

# Customer Claims in Automobile Spare Parts Industry – A 3PL Perspective



R Sundarprasad, E. Muthukumar

**Abstract—** Automobile OEM (Original Equipment Manufacturer) has two key lines of business. One being the main equipment sales and the other being spare parts associated to the original equipment. This line of business is either called as After Sales Market / After Market / Spares Market. As part of wear and tear of spare parts of original equipment service and replacement of spare parts comes into picture. A 3PL organization is selected by OEMs to manage their after sales service. Primary responsibilities of a 3PL includes warehouse management where the spare parts of OEMs are received, stored, order processed and delivered to OEM's end customers. Hence, 3PL companies have major share in ensuring accurate delivery of spare parts to OEM's end customers. Any wrong or shortage or excess delivery (which is termed as Customer Claims) impacts the customer satisfaction level and adds up logistics cost to both 3PL organization and OEM. This paper aims at evaluating the core reasons behind customer claims.

In completing this research, the population selected for study is from 3 leading automobile OEMs and 1,00,000 samples.

The results have shown that the key drivers of customer claims are due to stock management in warehouse managed by 3PL organization in following areas of operation.

- Inbound (Gate entry of vehicles, Unloading, Physical verification of unloaded stock, Physical putaway of parts in warehouse storage locations)
- Outbound (Customer order registration, Picking instructions from the sales order processing system, Physical picking of parts, Packaging of picked parts, Despatch and Delivery at customer end)

In the above-mentioned key process areas ERP (Enterprise Resource Planning) application or WMS (Warehouse Management System) or Inventory Management application plays a significant role in avoiding or minimizing customer claims. Apart from applications and Information Technology systems, skill of staff and operatives, discipline of operatives, system controls influence extensively in customer claims to be generated.

**Background/Objective:** To investigate deeper into causes that impact customer claims from 3PL service provider view.

**Methods / Statistical analysis:** The results are based on about 1,00,000 samples for a periodicity of 6 years from 3 major automobile industry linked 3PL organization.

**Results/findings:** The claim samples showed significantly higher due to pick issues ~ 41.7% and wrong labelling issues ~ 42.34%. Other reasons contribute about 15.96%

**Conclusion:** The analysis offers a clear distribution of root causes in the collected samples.

**Keywords:** Picking, Labelling, Pick face (Fast moving items storage), OEM (Original Equipment Manufacturer), 3PL (Third Party Logistics Service Providers), Claims, IT (Information Technology)

## I. INTRODUCTION

Third Party Logistics (3PL) is the function by which the owner of goods (The Client Company) outsources various elements of the supply chain to one 3PL company that can perform the management function of the clients inbound freight, customs, warehousing, order fulfilment, distribution, and outbound freight to the clients customers (Maxwell - <http://www.logisticslist.com/3pl-definition.html>)

In warehouses of OEMs, 3PL performs all processes, activities, IT system transactions to fulfill order requirements of OEM's end customers. Parts ordered by end customers are picked, processed, packed, despatched and delivered by the 3PL operators. Claims are typically complaints registered by end users against such delivered parts. A few types of claims are: wrong part delivered, right part delivered but with quantity mismatch, right part delivered but in a damaged condition, right part delivered but not meeting the package requirements, right part delivered but of old version.

The claims registered by end customers on the warehouse usually associated with poor methods adopted for picking the parts. Claims as it increases the cost associated with re-processing the customer orders in terms of return logistics, warehouse processing and outbound logistics. Identification of claims have always remained as a post-mortem activity rather than a proactive solution. The events associated with such proactive solution is not built as part of process but as a standalone audit system.

## II. PROBLEM STATEMENT

Problem of customer claims has been in discussion for a very long time. 3PL organizations typically don't own the process of OEMs. Instead, they become the custodian of OEM's process in warehouse management. This gives an opportunity to dive deeper and understand with data the real cause of customer claims, importantly the major contributor to customer claims.

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\* Correspondence Author

R Sundarprasad\*, Research Scholar, Nehru College of Management, Coimbatore, Tamil Nadu, India.

E. Muthukumar, Professor, Nehru College of Management, Coimbatore, Tamil Nadu, India.

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**III. OBJECTIVE OF THIS STUDY**

The wider objective is to understand the areas of operations within 3PL organization that contributes to customer claims, and the explicit objectives are:

- To identify the contributors to customer claims and its business impact to both client and 3PL organization
- To determine the root causes from 3PL organization perspective for customer claims generation
- To arrive and implement action items for reducing customer claims
- Post implementation assessment for the action items

**Research Questions**

1. What is the customer claims level registered on Automobile OEMs?
2. What impact it transform on 3PL organization in terms of business and Customer Satisfaction Level?
3. What are the major causes for customer claims and ways to control?

**IV. RESEARCH HYPOTHESIS**

The following research hypothesis were prepared for the study:

- H1: There are common challenges in controlling customer claims & better process and control can address them
- H2: There is a major impact on 3PL organization’s profitability
- H3: Information Technology can help controlling customer claims

**V. METHODS**

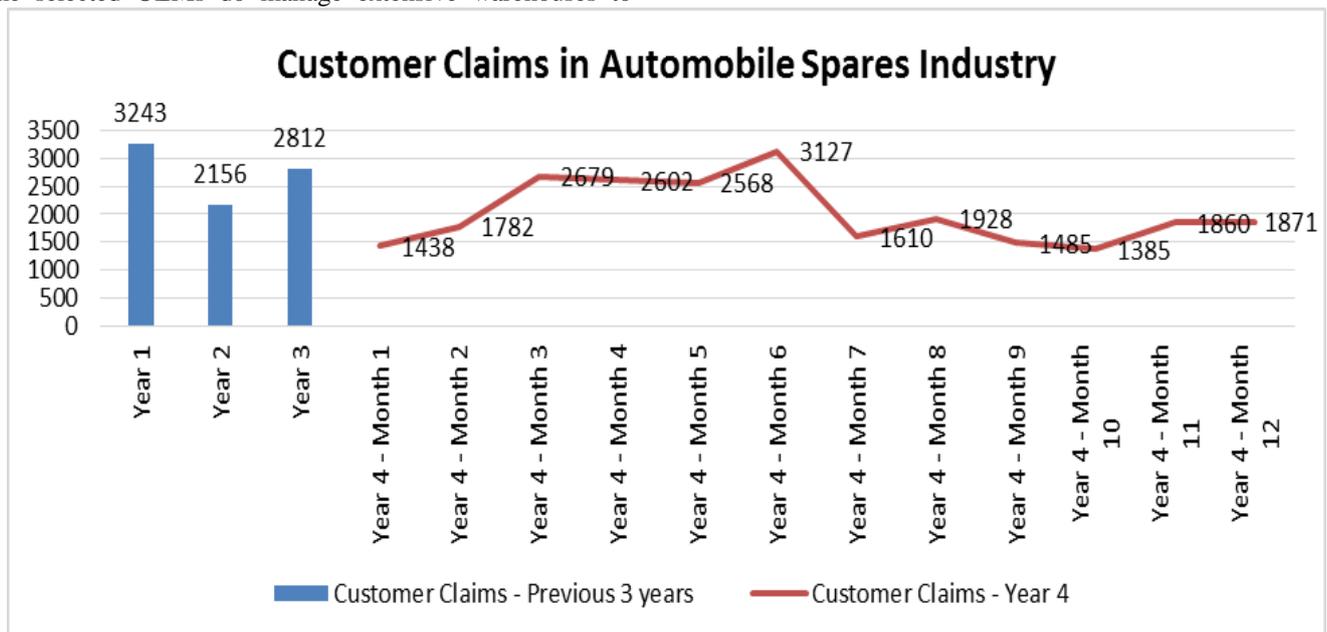
*1.1. Industry and Data Sample Collection*

Warehouses of 3 leading automobile OEMs positioned at distinct geographic locations participated in this study. The research sample pertains to the customers across the country. The selected OEMs do manage extensive warehouses to

manage the spare parts of their vehicles. This is to have a control on the market by offering better customer service in terms of parts availability with dealers for quick service delivery. The OEM’s existence not only depends on the marketing involved in selling their vehicles (end product) but also to provide spare parts to the vehicle owners in case of repairs & damages. Any automobile OEM needs to maintain the stock of spare parts based on the product life cycle of vehicles sold in the market. In such cases OEM’s role in managing the spare parts is a must. This being their non-core activity (because they are manufacturers), spare parts management has been outsourced to various 3PL organizations. Although the inventory ownership lies with OEMs, 3PL has an upper hand in managing their spare parts and distributing them in the market as and when needed. 3PL acts as inventory custodian and not the owner of spare parts but liable for receiving, storing, processing, dispatching, managing claims, controlling claims within the specified service level agreement as agreed with OEMs. Claim although seen as an error in the processing, it leads to increased processing cost due to returns management. On another hand it also impacts the service level offered to the dealers. To understand the quantum of claims, 4 years transactions in selected OEMs related to claims were analyzed and the findings are portrayed below:

*H1: What is the level of customer claims in OEMs? Are they common challenges?*

On an average 2027 Parts Per Million customer claims are registered on monthly basis. This shows the significance of the same. Also, directly it increases the re-processing cost to resolve the claims. Although the trend shows declining value, still it has bigger financial impacts for OEMs. When analyzing the data for 4 consecutive years it is evident that customer claims are common challenges for any 3PL organisation and also for OEMs.



*H2: There is a major impact on 3PL organization’s profitability*

All organized 3PL players in the market are evaluated for their performance on monthly basis by the OEMs. This evaluation is based on Key Performance Indicators with

multiple parameters. A typical KPI format prepared by OEM to measure 3PL's performance is shown below:

S.No.	Key Deliverables	Weightage in %	Targeted level of Performance	Actual level of Performance	% of Achievement	Customer satisfaction rating (1- very Poor, 5 - Average, 10-Excellent)
1	Goods Inward	10	Ginning of the parts should be completed within 6 hrs from the time of LECI	1)No of Lines Received =5548 2)No of Lines ginned =5548	100%	10
		10	Binning of the parts should be completed within 24 hrs from the time of Ginning	1) No. of Lines Ginned=5548 2) No. of Lines Binned=5332	96%	9
		10	Raising of the discrepancy claims within 7 days from the time of receipt	1) No. of Discrepancy Observed =126 2)No. of discrepancies raised =126	100%	10
2	Float Control	10	Challans to be completed within 24 hrs from the time of release	1)No of challans released =45407 No of Actual Challans =41184 2)No of challans executed =31598	77%	8
3	Despatch	10	All the despatches to be made within 24 hrs from the time of DI except for the cases of non availability of road permits and consolidations	1)No. of Lines DI made=32819 No. of Actual DI = 32621 No.of Lines Cleared=32219	98%	9
4	VOR	10	VOR Challans to be Packed within 6 hrs from time of release	1) No of VOR Orders lines Recd =3845 No of Actual Challans=3631 2) No. of VOR executed =3401	94%	9
5	Claims	10	All the discrepancy claims to be settled within 7 days from the time receipt of complaints	No. of Claims received=179 No.of Claims settled=167	93%	9
6	PIV	10	PIV for 1500 items to be completed per month	No. of Lines PIV done=2838	100%	9
		10	Dock auditing to be done for 1500 lines per month	Dock audit completed = 2479 No. of Discrepancy observed=17	100%	7
		10	All NS challans to be cleared within 48 hrs	No of NS challans found=284 No.of NS challans Deleted=137 No.of NS challans cleared=83	77%	7
<b>Total</b>		<b>100%</b>		<b>CSI Index</b>	<b>94%</b>	<b>87%</b>

Among the KPIs a few parameters when not achieved by 3PL organization is penalized. The penalty formulation differs from one OEM to another. But, typically the value of sale lost due to customer claims are directly imposed on 3PL by OEM. In some cases, INR 10,000 to INR 25,000 are debited on 3PL's monthly service fee against each non-achieved KPI parameter. This has a very big significance because, assuming customer claims in a month is around INR 20,00,000 it will bring down 3PL's profitability and recovering it in the same financial year is a very big challenge.

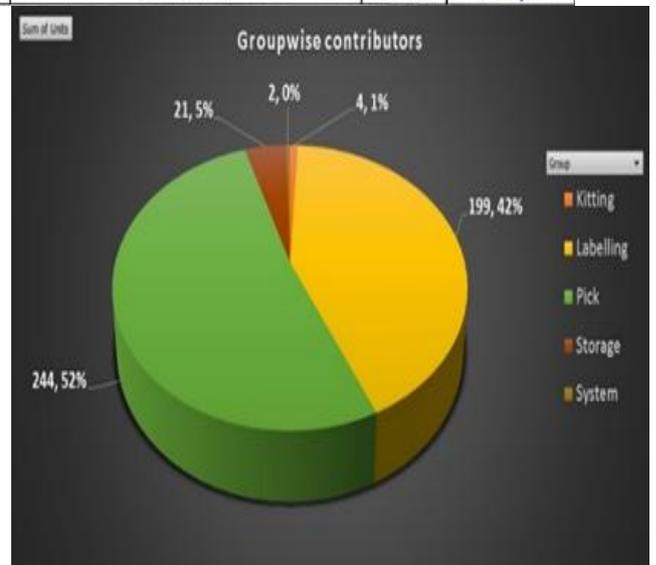
*H3: Information Technology can help controlling customer claims*

Before looking at the hypothesis evaluation is done to find the areas that contribute to major claim share.

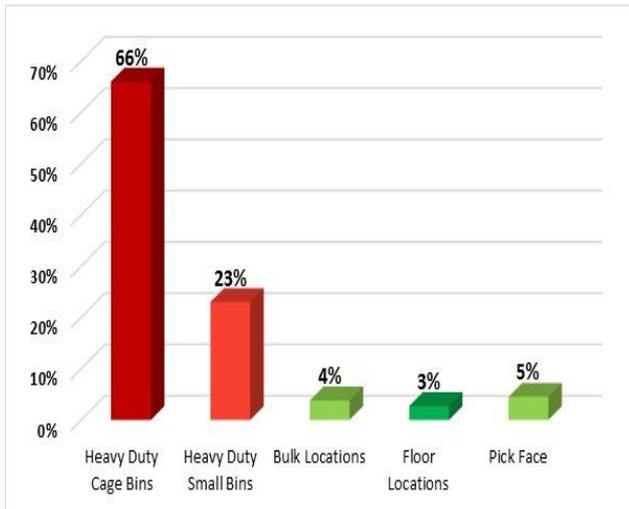
The business process was broken down to multiple steps like kitting, labelling, picking, storage and system support. And the claims are tracked back to find which business process contributes to more claims.

**1.2 The claim contributors over 4 years** were collated and the claims were analyzed in detail to arrive at the major contributors.

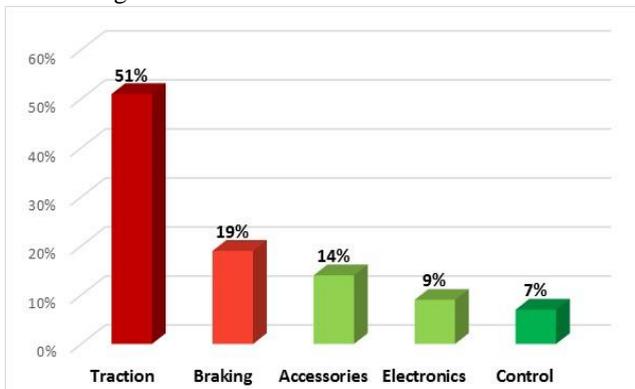
- Picking process contributes about 52% of claims
- Labelling process contributes about 42% of claims



**1.3 The items placed at pick face** (fast movers) contribute less to the claims whereas the c-class parts stored at heavy duty locations are identified as highest contributor.



**1.4 The traction and braking parts** of automobile products contribute to almost 90% of total claims. Both the groups undergo frequent wear and tear and also due to multiple subgroups existence suiting different vehicles the claims are high.



**1.5 Implemented solution using Information Technology**

A simple bar code scanning solution was implemented in picking business process to bring in control. The objective of solution is to ensure that the picking operatives picks right part from right location and right quantity for a customer. Hence, when a part is received into the warehouse all items are barcoded. When a customer registers an order for a part the picking instruction from the IT system prints the following information:

- a. What part to pick?
- b. Where to pick the part from?
- c. What quantity to pick?

The picking operative if violates any of the above, picking confirmation will not be registered in the system against the customer order. Post implementation analysis shows that the picking and labelling business process that contributed originally 52% and 42% respectively reduced to 36% and 22%. Continuous training programs will further help in reducing the claims and directly protects the profitability of 3PL organisation.

**VI. RESULTS**

The significant contributors for claims are due to pick issues ~ 52% and wrong labelling issues ~ 42%. Further breakdown of pick issues revealed the wrong placement of parts in the locations, mix up of wrong parts in the right locations. Post implementation of information technology in

picking and labelling business process reduced the error rate by 30% in picking and 47% in labelling.

**VII. CONCLUSION**

From the above data it is evident that picking of parts as an activity has a major share in the overall claims. The cause is understood as poor process and lack of system guidance. The second highest cause is due to poor labelling which is due to extensive human dependency instead of semi or fully automatic labelling process and system. Brining of information technology to ensure fool-proof system in picking and labelling reduces customer claims.

**VIII. RECOMMENDATIONS**

In line with the findings, the following recommendations are suggested:

- 3PL organisation should ensure overall stock management process and system is robust and has control checks.
- Picking process and methods should have inbuilt validation that the right parts are picked for delivery.
- Stock audit, bin audits to be performed on regular intervals and multiple frequency and can never be missed or avoided.
- Audit team and Management should always work on the exceptions that causes customer claims and ensure effective deliveries are made to the customers.

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