

**A Conceptual Project for
Bachelor in Business Administration
(Logistics & Supply chain Management)**

By

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PROJECT REPORT: FLIPKART.COM



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The internet retail industry in India

The internet retailing industry grew by 34% in 2011 to \$ 10 billion with investments of about \$ 900 million over last year¹. It is expected to grow at a compounded rate of 39% over the next 5 years. Online retail account for less than 1% of the total retail market in India (compared to about 5% in the US), and thus, presents a huge growth potential for international retailers². Internet retailing in India mainly focuses on non-grocery products such as consumer electronics, media products, sports equipment, consumer appliances and books; products that do not require extensive touch and feel. Books and gifts, however are the largest contributors. Several Internet retailing players are providing much cheaper prices compared with store-based retailers, which is attracting consumers in India. High discounts are primarily driving adoption while gaining the trust of consumers through fraud proof options such as cash-on-delivery. Investments in logistics and infrastructure and support by third party companies have led to ever expanding reach. It is evident that Internet prices are projected to be more competitive than any other retailers in India.

Most Internet retailers offer services, such as flexible payment methods, warranties for electronic goods and free home delivery. The prices from several players are very competitive with all e-retailing players offering good deals on a variety of products in order to attract customers. Players with a wide variety of products have managed to gain the most value sales. Internet retailing in India is segmented under different formats, including vertical shopping, whereby the manufacturer is also the retailer, multi-product Internet retailers, such as Futurebazaar, Shoppers Stop and comparison shopping. International companies were not allowed in India up to 2010 as the government put a ban on FDI in multi-brand retailing. However, in 2011 the ban was liberalized and over the forecast period some of the major players, including Amazon.com, are expected to enter the Indian e-retailing environment.

The industry, however, faces many challenges. The foremost being high customer acquisition cost (~Rs 1,500) and small basket size. Repeat purchases are essential to recover acquisition spending. Companies tend to hold extensive inventory of up to 3 months in-order to get discounts from their suppliers, this requires substantial investment. In-house logistics require

further investment and third parties are operationally expensive - delivery costs 5-10% of the product value. Internet retailers are 'burning cash to fuel growth', offering discounts deeper than their pockets and spending heavily on advertising and marketing³.

About Flipkart.com

Founded in 2007 by two IIT Delhi graduates, Flipkart.com is today India's largest online shopping website. The etymology of the website lies in the fact that the founders, Sachin and Binny Bansal envisioned it to be an online store for books – hence the „flip“ suggests the flipping of the pages of a book while the „kart“ is derived from the „shopping cart“.⁴

It has been cited as a success story in the domain of online retail – a sphere generally dubbed as impossible to succeed in India. Started with an investment of Rs. 4 lakhs by the founders

Company Structure

The entire organizational structure of Flipkart is organized in three broad teams as depicted below.

Product and technology	Business Development	Operations
<ul style="list-style-type: none">• Website Management• ERP System	<ul style="list-style-type: none">• Vendor Management• Sales Management• Pricing Strategies	<ul style="list-style-type: none">• Procurement• Warehouse• Logistics• Customer Support

Product and Technology Team

The product and technology team is the core strength of the company. The team is responsible for the management of the website as well as the ERP system. It has developed a state of art system in-house using open source software. Website is a backbone of any online retail shop and Flipkart's website is also managed by this team only. The team manage the entire process right from listing of item to search engine optimization.

Business Development Team

Business development team is responsible for all the activities related to sales including vendor management to pricing and discount strategy.

Operations Team

Operations team deals with all the supply chain aspects of the company right from procurement and warehouse management till customer support. The team support the customers both online via telephone as well as offline via email.

Customer Support team

Flipkart has a strong focus on customer service with customer delight as the top most priority. And to fulfil it the company guarantees a 24/7 full customer support and to cater this facility it has a dedicated customer support team which offers both inbound and outbound support. There are two prime responsibilities of support team:

- **Website Guidance:** The team basically provide guidance to new users of the website on how to navigate through it. It also handles order processing functions like order verification calls, payment related queries etc.
- **Resolution of Issues:** This includes intimation to customer about issues such as any delay in delivery as well as resolution of complaints both pre-purchase and post purchase.

Logistics

Logistics is one of the most important facets of any successful ecommerce venture. Flipkartships more than 30000 items a day which makes management of the logistics a cumbersome task for the company. Furthermore, the cost of the delivery is born by the company itself making logistics a financially complex issue also. Hence in order to successfully manage logistics Flipkart uses its in-house logistics (FKL) as well as third party logistics (3PL) services. While more than 90% of the Cash on delivery (COD) shipments and about 60-70% of the overall shipments are delivered by the FKL the rest of shipments are catered by 3PL service providers. Moreover, if there are more than 100 deliveries for a particular destination the company uses FKL. In case of FKL, the shipment is first transported to Mother hub and then to delivery hub and subsequently from delivery hub the last mile delivery is done using suitable mode of transport such as two-wheelers, bicycles, or on foot. The company has tie-ups with more than 15 courier companies like Blue Dart, First Flight etc. to deliver their products and Indian post for areas where courier do not reach. And to manage the 3PL providers efficiently the company allocates time slots to different logistics partners and they can pick up deliveries on specified time slots only.

For delivering the items the logistics service among the three is decided based on the area where the item needs to be delivered as well as product type and payment method. FKL is presently

available in major tier 1 cities including metros only. The company uses India Post only in case if the shipment location is not serviced by any of the 3PL as well as FKL primarily because of the higher delivery time. Moreover, India Post orders are of prepaid nature only. The delivery time varies between 3 days to 3 weeks depending on the location and availability of the product. For example imported products take about 3 weeks" time to get delivered to the customers whereas if product is available in local warehouse it gets deliver within 3 days. The mode of transportation is also dependent on the location. For example, the inter-city, trans-zone deliveries are made using air cargo whereas satellite cities and others in close proximity; products are transported overnight by train or truck. For the local parts of the cities where the warehouses of the company exist products are delivered using two-wheelers, bicycles, or on foot depending upon the proximity of the place.

Reverse logistics / returns processing

The returns for Flipkart are 2.6%. It follows a 30 day return policy. This policy which is primarily aimed to build trust with the consumers, has led to many customers duping Flipkart. For example there have been several incidents when a customer buys a book only to read it and then return it within 30 days. Similar incidents have been observed with mobile phones as well. Flipkart, through its data management systems, has tried to identify such frauds.

Return of a product to Flipkart can happen if the 3rd party cannot deliver to the address or the customer does not accept the product. Some orders are cancelled while the delivery is being processed by the courier company. Such order is not recalled but delivered to the address and then cancelled. Customers can call the customer support and courier back the product to Flipkart. The delivery cost is borne by Flipkart.

When a customer requests return of a product, there are 3 paths this request can take:

1. Replacement: Flipkart returns the product to the supplier and obtains a replacement that is delivered to the customer.
2. Store credit: If the customer is not satisfied with the product, he or she is given store credit of the same amount.

3. Actual cash-back: Given out as cash for cash-on-delivery payment or refunded for online payment.

Procurement

When Flipkart started its operations, they had employed the consignment model of procurement. In this model, the retailer (in this case Flipkart) holds the inventory owned by the supplier, and buys it from the supplier only when it is sold to the end consumer. Since the channel was new and unproven, this was the most risk-free way to operate. However, they have now discontinued this now and inventory now is purchased.

Procurement of items could be for:

- (a) **Inventory**: These items are pre-ordered based on previous sales data to stock as inventory. This category includes items with relatively low demand elasticity, fast selling items and items with relatively long shelf life.
- (b) **Just in-time**: Items procured just-in-time are used to serve immediate outstanding orders. Items with low or unpredictable demand are typically procured on an order-to-order basis. Just-in-time procurement is also used for expensive items or products that have seen slow sales growth.

As of now, the number of orders served from the inventory is roughly 75%, with 25% orders being served by procuring just-in-time. Procuring just-in-time is comparatively more expensive as the volumes for such orders are low, and the supplier discount offered therefore is considerably lower. However when ordering for inventory, bulk purchase is made and hence a much better price is realised. Therefore the company would ideally like to move to a ratio of 9:1 ratio of orders served through inventory to those procured just-in-time.

As a caveat however, there is an inherent trade-off between the company's long term objective of reducing just-in-time procurement, and its motto of "Consumer Delight". This is because in order to maximise consumer delight, the company would have to strive to serve all types of consumer orders and provide them with the maximum possible variety of products, which would require just-in-time procurement since many products have limited demand and cannot be stored

as inventory. However, operational efficiency demands rationalisation of product line and choosing one's customers.

Sourcing at Flipkart is conducted at two levels:

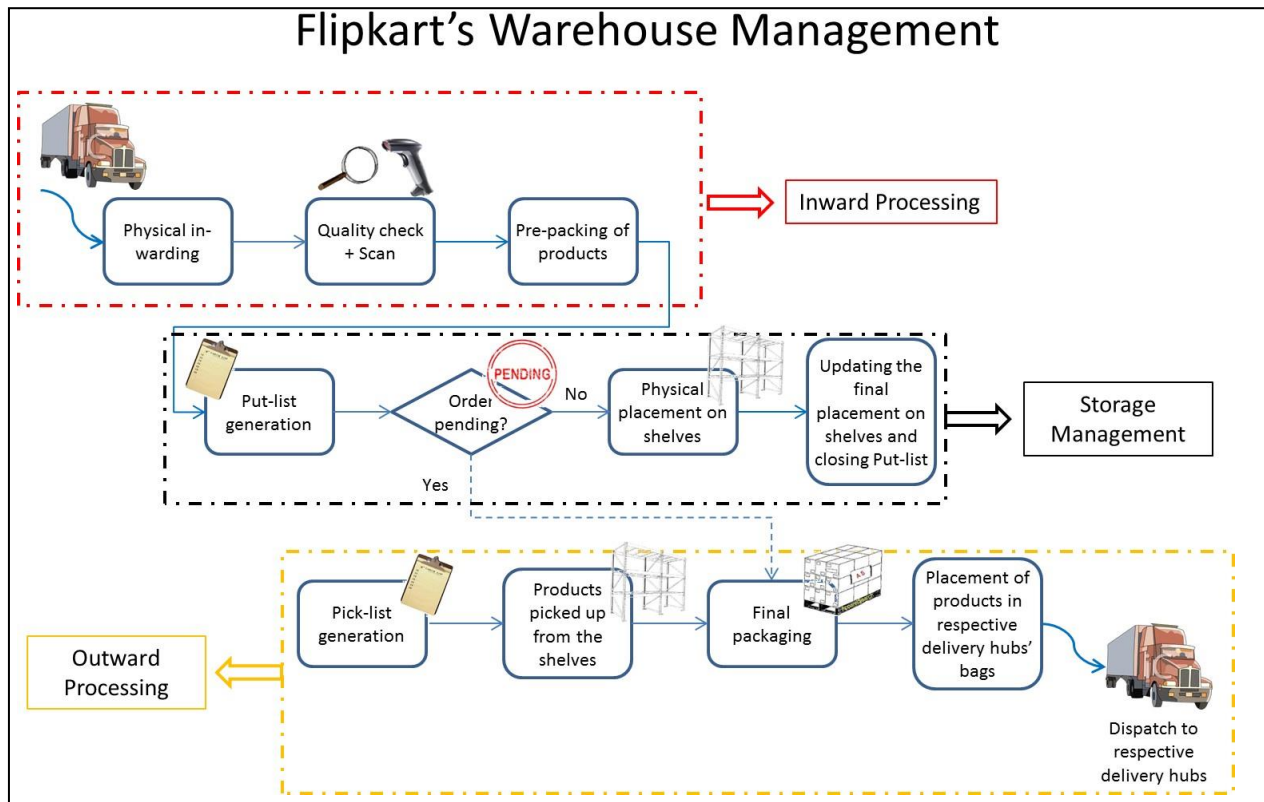
- (a) Regional: By Regional Procurement Teams
- (b) Centre: By the Central Procurement Team

Each regional procurement team has a network of local suppliers for made-to-stock as well as on-demand (Just in-time) procurement. They also have visibility of the stock for different SKUs with these suppliers, as last updated on the procurement team's system by these suppliers. From Flipkart's perspective:

Stock out: Defined as when the product is unavailable in the inventory (held in warehouses) as well as Flipkart's suppliers (as last updated)

The central procurement team has visibility of all the regional procurement teams' views, and therefore can monitor the stock levels for their suppliers all over the country. The central team's focus is on bigger suppliers with a country-wide reach.

Flipkart's Warehouse Management System



Flipkart has 7 major warehouses spread across the country in Mumbai, Kolkata, Delhi, Noida, Pune, Chennai and Bangalore. They have smaller regional distribution centres at over 500 locations spread across Tier I and high volume Tier II cities.

In Flipkart's Warehouse Management System (WMS), there are three major segments namely, Inward Processing, Storage Management and Outward Processing. Discussed below are the some of the details regarding each of the sub-processes involved in the WMS.

Inward Processing

1. *Physical in-warding:* This is the area where physical delivery of goods from suppliers to the warehouse is taken.
2. *Quality Check + Scan:* As soon as the goods are received, they go through an initial quality check at this stage. After this, they are scanned to make an electronic entry to record the input of goods into the warehouse on the IT systems. This step of quality check is also undertaken at the supplier's premises depending on the contract that Flipkart has with them.

3. *Pre-packing of products:* At this stage, an initial packing of each of the products is done. This pre-packing varies according to product. For instance, a book-mark and think transparent film packing will be done for a book. Similarly, if there is a freebie attached to a product, then the two products will be packed together.

Storage Management

1. *Put-list generation:* When the input of all products is done on the IT systems, a system generated list of shelves corresponding to the products is generated to facilitate placement of products on shelves. This is called Put-list generation, which marks the place where the respective items need to be put.
2. *Order pending check:* As soon as the system gets the input of the incoming products, system checks if any of the orders for the incoming products are pending or not. If orders are pending, the respective product is sent directly to the Final Packaging Area for Outward Processing.
3. *Physical placement on shelves:* Based on the Put-list, the products are placed on the respective shelves. If the marked shelves are not empty, the product is put on an empty shelf, and the respective shelf number is updated on the Put-list.
4. *Closing Put-list:* Once the product placement is done, Put-list is updated with the actual placement information and the list is Closed.

Outward Processing

1. *Pick-list generation:* Based on the orders to be delivered for the day, a Pick-list is generated by the IT system.
2. *Pick-up from shelves:* The respective products from the Pick-list are picked up from the shelves as per the IT system entries and gathered together to move towards Final Packaging Area.
3. *Final packaging:* The picked-up products are packed in Flipkart-branded boxes. At this stage, packaging is done according to the Category of the product, e.g., electronic items are packed differently from stationery.
4. *Placement in respective delivery hubs' bags:* After the final packaging, a product is placed in a specific bag which is dedicated for that destination area delivery hub. These bags are dispatched to their respective delivery hubs on a fixed timing during the day.

Some issues identified at the Warehouse Management level:

1. All the scans while conducting inward processing for each of the products are done manually. There is some scope of automation at this stage.
2. Due to packaging litter, there emerge chances of difficulty in mobility within the warehouse. Disposal of packing material may be addressed for better streamlining and ease of mobility.
3. Currently, there are separate sections for separate categories in the storage area, e.g., in the Bangalore warehouse, a whole floor is dedicated to books, while the other floor is dedicated to other categories. With the increase in the number of SKUs that Flipkart is undertaking for sale, the Warehouse management system's complexity will increase and its scalability in the current form might come under question. Hence, pre-emptive efforts may be made to make sure that the systems and processes are scalable based on increasing variety and quantity of SKUs handled.

Order Processing

Flipkart uses its own ERP systems to process orders and track the details of all the transactions that need to be carried out. A typical order at Flipkart starts with the customer searching, selecting the required item and placing the order. This on an average takes around 8-10 clicks to get the order placed. The email Id is considered to be the unique identification of a customer and all the records are maintained with reference to this Id.

The payment can be made by using debit card, debit card, Netbanking or COD(Cash on Delivery). The payment gateway used is powered by CC Avenue. Flipkart is working to have its own payment gateway which has not been possible so far because hosting a payment gateway requires fulfillment of Payment Card Industry Data Security Standards (PCI DSS).

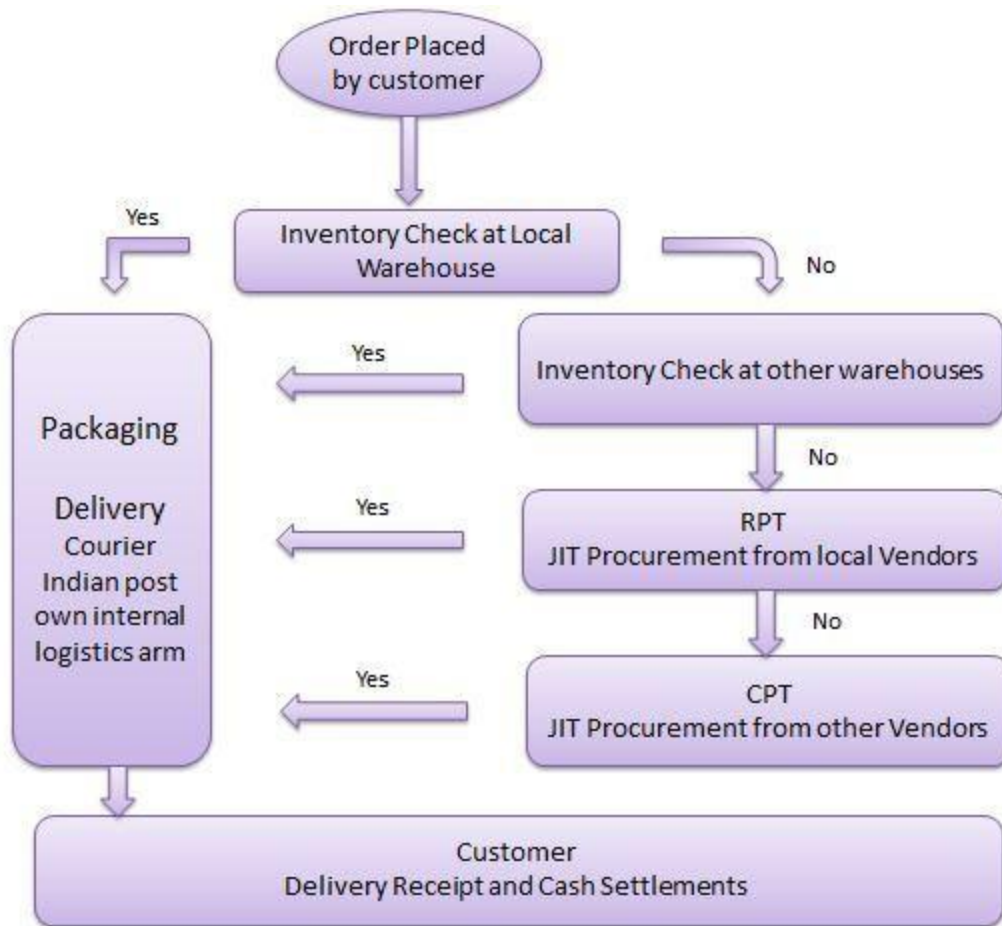
Order Fulfillment

Customer orders are fulfilled either via Inventory or JIT procurement depending upon the availability of the products.

1. As soon as the order is placed and approved, there is an inventory check done at the local warehouse. If the item is not found at the local warehouse, then the order goes to the nearest and then other warehouses. The product is then packaged and delivered to the customer.
2. If the item is not found in the inventory it is forwarded to the Regional Procurement Team (RPT) for JIT procurement from local vendors. If yet not possible, the order goes to the central procurement team (CPT) for the last option of procurement. After procuring from the vendor, the product is packaged and delivered to the customer via the most convenient warehouse. They have an understanding with their vendors for order tracking, reconciliation and MIS (Management Information Systems).

As and when the item is found, it is packaged then and there and shipped to the customer via either courier, Indian post or its own internal logistics arm depending upon the area where the item need to be delivered. The customer is kept updated on the status of his shipment via message, email and/or through website. An item is labeled out of stock only if it is not neither present in the warehouses nor with the vendors.

Flipkart, with its focus on customer delight, ensures an excellent after-sales service to its customers with regard to the delivery and/or addressing grievances related to any faulty or unsatisfactory products. The return of such items is done in an effective manner without any disputes. This is possible given the understanding with the vendors. For example, in case of electronics, warranty and after-sales service is largely manufacturer's responsibility. Whenever required, Flipkart facilitates a smooth interaction between the customer and manufacturer/service center.



Flipkart has fared very well in terms of the delivery time. It varies between less than 24 hours and 3 weeks depending on the location and availability of the product. On an average the delivery time is 3-4 days with a typical breakup as follows:

- 1 day for order processing
- 2 days for delivery
- 1 day as buffer

Inventory Management

The inventory stocks are replenished whenever it goes below Reorder point. In order to decide on reorder point and demand forecasting of each SKU, the company employs Holt's forecasting method. Holt's method is useful in cases where linear trends are present and requires separate

smoothing constants for slope and intercept. The forecasted demand used at Flipkart using Holt's method is based on historic trend and seasonality in not accounted.

The company employs FIFO(First In First Out) method for its inventory management, under which for any shipment request to a particular warehouse the oldest inventory items are shipped first. This makes a lot of sense especially for the electronics items since the technology becomes obsolete very quickly.

With respect to determining what items to store in the warehouse and what items to be procured from vendors, Flipkart uses Long Tail Concept, which is nothing but selling a large number of unique items with relatively small quantities. Flipkart orders such items on adhoc basis and usually don't keep inventory of such items since the demand for such items is very less and thereby minimizing overall distribution and inventory costs.

Supplier Management

Flipkart has always operated on the philosophy of starting out small and then scaling up as demand grows. It has been the same with selection of suppliers. For a new category, they generally start of by sourcing from local suppliers and distributors. Once there is enough demand generated, they approach the larger wholesalers or manufacturers directly. This serves two main pruposes:

1. It helps them to get better deals from the bigger manufacturers if they can order in larger quantities frequently enough.
2. It avoids the channel conflict dilemma that large suppliers face when they agree to similar terms with a smaller volume online player like Flipkart as compared to an established offline distributor.

An example of this strategy mentioned by PawanRaghveer, Mgr. Flipkart Supply Chain Excellence Division, is that given that Flipkart is now India's largest online retailer of books and they are larger than many offline stores as well – most of Flipkart's books are sourced directly from publishers.

Across product categories, Flipkart works with over 500 suppliers including several international suppliers as well. Flipkart's steady rate of growth has allowed them to get the best credit lines from their suppliers. They signed their first international supplier deal with Ingram Books in 2008 and they prefer working with them due to high level of predictability.

In fact, considering that customer delight is Flipkart's primary motto, any delay in supply can lead to late deliveries to the end-customer. So Flipkart follows a grading system of its suppliers based on their fill-rate performance. Suppliers are grouped into A, B and C grades based on their past performance.

There are several other secondary considerations while placing an order with a supplier:

1. Price considerations – As mentioned before – credit lines and discount terms play an important part in selecting suppliers.
2. Quality Check contract – Depends on whether QC will be done at supplier's place and then product will be shipped to Flipkart's warehouses or if the QC has to be done at Flipkart's warehouses.
3. Percentages of Returns Accepted – Higher the percentage of returns accepted by a supplier, the better for Flipkart.

Customer Support

Customer Support function for an e-commerce website is one of the most important touch-points for the business in terms of building trust, customer acquisition and maintaining customer loyalty.

Flipkart's Customer Support team consists of call-centre agents who handle in-bound and out-bound calls and also a team that handles e-mail queries. The entire team is based out of Bangalore and forms a core part of Flipkart's 6,000-strong employee base. Given that Flipkart tries to differentiate itself on superior shopping experience and customer service is an integral part of that – Flipkart prefers to train its own support staff rather than outsourcing the function to a BPO agency.

At present, a customer calls due to one of the below reasons:

1. Sales Assistance
2. General Enquiries
3. Product/Shipping related enquiry

One of the major reasons for these calls is Indian consumers poor familiarity with online shopping protocols. It is important to note that Flipkart tries to ensure that any order is placed within 6 clicks on the website.

There is also an outbound call-centre that performs the following tasks:

1. Pro-actively inform customers about any delay in deliveries.
2. Pro-actively check the status of refunds or returns.
3. Inform the user in case any delivery has not been successful due to the customer not being present at his address.

Despite all the good intentions of Flipkart in providing high-quality customer service, there are several internet blogs that suggest that their service quality has dipped in the last year or so.⁷ A major reason for this could be the growth in number of customer service executives“ not keeping pace with the increase in business volume. There could also be a problem of increased complexity in query handling due to increase in number of SKUs and product categories that would demand more rigorous training for the support staff.

Issues and Recommendations

1. A lot of manual labour is utilised in warehouses for put-listing and pick-listing. This can be addressed through high-end RFID usage – the way it is done for major logistic companies like DHL.
2. Warehouse layout needs to be looked into so that increased SKU complexity can be handled better.
3. Including seasonality in the forecasting process will help meet customer expectations better during high-rush seasons and manage inventory costs better during lean periods.
4. Periodic review of categories should be undertaken and non-performing or highly volatile categories should be dropped (or replaced with new categories).

5. Incentivise customers for using pre-payment (card card or other forms of online payment) methods over CoD payment. Offer EMI options, discounts and freebies for non-CoD customers.
6. Re-visit 30-day no-questions-asked replacement guarantee across product categories. Non-fulfilment of this promise has led to a lot of bad press for Flipkart. Operationally, it also keeps customer service teams busy and leads to additional complications in the reverse logistics path. It also creates problems with supplier management as suppliers may not want to accept ad-hoc returns based on Flipkart's policies.
7. Introduce premium pricing options and pin-code based delivery-time schedules. Currently Flipkart follows same delivery SLAs pan-India.
8. In-house Payment Gateway: Currently 3rd party Payment Gateways like CCAvenues charge on a per transaction basis. As number of transactions grow and average amount per transaction reduces, in-house capability development can help reduce costs. But this requires compliance with PCI DSS standard which is an added operational complexity.
9. Market place: Market place online shopping is gaining prominence, competitors like Infibeam and eBay have a lead in this domain.

Conclusion

In conclusion, through several interviews with industry insiders, it was evident that Flipkart is a learning organization. They do not spend a lot of time in addressing a problem till it becomes a burning issue and affects profitability significantly.

The company is extremely CEO-driven and encourages entrepreneurial thoughts. This has enabled a lot of in-house innovation and organically developed best-practices - that have now become the industry standard.

New global competitors with better best-practices are arriving in India shortly. Amazon is the biggest example of the same. Increased competition will put further pressure on margins and will need better handling of supply chain issues.

Last but not the least; Flipkart has very clearly prioritised customer delight as its chief avenue for customer acquisition and retention. This causes them to build a lot of slack into their existing

systems causing higher costs at several points in the supply chain. Will this strategy ultimately succeed in the long run –is anybody’s guess.