



Demand Planning in an HCV OEM: Management of intra-month non-linear demand

The HCV OEM witnesses hugely lopsided sales of HCVs in favor of the later part of the month. It, therefore, wants to improve its demand planning by managing its intra-monthly sales better. The key is to make the demand pattern more linear.



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OVERVIEW OF DEMAND PLANNING IN AN HCV OEM

1. Capabilities Created

Stellium suggested dealer incentive models and gave other recommendations to linearize HCV demand

2. Summary

The client wishes to linearize the intra-monthly sales for its HCVs and subsequently solve multiple demand planning problems the demand pattern gives rise to. Stellium base lined the current scenario for the client firm and by means of primary investigation and secondary data, gave recommendations to remove this lumpiness in demand.

3. The client

The client is a major HCV OEM in India, comprising of several business verticals. It sold over 40000 commercial vehicles in 2014, with a net income in excess of 8800 crores.

4. The Challenge

The sales pattern for the truck during a month is lumpy. It was reported by the OEM that the majority of their HCV sales materialize only during the last week of the month; as much as 65% of the sales are made in the last week of the month. This creates several supply chain problems which propagates upwards, all the way up to their production process.

5. Impacts of the Problem

This skewed demand pattern for HCVs had the following impacts:

- The Inventory space required to stock trucks for the end of the month sales spurt.
- The carrying cost for the inventory stock increases due to the stock up, to serve the month-end high demand
- Logistics problems- As the large number of trucks to be delivered at the month end excess requirements like drivers, fuel, etc. during the month end.
- The dispatch of large number of trucks from the plant and the warehouse in a single week (last week) creates problems.
- Balance sheet parameters like current assets, working capital

6. Reasons Identified for Intra-month Demand Non-Linearity

Dealer's side force

- Dealer has monthly targets wherein a particular target fetches him a certain bonus
 - IMPACT : HIGH
- Bonus incentive for selling a particular quantity of HCVs. So he may sell the truck on a lower price to get the incentive which would be more than his normal margin on selling a truck
 - IMPACT : MEDIUM
- Doesn't prefer to make a sale in the initial month time. But later, on the realization that his monthly targets won't be met he goes on to woo his customers, only later in the month.
 - IMPACT : MEDIUM
- The dealer usually divides a month in two halves. In the first half, he builds relationship with the customer and reserves the second half of the month final the deal
 - IMPACT : HIGH/MEDIUM

Offers given by the dealer to push a sale

- Dealers may also cite future increase in truck prices to make a sale by the month end so as to finish his monthly target
- Extended AMC
- Free insurance or registration
- Monetary discounts
- Better credit terms
 - Extended credit days to enhance financer IRR
- Other offers
 - Free on-site delivery
 - Free paint on the truck

Financer side forces

- The financer also has targets to achieve for loan disbursement. But he has a relatively less role to play, since he doesn't have much room for offers, as compared to the truck dealer
 - IMPACT : **LOW**
- The financer sometimes passes the information about potential truck buyers to other dealers, who then start pitching for their trucks. This prolongs the purchase process
 - IMPACT : **LOW**

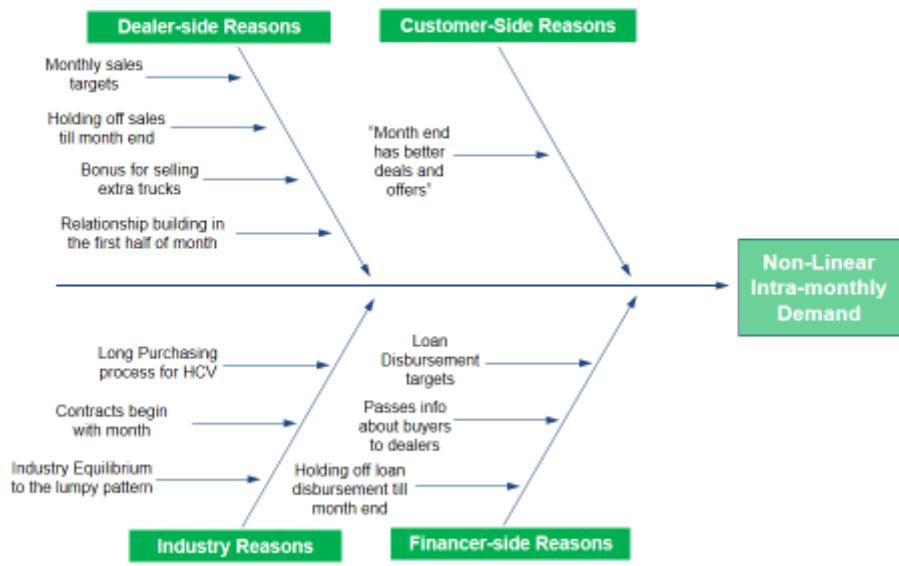
Customer-side forces

- The perception that month end is the best time to get good deals on vehicles.
 - IMPACT : **MEDIUM/LOW**

Industry forces

- The purchasing cycle of the truck is long and takes almost a month to complete. (the purchase cycle)
 - IMPACT : **HIGH/MEDIUM**
- Since most business contracts begin with the month, the best time to procure a truck is at the previous month's end.
 - IMPACT : **HIGH**

CAUSES OF NON-LINEAR INTRA-MONTH DEMAND



Cause and effect analysis for the non-linear intra-monthly demand

Recommendations

Improve in-house financing

In-house financing for an HCV OEM proves crucial for its sales because of benefits for customers like better financing terms and conditions, customized financing options for their HCVs and quicker processing time for loans.

The in-house financing can prove crucial for making intra-monthly sales of HCVs linear as the availability of finance reduces the duration of the purchase process for the customer and can lead to early sales for the dealer, cutting the long process which delays the sale till the month end.

Change the dealer target incentive structure

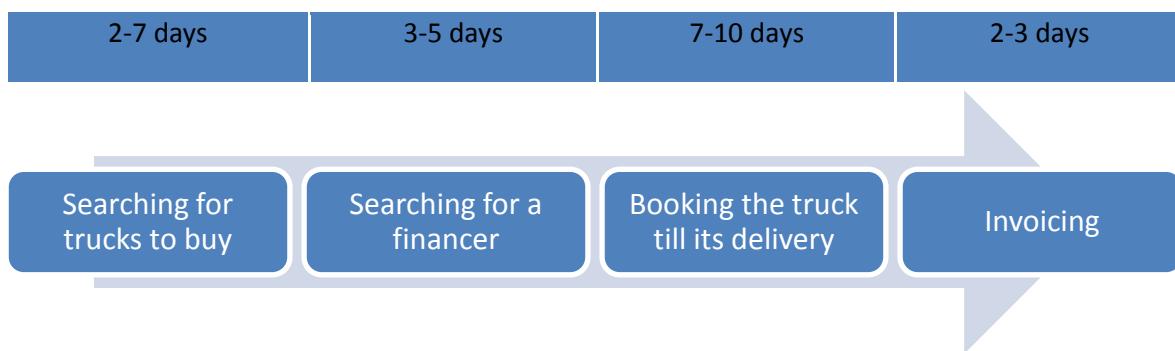
Currently, a truck dealer in Indian HCV market is incentivized for total sales made in a month. The incentive structure can incentivize the uniformity of sales during a month over and above the usual target incentive that a dealer receives.

| Weekly Sales Percentage | | | | Savings | Savings per dealer | Dealer Incentive @ 20% | Overall savings |
|-------------------------|--------|--------|--------|----------------|--------------------|------------------------|-----------------|
| Week 1 | Week 2 | Week 3 | Week 4 | | | | |
| 5% | 10% | 25% | 60% | 0 ₹ | 0 ₹ | 0 ₹ | 0 ₹ |
| 10% | 10% | 25% | 55% | 3,441,360 ₹ | 40,969 ₹ | 8,194 ₹ | 2,753,088 ₹ |
| 12% | 12% | 25% | 51% | 5,735,600 ₹ | 68,281 ₹ | 13,656 ₹ | 4,588,480 ₹ |
| 15% | 15% | 25% | 45% | 9,176,960 ₹ | 109,250 ₹ | 21,850 ₹ | 7,341,568 ₹ |
| 25% | 25% | 25% | 25% | 20,648,160 | 245,811 | 49,162 | 16,518,528 |

Different weekly sales percentage scenarios and corresponding savings

Shorten the purchase process for the customer

The purchase process for HCV purchase is long and takes about 15-25 days. The requirement is to shorten the process of purchase so that the sale of a truck doesn't get delayed into the month end.



The purchase process for an HCV in India

No haggle pricing

No-haggle pricing refers to the concept where the dealers offer a single price with no scope of discount on the vehicle. Haggling or bargaining is very prevalent in the commercial vehicle industry and has become so deeply entrenched that only bargaining may take up to a week before the truck is actually bought.

However, no-haggle pricing, which was introduced by auto makers in USA in the 1990s, is now even being adopted by truck makers.

No haggle pricing has several advantages, as it:

- It reduces the duration of the purchase process
- It disincentivizes the customer to purchase the truck in the last week of the month as he gets the same price during the first week as he gets during the end of the month

DICV has adopted a similar policy with its pricing as the dealers do not offer any monetary discounts or in benefits in kind to the customers. They have a fixed price for every truck, which they cannot sell below of and cannot extend any benefits like free insurance or registration fees.

Although in the very short run, the customers may be skeptic about such a pricing policy but in the long run, it will attract customers who will not be biased about any time of the month to buy a HCV.

Future scope

The HCV OEM will have to take active steps to shift their sales from the month end to the other initial weeks of the month by balancing the customer-side, dealer side and the industry side forces which lead to such a lumpy pattern of demand.



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