

# Insight of Third-Party logistics Market in India and UAE



R. Ashok, R. Rajesh

**Abstract:** Now days the use of third-party logistics market is very important and the usage of 3PL service is increasing day by day. The companies are approaching the third-party logistic providers in order to reduce their logistic cost, and to focus on core competency of business market in the world. It helps to take the company to the next level of competency and development in the market. This comparative study has analyzed the third-party logistics status between India and the UAE. This comparison is based on different surveys done by another investigator with our investigation. More than 75% of the clients are satisfied with their 3PL operators and it is a good indication of customer satisfaction towards the 3PL firms. According to the author's understanding, there is no comparative analysis done for the third-party logistic market of the UAE and other countries. This comparative study reveals the clear perception about the 3PL status between India and the UAE. The usage of IT application and its impact during 3PL operations are very crucial in both industries. In conclusion, it is found that the usage of 3PL service is growing fast day by day in India and the UAE.

**Key words:** Comparative study, 3PL market, India, UAE

## I. INTRODUCTION

Third-party logistics is defined as the traditional logistics function which was previously performed in-house but then it is given to the external companies to do the logistics operations (Lieb; 1992). It acts as an important part of economy and every business entity. It has various functions like transportation, warehousing, inventory management, order processing, information systems and value-added activities [Rajesh, 2013]. According to the study of Reuters plus, the Global Third Party Logistics market size was 67700 million US\$ in 2018 and it is expected to reach 106300 million US\$ by the end of 2025, with a CAGR of 5.8% during 2019-2025. Technavio's market research analysts have predicted that the third-party logistics market in India will witness an incremental growth of more than USD 10 billion during the period 2018-2022. As per 2019 Agility Emerging Market Index, China topped internationally followed by India and the UAE. Among the sub-indices, the UAE beat in business fundamentals followed by Malaysia and Qatar. While China and India drove the domestic and international logistics markets sub-indices. The UAE's logistics market has similarly benefitted remarkably from enormous enthusiasm

for physical establishment with industry estimates putting its size at \$30 billion. Locally, the UAE is placing assets into top of the line establishment endeavors such as Al Mafraq-Al Ghuwaifat road update upgrade and the creation of a 1,200km rail network. The market is also undertaking expansion at its main air and seaports. Jebel Ali, which fills in as a multi-measured focus point and free zone and facilitates domestic, regional and overall trade streams, interfacing the UAE with 140 ports worldwide, is encountering augmentations to increase handling capacity to 22.1 million TEU. At present e-logistics is playing vital role in the logistic operations. A new generation of e-logistics companies has emerged due to rapid growth of the internet. The web-based logistic players aim to bring the distributor, 3PLs and other parties together to enhance collaboration. We have taken five research studies for this comparative analysis. Details were collected from UAE by Sohail (2005) and Ashok (2019) and by Mitra (2005), B.S.Sahay (2006) and Rajesh (2013) from India for the study. These five investigation reports were compared with each other for our study. The detailed comparative study is as follows:

- Major outsourced /offered activities and their contributions in India and the UAE.
- Reason for the outsourcing in India and the UAE
- Factors for the success of the 3PL industry in India and the UAE
- Shortfalls from 3PL providers during 3PL operations as identified by 3PL users in India and the UAE
- Challenges faced by 3PL firms in in India and the UAE
- IT system in the performance of 3PL firms in India and the UAE
- IT system impact in the 3PL firms in India and the UAE
- Logistics performance measures in India and the UAE
- Information sources
- Market served by the users and 3PL firms in India and the UAE
- Satisfaction of the current 3PL provider services
- Summary of findings
- Conclusion

## II. LITERATURE REVIEW

### A. Logistics Outsourcing in India

Rajesh et al (2013) conducted a survey on 3PL practices based on Indian cities through questionnaire survey by collecting information from 3PL users and firms. Similarly, B.S.

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Sahay (2006) conducted the survey and received the details from 3PL users and Mitra (2005) analyzed the third-party logistics status from the provider perspective [1, 2, and 3].

### B. Logistics Outsourcing in the UAE

According to Frost & Sullivan (2010), UAE is a premier logistic hub in the Middle East due to the strategic location between Eastern and Western Hemisphere, availability of world class logistics, infrastructure facilities including free trade zone for transshipment, re-exporting and lowest average logistics cost in the world. Freight forwarding was the most important logistics function (80-90%) followed by Transportation (60-70%), Warehousing (30-40%) and VALS (<10%) [4].

William Neil (2015) pointed out that the UAE continues to strengthen its position as a global logistics hub, helped by its geographical positioning and world class transport infrastructure. Dubai continues to invest substantially in infrastructure and free zones that will provide an impetus for improving its standing as a trading hub. According to his study, construction (50%) was the major industry using outsourcing followed by the Oil & Gas (21%), Pharmaceutical (14%), Food & Beverage (7%) and light industries (7%) [5].

Balan. S (2011) pointed out that the porter's five force framework in the UAE 3PL industry such as (a). threat of substitute is low, (b). threat of new entrants is low due to scale and experience, access to supply and distribution channels, and avoidance of direct competition with big companies, Legislation and Government, (c). It is very easy for customers to change their 3PLs from one to another, (d). Bargaining power of supplier is low, (e). Competitive rivalry is high [6]. M. S. Sohail (2005) conducted the survey based on Dubai and Sharjah through questionnaire from 3PL users [7].

### C. Comparative study from different researchers related to Logistics Outsourcing services

Different researchers have done the comparative analysis in logistics for their investigation. The list is given below as Lieb et al (1993) had conducted the survey between America and Europe, Arroyo et al (2006) had done the analysis for the usage of 3PL service in the USA, Europe and Mexico. Sohail et al (2002) compared the use of 3PL service in the Australian 3PL firms between the years 1995 and 1999, Bookbinder (2003) had compared the logistics system in Asia and Europe. In 2006; Sohail et al conducted the comparison between Singaporean and Malaysian firms for the extended use of the 3PL services. Wu and Cheng (2006) did a comparative study between China, Hong Kong and Taiwan for the reverse logistics in the publishing industry. Qiang Wang (2008) carried out comparisons between the main land china and Hong Kong [8]. Sunil Kumar Jauhar (2012) conducted the comparative analysis between the South Asian countries [9].

## III. DATA COLLECTION

The data was collected from questionnaire survey. Two survey were chosen from the UAE for our research. Out of the survey 119 responses were received from 200 questionnaires. The response rate was 59.5%. In that, 102 user companies and 17 non-user organizations participated in the survey and 24 (19.2%) of 3PL firms participated in the survey from 125 questionnaires. The investigation was done

based on Abu Dhabi, UAE and carried out by field visits and mail surveys (Ashok,2019). Secondly, Sohail (2005) conducted a survey based on the cities Dubai and Sharjah. He received 142 (105 3PL user and 37 non-user) response (71%) from 200 questionnaire [7].

Three past investigation studies from India were taken for the comparative analysis. Survey first conducted by Rajesh (2013) on Indian cities and the data's were collected from 3PL user organizations and 3PL firms. He conducted the mail survey. He selected 300 questionnaires from both 3PL firms and 3PL users. He received 181 responses (60%) from 3PL user companies and 190 responses (63%) from 3PL firms [1]. Then the data were collected by B.S. Sahay (2006) and he did the survey based on Indian cities and from user perspective. He had analyzed the 3PL market situation from 130 responses (26%) from 500 respondents [3]. Finally, the output was received from Mitra (2005) and his investigation was based on the provider point of view. He took the values from 32 respondents (16%) from 200 questionnaire [2].

These five investigation reports were compared with each other for our study. The detailed comparative study is given below:

## IV. RESULTS AND DISCUSSION

### A. Outsourcing Activities

According to the different studies, table (1) shows the different types of topmost logistic activities outsourced/offered by companies in India and the UAE.

According to the present investigation done by Ashok (2019) in Abu Dhabi, UAE. Full truck load (90%) is the most outsourced activities by 3PL users in Abu Dhabi, UAE followed by Freight forwarding (89%), and Customs clearance (87%), Port operations (79%), Carrier selection (58%), Product assembly/installation (55%), Import/Export management (36) and Order processing (29%).

Customs clearance (67%) is the important service offered by 3PL firms, followed by Full truck load (54%), Warehouse management (42%), Import/Export management (41%), Carrier selection (33%), Port operations (33%), Rate negotiation (29%), Multimodal (21%).

According to Sohail(2005),Carrier selection (94%), Rate negotiation (88.6%), Shipment consolidation (82.9%) are the prime outsourced services by 3PL users, it's followed by Order fulfilment (52.4%), Warehouse management (27.6%), Inventory management and Customer spare parts each (20%).

Rajesh (2013) have found Carrier selection (65%) was the important outsourced activity by client in India, it was followed by Freight forwarding (63%), Multimodal (62%), Full truck load and Warehouse management (60%), Packaging and labeling (48%), Customs clearance (46%) and Freight consolidation (26%).

Carrier selection (48%) was the most offered service by 3L firms, it was followed by Customs clearance (46%), Freight consolidation (44%), Multimodal (42%), Warehouse management (42%), Packaging & labeling (38%), Vendor mgmt. (37%) and Freight forwarding (36%).

B.S. Sahay (2006) investigated Outbound Transportation (55.7%) was the most outsourced service by 3PL users in India followed by Inbound Transportation (52.2%), Customs clearance (51.5%), Import / Export management (34.5%), Outbound Warehousing (33.9%), Warehouse management (29.5%), Fleet management (29.1%) and Packaging and labeling (29%).

Mitra (2005) identified Warehouse management (84%) was the prime service offered by 3PL firms in India which was followed by Full truck load (81%), Freight forwarding (75%), Customs clearance (69%), Multi modal and consulting services (69%) Freight consolidation (66%), Reverse logistics (59%) and Break Bulk Operations (56%).

**Table-1 Logistic services outsourced by 3PL users and Offered by 3PL firms**

United Arab Emirates						India							
Ashok,2019				Sohail,2005		Rajesh et al,2013				B.S. Sahay,2006		Mitra,2005	
3PL users	% (Rank)	3PL firms	% (Rank)	3PL users	% (Rank)	3PL users	% (Rank)	3PL firms	% (Rank)	3PL users	% (Rank)	3PL firms	% (Rank)
FTL	90(1)	Customs clearance	67(1)	Carrier selection	94.3(1)	Carrier selection	65(1)	Carrier selection	48(1)	Outbound transportation	55.7(1)	Warehouse mgmt./ operations	84(1)
Freight forwarding	89(2)	FTL	54(2)	Rate negotiation	88.6(2)	Freight forwarding	63(2)	Customs clearance	46(2)	Inbound transportation	52.2(2)	FTL	81(2)
Customs clearance	87(3)	Warehouse mgmt./ operations	42(3)	Shipment consolidation	82.9(3)	Multimodal	62(3)	Freight consolidation	44(3)	Customs clearance	51.5(3)	Freight forwarding	75(3)
Port operations	79(4)	Import/export mgt.	41(4)	Logistics information system	78.1(4)	Warehouse mgmt./ operations	60(4)	Warehouse mgmt./ operations	42(4)	Import/export mgt.	34.5(4)	Customs clearance	69(4)
Carrier selection	58(5)	Carrier selection	33(5)	Order fulfillment	52.4(5)	FTL	60(4)	Multimodal	42(4)	Outbound warehousing	33.9(5)	Multimodal and Consulting services	69(4)
Product assembly/ installation	55(6)	Port operations	33(6)	Warehouse mgmt./ operations	27.6(6)	Packaging and labeling	48(5)	Packaging and labeling	38(5)	Warehouse mgmt./ operations	29.5(6)	Freight consolidation	66(5)
Import/export mgt.	36(7)	Rate negotiation	29(7)	Inventory management	20(7)	Customs clearance	46(6)	Vendor management	37(6)	Fleet management	29.1(7)	Reverse logistics	59(6)
Order processing	29(8)	Multimodal	21(8)	Customer spare parts	20(7)	Freight consolidation	26(7)	Freight forwarding	36(7)	Packaging and labeling	29(8)	Break bulk operations	56(7)

**B. Outsourcing Necessity**

Table (2) shows that the motivation of outsourcing activities in 3PL user firms in India and the UAE. According to the investigation done by Ashok (2019) in the UAE, B.S. Sahay (2006) and Rajesh (2013) in India, Improved customer service (Rank-2, Rank-3 and Rank-2 for the UAE;2019, India;2006, and India;2013 respectively),Logistics cost reduction (Rank-1, Rank-1 and Rank-2 for the UAE;2019, India;2006, and India;2013 respectively), To better process responsiveness(Rank-3 and Rank-6 for the UAE; 2019 and India; 2013 respectively),Improve process capability and cycle time (Rank-4 for the UAE;2019 and India;2013 respectively),Improve conformance quality (Rank-5 and Rank-3 for the UAE; 2019 and India; 2013 respectively),To develop supply chain flexibility (Rank-6 and Rank-5 for the UAE; 2019 and India; 2013 respectively),Productivity improvements (Rank-7 and Rank-5 for the UAE; 2019 and India; 2006 respectively), Focus on core competencies (Rank-8, Rank-2 and Rank-1 for the UAE; 2019, India; 2006, and India; 2013 respectively), Corporate restructuring (Rank-9 for the UAE, 2019), Access/Expansion to unfamiliar markets (Rank-11 for the UAE, 2019), Access to emerging technologies (Rank-12 for the UAE,2019),To increase inventory turn (Rank-13 and Rank-6 for the UAE; 2019 and India; 2006 respectively), Improve return assets(Rank-14 and Rank-4 for the UAE;2019 and India;2006 respectively), Operation of IT systems, Diverting capital investment and E-Commerce application (Rank-15, Rank-16 and Rank-17 for the UAE,2019 respectively). It reveals that Logistics cost reduction, and improved customer services are the prime reasons for the 3PL user organizations to approach 3PL firms for their logistics activities. It shows that customers wanted to reduce the cost in logistics in order to get the financial

achievement and improved customer service by providing cost reduction, good delivery performance and reduce cycle timing and good relationship with them in India and in the UAE. At the same time, it focusses on core competencies which is another important reason for the outsource in India and because of the huge market, companies have to face more competition in the market. In order to solve this competition, they are approaching 3PL firms. Companies are not much focusing on corporate restructuring, IT usage and expansion of unfamiliar market in the UAE and these reasons are not included in their study of the Indian Authors.

**Table 2-Necessity of using 3PL operation in user organizations**

Reasons	Mean (Rank)		
	UAE (Ashok, 2019)	India (B.S.Sahay, 2006)	India (Rajesh et al,2013)
Improved customer service	3.95(2)	4.1(3)	3.7(2)
Logistics cost reduction	4.12(1)	4.4(1)	3.7(2)
To better process responsiveness	3.94(3)	-	3.2(6)
Improve process capability and cycle time	3.9(4)	-	3.5(4)
Improve conformance quality	3.39(5)	-	3.6(3)
To develop supply chain flexibility	3.34(6)	-	3.4(5)
Productivity improvements	3.18(7)	3.8(5)	-
Improve process lead time	2.29(10)	-	3.4(5)
Focus on core competencies	2.96(8)	4.3(2)	3.8(1)
Corporate restructuring	2.42(9)	-	-

Access/Expansion to unfamiliar markets	1.78(11)	-	--
Access to emerging technologies	1.57(12)	-	-
To increase inventory turn	1.45(13)	3.7(6)	-
Improve return assets	1.43(14)	3.9(4)	-
Operation of IT systems	1.39(15)	-	-
Diverting capital investment	1.36(16)	-	-
E-Commerce application	1.35(17)	-	-

**C. Factors influencing the Success of the 3PL industry**

Table (3) shows that the factors influencing the 3PL user organization in India;2013 and the UAE;2019. According to the study, the comparison of success factors in 3PL operations between the UAE and India are: Cost (Rank-1 and Rank-9 for UAE and India respectively), Delivery time/Delivery performance (Rank-2 and Rank-1 for the UAE and India respectively), Strategic commitment to customers (Rank-3 and Rank-4 for the UAE and India respectively), Quality of services(Rank-4 and 8 for the UAE and India respectively), Attitude towards customer/relationship (Rank-5 and Rank-3 for the UAE and India respectively), Ability to meet customer needs(Rank-6 and Rank-7 for the UAE and India respectively), Documents accuracy (Rank-7 for the UAE (not included for Indian study), Flexibility(Rank-8 and Rank-2 for the UAE and India respectively), Reputation(Rank-9 and Rank-6 for the UAE and India respectively),Reliability (Rank-14 and Rank-5 for the UAE and India respectively), Storage facilities, Good communication, Technical competence and Financial stability are ranked by 10,13,11 and 12 respectively for the UAE study. But these factors are not considered for the Indian study. It reveals Delivery performance/Delivery time is one of the important influencing factors (90%) in India and the UAE.80 to 90 % of the 3PL users had respondent Flexibility and Attitude towards customer relationship are the most important influencing factors in India and the UAE. Financial approach is the most influencing factor in the UAE, but operational perspective and related factors are the important factors in India. Finally, both countries are giving more preference to Financial, Operational and Customer point factors to succeed in the 3PL market in India and the UAE.

**Table 3-Factors influencing**

Factors influencing	Mean (Rank)	
	UAE (Ashok,2019)	India (Rajesh et al,2013)
Cost	4.31(1)	2.9(9)
Delivery time/Delivery performance	4.29(2)	4.7(1)
Strategic commitment to customers	4.21(3)	3.7(4)
Quality of services	4.12(4)	3.1(8)
Attitude towards customer/relationship	4.06(5)	4.3(3)
Ability to meet customer needs	4.04(6)	3.4(7)
Documents accuracy	4.03(7)	-
Flexibility	4(8)	4.5(2)
Reputation	3.76(9)	3.5(6)
Storage facilities	3.73(10)	-
Good communication	3.55(13)	-
Technical competence	3.63(11)	-
Financial stability	3.56(12)	-
Reliability of the 3PL provider	3.49(14)	3.6(5)

**D. Shortfalls of the 3PL providers**

Table (4) shows that the various shortfalls of 3PL service providers as identified by 3PL user organizations. According to the investigation by Rajesh (2013) in India and Ashok(2019) in the UAE, Lack of implementation of updating and advanced technology(Rank-1 and Rank-3 for India and the UAE respectively), Lack of continuous improvements(Rank-2 and Rank-3 for India and the UAE respectively), Lack of strategic management skills(Rank-2 and Rank-5 for India and the UAE respectively), Lack of consultative/knowledge-based skills and Less flexibility in operations and delivery (Rank-3 for India).But they are Rank-2 and Rank-4 for the UAE respectively. Finally, Lack of realization of cost reduction (Rank-4 and Rank-1 for India and the UAE respectively). It reveals that the customer has focused always on the above shortfalls to be rectified from the 3PL suppliers in India and the UAE. Clients wanted to improve technological advancement for the development of 3PL operation and satisfaction of 3PL operations and they think, they may give smooth operations and implementation during 3PL operations. But in the UAE, clients wanted to reduce the cost realization activities from 3PL suppliers followed by knowledge-based skills. It shows that the clients are not much interested in the Technological application. This is because they are all already developed in the UAE.

**Table 4-Shortfalls of the 3PL providers**

Short falls	Mean (Rank)	
	India (Rajesh,2013)	UAE (Ashok,2019)
Lack of implementation of updating and advanced technology	3.6(1)	2.6(3)
Lack of continuous improvements	3.5(2)	2.6(3)
Lack of strategic management skills	3.5(2)	2.3(5)
Lack of consultative/knowledge-based skills	3.4(3)	2.8(2)
Less flexibility in operations and delivery	3.4(3)	2.4(4)
Lack of realization of cost reduction	3.3(4)	3(1)

**E. Challenges faced by 3PL firms**

Table (5) shows the common challenges faced by 3PL firms during the operations in India;2013 and the UAE;2019. According to the comparative analysis, Reduced labor cost due to competition market, Improve customer services and Cutting transportation cost (Rank-1, Rank-2 and Rank-3 respectively in the UAE), Profitability (Rank-3 and Rank-4 for India and the UAE respectively), Supply chain visibility(Rank-5 in the UAE), Finding the customers(Rank-1 and Rank-5 for India and the UAE respectively), VAT system and High transportation cost are ranked 6 each in the UAE, Rising economic pressure(Rank-2 and Rank-7 for India and the UAE respectively), Global coverage (Rank-3 and Rank-8 for India and the UAE respectively), Technology strategy and implementation (Rank-2 and Rank-9 for India and the UAE respectively), Staffing, Training and other HR issues(Rank-4 and Rank-10 for India and the UAE respectively), Expanding/Selling to new market is ranked eleven in the UAE, Finding good alliance partners(Rank-3 and Rank-12 for India and the UAE respectively),while Capacity(Rank-1) is the greatest challenge being faced in the India 3PL firms.



It reveals that 90 % of the above 3PL firms in India have faced different challenges such as Capacity, Finding the customers, Profitability, Rising economic pressure, Technology strategy and implementation, Global coverage and Staffing, Training and other HR issues and 70 to 80% for the UAE 3PL firms which faced challenges due to Reduced labor cost, Competition market, Improved customer services, Cutting transportation cost, Profitability, Finding the customers and Supply chain visibility. Rising economic pressure, Global coverage and Technology strategy and implementation Staffing, Training and other HR issues and Finding good alliance partners are the minor challenges faced by 3PL firms in the UAE.

**Table 5-Challenges faced by 3PL firms**

Challenge's Faced	Mean (Rank)	
	India (Rajesh et al,2013)	UAE (Ashok,2019)
Reduced labor cost due to competition market	-	4.1(1)
Improved customer services	-	4(2)
Cutting transportation cost	-	3.9(3)
Profitability	4.6(3)	3.9(4)
Supply chain visibility	-	3.8(5)
Finding the customers	4.8(1)	3.8(5)
VAT system	-	3.5(6)
High transportation cost	-	3.5(6)
Rising economic pressure	4.7(2)	3.4(7)
Global coverage	4.6(3)	3.3(8)
Technology strategy and implementation/investment	4.7(2)	3(9)
Staffing, Training and other HR issues	4.5(4)	2.8(10)
Expanding/Selling to new market	-	2.3(11)
Finding good alliance partners	4.6(3)	2.1(12)
Capacity	4.8(1)	-

**F. IT System performance during 3PL operation**

Table (6) shows the IT system performance in India and the UAE. Totally twenty IT applications are investigated in the comparative analysis. According to the study, Export/Import management system and Mobile communications (Rank-1 in the UAE, 2019). Mobile communication (Rank-1 in India, 2005) and Export/Import management system (Rank-2 in India, 2013), Shipment tracking (Rank-2 and Rank-1 for the UAE,2019 and India,2013 respectively), Transportation management (Planning & Scheduling) system (Rank-3 for the UAE,2019 and India,2013 respectively), Electronic Data Interchange (EDI) (Rank-4 and Rank-2 for the UAE, 2019 and India, 2005 respectively), CRM (Customer Relationship Management) and E-Commerce application had (Rank-4 and Rank-5 for the UAE, 2019 respectively), Customer order management system(Rank-6 and Rank-4 for the UAE,2019 and India,2013 respectively), Network modeling and optimization ( Rank-7 in the UAE, 2019), Warehouse distribution system(Rank-8 and Rank-5 for UAE, 2019 and India,2013 respectively), Supplier management system and Web enabled communication, Supply chain planning and Distributed order management all occupied Rank-8 in the UAE,2019. Supplier management system (Rank-6 in India, 2013), Web-enabled communication occupied (Rank-1 in India, 2013), Yard management (Rank-9 in the UAE, 2019), Global positioning system (GPS) (Rank-10 and 4 for UAE,2019 and India,2005 respectively), Satellite-based tracking system (Rank-11 and Rank-4 for the UAE,2019 and India,2005 respectively), Cloud-Based System (Rank-12 in the UAE, 2019), Barcoding / RFID(Rank-13,Rank-7 and

Rank-3 for the UAE,2019,India,2013 and India,2005 respectively). Finally, Geographic information system (GIS)(Rank-14 and Rank-5 for the UAE,2019 and India,2005 respectively).This investigation reveals Export / Import management system, Shipment tracking, Web-enabled communication, Electronic Data Interchange (EDI) and Mobile communication system, Warehouse distribution system and CRM (Customer Relationship Management) are the most IT systems used for 3PL operations in India and the UAE. Yard management, Global positioning system (GPS), Satellite-based tracking system, Cloud-Based System, Geographic information system (GIS) have less importance in IT application in the UAE and India. This study reveals that the IT application usage in the UAE is higher than in India.

**G. Impact of usage of ITES**

Table (7) shows that the impact of IT application on 3PL firms in India and the UAE. This investigation was carried out based on the operational wise and follow-ups while using IT application in the 3PL operations in 3PL firms. According to our research in 2019, Order accuracy (Rank -1), Fast delivery (Rank-2), Effective communication with customers (Rank-3), and Quick response to customer enquiries (Rank-3) are the top three IT impacts on 3PL firms followed by Good inventory management (Rank-4) and Reliable delivery (Rank-5)[Ashok,2019].In India, Quick response to customer enquiries (Rank-1), Effective communication with customers (Rank-2), Prompt follow-up of customer complaints (Rank-2),Reliable delivery (Rank-3) and Order accuracy(Rank-3) are the mostly impacted areas while using IT services in 3PL operations and Fast delivery occupied the last slot[Rajesh,2013].Good inventory management was not considered in Indian study. This comparison shows that the operational perspective and customer perspective are mainly covered by Indian 3PL providers. But the customer satisfaction and follow-ups are mainly covered by the UAE 3PL firms.

**Table 6-IT system performance**

IT System Performance	Mean (Rank)		Percentage (Rank)
	UAE (Ashok, 2019)	India (Rajesh et al,2013)	India (Mittra, 2005)
Export/Import management system	3.9(1)	3.5(2)	-
Mobile communication	3.9(1)	-	78(1)
Shipment tracking	3.7(2)	3.6(1)	-
Transportation management (Planning & Scheduling) system	3.6(3)	3.2(3)	-
Electronic data interchange (EDI)	3.5(4)	-	56(2)
CRM (Customer relationship management)	3.5(4)	-	-
E-Commerce application	3.45(5)	-	-
Customer order management system	3.3(6)	3.1(4)	-
Network modeling and optimization	3.1(7)	-	-
Warehouse distribution system	3(8)	3(5)	-

Supply chain planning	3(8)	-	-
Supplier management system	3(8)	2.5(6)	-
Web enabled communication	3(8)	3.6(1)	-
Distributed order management	3(8)	-	-
Yard management	2.8(9)	-	-
Global positioning system (GPS)	2.75(10)	-	9(4)
Satellite-based tracking system	2.4(11)	-	9(4)
Cloud-Based System	2.4(12)	-	-
Barcoding/RFID	2.3(13)	2.4(7)	31(3)
Geographic information system (GIS)	2.2(14)	-	3(5)

**Table 7-Impact of usage of IT system**

IT System Impact	Mean (Rank)	
	UAE (Ashok, 2019)	India (Rajesh et al,2013)
Order accuracy	4.62(1)	4(3)
Fast delivery	4.6(2)	3.8(4)
Effective communication with customers	4.54(3)	4.4(2)
Quick response to customer enquiries	4.54(3)	4.5(1)
Good inventory management	4.5(4)	-
Reliable delivery	4.4(5)	4(3)
Prompt follow-up of customer complaints	4.3(6)	4.4(2)

**H. Impact of logistic performance of 3PL firm’s usage on 3PL user firms**

Table (8) shows that the logistic performance measures from 3PL user organizations while using 3PL Operations. According to the investigation by Rajesh (2013) in India and Ashok (2019) in the UAE, Customer Satisfaction (Rank-1 and Rank-3 for the UAE,2019 and India,2013 respectively), Internal Logistics System Performance (Rank-2 for the UAE,2019, but not included for Indian Study), Logistics Cost reduction (Rank-3 and Rank-4 for the UAE,2019 and India,2013 respectively), Average order cycle length(Rank-4 and Rank-6 for the UAE,2019 and India,2013 respectively), Employee Morale (Rank-5 for both countries) and such logistics performance Service level improvement (Rank-1 in India,2013), Fixed logistics asset reduction (Rank-2 in India, 2013) and Cash-to-cash cycle reduction (Rank-3 in India,2013).These aspects were not focused by the author in his investigation in the UAE. It reveals the operation wise performance measure is the major impact in Indian and the UAE user organizations, but at the same time financial performance measures have also taken place in both countries. Also, the result indicates the positive impacts on customer satisfaction and negative impacts on employee morale while using 3PL operations in 3PL user organization in India and the UAE.

**Table 8 -Impacts on logistic performance using 3PL operations in 3PL client firms**

Logistics performances	Mean (Rank)	
	UAE (Ashok,2019)	India (Rajesh et al,2013)
Customer Satisfaction	4(1)	4.3(3)
Internal Logistics System Performance	3.9(2)	-
Logistics Cost reduction	3.6(3)	4.2(4)
Average order cycle length	3.4(4)	3.8(6)
Employee Morale	2(5)	3.9(5)
Service level improvement	-	4.6(1)
Fixed logistics asset reduction	-	4.4(2)

Cash-to-cash cycle reduction	-	4.3(3)
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**I. Information Sources**

Those using 3PL services become aware of the services of the company or companies, which they are using in different ways. There has been no study done so far in India regarding Information Sources. This report is based on the study in 2005 and 2019 in the UAE. As shown in table (9), Sales call by representative (Rank-1 and Rank-3 for 2019 and 2005 respectively in the UAE), others (1. Recommendations from friends, 2. Market contacts, 3. Appointed by customers) Rank-3 and Rank-6 for 2019 and 2005 respectively in the UAE), Sales contract at a logistical conference(Rank-5 for both years in the UAE), Discussion with other logistical professionals(Rank-4 and Rank-2 for 2019 and 2005 respectively), Direct mail advertising(Rank-2 and Rank-4 for 2019 and 2005 respectively) and Advertising in professional publications (Rank-6 and Rank-1 for 2019 and 2005 respectively) are the important factors. It reveals Sales call by representative and Direct mail advertising are the major information sources in 2019 and Advertising in professional publications and Discussion with other logistical professionals were the main information sources in the year 2005.

**Table 9-Source of information to get the 3PL market**

Information sources	Mean (Rank)	
	UAE (Ashok,2019)	UAE (Sohail,2005)
Sales call by representative	39(1)	16.2(3)
Others (1. Recommendations from friends .2. Market contacts 3. Appointed by customers)	29(3)	6.67(6)
Sales contract at a logistical conference	13(5)	10.5(5)
Discussion with other logistical professionals	19(4)	19(2)
Direct mail advertising	32(2)	14.3(4)
Advertising in professional publications	9.7(6)	76.2(1)

**J. Satisfaction of 3PL User**

This table shows (10) the comparison of customer satisfaction. As per the study, most of the customers were satisfied with 3PL service providers in India and the UAE. On an average 70 % of the customer were satisfied with their 3PL firms and 3PL operations in India and the UAE. In the UAE 26 % customers were very satisfied in the year of 2005 and 10 % of clients were very satisfied in the year of 2019. In India nearly 10 % of customers were well satisfied with their 3PL firms in 2006. The very satisfaction percentage of customers in the UAE, 2005 is nearly twice than the year of 2006 in India and 2019 in the UAE .6% and 9% of the customers were neutral with their 3PL firms in India, 2006 and the UAE, 2019 respectively. 5% of the customers are dissatisfied in the UAE, 2019 and none of the customer firms was very dissatisfied with their 3PL operations in India and the UAE. It is shown that the relationship between the customer and 3PL firms, responsiveness and operations from 3PL firms are good.

**Table 10-Customer satisfaction**

Customer satisfaction	Percentage		
	UAE (Ashok,2019)	UAE (Sohail,2005)	India (B.S.Sahay,2006)
Satisfied	76	68	72.3
Very satisfied	10	26	9.6
Neutral	9	-	6
Dissatisfied	5	-	-
Very dissatisfied	-	-	-

servicing large 3PL operations in user organization and Chemicals (83%),Electronics(75%),Construction &Building materials(71%),Apparel & Textiles(71%),Furniture(71%), Oil & Gas(71%) and Automotive(67%) are the most important markets served by 3PL firms in the UAE [Ashok,2019]. Chemicals (52%), Automotive (50%), and Pharmaceuticals (50%) are the first three industries served by 3PL provider firms and Electrical Equipment’s (12%), Automotive and Chemicals (11%) are the major industries served by 3PL user organizations in India [Rajesh,2013].Automotive (27%), Engineering(23%) and Others(21%) are the highly demanded industries served in India[B.S.Sahay,2006]. Pharmaceuticals (72%), Automotive and Industrial (66%), Apparel & Textiles (59%) are the important industries served in India [Mitra,2005

**K. Industry served**

Table (11) shows Construction & Building materials (88%), Manufacturing (65%) and Oil& gas (33%) industries are ].

**Table-11 Industry served**

Markets Served	United Arab Emirates				India		
	Ashok (2019)		Sohail (2005)		Rajesh (2013)		Mitra (2005)
	3PL user	3PL firms	3PL user	3PL Firms	3PL user	3PL user	3PL firms
Aerospace	0	50	-	-	-	-	-
Agriculture	1	54	-	-	-	-	-
Automotive	2	67	-	50	11	27	66
Chemicals	4	83	-	52	11	7	38
Construction & Building Materials	88	71	-	-	-	-	-
Consumer packaged goods	1	63	-	34	8	-	50
Electronics	35	75	-	-	-	-	-
Renewable energy	1	3	-	-	-	-	-
Food & Beverage	1	58	-	38	8	-	44
Apparel & Textiles	1	71	-	46	9	4	59
Furniture	1	71	-	-	-	-	-
Grocery	0	25	-	-	-	-	-
Healthcare	1	54	-	-	-	-	28
Oil & Gas	33	71	-	-	-	-	16
Pharmaceuticals	0	50	-	50	9	-	72
Trade show	0	38	-	-	-	-	-
Manufacturing	65	58	-	-	-	-	-
Electrical equipment’s	-	-	-	21	12	-	53
Retailing	-	-	-	33	10	-	31
Machinery/Industrial/Engineering	-	-	-	31	9	23	66
Heavy Engineering	-	-	-	43	-	-	-
Telecommunication	-	-	-	-	-	3	50
Others-----	1	8	-	22	9	21	-

**V. SUMMARY OF FINDINGS FOR 3PL MARKET IN INDIA AND THE UNITED ARAB EMIRATES**

According to the detailed comparative analysis from the above sections, the third-party logistics market in India and the UAE have been summarized in Table (12).

## Insight of Third-Party logistics Market in India and UAE

**Table 12- Third party logistics market status in India and the UAE**

DESCRIPTION	UUNITED ARAB EMIRATES	INDIA
Outsourcing Activities	Full truck load (90%), Freight forwarding (89%), and Customs clearance (87%), Port operations (79%), Carrier selection (58%), Product assembly / installation (55%) are the most outsourced activities by 3PL users in Abu Dhabi, UAE. Customs clearance (67%), Full truck load (54%), Warehouse management (42%), Import / Export management (41%), Carrier selection (33%), Port operations (33%) are the important services offered by 3PL firms [Ashok,2019]. Carrier selection (94%), Rate negotiation (88.6%), Shipment consolidation (82.9%) are the prime outsourced services by 3PL users [Sohail, 2005].	Carrier selection (65%), Freight forwarding (63%), Multimodal (62%), Full truck load and Warehouse management (60%) are the important outsourced activities by the client and Carrier selection (48%), Customs clearance (46%), Freight consolidation (44%), Multimodal (42%), Warehouse management (42%) are the most offered service by 3L firms in India [ Rajesh, 2013].Outbound Transportation (55.7%), Inbound Transportation (52.2%), Customs clearance (51.5%), was the most outsourced service by 3PL users in India [B.S.Sahay, 2006].Warehouse management (84%), Full truck load (81%), Freight forwarding (75%), Customs clearance (69%),Multi modal and consulting services (69%) Freight consolidation (66%), Reverse logistics (59%) and Break Bulk Operations (56%) are the services offered by 3PL firms in India [Mitra, 2005].
Factors influencing the Success of 3PL industry	Cost is the most influencing factor in the UAE followed by delivery time, strategic commitment to customers and quality of service [Ashok, 2019].	Delivery performance/Delivery time is one of the important influencing factors in India followed by Flexibility and Attitude towards customer /relationship [Rajesh, 2013].
Outsourcing Necessity	Logistics cost reduction and Improved customer service are the prime reason for the 3PL user organization to approach 3PL firms for their logistics activities [Ashok, 2019].	Focus on core competencies [Rajesh, 2013] and Logistics cost reduction [B. S. Sahay, 2006] are the important reason to outsource in India.
IT System Performance	Mobile communication, Export/Import management system and Shipment tracking are the important IT system usage in the UAE [Ashok, 2019].	Web enable communication system, Export/Import management system, Mobile communication, Shipment tracking, Transport management (Planning & Scheduling) system [Rajesh, 2013]. Mobile communication, Electronic data interchange (EDI) and Bar coding/RFID are the major IT usage in 3PL operations used by 3PL providers [Mitra, 2005].
Challenges faced by 3PL firms	Reduced labor cost due to competition market, Improved customer services, Cutting transportation cost, Profitability, Finding the customers and Supply chain visibility are the major challenges and Staffing, Training and other HR issues and Finding good alliance partners are the minor challenges faced by 3PL firms in the UAE [Ashok, 2019].	Capacity, Finding the customers, Profitability, Rising economic pressure, Technology strategy and implementation, Global coverage and Staffing, training and other HR issues are the major challenges faced by Indian 3PL firms [Rajesh, 2013].
IT system impact	Order accuracy, Fast delivery, Effective communication with customers and Quick response to customer enquiries are the top three IT impacts in 3PL firms [Ashok, 2019].	Quick response to customer enquiries, Effective communication with customers, Prompt follow-up of customer complaints, Reliable delivery and Order accuracy are the mostly impacted area while using IT services in 3PL operations and Fast delivery occupied the last slot [Rajesh, 2013].
Impact of logistic performance	Customer satisfaction, Internal Logistics System Performance and Logistics Cost reduction are the most impacted areas in the UAE [Ashok, 2019].	Service level improvement fixed logistic asset reduction, customer satisfaction and cash to cash cycle reduction are the most impacted area in India [Rajesh, 2013].
Area of Short falls from 3PL providers	Clients wanted to reduce the cost realization activities from 3PL supplier and knowledge-based skills in the UAE [Ashok, 2019].	Clients wanted to improve technological advancement, Continuous improvement and strategic management skills from 3PL supplier [Rajesh, 2013].
Information Sources	Sales call by representative and Direct mail advertising are the major information sources [Ashok,2019] and Advertising in professional publication, Discussion with other logistical professionals are the main information sources [Sohail,2005]	Not included in their study of the Indian Authors
Customer Satisfaction	About 70 % of the customers were satisfied with their 3PL operations. In UAE 26 % customers were very satisfied in the year of 2005 [Sohail, 2005].10 % of clients are most satisfied in the year of 2019. The most satisfaction percentage of customers in the UAE, in the year 2005 was nearly twice than that in 2019. 9% of the customers are neutral with their 3PL firms in the UAE [Ashok, 2019].	About 70 % of the customers were satisfied with their 3PL operations. In India nearly 10 % of customers were very satisfied with their 3PL firms in 2006. 6% of the customers were neutral with their 3PL firms in India [B. S. Sahay, 2006].



Industries served	Construction & Building materials (88%), Manufacturing (65%), Electronics (35%) and Oil & gas (33%) industries are mostly served by 3PL users and Chemical (83%), Electronics (75%), Construction and Building material (71%), Oil & Gas (71%) and Automotive (67%) are the top markets occupied by 3PL firms [Ashok,2019].	Chemicals (52%), Automotive (50%), Pharmaceuticals (50%) are the first three industries occupied by 3PL provider firms and Electrical Equipment (12%), Automotive and Chemicals (11%) are the industries most served by 3PL user organizations in India [Rajesh, 2013]. Automotive (27%), Engineering (23%) and Others (21%) are the major industries served in India [B. S. Sahay, 2006]. Pharmaceuticals (72%), Automotive and Industrial (66%), Apparel & Textiles (59%) are the major industries served in India (Mitra, 2006).
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**VI. CONCLUSION**

- Because of the infra structure development, massive requirements of Construction & Building Materials from and to other countries and marvelous improvement in Manufacturing Industries and the material transferring to other countries by inter connecting roads, Full truck load, Freight forwarding, Customs clearance, Port operations ,Carrier selection, Import/Export management, Warehouse management, Rate negotiation and Multimodal are the most wanted logistic services outsourced /offered by 3PL users/firms in the UAE.
- Due to the shortage of project completion target date and to satisfy the Project Operator/Consultant/Main Contractor, Customers are looking for 3PL firms in Product assembly/installation (Ashok, 2019).Carrier selection, Rate negotiation, Freight consolidation are the prime outsourced services by 3PL users, it’s followed by Order fulfilment, Warehouse management and Inventory management. Customer wanted outsourcing activities to improve their operational in nature in UAE (Sohail, 2005).
- From the Indian Study (Rajesh, 2013 and Mitra,2005), it is seen that the activities mostly outsourced are those that are operational in nature, while there is a lesser degree to outsource activities that are genuinely customer related, for example order processing and reverse logistics, and activities that include the utilization of information technology (IT) and are strategic in nature like distribution.
- As per the study by B. S. Sahay and Mohan. R (2006) 46.7 percent of associations in India utilize 3PL suppliers to perform both domestic and international operations,44.4 percent use such services for domestic operations only and 8.9 percent utilize these for worldwide tasks .Because of the worldwide and domestic operations and most of the locations are connecting by Roads, Warehousing, inbound and outbound transportation, custom clearing and forwarding are the most repeatedly outsourced activities in India.
- Financial approach is the most influencing factor in the UAE, but operational perspective and related factors are the important factors in India. Finally, both countries are giving more preference to financial, operational and customer point factors to succeed in the 3PL market in India and the UAE. It shows that the customers wanted to reduce the cost in logistics in order to get the financial achievement and improved customer service by providing cost reduction, good delivery performance and reduce cycle timing and good relationship with them in India and the UAE.
- In order to resolve the competencies, Organizations are approaching 3PL firms in India. Companies are not much focusing on corporate restructuring, IT usage and expansion of unfamiliar market in the UAE and these

reasons are not included in their study of the Indian authors.

- Mobile communications, Shipment tracking, Export/ Import management system are the important IT system usage in the UAE. Mobile communications, Export/ Import management system, Shipment tracking, Transport management (Planning & Scheduling) system, Electronic data interchange (EDI) and Web enable communication system are the major IT application usages in 3PL operations used by 3PL providers in India.
- Cost related challenges faced by 3PL firms in the UAE, but this challenge is different from Indian study, i.e., they are facing Challenges such as operational and technical wise.
- Using IT application and its impacts for Operational and customer satisfaction in nature are mainly covered for Indian 3PL providers. But the customer satisfaction and follow-ups are mainly covered by the UAE 3PL firms.
- Operation wise performance measure is the major impact in Indian and the UAE user organizations, but at the same time financial performance measures are also taken place in both countries. Also, the result indicates that the positive impacts on customer satisfaction and negative impacts on employee morale while using 3PL operations in 3PL user organization in India and the UAE.
- Clients wanted to improve technological advancement for the development of 3PL operation in India. But in the UAE, the clients are not much interested in the Technological advancement, because they are all already developed in the UAE.
- Sales call by representative and direct mail advertising are the major information sources in 2019 and advertising in professional publications and discussion with other logistical professionals were the main information sources to know the 3PL companies by 3PL user organizations in the year 2005 in the UAE.
- More than 90% of the customer firms are satisfied and very satisfied with their 3PL firms in India and the UAE. It shows the relationship between the customer and 3PL firms, and the responsiveness and operations from 3PL firms are good.
- Because of the Infrastructure development, Oil & Gas industry and automotive export and import, these industries are mostly served in the UAE. Due to increasing population and more requirements Pharmaceuticals, Textiles and Automotive are highly served in India.

- The Third-party logistics Industry is growing very fast in Abu Dhabi as in Dubai where the 3PL market is highly developed.
- The IT usage in 3PL Industry is very high especially in Dubai and the usage is going peak in the near future in Abu Dhabi.
- Two thirds of the 3PL providers are doing International and Domestic operations in the UAE.
- Geographical location, Economic development, and Government support to open new business and Growing Technological development are the other reasons for the 3PL market growing fast in the UAE.
- Heavy industry and manufacturing companies continue to prefer Abu Dhabi, with KIZAD attracting majority of these requirements.
- Growing economic development, and infrastructure development are the most important factors for 3PL market success in India.
- Finally, both the UAE and India are the emerging trend in 3PL operations and going to the next level. Because, arrival of newcomers in the market, Govt. support and Economic development are very high in both countries.

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