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Who moved my grocery, in 10 minutes? - A light on Indian dark stores

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Abstract

Theoretical basis

The case explores the evolution of eCommerce into qCommerce (*q for quick*) in the context of post pandemic online grocery sector in India. The case enables students to revisit Hollander and McNair's hypothesis on the wheel of retailing in the era of machine learning, predictive analytics, and hyperlocal service using dark stores.

Research methodology

The case is derived from secondary sources, including publicly available reports and information about various qCommerce platforms.

Case synopsis

The case begins with a brief introduction to the concept of dark stores and where does it fit in the machinery of qCommerce. Then we try to understand why Indian consumer are embracing this revolution in online delivery model. We then try to explore how this idea of dark store started during the pandemic lockdown by a start-up Zepto run by two Stanford dropout teenagers. We then try to understand what the big players in this sector are trying in order to mitigate this innovative disruption. We also highlight three specific problems related to human capital, sustainability, and consumer behaviour. We end this case by summarizing the lessons learnt from these problems, how to resolve them, and finally few recommendations on the projected future of hyper localization.

Complexity academic level

The case is written for management undergraduates enrolled in a service marketing or supply chain course. As the case focus on India, it could also be used in local entrepreneurship courses.

Keywords

Dark Store, Q-Commerce, D2C Model, eGrocery, Hyper localization

Introduction

The Covid-19 pandemic has shaken the economies and the human race across the world, including India. However, it acted as a boon for eGrocery, where essential-focused e-commerce platforms could safely provide the services and products at-home. During the challenging Covid-19 lockdown period, Indian consumers organically resorted to ordering groceries online, led by the safe and hygienic purchase experience provided by different eGrocery platforms during these difficult times. During the period of April to June 2020, the eGrocery market was able to reach 1.6x Gross merchandise value (GMV) of January 2020. Post the lockdown, the Grocery sector was able to sustain the surge for the remaining year and exited 2020 at almost 2x of January 2020 GMV (Redseer, 2020).

Apart from the shift in consumer mindset, increase in adoption of online hyperlocals have significantly contributed to the eGrocery sector. Consumable market mainly consisted of three different consumer buying patterns - stock-up, top-up, and unplanned purchases (Redseer, 2021). While legacy eCommerce and offline Kirana stores catered to stock-up and too a small extent top-up buying patterns, hyperlocal delivery specifically tried to address the unplanned purchases. As depicted in exhibit 1, such consumers prefer value and quick delivery and is not too much concerned about next big sale or discounts. For example, a work-from-home dad who needs to change the diaper of his new-born child but has run out of home supplies and is in midst of an important client call to spare even 10 minutes to the nearest offline Kirana store. This was the inflection point which gave rise to the concept of dark stores, a micro fulfilment warehouse that strategically stores around 2000 products depending on the unplanned purchasing pattern of the immediate neighbourhood.

Background

On 24th March 2020, Prime Minister of India announced lockdown in whole country. Due to which Aadit and Kaivalya got stuck into a flat in Mumbai. If they ordered grocery from anywhere then delivery time was at least 2-3 days. This frustration gave birth to, "Kirana Kart". Its model was very simple. Because most of the people were locked in their house during covid and were unable to go out so Kirana kart would deliver groceries to such houses. While running Kirana kart, slowly a pattern was observed. They saw that whichever delivery got completed in 45 mins to 1 hour, repeat order of those customers were placed 20% of the times. But the deliveries that completed in 20-30 minutes, return order of those customers were placed 40% to 50% times. By regularly studying these patterns for a month, Aadit &

Kaivalya discovered a lot of things about Indian consumer behaviour. And after that they shut down Kirana Kart and started *Zepto*. The namesake was inspired by the smallest unit of time measured (i.e., 10^{-21}) by a group of German Scientist and published in the Science Magazine.

Other players like Big basket, Jio Mart, & even Amazon pantry had a common factor which is, "Disloyal customers". If we use Grofers, then there is a high chance that we will be using Big-Basket as well. In fact, we might be ordering our consumables someday from Jio Mart as well. Now question arises that why customers of these companies are not loyal to them? So, the reason to this is a thing which is common in all these companies which is, “Proposition of discounting”. Customers keep all the apps downloaded whether it is Swiggy, Jio Mart, or big basket. But placed order from where they are getting most discounts, as the time of deliver on these apps were almost similar that catered to top-up and stock-up purchase patterns.

Zepto, on the other hand concentrated on the convenience and speed, rather than the discounting aspect to create a disruptive niche of consumers. This was made possible by a network of hyperlocal delivery using dark store.

As introduced earlier, dark stores are small functional spaces laid out like a supermarket or warehouses dedicated to fulfilling only direct-to-customer online orders. These places are small in size, often 3000 to 4000 square feet, and are fully automated. That's why they don't require even light to attract customers. Hence the name, dark stores. These stores are closed to the general public except for picking off by delivery personnel.

Zepto uses three business strategies. As the first strategy, they study the buying pattern in whichever area Zepto enters. They observe what people want to buy and what is the buying frequency of people followed by the total spending power of the locality. As part of the second strategy, they carry out, “Location engineering”. Whenever they enter into a new area then they analyze the traffic routes followed by checking the real estate prices of that area. This helps them to estimate their average lead time even before they start delivering in that area. After doing these two things, third thing is a dark store, which is opened on a centralized location whose capacity is to serve all the customers within the radius of 3 kms. In a particular area, where Swiggy instamart delivers to the houses in 30 minutes, Zepto maintains a median time of 8 mins 47 seconds. Interesting thing is that the delivery boys of both companies take the same 6-7 mins from the respective dark stores. So why is there such a great difference in the delivery timing of both the companies? The answer to this is hidden in *PPB* formula. And

success of dark store model is also due to this formula only. First P - Picking, which is very fast in all the stores of Zepto. In their dark stores, all the employees have tablets. As and when orders are placed it comes to central hub. From that hub the order reaches dark store. From there, it's given to the employees with the entire list of things with their rack position and shortest route between the layouts are reflected on their tablets using machine learning optimization algorithms. Then comes the second P - Packing, all the items are collected & packed quickly. And third B - Bagging, as the delivery agent gets the order in hand agent needs to leave the warehouse. Zepto ensures that the lead time of all three activities - picking, packing & bagging should be 60 seconds (Dalmia, 2021). But the question arises that all these things can be done easily by Swiggy or Big basket as well. Then how will Zepto compete with these deep funded companies? This answer lies hidden in their third strategy whose name is, "Hyper focus". A thing is common in all these companies Swiggy, Big basket, and Jio Mart - They all compete on price. Where customers get most discounts, they like to order from there only. But Zepto is hyper focused on speed. In fact, customer acquisition strategy of Zepto is a lot different from the other companies. So how does Zepto acquire customers? To understand this, let us imagine we are ordering for the first time from Zepto. Firstly, as an idealist, most of us will oppose this idea and say why do we need a 10-minute grocery while thousands are dying due to lack of 10-minute service of blood or ambulance. But we still end up giving it a try as we will be promised a deep discount alongside first free delivery. After which whatever we order, that will be delivered in next 10 mins to our house. Now we forget the discount & we only remember the delight that our delivery was done in only 10 mins, and we boastfully start posting over social media and LinkedIn. So, to acquire and retain a customer, they would only have to cash-burn once or twice, to achieve the perpetual delightful state of receiving an order within 10 minutes.

In other words, by hyper focusing on the customer delight aspect, hyperlocal platform like Zepto is creating a psychological barrier of excellence which is much harder to overcome rather than an easily penetrable transactional barrier by other players who rely on high discounts.

Problem

There are three major problems which Zepto might be facing in upcoming times. First problem will be the retainer strategy by deeply funded competitors. Companies like Swiggy, Big basket & Grofers have very strong retainers. Like instamart of Swiggy and BBDaily of Big basket. And if we talk of Grofers, then Grofers have already rebranded itself to BlinkIt

and started executing the 10-minute delivery model in large scale (refer Exhibit 2 and 3). Acquiring & pulling customers will get more tougher for Zepto. Getting acquired by one of these old players also remains a high probability. Even with a $100 million Series C fundraise, Zepto will face a cash crunch to retain customers as well as delivery boys who will constantly be poached by rival companies with higher salary jump of up to 100%. Because all these older companies already have their strong retainers, second threat will be – Economies of scale. Because the daily sales volume of Swiggy, Big basket & BlinkIt is very high, they will be having more cash comparatively than Zepto. This gives the power of cash discounts to these companies, i.e., they have so much cash that they can purchase whole inventory on cash discounts. And as Zepto is a new player so its purchase capacity is less than these companies. That give rise to the third threat of "Price power maintenance". Quick deliveries are very expensive & especially when there are no delivery charges. Running low prices & speed simultaneously is quite tough. And to be sustainable in such mode we need strong cash flow and of a lot of Venture Capital funding.

Lessons Learnt and Proposed Solution

First lesson – Customers are loyal toward the value & not the brand. Any customer today is attached with the value provided by the brand instead of the brand itself. As customer is loyal to value provided by the brand instead of just the brand name, so that's why continuously improving value proposition is the only option left for companies like Zepto to survive in market before it gets eventually acquired. Second lesson – Tapping the untapped. In every market, every sector, every business something is always left untapped. The logistics can be used for gifting, fast-fashion, or pharma industry. As Zepto was able to untapped the want of people from their impatience. And lastly, sustainable packaging can appeal to a lot of young generation consumers availing this service. A huge amount of redundant plastic and cardboards gets wasted in packaging smaller quantity of unplanned purchases. If the app provides points or badge for consumers who returns such packaging in their next visit that goes back to the dark stores for recycled use, customer stickiness can be increased with a sense of community.

Recommendations

A dozen different ultra-fast delivery companies at some stage will go under or be acquired by their rivals. Finally, and perhaps most significantly will the growth trend survive beyond lockdowns? When people are working from home, they can place dark store orders throughout the day but if they return to the office and orders become concentrated in the evenings the

business case may not add up as readily. Besides it's easier for commuters to pop into the corner store on their way home. It's pretty clear however the dark stores are here to stay. The irony is that if everyone decides it's an attractive business, supermarkets and venture capitalists alike will continue to pile into the space and the ensuing price war will mean it ceases to be an attractive business (McArthur et al., 2016). It'll be good for the consumer, but our local Kirana might find that its lunch is being eaten by someone else.

As Hollander (1960) argues whether the hypothesis of wheel of retailing, coined by McNair, is applicable to all retail areas, where the retail grows, matures, and dies due to a new entrant, we see that in this era of machine learning and predictive analytics, the wheel of retailing is not only valid, but adoption of technology squeezes up the lifetime of this wheel. In simple words, during the older times of lesser developed technology, if a retail concept aged in "man-years", now a retail concept ages in "dog-years". With the advent of more sophisticated technology, it can be hypothesized that life cycle of newer retail concepts, although more disruptive, will become much smaller.

Acknowledgement

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Exhibits

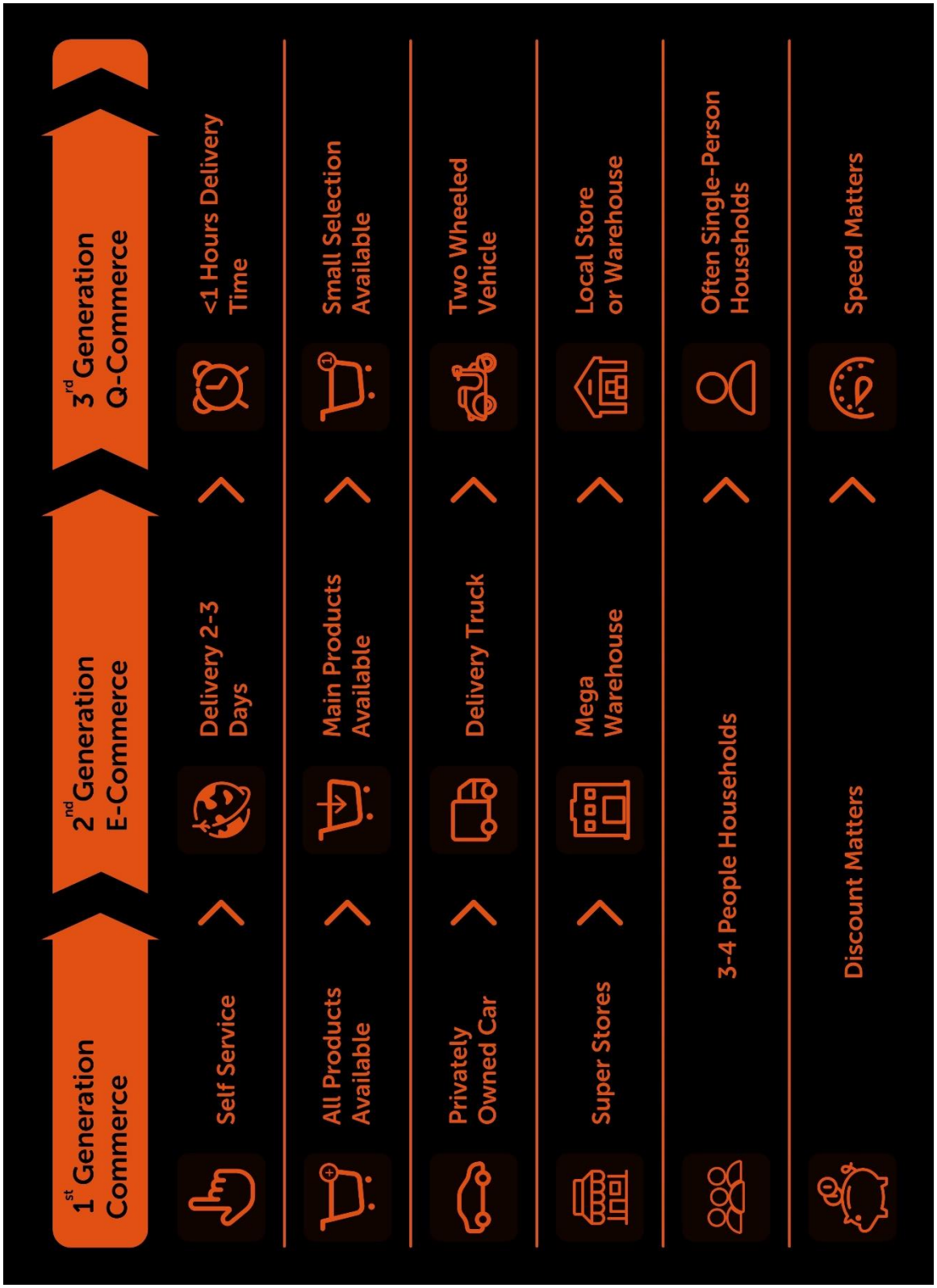

Exhibit 1: Transition of 1st Generation Commerce to 3rd Generation Q-Commerce

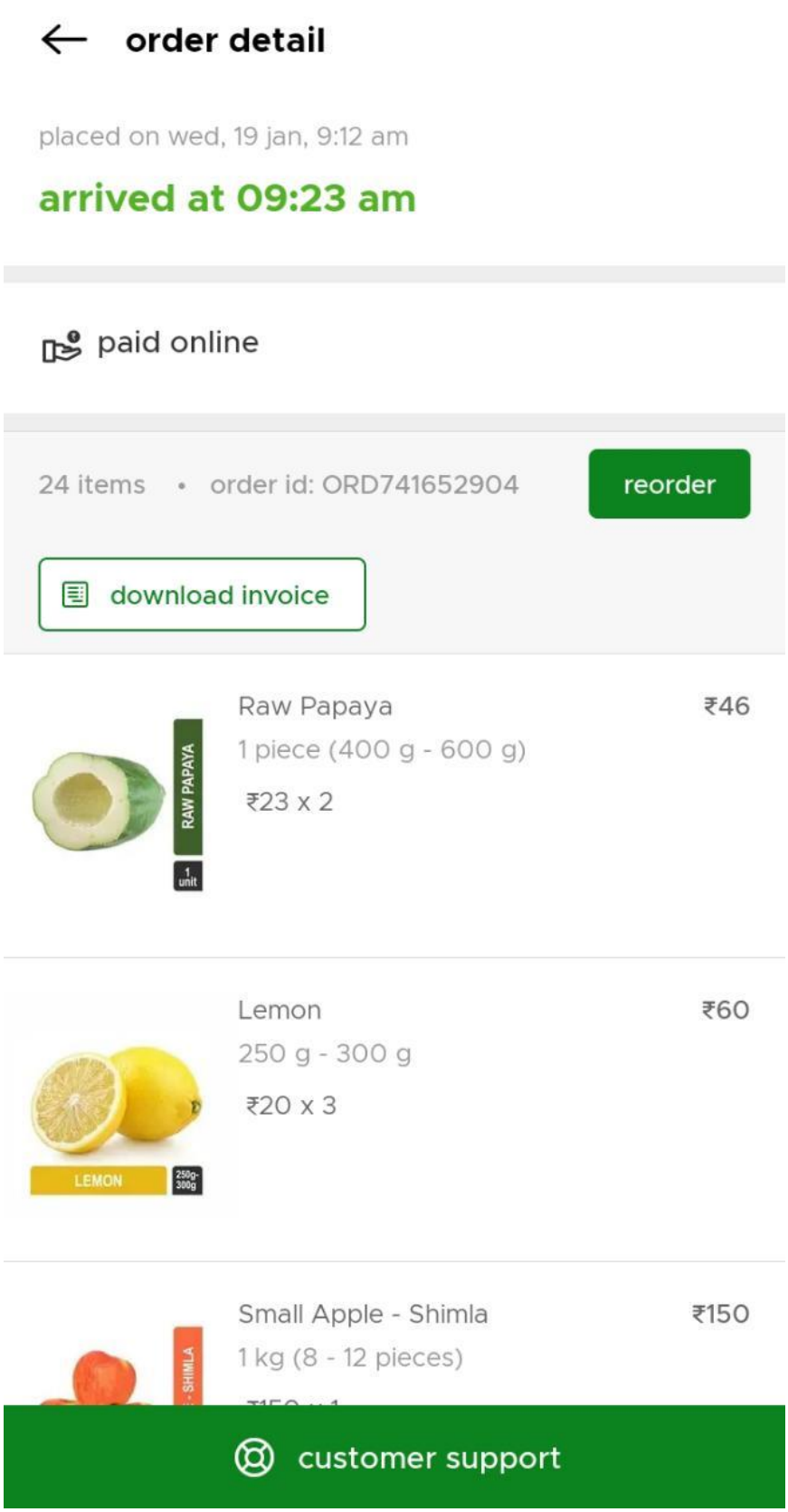

Exhibit 2: Order placed and Arrival time on BlinkIt

Tax Invoice / Bill Of Supply

Super Store Kolkata Khardaha ES29 PR (LT)
Lovely Trading India Pvt Ltd, 11, MS Mukherjee Rd, Jole Doba Para, Khardaha, Kolkata, West Bengal 700116
Kolkata
700116
Pin code : 700116
GST Tin : 19AADCL3060D1ZT
FSSAI : 10019011006506

Order Id : 14898191
Invoice No. : CKL2397T21003663
Date : 19-Jan-2022
CIN No. : U74999DL2017PTC317006
PAN No. : AADCL3060D
Place of Supply : West Bengal

Invoice To
Name : Mayukh Mukhopadhyay
Address : E3 shree kunja
2/1 Panchanantala Road Sukchar 700115
Kolkata
West Bengal (WB)

Sr. no	Item Code	Description	Qty.	Mrp.	Unit Price (Excluding tax)	Sub Total (Excluding tax)	GST (%)	Cess (%)	Additional Cess Val	Net Amount (Including tax)
1	10078554	Raw Papaya (HSN-07061000) | 1 unit (400 g - 600 g)	2	23.00	23.00	46.00	0.0	0.0	0.00	46.00
2	10075659	Lemon (HSN-07061000) | 250g - 300g	3	20.00	20.00	60.00	0.0	0.0	0.00	60.00
3	10067919	Small Apple - Shimla (HSN-21069011) | 1 kg (8-12 units)	1	150.00	150.00	150.00	0.0	0.0	0.00	150.00
4	10064613	Moreish Brown Bread (HSN-19059040) | 400 g	1	30.00	30.00	30.00	0.0	0.0	0.00	30.00
5	10061351	Spring Onion (HSN-07070000) | 1 unit (150-200 g)	1	11.00	11.00	11.00	0.0	0.0	0.00	11.00
6	10042667	Grofers Mother's Choice Bay Leaf/Tej Patta (HSN-09109100) | 50 g	1	30.00	23.81	23.81	5.0	0.0	0.00	25.00
7	1001515	Red Carrot	1	25.00	25.00	25.00	0.0	0.0	0.00	25.00
8	10014187	Cabbage (HSN-07041000) | 1 unit (400-600 g)	2	19.00	19.00	38.00	0.0	0.0	0.00	38.00
9	10013450	Cauliflower (Gobhi) (HSN-07041000) | 1 unit (300-500 g)	2	25.00	25.00	50.00	0.0	0.0	0.00	50.00
10	10003982	Raw Banana (Plantains) (HSN-08031010) | 6 units	1	30.00	30.00	30.00	0.0	0.0	0.00	30.00
11	10002243	French Beans (HSN-07081000) | 250 g	1	14.00	14.00	14.00	0.0	0.0	0.00	14.00
12	10002252	Green Peas (HSN-07091000) | 250 g	5	14.00	14.00	70.00	0.0	0.0	0.00	70.00
13	10003972	Coriander Bunch (HSN-06011000) | 1 unit (100 g)	1	9.00	9.00	9.00	0.0	0.0	0.00	9.00
14	10002249	Green Capsicum (HSN-07070000) | 250 g	2	30.00	30.00	60.00	0.0	0.0	0.00	60.00

Sub Total (excluding tax) 616.80
Tax Total (Inclusive of cess) 1.20
Total Payable(Including tax) 618.00

CGST = 593.00 * 0.0% = 0.00, 23.81 * 2.5% = 0.60,
Total CGST = 0.60
SGST = 593.00 * 0.0% = 0.00, 23.81 * 2.5% = 0.60,
Total SGST = 0.60
CESS = 616.81 * 0.0% = 0.00,
Total CESS = 0.00

This is a computer generated Invoice and Signature is not required

Exhibit 3: Tax Invoice of BlinkIt - Dark Store pin code is very close to Consumer pin code