Prof. K.S. Chandrasekar

Dean, Department of Management Studies, University of Kerala, Thiruvananthapuram

Prof. R. Magesh

Professor & Head, Department of Management Studies, Anna University, Chennai, Tamil Nadu

CONTENTS

Sl. No.	Title	Page No.
1.	INVENTORY OPTIMIZATION AND LOGISTICS PLANING IN A MANUFACTURING COMPANY USING PPEP Dr. K. Sadasivan & Mr. G. Sashang	1
2.	THE STUDY OF LOGISTICS SCHEDULING PROBLEM IN COMMERCIAL VEHICLE MANUFACTURING COMPANY Dr. K. Sadasivan & Mr. M. Vijay Prakash	10
3.	A STUDY ON OPPORTUNITIES AND TRENDS IN TELECOM SERVICES A. S. Alagu Kanna	19
4.	GDP IMPACT ON EFFICIENCY GAINS OF TRANSPORTATION AND DISTRIBUTION OF NASCENT INFORMAL SECTORS IN INDIA Dr. K. Ganesamurthy, M. Naghappa Rajan & Dr. A. Morarji	27
5.	COORDINATION'S INFORMATION SYSTEM FOR SUPPLY CHAIN OF AGRICULTURAL PRODUCT IN TAMILNADU M. Kalidhasan, Dr. P. Rajan Chinna & K. Srinivasan	32
6.	BRAND PREFERENCE AND SATISFACTION OF PERSONAL CARE PRODUCTS IN FAST MOVING CONSUMER GOODS R. Vijayalakshmi, Dr. T.R. Gurumoorthy & G. Lingavel	39
7.	AGRIBUSINESS(FOODS) SUPPLY CHAIN MANAGEMENT IN INDIAN AGRICULTURE: AFFAIRS, FAVORABLE CIRCUMSTANCES AND FURTHER RESEARCH Dr. V.A. Anand & Mrs. J. Pandilakshmi	48
8.	A STUDY ON SUPPLY CHAIN OVER TRANSIT TIME IN WHEELS INDIA PVT LTD K. Srinivasan, Dr. P. Rajan Chinna & M. Kalidhasan	60
9.	LOGISTICS NETWORK OPTIMIZATION IN DISTRIBUTING CRITICAL MEDICAL SUPPLIES FOR A PHARMACEUTICAL COMPANY Dr. V.A. Anand & Mr. R. Arivalagan	69
10.	3PL PRACTICES: AN INDIA PERSPECTIVE Dr. S. Chandrasekar & Dr. C. Vethirajan	76
11.	THE AGILE SUPPLY CHAIN: COMPETING IN VOLATILE MARKETS Dr. Senthil, Srinivasan Mohandas & R.K. Ramachandran	93

3PL PRACTICES: AN INDIA PERSPECTIVE

Dr. S. Chandrasekar

Assistant Professor, Department of Commerce,
Madurai College (Autonomous), Madurai.

Dr. C. Vethirajan

Professor and Head, Dept. of Corporate Secretariatship,
Alagappa University, Karaikal.

Introduction

Redistributing of Logistics highlight is a business element of creating hugeness in, where throughout the world. A creating awareness that forceful increase originates in the conveyance way as a decent arrangement as from the item has been instrumental in updating Logistics from its normal private cabin highlight to a vital meeting room (Pazzoque and Sheng, 1998). So as to adapt to its Logistics exercises adequately and effectively, an organization may also consider the accompanying decisions - it can provide the capacity in-house by making the administration, or it can own one of a kind Logistics bar kups through setting up or looking for Logistics firm or it can redistribute the administration and buy the administration. At present, there has been a creating enthusiasm for the 3PL alternative, for example re-appropriating of Logistics highlights to third-party celebration party Logistics specialist organizations.

Consider Logistics administrations are extensively ordinary in North America (Lieb, 1992; Lee and Pando, 1999) and Europe (Lieb, Miller and Wassenhove, 1993) and have been reported in an amount of going before studies. Comparative investigations have been made on Logistics issues in Bulgaria (Bloomen and Petrov, 1994), South Africa (Cilliers and Vogel, 1994), Australia (Depran, Lieb, Millen and Sahal, 1996), Korea (Kim, 1996) and Asia Pacific (Millen and Sahal, 1996), Singapore (Bhatnagar, Sahal and Millen, 1999), and Latin America (Can and Arg, 2001). These global areas have profited huge advantages of 3PL arrangements over the end couple of years. Anyway to date there has been no far reaching study that has articulated in the writing that has concentrated on 1/3 party Logistics administrations in India. There are many separated instances of character gatherings and case individual Logistics capacities. Subsequently, it was viewed as important to raise out a far reaching review on 3PL practices in India.

The paper has been prepared as pursues. In the resulting two areas, we existing a speedy depiction of the Indian vehicle surroundings went with through an evaluation of the applicable portions of writing. In this manner, we characterize the query technique which is then trailed by utilizing the outcomes in light of data examination, from the study. At long last, future advancements and ends waying up from this query are distributed.

The Indian Transportation Environment

With a gross domestic item (GDP) of over US \$475 billion, the Indian undertakes turns through 14 percent of its GDP on Logistics. The Indian Logistics condition comprises of street transport organizations, railroads, airship cargo organizations, between modular vehicle suppliers, ports and transport organizations, as appropriately as 3PL organizations. Their exhibition is genuinely founded on the country of foundation - streets, railroads, ports and airplane terminals.

Streets & Trucking: India has a truly gigantic road system totalling to 2.7 million kms of road size (1996-97), the 0.33 biggest road networks on the planet. As indicated by evaluations of the Planning Commission, the streets conveyed only 11 percent of merchandise and 24 percent of travelers all through 1995. Express and National percent for things and 80 percent of the entire road length however hoist almost roadways speak to exclusively 14 percent of the street segment. Reach in the insides of the terrain is 40% of all cargo traveled through the street segment being connected with streets. This restricted with just 48% of the 0.55 million towns being connected with streets. This represents a genuine trouble of access and network to rustic markets. By and large the incredible of streets is poor, following in steady vehicle speeds, increased mileage of autos and high mishap rates. In spite of suspect quality, the portion of cargo passing through streets has developed to sixty one rate in 2001. The Indian Government has started a uber venture, known as National Highway Development Program, for four-laning of thruways interfacing the 4 metros of India and the North-South and East-West hall. Fulfillment of this assignment through 2007 is foreseen to extraordinarily affect transportation cases and expenses.

Rail Transport The Indian Railway system is an administration restraining infrastructure in India and is loaded with shrouded efficiencies. It is the second biggest railroad structures on the planet covering a course size of 62,809 Kms (1998-99). This helps 4630.05 a huge number of travelers and 450 million tons of cargo development every single year (CMIE, 1999). Be that as it may, the contraption of variable cargo costs relying upon order of products has debilitated a portion of the enterprises from utilizing rail transport. At the equivalent time, the complete estimation of the utilization of the rail system is high because of managing necessities and the time and benefit of masterminding get and drop of dispatch to and from railroad offices. This outcomes in the steady basic pace of cargo development and low basic wagon turnaround time, which are dominating issues for the logisticians in the nation. Right now, the Indian Railways is attempting endeavors to improve its administrations through presenting special cargo trains, which give significantly quicker transportation times, and showing multi-modular luxuries to diminish managing times through containerized payload movement by methods for Concor (Container Corporation of India).

Airplane terminals and Air Cargo: The six universal and 87 home air terminals manage 0.22 million metric huge amounts of home payload and 0.468 million metric huge amounts of global load, which is incredibly awful as far as world guidelines. This is on the

grounds that the air payload is utilized just when ocean change should not be utilized both because of time or regional limitation. This represents a genuine prevention in obtaining specifically when partnerships are looking at embracing world sourcing methods to diminish costs and brighten item quality. To make air freight extra wonderful and presentable, the Indian government has started some significant advances which comprise of - presentation of 'open sky' approach, presentation of incorporated load organization machine at 4 metro air terminals, arrangement of communities for transient payload and activation of working hours for town side activity for fare and import exercises.

Seaports and Shipping There are eleven most significant ports that handle the total abroad trade of the utilization of an adding up to 271.92 million tons (1998-99). The office and foundation of Indian ports are evaluated low on worldwide gauges uniquely by virtue of absence of capacity territory and obsolete overseeing gear. Subsequently, India's offer on the planet sea is minuscule however the Indian armada of vessels speaks to somewhat more than 1 percent of the world enlisted tonnage. Because of lower draft, the normal estimation of the Indian ports is a ton littler than winning sizes globally. Likewise, most Indian Ocean ports are wasteful in stacking and emptying tasks. The outcome is that boats are gotten for longer time here, which products the cost for the slupper by the guide of as parts as 10-20 percent. The allowing of infrastructural status to the transportation business is anticipated to give financial and tax cuts for the advancement of this vehicle mode in the coming years.

Every one of the elements related to move framework referenced above have antagonistically influenced the Logistics organization in the USA - each in expressions of lead time and charges (Korgaonker, 1999). Nonetheless, a large group of arrangement alterations by and by in progress is anticipated to pass on about a phenomenal trade in the Indian transportation condition. This manages colossal conceivable outcomes for gatherings offering Logistics benefits in the United States and subsequently betokens top news for Indian associations to decrease Logistics costs by methods for the use of 0.33 festival Logistics contributions for predominant award chain efficiencies.

Literature Review

Redistributing, outsider Logistics administrations (3PL) and contract Logistics by and large mean something very similar (Lieb, Millen and Wassenhove, 1993). It includes the utilization of outside organizations to perform Logistics capacities, which have generally been performed inside an association. The capacities performed by outsider Logistics specialist organizations can incorporate the whole Logistics process or select exercises inside that procedure.

A key method of reasoning for re-appropriating of Logistics capacities is the increased globalization of organizations. During the most recent two decades, globalization has risen as a noteworthy power of forming business techniques, driving firms to create items intended for a worldwide market and to source segments all around (Cooper, 1993). This has prompted increasingly complex supply chains requiring bigger contribution of directors in Logistics capacities. Absence of explicit learning of traditions, charge

guidelines and framework of global nations has constrained firms to secure market a outsider Logistics specialist organizations. Subsequently, firms are locating their centers on center exercises and leaving the rest to master firms (Brewer, 1990; Forster and Miller, 1990; Trunick, 1989).

A similarly significant improvement that is affecting the Logistics business is the expanded accentuation on inventory network the board as a wellspring of upper hand. Over the most recent two decades, the journey for large scaled firms drive at first to a quick reception of new assembling techniques like without a moment to spare adaptable assembling frameworks. PC supported assembling, etc by associations. These techniques have realized huge upgrades in inventory network execution through their various compacted assembling lead times and improved quality. Be that as it may, further improvements in inventory network execution will require speeding the program of data on requests to upstream production network acceptances and assisting Logistics exercises like stockpiling and conveyance of materials or items through the whole value network (Bhatnagar, Sohal and Millen, 1999). An ongoing examination completed in inventory network the executives references in India features that the offering of Indian economy and globalization of organizations has been a key factor for the Indian business adjust store network methodology with business technique streamlining items for production network combination and structure associations for limiting investments. Indian associations are progressively sending production network procedures for various upgrades - to build deals income, improve benefits, even request to compress process duration and limit inventories (Sabay and Mohan, 2005).

Logistics is in this manner rising as a key backbone of rivalry later on. Great Logistics execution requires a tradeoff between the need to lessen generally speaking store network stock and lead times, while at the same time catching economies of scale and offering client administration for upgraded business execution. Flexibility of outsider Logistics specialist co-ops empowers them to keep up this exchange off by transforming fixed expenses into variable expenses for organizations utilizing their administrations (Lieber, 1989). The utilization of outsider Logistics specialist co-ops has picked up unimpeachable quality in this specific circumstance.

Observational investigations have tried the accompanying elements in characterizing the degree of utilization (Lieb, 1992; Dapiran, Lieb, Millen and Sohal, 1996; Bhattachar, Sohal and Millen, 1999).

- Length of involvement with outsider Logistics firms
- Level of pledge to the utilization of outsider Logistics administrations
- Percentage of the complete Logistics spending plan designated to outside Logistics specialist co-ops
- Specific Logistics administrations redistributed (between the customer shipment solidification armada the board request satisfaction per request, transporter determination Logistics data frameworks rate exchange and gathering request preparing, stock recharging request piece)

To decide the use of third festival Logistics rehearses in India, a mail review was once led at some phase in 2002-03. The overview poll was once structured dependent on the exploration completed by means of Lieb et al. (1993), Dapiran et al. (1996), Bhatnagar et al. (1999), Larthoven et al. (2000) and Sahay et al. (2002). The review instrument concentrated on the accompanying regions:

- (1) Importance of a scope of Logistics activities to associations.
- (2) Extent of use of administrations provided by utilizing third festival Logistics supplier organizations for doing one of a kind Logistics exercises
- (3) Reasons for redistributing.
- (4) The affect of the use of 1/3 festivity Logistics contributions on Logistics execution, buyer fulfillment and specialist spirit;
- (5) The advantages of utilizing 0.33 Third Party Logistics contributions on specific endeavor targets.
- (6) The normal fulfillment with third festival Logistics supplier suppliers, and
- (7) The feasible arrangements of current clients of 1/3 birthday gathering Logistics administrations

The respondents have been mentioned to round out the study that palatable caught the front line condition of Logistics inconveniences in the association with accentuation on redistributing. Notwithstanding the poll study and an assortment of individual visits to a serious number organizations have been done to get direct information related to this subject as appropriately as cross-mind the reactions got from the review members.

The objective populace for this get some answers concerning was before the 2002 business Today rundown of zenith 500 organizations in India. The survey together with the introductory letter and a post-answer envelope has been sent to these gatherings routed to the above administrators. Inside a month of conveying the study poll eighty five reactions were gotten. From that point uplake phone calls have been made to the last 272 organizations that had never again reacted. Thus forty nine companies reacted extra in the following two weeks. Be that as it may, after certainties section 4 reactions had been found fragmented and in this way unseemly for explicit examination. It brought about the reaction cost of one hundred thirty or 26.0 level of the first example of 500 associations.

The reaction cost is in accordance with the past research directed on 0.33 gathering Logistics benefits in North America, Europe, Australia and Singapore that have been founded absolutely on 131, 53, eighty four and 126 reactions individually (Lieb et al. 1993, Dapiran et al., 1996, Bhatnagar et al., 1999, Larthoven et al., 2000) bringing about reaction charge of 12.6 percent in Australia and 16.8 percent in Singapore. The reaction value furthermore contrasts pleasantly and the first get some answers concerning completed on Supply Chain Management Practices in Indian industry that had a reaction charge of 13.6 organizations or 9.0 percent (Sahay et al., 2002). At last, exact information examination was once performed on the usable example measurement of a hundred thirty Indian associations. Investigation of the insights is in the accompanying area

transportation, outbound transportation, marking and bundling, conveyance, client custom leeway and sending import trade the board, administration/support)

Use of outsider Logistics administrations is a vital choice and henceforth it is important to see and evaluate the effect it has on business execution. The motivation behind taking part in outsider relations is only from time to time cost decrease alone, yet a mix of administration upgrades and productive tasks (Larsen, 2000). Concentrates dependent on client firms show that the choice is beneficial in the event that it affects at least one component delineated in Table I

Table I Impact of usage of 3PL services - Literature Review

Factor	Identified By (Year)
Impact on Customer Satisfaction	Gooley (1992); Lieb et al (1993)
Impact on Logistics system performance	Lieb et al. (1993); Dapiran et al (1996); Bhatnagar et al. (1999); Foster & Muller (1990); Richardson (1992, 1995)
Reduction in capital investment in facilities	Fantasia (1993); Foster & Muller (1990); Richardson (1992)
Reduction in capital investment in equipment	Goldberg (1990); Sheffi (1990); Trunick (1992); Fantasia (1993)
Reduction in investment in information technology	Bowersox (1990); Dapiran et al (1996)
Impact on Employee morale	Foster & Muller (1990); Richardson (1992, 1995)
Reduction in manpower cost	Minahan (1997); Mc Millan (1996); Richardson (1990, 1995)
Improvement on specific Logistics function parameters	Richardson (1995)
Improvement in inventory turnover rates	Bradley (1995)
Improvement in on-time delivery	
Increasing productivity	

The above investigations give a powerful structure to the examination philosophy for breaking down the outsider Logistics rehearses in India. The info factors to the examination system portray the association explicit qualities, for example the degree of utilization of outsider Logistics benefits, the purposes behind re-appropriating, and the effect of the use of outsider Logistics administrations. The yield capacity of future utilization of outsider Logistics administrations is impacted by the three information factors.

Results

The most striking aspect of a respondent's view expressed in the questionnaires was the association of respondents with the following categories: Chemicals, Engineering, Pharmaceuticals, Food and Tobacco, and Textiles. Other categories of respondents were also mentioned: Administrative, Metals, and Miscellaneous.

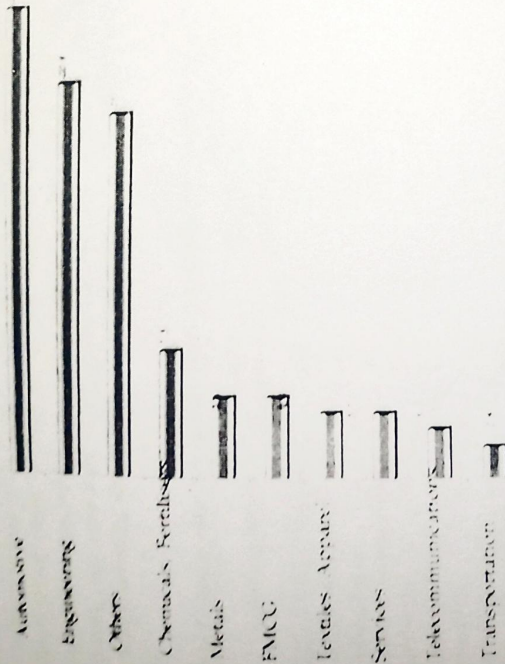


Figure 1. Classification of Respondents by Industry

The respondents comprised of respondents of various industries. The respondents are particularly better represented in the Chemicals, Engineering, Pharmaceuticals, Food and Tobacco, and Textiles categories. The respondents with the highest stake in the entire sample were in the Chemicals, Engineering, Pharmaceuticals, Food and Tobacco, and Textiles categories. The respondents with the highest stake in the entire sample were in the Chemicals, Engineering, Pharmaceuticals, Food and Tobacco, and Textiles categories. The respondents with the highest stake in the entire sample were in the Chemicals, Engineering, Pharmaceuticals, Food and Tobacco, and Textiles categories.

... 2000 ...

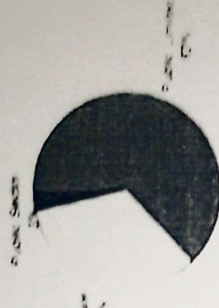


Figure 2. Classification of Respondents by Industry

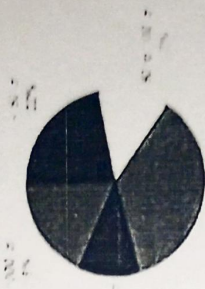


Figure 3. Classification of Respondents by Industry

Percent of Respondents by Industry

The respondents comprised of respondents of various industries. The respondents are particularly better represented in the Chemicals, Engineering, Pharmaceuticals, Food and Tobacco, and Textiles categories. The respondents with the highest stake in the entire sample were in the Chemicals, Engineering, Pharmaceuticals, Food and Tobacco, and Textiles categories. The respondents with the highest stake in the entire sample were in the Chemicals, Engineering, Pharmaceuticals, Food and Tobacco, and Textiles categories.

Recent Trends in E - Supply Chain Management

Table V: Organizational Impact of Outsourcing Logistics Activities

Factors	Percentage of Respondents (%)				
	Very Positive	Positive	Average	Negative	Very Negative
Logistics System performance	13.8	54.3	28.7	2.1	1.1
Customer satisfaction	22.6	45.2	32.3	0.0	0.0
Employee Morale	6.8	42.0	46.6	4.5	0.0

Results call attention to that the utilization of contributions of 3PL bearers has had a vigorous beneficial effect on all the three measurements. Almost 50 level of the clients referenced that the affect has been "sure" or "positive" in all the three regions of authoritative effect. Be that as it may, 4.5 percent of the respondents showed that 3PL administrations affected worker confidence. Likewise 3.2 percent of the respondents demonstrated a negative effect on Logistics machine execution. These outcomes demonstrate that individuals issues are a basic thing to be considered in redistributing of Logistics capacities.

Additionally, the respondents had been likewise mentioned to measure the extent enhancement on monetary cautioning signs - improvement in deal incomes, working capital improvement, capital resource decrease, fabricating charge decrease, work cost decrease, return on resource improvement, Logistics esteem decrease - in light of the utilization of 3PL administrations. Client offices have expressed considerable monetary updates as demonstrated in Table VI. The financial improvements be appropriately with the emphasis on Logistics cost decrease as the premier reason for the use of 3PL administrations.

Table VI Financial Improvements

Financial Indicator	% Improvement
Improvement in sales revenue	13.5
Working capital improvement	12.3
Capital asset reduction	9.2
Production cost reduction	10.5
Labor cost reduction	10.0
Return on Assets improvement	10.0
Logistics cost reduction	15.0

Further, the study survey tested the respondents to record on the improvement they have had on specific business targets identified with Logistics device evaluation. Clients record acquiring more than one advantage in changing degrees as opposed to their desires. Over 80% of the respondent's country that the utilization of the transporter organizations has helped them upgrade on-time conveyance, give specific Logistics better and abatement process duration at "expected" or "more than anticipated" degrees. Almost 75% of the respondents sense that they have been competent to improve center around their center learning and limit operational charges at or above desires. 3PL supplier merchants

have been skilled to improve the geographic reach of the client organizations expressed by methods for 61% of the respondents. At long last the utilization of administration has moreover helped gatherings to get extra vital/operational adaptability and separation from the adversaries (Figure 5).

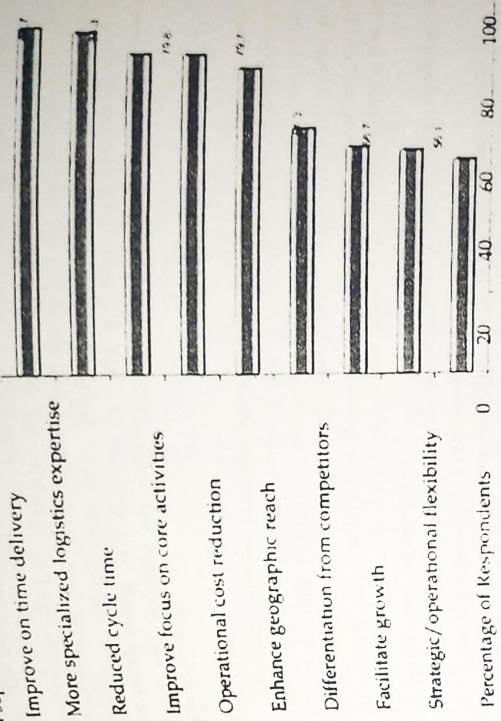


Figure 5: Improvement in business objectives related to Logistics system performance

Clearly, 3PL companies can help an agency acquire giant results, both in terms of commercial enterprise performance and logistics cost reduction. Logistics competency via outsourcing will certainly be a key differentiator in modern day aggressive world.

Summary and Future Patterns

Presently practically all the association the utilization of 0.33 Logistics contributions are calm with the presentation of 3PL administration sellers as for their desires. An entire of 96 rate showed that their customary pride with 3PL specialist organization used to be at 'more than anticipated'. Another 72.3 percent showed that their fulfillment used to be at 'anticipated' levels. Just 6.0 rate alluded to that they had been both 'not fulfilled' or their pride have been 'not as much as desires' with the utilization of 0.33 Third Gathering Logistics supplier suppliers. Of course, ninety six percent of the respondents showed that the utilization of 0.33 festival Logistics specialist co-ops had been an enormous advancement taking a gander at the effect of the use of 3PL contributions on big business targets.

Clients had been also mentioned how they would control their utilization of 3PL Logistics specialist organizations, in the event that they had been given entire corporate responsibility to settle on that choice. 39.8 rates of the respondents are anticipating modify the contributions with the guide of radically developing it while 41.8 level of the respondent's increment the redistributed administrations modestly. Just, 15.3 percent showed that they would protect it at equivalent stages and the end 3.1 percent would sensibly diminish the utilization of 3PL Third Gathering Logistics administrations

Table VII: Activities planned to be outsourced

Logistics Activities	Importance rating of Logistics Activities	Percentage of Respondents (%)		
		Current Outsourcing levels	Increase in usage of 3PL in 2 yrs over current levels	Increase in usage of 3PL in 5 yrs over current levels
Rate Negotiation	4.3	22.6	33.9	38.7
Inventon, Management	4.3	23.5	38.2	54.4
Customer Service/Support	4.2	15.8	35.1	45.6
Outbound Transportation	4.0	55.7	32.9	38.6
Marketing Sales Promotion	3.8	8.5	39.0	47.5
Distribution	3.8	22.9	38.6	54.3
Order Processing	3.8	19.4	40.3	53.7
Order Fulfillment	3.8	20.4	35.2	42.6
Custom Cleaning & Forwarding	3.7	51.5	31.8	39.4
Order Picking	3.6	27.0	38.1	52.4
Outbound Warehousing	3.5	33.9	35.7	48.2
Import/Export Management	3.4	34.5	32.7	47.3
Inbound Transportation	3.3	52.2	40.3	43.3
Selected Manufacturing	3.3	16.4	34.4	47.5
Labeling & Packaging	3.1	29.0	40.3	46.8
Fleet Mngt. & Consolidation	3.1	29.1	40.0	51.5
Inbound Warehousing	3.0	29.5	44.3	57.7
Assembly/Installation	2.8	12.7	34.5	45.5
Reverse Logistics	2.5	22.2	42.6	57.4

With an insight to make greater the redistributing of Logistics exercises, respondents had been approached to measure the exercises they intended to re-appropriate in the ensuing 2 years and the following 5 years (Table VII). Outbound Transportation (91.3%), Inbound Transportation (95.5%) and Custom Clearing and Sending (90.9%) will continue to be the most unmistakable exercises to be re-appropriated throughout the following 5 years. Different Logistics activities like Import and Fare The board (81.8%), Outbound Warehousing (82.1%), Inbound Warehousing (85.2%) and Armada The board and Union

(83.6%) would be redistributed with the guide of over 80% of the respondents in the following 5 years. Be that as it may, greatest amplify in use of 3PL contributions is anticipated in the zones of Inbound Warehousing (44.3%) and Turn around Logistics (42.6%) in the following 2 years. So also, apex 5 zones that will ride greatest development in the consequent 5 years incorporate Turn around Logistics (57.4%), Inbound Warehousing (55.7%), Armada The executives (camp. Combination (54.5%) Stock Administration (54.4%) and Conveyance (54.3%). Thus the utilization of 3PL bearer suppliers would augment at a speedier accure in Logistics exercises of abatement importance rating. This approves the need of Indian associations to diminish Logistics charge and spotlight on center abilities as conspicuous intentions in use of 3PL administrations.

Conclusion

Changing business surroundings has pushed enterprises in India to focus on their center exercises and offload a large group of Logistics capacities to specialists in the field. All around, the change of astounding Logistics redistributing incorporates beside transportation, warehousing and custom freedom a whole fluctuate of different activities for example, cargo change installments, evaluating, contract assembling and get together tasks, bundling and marking, cargo solidification to distinguish a couple. The practices in Indian industry unveil that:

- Warehousing, inbound and outbound transportation, custom clearing and sending are the most much of the time redistributed exercises
- Activities, for example, bundling, armada the board and combination are picking up intrigue and developing in ubiquity
- More and additional partnerships are intending to utilize 3PL administrations here on as an implicit arrangement of contributions rather than for simply movement of material
- The inspiration for doing as such comes because of the advantages of Logistics esteem decrease, potential to concentrate on the center business and upgrading inventory network proficiency

Despite the fact that the use of 3PL administrations shows positive and gigantic impact on business venture execution, 0.33 festival Logistics practices are regardless at an early stage in India. 55% of gatherings buy in to 3PL contributions when contrasted with 75% all around and these appear to be more prominent of transportation and warehousing related exercises. Associations will grow the utilization of 3PL contributions in run of the mill Logistics activities and extend the extent of re-appropriating principally dependent on the average enjoyment and the impact on business targets - Logistics gadget exercise, customer delight and representative confidence. These signs should help the 3PL supplier suppliers chart the profundity and extent of their transporter decisions in India. They completely feature the significance of giving over results that affect the business targets as to broaden re-appropriating conceivable outcomes for Indian associations. It is obvious

THE AGILE SUPPLY CHAIN: COMPETING IN VOLATILE MARKETS

Dr. M. Seethil
Srinivasan Mohanadas
R. K. Ramakrishnan

References

1. Sava, E. and Trasky, M. (1991) "Transportation outsourcing: a survey of US practices", *International Journal of Physical Distribution and Logistics Management*, Vol. 21 No. 3, pp. 15-21
2. Saxonen, D.R.V. and Deryn, J.F. (1994) "Logistics in Bulgaria: Concepts for New market Expansion", *International Journal of Physical Distribution and Logistics Management*, Vol. 24 No. 2, pp. 5-36
3. Sawensox, D. (1990) "The strategic benefit of logistics alliances", *Harvard Business Review*, July-August, pp. 38-45
4. Bradley, P. (1995) "Third parties gain slow, cautious favor support", *Logistics*, May, pp. 51-52
5. Byrne, P.M. (1993) "A new roadmap for contract logistics", *Transportation and Distribution*, September, pp. 42-48
6. Gillies, W.W. and Nagel, P.A. (1994) "Logistics trends in South America", *International Journal of Physical Distribution and Logistics Management*, Vol. 24 No. 1, pp. 4-14
7. Cooper, J.C. (1993) "Logistics strategies for global business", *International Journal of Physical Distribution and Logistics Management*, Vol. 23 No. 4, pp. 12-23
8. Dapiran, P., Lieb, K., Alaman, K. and Sahal, A. (1998) "Third party logistics services usage by large Australian firms", *International Journal of Physical Distribution and Logistics Management*, Vol. 28 No. 10, pp. 8-15
9. Fantasia, J. (1992) "Are you a candidate for third party logistics?", *Transportation and Distribution*, January, pp. 8
10. Foster, J.A. and Munkittrick, J. (1990) "Third parties: your position in the 1990s", *Transportation and Distribution*, Vol. 20 No. 10, pp. 31-32
11. Goh, M. and Ang, A. (2001) "Some logistics realities in Indonesia", *International Journal of Physical Distribution and Logistics Management*, Vol. 31 No. 11, pp. 8-15

Abstract

The agile supply chain is a new paradigm in supply chain management. It is characterized by its ability to respond quickly to changes in demand and market conditions. This paper discusses the challenges of operating in volatile markets and the role of the agile supply chain in addressing these challenges. The agile supply chain is a dynamic and flexible supply chain that can adapt to changes in demand and market conditions. It is characterized by its ability to respond quickly to changes in demand and market conditions. This paper discusses the challenges of operating in volatile markets and the role of the agile supply chain in addressing these challenges.

Agile Velocity

There are many factors that contribute to the agile velocity of a supply chain. These factors include the use of information technology, the adoption of lean manufacturing practices, and the implementation of agile supply chain strategies. The agile supply chain is a dynamic and flexible supply chain that can adapt to changes in demand and market conditions. It is characterized by its ability to respond quickly to changes in demand and market conditions. This paper discusses the challenges of operating in volatile markets and the role of the agile supply chain in addressing these challenges.

A lean approach to supply chain management is where the demand is met by the supply chain. The agile supply chain is a dynamic and flexible supply chain that can adapt to changes in demand and market conditions. It is characterized by its ability to respond quickly to changes in demand and market conditions. This paper discusses the challenges of operating in volatile markets and the role of the agile supply chain in addressing these challenges.