Capitalizing on the after-market

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The Indian automotive industry sells around 18 million vehicles per year. Regardless of the type of vehicle and the manufacturer, there are several key challenges that are common across the industry (on-road as well as off-road vehicles) that prove to be bottlenecks in the growth path. These challenges not only impact the vehicle manufacturers and owners but also the country to a certain extent.

Every auto manufacturer offers at least a few models of its vehicles in the market. Each of these vehicles uses hundreds of components. In order to maintain superlative customer relations and sustain profitability, all the manufacturers need to focus not only on sales but also on the post-sales services. They need to make sure that spare parts are widely available along with a comprehensive and large network of service centers. The company has to ensure that parts are in ample availability, not only for the active models, but also for the inactive models for at least a period of 5 to 10 years post-discontinuation of the model. In short, this means making certain that 30,000 to 1,00,000 parts are available in the market at once.

Automobile companies use various forecasting models to predict demand. However, demand can rarely be predicted absolutely accurately and therefore the system ends up with shortages or surpluses. Nearly 20% to 35% inventory of any auto company would consist of parts that have not been sold in the previous 12 months. At the same time, the shortage of fast-moving parts keeps upsetting the customers. Since customers (who usually prefer to use genuine spare parts) can't wait for the supply of the parts from the company, they are forced to opt for spurious spares. The spurious spare parts (many of them are imported), not only negatively impact the performance of the vehicle in the long run but also lead to loss of revenue and reduced customer loyalty for the company. Customers feel hassled when a part that they need urgently is not available, and for good reason. They might have to visit more than one dealer to get the part or wait till the part is made available. In case of an emergency break down, if needed parts are not available, the vehicle gets stuck at the workshop for more than the intended period. The frazzled customer is likely to share his grievances on social media and through word-of-mouth with his/her acquaintances. The final offshoot of this situation is irreparable harm to the reputation of the company in the long run.

Due to the above-mentioned challenge, the service network tends to lose on multiple fronts. The biggest cost factor for service centers is in terms of investment for infrastructure and employee salaries. When service centers witness a rush of cars, spare part availability goes down and vehicles end up spending more time in the bays. This wastes the overall servicing capacity of the centre. On the other hand, if customers start opting for local workshops and garages, service centers lose out

due to under-utilisation of capacity and business. To a large extent, the mentioned challenges are pretty much applicable to several capital equipment manufacturers including construction equipment builders. There is, however, a solution for this situation that can enhance productivity and lead to mutually-beneficial results for both manufacturers and their customers.

Applying the philosophy of theory of constraints: The Theory of Constraints operates on the basis of the 'Pull Replenishment' principle instead of the conventional 'Forecast Mode' to predict consumption of parts. The TOC-based solution integrates the entire after-market supply chain based on actual consumption. In the auto environment, however, it is important to ensure availability of parts (even if it is slow moving) to provide superior service to customers.

Applying the concepts of Pareto's 'Vital Few Trivial Many', there is a vast universe of parts in the after-market. We can often find few parts (we call them Head) that are consumed faster than the rest of the parts (Belly & Tail). The TOC solutions treat the Head (Fast Moving) parts, Belly (Medium Moving) and Tail (Slow Moving) products differently to ensure high availability at the same time minimizing the inventories of Belly and Tail parts. The TOC way of managing the supply chain ensures more than 90% availability of all types of parts at an appropriate location in the supply chain i.e. service centers, retail stores, dealers, regional warehouses etc.

In the auto environment, unlike for example fashion garments, the parts are consumed only upon real need (when the vehicle breaks down). The aged non-moving parts inventory can't be liquidated by offering discounts. Therefore, TOC solutions identify and eliminate the causes that keep generating slow-moving or non-moving parts in the inventory. Consequently, they improve the inventory turns and minimize the damage due to the non-moving parts.

As an example, JCB India, the construction equipment major, has adopted TOC's 'Pull Replenishment' system' for its after-market business and has experienced 90%-94% same-day fulfillment of customers' orders along with significant improvement in the inventory turns within few months from the commencement of the TOC project. JCB India has implemented and integrated the TOC concepts across dealers and their stores (point of sales). The dealers/stores are enjoying benefits from significantly higher availability of parts and faster response from JCB without any manual interventions.

- Availability of parts more than 90% across supply chain
- Inventory turns increased by 28%
- Improvement in availability at point of sale (Dealer outlets), the rush orders from Dealers to JCB to support customer machine break down has reduced