

ORGANIZATIONAL BUYING BEHAVIOR FOR CLIPPING: A COMPREHENSIVE STUDY WITHIN AUTOMOBILE INDUSTRY

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Abstract:

The automobile industry is one of the most important drivers of economic growth in emerging countries like India, is one with high participation in global value chains. In growing demand of automotive, when we consider the Design-to-Cost (DTC), focus always on bigger automotive compound like Body in white, seats, electronics, & powertrain. Some of the biggest surprises may come from the smallest parts. We take the example of simple Plastic or metal clip in interior panels. At first glance, it looks like a low-value plastic molded part. If we collect all the clips are used in one single car, it will cost more than few thousand rupees. Other than this here's are some aspects which matters a lot. Why Fasteners Matter More Than We Think? This paper is focus on to study the buying behavior of the organizations of the clippings who are small in commercial value but carry the high value in assembly.

Keywords: Fastening, Clipping Solutions, Buying Behaviour, Assembly cost, Assembly Efficiency.

I. INTRODUCTION:

The automotive fasteners market is evolving, as manufacturers and procurement leaders adapt to new material requirements, production methods, and global trade variables. These shifts shape competitive priorities and redefine how product performance and supply robustness are achieved. The automotive fasteners market grew from USD 29.39 billion in 2025 to USD 31.10 billion in 2026 and is projected to reach USD 44.36 billion by 2032, with a CAGR of 6.05%. This trajectory signals rising demand for advanced fastening solutions as industry stakeholders upgrade vehicle engineering, focus on lightweighting, and navigate global sourcing pical application of the clips are as below :

Structural & Functional: Hold trims & harnesses in place; avoid rattles & Warranty.

NVH & Quality : Anti-squeak, damping, and rattle control, Safety : Designed to hold/break at set loads during crash events

Assembly Efficiency : Low takt time, better ergonomics,

These are some of the key features make these clips more important and complex. To manufacturing these clips tooling & Precision is the important factor. Micron-level tolerances, complex Molds make them higher cost than they look. Many of these clips are found proprietary/patented clips. These proprietorship leads to monopoly pricing, heavy amortization.

This study is focused to understand buying behaviors of the automotive customers towards the clipping solutions. The most important feature of these clips over the nut & bolt is Easy removal & refit during servicing. It helps for quick & Faster turnaround. Lower customer cost, better technician experience and Higher satisfaction. SO as overall outcome is It's easy to dismiss fasteners as "low value." But removing/oversimplifying them leads to NVH issues, Safety risks, Assembly inefficiency, Higher service costs. The right approach is to standardize, dual-source, and evaluate lifecycle impact (assembly + service + customer experience). So Fasteners aren't just plastic. They're engineered solutions that protect quality, safety, and efficiency across the vehicle lifecycle.

Following are the typical segments of the Clipping market.

By Material: Nylon, Polyethylene, Polypropylene, Acetal, Polycarbonate, Polyvinyl Chloride spring steels, and Others.

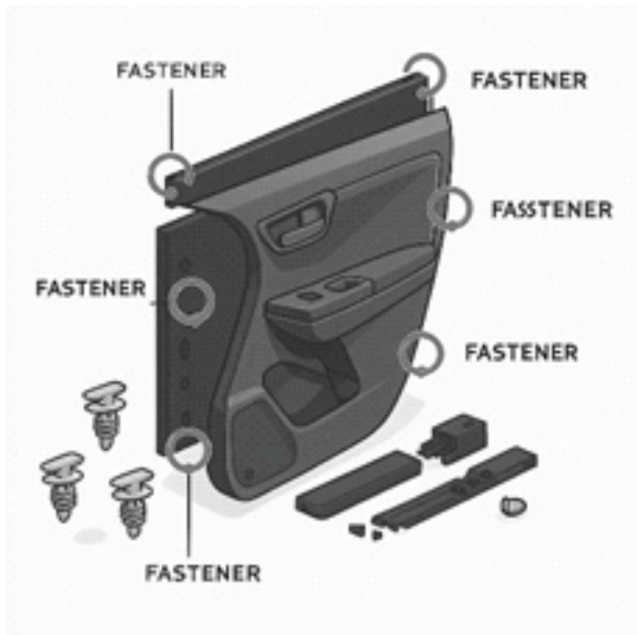
By Type: Threaded industrial fasteners and Non Threaded industrial fasteners.

By Function: Bonding and NVH.

By Application: Interior, Exterior, Electronics, Powertrain, Chassis, Wire harnessing, panel fastening etc

NEED OF STUDY: Continued transformation in the automotive fasteners market stems from technology adoption, supplier evolution, and global regulatory shifts. Decision makers who align sourcing, design, and automation strategies will capture operational gains while managing supply and trade complexities. This research examines the buyer behavior for the clipping product. The wide understanding of buyer behavior will help the clipping supplier for designing their strategies for clipping product. Right strategy in place will help

them to capture the maximum share of the growing market.



II. REVIEW OF LITURATURE:

A) Modelling of the mechanical behavior of clips for automotive interior panels

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Author mainly discussed the design of the clips. The major objective of the author is to study the mechanical behavior of a metal clip which is used to attach interior plastic panels in cars. The study was conducted at Volvo Car Corporation. The findings of this work help predict the assembly force contribution of the studied clip. The author's work used to test parameters such as how a change in geometry of the clip would affect the assembly force. This thesis provides an understanding of the behavior of the clip during the assembly process which may be used in future development related to improvement of the ergonomic aspects of this process. So this paper proved that clips play the very important role in assembly process at car manufacturer

B) Automotive Plastic Fasteners - Global Strategic Business Report February 2026 Market Glass, Inc. ID: 5301837

The global market for Automotive Plastic Fasteners was valued at US\$8.2 Billion in 2024 and is projected to reach US\$20 Billion by 2030, growing at a CAGR of 16% from 2024 to 2030. This prediction of the market shows the interesting & prospers future for clipping industry. Major factors like light weight and corrosion resistance property make plastic clipping more popular.

These reports mentioned that the growth in the automotive plastic fastener market is driven by several interrelated factors like shifts in vehicle design and advancements in material. As report mentions, a key driver is the industry-wide push toward vehicle weight reduction, Plastic fasteners, which are significantly lighter than their metal counterparts, play an essential role in these weight-saving efforts.

C) Contrast Enhancement Method Using Region-Based Dynamic Clipping Technique for LWIR-Based Thermal Camera of Night Vision Systems

Cheol Ho Chi, Joonhwan Han, Jeongwoo Cha, Hyunmin Choi

In the Auto industry increasing trend of autonomous driving Assistance system demands growing trend to employ long-wave infrared thermal-imaging cameras & sensors for robustly collecting data even in extreme environments. So all these cameras & sensors needs to securely assemble on vehicle body. In this paper, Authors introduced a histogram equalization-based contrast enhancement method employing a region-based clipping technique for Cameras & Sensors. Authors assess its performance, by visual and qualitative evaluations under best and worst driving scenarios. Authors concluded that clipping method enhances contrast and clarity compared to the conventional method. So this paper supports that the clipping product demand will go up in coming years.

D) Procurement in Automotive Industry

Onela-Roxana Puiu, [Mircea Boscoianu](#), [Eugen Silviu.Elena Corina Boscoianu](#)

The study aim to determine procurement best practice for sustainable and efficient supply chain in Automotive industry. As per the authors Digitalization is key & mostly used trend in procurement of auto compounds. Collaboration & communications in the key factors in overall procurement cycle. Major focus on strategic initiatives and cost reductions not only to increasing efficiency but also improving profitability. Author recommend to identify other strategies and factors that could be more effective for the above criteria. This can be further extended to scope of clipping product & fasteners.

E) Business-to-Business (B2B) Marketing for Industrial Products Strategies, Challenges, and Effectiveness by [Mohammad Ruvi](#)

Author explores the potential of online ads & social media in Business-to Business (B2B) marketing, focusing on its effectiveness, challenges, and success factors in the B2B segment. Author considered the pumps, valves, and compressors. particularly for his studies. Expert interviews are conducted by authors for

his research. Author suggested that Social & online media Ads is a viable solution for B2B companies looking to generate high-quality leads and increase brand visibility, particularly when combined with other marketing strategies. In our study this can be tested of fasteners in future study.

RESEARCH OBJECTIVES:

- 1) To study the buying preference for clipping product.
- 2) To study whether the clipping product is strategic product for buyer?
- 3) To study the preference of design ownership of the clipping product by the customers.

SCOPE OF RESEARCH:

- 1) The scope of the study is confined B2B Market.
- 2) Study is covered Automotive Industry only.
- 3) Study explores the Organization buying behavior for Clipping product only.

Study is be conducted with

OEMs stands for an Original Equipment Manufacturer (OEM) usually refers to a company that builds a product designed for end-users. Ex: TATA, LG Etc.

Tier'1: These are suppliers who are directly supplying their final product to OEMS & their products are directly get assembled in final product of end user

III RESEARCH DESIGN:

Research Type:

This research can be considered as Descriptive type research. Here we did the precise investigation & working hypothesis from working point of view.

Type of Data: Only Primary data used for the research.

Sources of Data:

Primary data is collected from organization customers from automotive industry.

Data Collection Method: Survey Method is used for data collection.

Data Collection Instrument:

Structured questionnaires is used for which is include both close ended and open-ended questions. Systematic planned interview is conducted.

Sampling Design

Sample design for OEM:

Sampling Unit: All the OEMs In India from Automotive,

Sampling Element: Production, Quality, Marketing, Purchase & Design Managers

Sampling Method: Stratified Random Sampling.

Separate state of OEMs from Automotive & Tier1

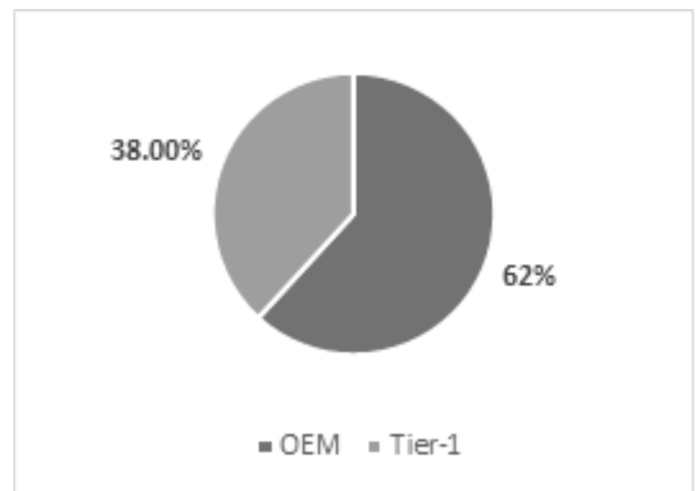
Sampling Size: 39

IV. DATA ANALYSIS:

Demographic characteristics of the respondent

Sr.No.	Particulars	Respondents	Percentage
1	OEM	24	62%
2	Tier-1	15	38%
	Total	39	100%

Table 1



62% respondent are from the OEM & 38% respondent are the tier'1 supplier to the OEMS. As the OEM participation is more will help to understand the industry behaviour in better way as the OEMs are the final user of the product on their assembly line.

Type of product manufactured by the respondent customer.

Sr. No.	Particulars	Respondents	Percentage
1	2w	6	15.0 %
2	3w	3	8.0 %
3	Passenger Vehicle	9	23.0 %
4	Commercial Vehicle (Trucks & Buses)	6	15.0 %
5	Tier'1	15	39.0 %
	Total	39	100 %

Table 2

15% of respondent are the 2W OEMs, 8% respondent are 3W manufacturer, 23% respondent are passenger vehicle manufacturer 15% respondent are commercial vehicle manufactures & remaining 39% are the Tier'1 manufacturer. More number of are respondent are from passenger vehicle & 2W manufacturer. They are the maximum represent of the market from automotive industry by volume.

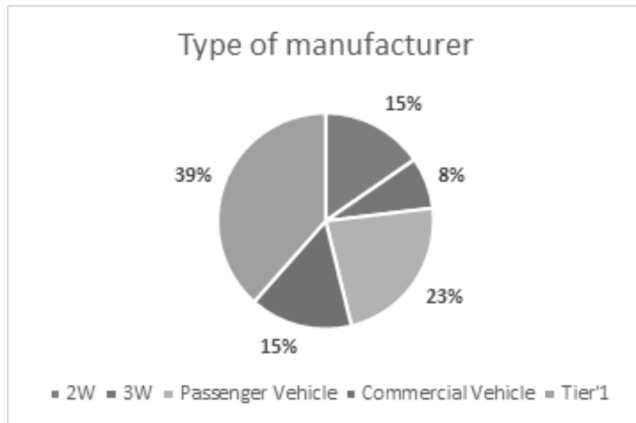


Fig 2

To find out which kind of fasteners they are used?

Sr. No .	Particulars	Respo ndent s	Perc enta ge
1	Standard fastener (Nut Bolt & Screws)	8	21.0 %
2	Clips (Plastic & Metal)	16	41.0 %
3	Both	15	38.0 %
	Total	39	100 %

Table - 3

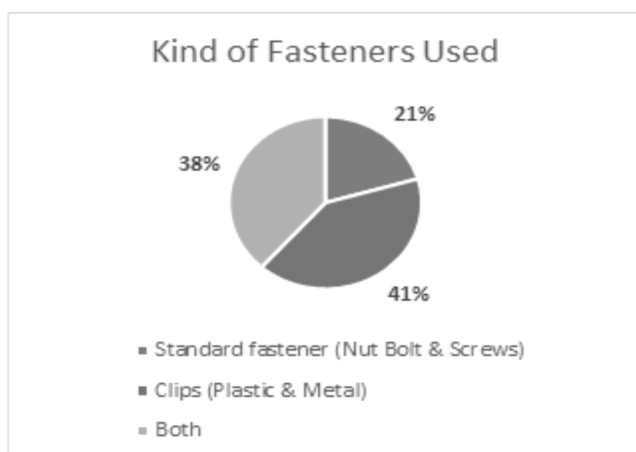


Fig - 4

21% customers are used mostly nuts & bolt type of fasteners & don't prefer to use quick fix clips. 41% of customers prefer to use clipping product over the standard nuts & bolts. Remaining 38% customers use both type of products. If we consider the this 38% then total 79% customer prefer to use clipping solutions over the standard nuts & bolts fasteners.

If they are using the clipping solutions then To find out why their preference to use the clipping solutions ?

Sr. No .	Particulars	Respo ndent s	Perc enta ge
A	If Yes		82%
1	To improve the assembly efficiency	12	31%
2	To reduce the cost	9	23%
3	To improve Quality	11	28%
4	Any Other	-	
B	If No	1	3%
C	Based on Application	6	15%

Table 4

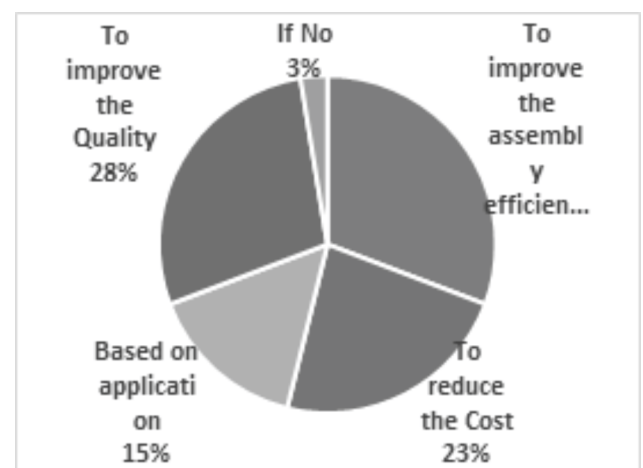


Fig 4

Strong product-market fit: An 82% adoption rate indicates the clipping solution is widely accepted among surveyed customers.

The outcome of Value proposition is operational-first:

- **Efficiency is the #1 driver :** customers likely see throughput gains, reduced cycle time, or fewer assembly steps.
- **Quality is almost as strong:** customers likely

experience fewer defects/rework and improved consistency.

- Cost matters, but customers may view it as a downstream benefit of efficiency/quality, not the initial trigger.

Based on application segment (15%): These customers prefer the clipping product when they won over with application-specific proof—they need to see success in scenarios.

“No” segment (3%): Small, but useful for objection mapping—capturing their reasons can be helpful to drive the influential strategy for them. It can help to increase customer base for clipping suppliers.

Do you consider the clipping product as strategic product in your product purchase?

Sr. No.	Particulars	Respondents	Percentage
1	strategic Product	32	92.00 %
2	commodity product.	7	8.00%
	Total	39	100%

Table 5

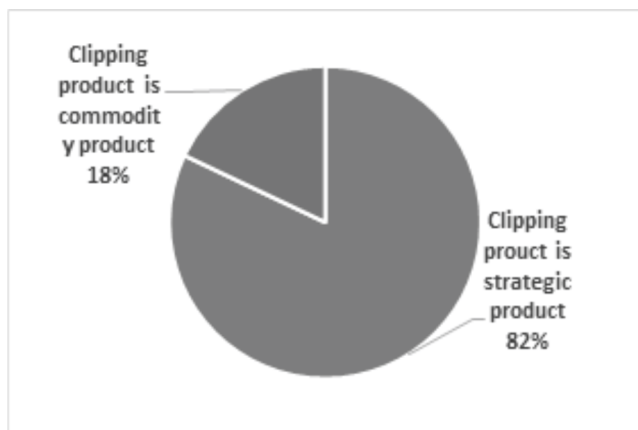


Fig 5

Data shows that clipping product is a Strong strategic positioning for the automotive OEM customers. The product is not bought purely on price; it's tied to critical outcomes (e.g., assembly efficiency, quality, reliability, uptime). This aligns with earlier survey outcome where “efficiency” and “quality” were the top reasons for adoption. These come as classic strategic drivers.

Some portion of customers are Minor but meaningful commodity segment. Out of 39 surveyed automotive customers 18% customer sees the product as

interchangeable and price-led. This group of customers lacks awareness of performance deltas, service/support value, or application-specific benefits.

From Commercial implications, For the strategic majority: clipping suppliers justify value-based pricing, multi-year agreements, preferred-supplier status, and joint road mapping. But for the commodity minority: Use hard differentiation—validated performance specs, certifications, failure-rate data, application case studies, and bundled services—to shift perception from price to value.

Research Outcome In Relation With Survey Customer Segment:

Strategic positioning is accepted across the ecosystem. With 82% calling the product strategic, the perception is strong beyond Tier-1s customers too (since 61% of the sample are OEMs).

The application-dependent 15% likely within OEMs (and some Tier-1s) who need fit-by-use-case validation. They witness the application suitability.

Operational value prefer unit price as selection factor. The reasons (efficiency, quality, then cost) are the primary drivers for selection & it points to process and throughput as primary drivers—it's obvious & consistent with the needs of Tier-1s (line performance) and PV/CV OEMs (quality consistency, warranty risk, uptime).

Segment wise Implication & recommended actions :

- 1) **Tier-1 (39%) – Largest population, strongest leverage this resonates:** Standardization across programs, throughput gains, FPY, rapid changeovers, traceability, PPAP/APQP readiness.

Strategic Recommended Action : Emphasize quality and reliability evidence, certifications, and case studies in PV assemblies; include traceability & compliance support.

- 2) **Passenger Vehicle OEMs (23%) this resonates:** Quality consistency, defect prevention, warranty reduction, supplier robustness.

Strategic Recommended Action : Focus on throughput and cycle-time wins, operator training modules, and TCO tied to mass volumes.

Conclusion:

Based on the survey findings, the clipping solution is viewed as a high-value, strategically important product across a diverse customer base. With 82% of respondents using the solution and a further 15% considering it

depending on the application, adoption is strong across segments. The primary drivers—assembly efficiency, quality improvement, and cost reduction—show that customers see clear operational and performance benefits rather than treating it as a simple price-driven item. This aligns with the strategic perception, where 82% classify the clipping product as a strategic component, indicating its role in ensuring productivity, consistency, and reliability in manufacturing. The customer composition—dominated by Tier-1 suppliers (39%), followed by Passenger Vehicle OEMs (23%), and supported by 2W, CV, and 3W segments—shows that the strategic value is recognized across the automotive ecosystem. Overall, the data highlights a strong market endorsement, with the clipping solution positioned as a mission-critical enabler of efficiency and quality, rather than a commodity, and with clear opportunities to further convert the “application-dependent” group through targeted technical validation.

Future Scope :

The sample is Tier-1 heavy (39%), This mix suggests that the overall strategic sentiment and adoption are heavily informed by Tier-1 experiences and needs. Involve more OEMS customers in survey to test the above outcome with OEM customers.

Because the survey had only 39 customers, the numbers can easily shift by quite a bit. So when we compare the reasons for using the clipping solution—efficiency (37.5%) vs. quality (34.4%)—the difference is too small to say for sure which one is truly higher. It gives us a general direction, but not a guaranteed ranking. To have accurate and confident results, need to survey more customers.

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