

BongCart Project Scope

User Story: BongCart is not a normal online E-Commerce; here user will get few extra facilities from other Ecommerce application.

Here various type of categories and subcategories available for daily necessity basis of users eg. Grocery, Vegetables, Foods(Fish, Meat), Sweets, Medicines, Hardware, Home utility, Personal cares, Fashions, Shoes, Cosmetics, Readymade Foods etc.

Search Options: When customer or viewer searches his/her desirable products under these categories they can see the details of the product eg. Product multiple images, product details, availability and so on. These all the product information and attributes are change as per category wise. User can search both way search 1) Category with brand wise and 2) Shop Name with distance wise. That means if user want to buy his/her favourite sweet from “Bijoy Moira Shop” then he/she can place this shop name at company field and upon click on search the list of available sweets will display at the search result page for Bijoy Moira Shop. Also if he/she searches Rosogolla at category with brand wise search section then all the shop nearby him/her where Rosogolla are available will listed. Also he/she can get as per his/her urgency (most desirable daily uses like grocery, vegetables, sweet, foods, medicine will get within one hour and few products like Fashions, Shoes, Personal care, Home Utility etc. Time duration after 1 day). This is the speciality of BongCart Ecommerce from others.

Payment Options: User can pay by two ways. Online payment options through credit card, debit card, internet banking, wallet and also cash on delivery payment.

Return Policy: User can be return as per the supplier. That means some particular categories user can return within 7 days or supplier policies and few products user can not return like Fish, Meat, vegetables etc. But if customer will upload the rotten products picture on the return section with the description customer will get some benefit as per the supplier and management policy at his next order.

At the user section there are also available product sort by at product listing page. 1) Price low to high, high to low and newest first. 2) Product Filter by category and subcategory wise, Price min to max range, customer rating review, brand, availability, discount, offers etc.

Customer can place rate and review for each product. Customer can add wishlist.

At Product details page pin code wise availability will check.

Similar Product, Bought Together, Recently viewed section is also available.

B2B or Supplier Story: B2B or Supplier can registered at the system directly or our agent can do this on behalf of his/her. Registration only completes by OTP verification and approve by admin. Initially for registration no payment option available but it will be implemented later as per membership package wise, and for each package there will be special benefits and each package have different price for payment.

After login he/she will get dashboard. From there supplier can add products by category wise with details. Each category wise products fields or attributes are different which are already set by admin.

Eg. For grocery products fields and attributes are not same for medicine products.

B2B or Supplier also get category wise percentage breakup, that means if admin can set 20% earn for sweet category so at supplier dashboard he/she will see the admin percentage for category. Also if any customer can purchase any sweet from this supplier which price are Rs. 10 then supplier will get Rs 8 and admin will get Rs2. B2B or Supplier can see this details breakup for every order details.

B2B or Supplier can see order listing and details of each order with customer details with detail price breakup. Also order number, order date time and customer wise search available at his panel. After sending product from his/her end supplier will mark 'Product Send'.

When customer order a product for a particular supplier then that supplier will get notification by sms as well as email and dashboard notification. And nearest delivery boy will get same notification by sms and dashboard. After reaching delivery boy at his end supplier will deliver that particular product to him and delivery boy will reach to customer end. In this every section or situation status will send to customer like processed, product delivered, delivery boy on the way, reach etc.

B2B or Supplier can also see total earning, total order by category wise, month wise, date wise and year wise.

Delivery Boy Panel: Delivery Boy also register at the system and OTP verification and admin verification will must for him. After login he can change his profile and each delivery boy must be upload documentation (eg. Aadhar card, Pan Card, driving license if biker, photo, address proof, police verification etc.). These will also verify by admin only. He/she can also get order notification which place by customer. Delivery Boy can also reach the supplier end by getting this and after getting product from supplier he will set status "get the product from supplier". When deliver product to customer also set status "Product will deliver". Delivery boy will deliver within 2-3 Kilometres, if any delivery will not within this range then he/ she will get extra money which will set admin by KM wise.

Delivery Boy can also see total earning, Total deliver per day wise, month wise and year wise. He/she will get commission depend on total delivery.

Admin Panel:

Admin can login and change profile settings

Add category and subcategory with images.

Admin can add brand with images

Admin can get Delivery Boy registration and all the uploaded documents. Admin can verify and approve the Delivery Boy for login.

Admin can set up commission percentage for Delivery Boy on basis of total delivery, total registration.

Admin can set up KM wise extra charge for delivery boy.

Admin can get B2B or Supplier registration and approve for login.

Admin can set up category wise percentage for his earning

Admin can get the entire listed customer and his order details to review.

Admin can also set offer by category wise; admin can add banners with position setup.

Admin can set discount option category wise.

BongCart Business (MarketPlace Model) Analysis Algorithm/Logic Scenario:

(A) Business Attributes:

Producer/Vendor → PV, Delivery Person → DP, Consumer/Customer → CC; Product to Sell (PTS): In Three Parts... (i) Pending → PSP (7 days tenure), (ii) Failure → PSF (Decision obtained on 8th day), (iii) Success → PSS (Decision obtained on 8th day);

(B) Functional Roles (Required for understanding only listed here):

PV: Provides Products quantity, weight or volume basis. So Commission comes in product per quantity/weight/volume (QWV) basis.

DP: Deliver product/s from PV to CC. Distance Limit (DL) of 2/3 km (Outstation option is there on commission basis to DP). Payment option is, fixed pay option with weekly/monthly PSS target + variable pay based on more PSS one DP can earn + per km basis for delivery beyond DL.

CC: Buy product/s (PTB) delivered by DP with max replace/return option of 7 days or as per product replace/return policy which varies from product to product.

PTS: PTS once passes PSP stage and PSF results in Business Failure (BF) or PSS results in Business Success (BS).

PV&CC&DP Association: Primary option is locality of reference or particular PV specific on DL basis. Secondary option performs this association study on DL incremental optimization basis.

Logistics: Product collection from or replace/return to PV/s (PCRL) and delivery to or replace/return from CC/s (PDRL) associates with logistics charge. Here carrier is DP determined by optimized DL.

N.B: Locality of range by reference association is done with reference from geo location on the timestamp.

(C) Functional roles attributed (Required for understanding only listed here):

PV: Id, PTS, Brand, QWV, Price, Commission, Price per unit QWV (System will calculate), Commission per unit QWV (System will calculate);

PTS: id, Brand, Buying Price per unit QWV, Sale Price per QWV, Profit per QWV;

CC: id, PTB, QWV, Product Price, Convenience Charge, Discount;

DP: id, PTS, PV, CC, Sale Status (Can be PSP/PSF/PSS);

PCRL (Product Collection Replace/Return Logistics): id, PTB/PTS, PV, Collection distance, Cost per unit distance;

PDRL (Product Delivery Replace/Return Logistics): id, PTB/PTS, CC, Shipping distance, Cost per unit distance;

***Mandatory**: Business Segmentation by following elements and incorporation of this model strategic model in doing business automation is mandate in competitive marketplace:

Market demand supply chains of saleable products rely on...

(i) PV Perspective: Product availability, quality reliability, pricing and geographic scalability.

(ii) CC Perspective: Demographic, Psychographic and Geographic.

N.B: Product buying price from PV controlled by B2B strategy and sale price to CC controlled by B2C strategy. BongCart business strategy is based on “MarketPlace Model” which is a hybrid model and a mixture of B2B and B2C. MPM model is that sellers sale their products to end customer through BongCart.

(D) MarketPlace Model Strategy:

E-Commerce B2B with PV B2C with CC Strategy by example:

Flipkart Seller Fees CalculatorFlipkart Price Calculator:

Commission Fees	Rs.149.85
Flipkart Shipping Fees	Rs.92
Commission+Fixed+Collection+Shipping Fees	Rs.276.83
GST on Commission+Fixed+Collection+Shipping Fees	Rs.49.83
Total Flipkart Charges	Rs.326.66

Here, Fixed+Collection+Shipping Fees = 276.83 – 149.85 = 126.98

How much does flipkart charge for selling?

The percentage varies based on the category, sub-category, selling price of the item (or order item value), and in some cases by FSN (Flipkart Serial Number). The fee ranges between 5% – 30%. Same commission fee rate card applies for all seller performance tiers.

	Flipkart	Snapdeal	Amazon	Paytm	Shopclues	Ebay
Selling Price	1000	1000	1000	1000	1000	1000
Marketplace Commission 150 (15%) -70 (7%)	-150 (15%)		-150 (15%)	-80 (8%)	-140 (14%)	-
GST on Commission	-27	-27	-14	-25	-27	-13
Marketplace Payment Fee (4.5%)	-10	-32 (3.2%)	-10	-30 (3.03%)	0	-45
GST on Payment Fee	-2	-6	-2	-5	0	-8
GST on Item	-153	-153	-153	-153	-153	-153
Shipping (inclusive taxes)	-55	-50	-40	-45	-50	-38
Net in Hand*	₹ 603	₹ 582	₹ 701	₹ 602	₹ 620	₹ 673
Deductions	-40%	-42%	-30%	-40%	-38%	-33%
Net In Hand%	60%	58%	70%	60%	62%	67%

Flipkart selling fees and charges depend on the following factors:

Product Category

Product Sub-category

Selling price of the item (or order item value)

Seller's Performance Tier (Bronze, Silver, Gold) – This is determined by your performance as a seller, based on your ontime fulfilment rate, cancellation rate, customer returns, etc.

Fulfilment Mode (By Seller, By Flipkart)

Source and Destination locations of the order (Local, Zonal, National)

Weight and dimensions of the product (Weight-based, Volumetric)

Storage duration (Short Term, Long Term – when storing in Flipkart Warehouse)

Shipping Type (Pre-paid, COD)

Return Type (By Customer, By Courier (RTO), Replacement)

Types of selling fees and charges that Flipkart charges sellers are as follows:

Sales Commission Fee Charge: Sales commission charged by Flipkart is a percentage. It is calculated as a percentage of the Order Item Value, which includes selling price and shipping charge paid by customer. It excludes discount offered by Seller and any NDD/SDD charges. The percentage varies based on the category, sub-category, selling price of the item (or order item value), and in some cases by FSN (Flipkart Serial Number). The fee ranges between 5% – 30%. Same commission fee rate card applies for all seller performance tiers.

Fixed Fee Charge: Fixed fee is charged on every successful sale on Flipkart's marketplace platform that is any order which is not returned or cancelled. This varies based on Order Item Value and sub-category the product belongs to. Fixed fee is not charged in case of customer or courier returns. Same fixed fee rate card applies for all seller performance tiers.

Collection Fee Charge: Payment collection charges for orders placed on Flipkart's marketplace platform. Selling price is equal to the amount paid by the Customer including shipping charges paid by them, if any. Same collection fee rate card applies for all seller performance tiers.

Shipping Fee Charge: Shipping Fee is charged for shipping order items to customers. Chargeable weight is calculated as the higher of volumetric or dead weight of the product when measured with primary packaging. It also varies based on shipment destination – local, zonal and national. Moreover, it varies based on the performance of the seller in terms of fulfilment rate, shipping time, cancellation rate etc based on which the seller is given a tier – bronze, silver or gold. Higher the tier, lesser the shipping fees are. For certain verticals, the chargeable weight is capped at 1.5 times dead weight.

Reverse Shipping Fee Charge: Charged for reverse pick-up and shipping when customers return a product, and varies based on chargeable weight and shipment zone. For certain verticals, the chargeable weight is capped at 1.5 times dead weight. Same Reverse Shipping Fee: rate card applies for all seller performance tiers.

Return Charges – Customer Refund: The payment policy for customer returns where a refund has to be processed will be done as mentioned here. This policy is applicable to all customer returns. Note: Reverse shipping fee will be proactively reimbursed through SPF if the returned product is found to be damaged, incorrect or missing at the time of product verification at the Fulfilment Centre. Returns due to unsuccessful delivery to Customer or Customer cancellations prior to delivery completion are not charged. These returns are commonly termed as RTO. Delivery charges paid by buyers for FAssured listings are passed to the seller.

Return Charges – Replacement: The payment policy for customer returns where a replacement has to be delivered will be done as mentioned here. Forward charges on replacement product will apply only where Flipkart incurs a direct cost. This policy is applicable to all customer returns. Note: Reverse shipping fee will be proactively reimbursed through SPF if the returned product is found to be damaged, incorrect or missing at the time of product verification at the Fulfilment Centre. Returns due to unsuccessful delivery to Customer or Customer cancellations prior to delivery completion are not charged. These returns are commonly termed as RTO. Delivery charges paid by buyers for FAssured listings are passed to the seller.

Charges under Flipkart Fulfilment (or Flipkart Advantage)

Pick And Pack Fee Charge: Pick And Pack fee is charged for picking and packing of order items when using Flipkart Advantage (also known as Flipkart Fulfilment). This varies based on weight and whether the item is fragile or not. Weight is calculated as the volumetric weight or dead weight, whichever is higher, when measured with primary packaging. Same Pick And Pack Fee rate card applies for all seller performance tiers.

Same Day Delivery (SDD): This fee is charged to Customers when they request delivery on the same day as the order date.

Next Day Delivery (NDD): This fee is charged to Customers when they request delivery on the next day after the order date.

Storage Fee: Sellable or unsellable Inventory: This fee is charged for storing inventory in Flipkart's warehouses. It varies based on weight and age of the inventory. Weight is calculated as the volumetric weight or dead weight, whichever is higher, when measured with primary packaging. Age slabs for all inventory: Regular: < 4 months; Long Term Storage – 1: 4 to 6 months; Long Term Storage – 2: > 6 months. Same Storage Fee rate card applies for all seller performance tiers.

(E) B2C Sale activity logic:

Once one product sell activity takes place, algorithm gets in chronological order, CC with PTB then based on locality of reference or particular PV specific PTS is found with DP based on locality of DL range by reference optimized.

PSS is committed after time limit as per replace/return policy is over. If replace/return policy is 7 day then PSS is committed on 8th day.

(F) How much business on revenue basis:

One way can be said as PV/Brand/Distance (Collection + Shipping)/DP/CC/PTB/PTS wise BongCart sale business consumption or contribution.

PV wise, Brand wise, Distance(Collection + Shipping) wise, DP wise, CC wise, PTB/PTS wise PSP/PSF/PSS report data with per unit buy/sale price and commission earned;

From this data set logic can generate report on daily/weekly/monthly/quarterly/yearly sale and earned profit report.

This report/s will help company to plan how to grow and maintain business focusing on valued CC, valued PTB/PTS, valued Brand, valued PV and considerable distance(collection + shipping) also.

(i) Earned profit/loss based business revenue calculation on buy/sale price difference and commission earned tracking and management inbuilt with this.

(ii) Promoting PTB to CC, Promoting discount policy to CC, Optimizing convenience fee/s chargeable to CC, Winning PV/CC satisfaction and thus BongCart goodwill earning along with profit.

(iii) This will also be helpful in calculation management of DP payment options on the basis of DP wise product delivery consumption.

(G) Control Business Revenue with Margin and Markup:

Margin and Markup are two important elements in this product sale business.

Margin = (Price – Cost)/Price => Margin*Price = Price – Cost => **Price = Cost/ (1-Margin).**

Markup = (Price – Cost)/Cost => Markup*Cost = Price – Cost => **Price = Cost* (1+Markup).**

Now,

Revenue/Price: This is the earning by selling product/s.

CoGS: Cost on Good Sale. This includes all additional costing like logistics, tax, etc involves with one product to sale along with production cost or buying cost.

Gross Profit (GP): Revenue – CoGS.

Revenue = CoGS/ (1-Margin) and Revenue = CoGS*(1+Markup).

$\text{CoGS} / (1 - \text{Margin}) = \text{CoGS} * (1 + \text{Markup}) \Rightarrow 1 / (1 - \text{Margin}) = 1 + \text{Markup} \Rightarrow 1 = (1 + \text{Markup}) * (1 - \text{Margin})$

$\Rightarrow 1 = 1 - \text{Margin} + \text{Markup} - \text{Markup} * \text{Margin} \Rightarrow \text{Margin} = \text{Markup} * (1 - \text{Margin}) \Rightarrow$

Markup = Margin/ (1-Margin).

Also, $\text{Margin} * (1 + \text{Markup}) = \text{Markup} \Rightarrow \text{Margin} = \text{Markup} / (1 + \text{Markup})$.

Margin value gives the ratio of the Revenue/Price amount comes as Gross Profit/Profit.

Markup value gives the ratio of the CoGS/Cost amount is added with CoGS/Cost to sale the product.

Example,

Say CoGS/Cost = Rs 65 and Sale Margin = 25% = 0.25.

$\text{Revenue/Price} = 65 / (1 - 0.25) = \text{Rs } 87$ (Product sale value calculated).

$\text{Markup} = 0.25 / (1 - 0.25) = 0.33 \Rightarrow 33\%$ (This is calculated Cost Markup).

Finally, CoGS = Rs 65, Revenue/Price = Rs 87, Gross Profit (GP) = Rs 22

Margin = 25% (Revenue earned in terms of Profit or Gross Profit),

Markup = 33% (Ratio of the CoGS added with CoGS to sale the Product/s).

N.B: Good Business = Profit/Loss + Goodwill; Loss is a failure and it is the opportunistic attempts in learning the business more well to minimize the risk of failure to earn success like drop/s of water. While collecting drop/s of water or success can make a pond/lake/sea/ocean like business revenue in terms of GVM (Gross Merchandise Value)!

(H) BongCart specific example:

Till now sufficient knowledge is gathered for MarketPlace Model for doing the e-commerce business.

Let's start with one grocery product "Sugar" to evaluate cost and earning estimation...

BongCart buy sugar in whole sale price...

(i) Whole Sale Price (WSP): Rs 3000 per 100 kg (Whole Sale Price is the cost for BongCart)

Retail Sale Cost (RSC) per 1 kg = Rs 30

(ii) Commission receive by BongCart from PV: 5% on WSP that is Rs 150

(a) BongCart Commission (BCC) per 1 kg = Rs 1.50

(iii) BongCart Fixed Cost per kg (BFC): Rs 1 (Considering here that PV is charged this amount)

(iii) MRP (Market or Maximum Retail Price) or Retail Sale Price or Retail Suggested Price (RSP): Rs 40 per kg

(a) Per kg profit on WSP: Rs 10

(iv) Product Delivery Charge (Collection from store or PV + Shipping to CC => PDC): Rs 4 per km

(v) GST on BFC + BCC + PDC: 4%, in ratio 0.04

(a) GST Chargeable (GSTC) per kg per km = $1 + 1.5 + 4 = \text{Rs } 6.5$

(b) GST charge on GSTC: $6.5 * 0.04 = \text{Rs } 0.26$

(vi) BongCart Revenue (BCR) per kg per km: $\text{RSP} + \text{BCC} + \text{BFC} \Rightarrow 40 + 1.5 + 1 \Rightarrow \text{Rs } 42.50$

(vii) Cost of Good Sale (CoGS) = $\text{RCS} + \text{PDC} + 5.88\% \text{ of BCR} + \text{GST}$ (If there is other costing, must be considered).

$$\text{CoGS} = 30 + 4 + 2.5 + 0.26 = \text{Rs } 36.76$$

(viii) BongCart Profit (BCP) per kg per km: $\text{BCR} - \text{CoGS} = 42.50 - 36.76 = \text{Rs } 5.74$

(a) Here, $\text{PDC} + 5.88\% \text{ of BCR} = 4 + 2.5 = \text{Rs } 6.5$ divided between DP and Admin in 80:20 ratio.

Thus, DP Cost: Rs 5.20 and Admin Cost: Rs 1.30

Estimation is listed in table format with business QWV:

<u>RSC</u>	<u>GSTC</u>	<u>GST (4%)</u>	<u>MRP/RSP</u>	<u>BCR</u>	<u>CoGS</u>	<u>DP Cost</u> (80%PDC)	<u>Admin Cost</u> (20%PDC)	<u>BCP</u>	<u>Business QWV</u>
30	6.5	0.26	40	42.50	36.76	5.20	1.30	5.74	1 kg per 1 km
3000	254	10.16	4000	4250	3264.06	203.12	50.78	985.94	100 kg per km

What is Margin and Markup value here?

Revenue (BCR) = Rs 4250, CoGS = Rs 3264.06, Gross Profit (GP) = Rs 985.94

Margin = $((4250 - 3264.06)/4250) * 100 = 23.2\% \Rightarrow \text{Markup} = 0.232 / (1 - 0.232) = 0.302$ (by formula);

>>> Profit Margin (%) = 32.2%

Markup = $((4250 - 3264.06)/3264.06) * 100 = 30.2\% \Rightarrow \text{Margin} = 0.302 / (1 + 0.302) = 0.232$ (by formula);

>>> Markup on CoGS (%) = 30.2%

This is straight forward and best case business scenario where below vital points are not considered:

(i) Any additional cost overhead by loss in sale and or any discount costing on MRP/RSP value.

(a) Cost overhead by loss in sale: Had to sale in lower/discounted price than MRP/RSP due to clearance purpose or due to total loss as the product is damaged.

(b) Cost overhead by discount on MRP/RSP, to increase sale CC is given discount on MRP/RSP.

(ii) Customer capturing by segmentation strategy evaluating product brand, quality, vendor (PV), delivery distance and customer's demographic, psychographic buying behaviour and habit is not considered here.

(iii) BCC, BFC, PDC and GST variations.

(iv) Commission rate on BCR to delivery supply chain (DP + Admin) persons/employees.

(v) Cost overhead by replace/return policy.

Will come to these derivatives... Get more in the attached excel sheet with sample data example...