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The Paradigm Shift

Envisioning “Hybrid” Hyperlocal delivery systems
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The world is rapidly adopting several technologies and the rate of such adoption has never been so high. With the introduction of the iPhone in 2008, the entire business world has forayed into an unprecedented digital domain. Throughout the recent decade many businesses have hence migrated to the digital landscape and with 4G data in widespread access, many underprivileged classes too have become “netizens”. Amidst such disruptions, e-commerce has been one of the best recipients of this “internet advantage”. In fact, post demonetization many people have adopted digital payment as a regular choice of transaction, and this has led to even more convenience for online shopping. With such disruptive growth, many e-commerce giants have been constantly upgrading their supply chain models to be more efficient and robust to the up- surging demand. They have indeed become so efficient that we are in an era of “hyper efficiency” where delay is now accounted for in the scale of minutes. Despite such improvements, availability and competition have proven to be a pinprick to these giants.

These e-commerce platforms are also faced with the larger problem of competition with the rise of hyperlocal startups who specialize in delivering consumer goods like groceries and also medicines within a matter of a few hours with their same day delivery options. These startups resort to the much critiqued model of “Hyperlocal delivery” which needs specialized teams to work with spatio-temporal forecasting techniques and advanced operations research techniques to service the demand in the least time possible whilst incurring least cost as well. But these

startups too have started their own private label brands to reap higher margins, thereby unfavorably affecting the local retailers and everyone in the consumer goods supply chain to a considerable extent.

There is also a growing unrest amongst retailers who have been subsumed by the shift of demand towards the e-commerce giants. Moreover, these e-commerce giants, powered by data science and machine learning can precisely target the right customer with the perfect product line, extraordinary discounts and at the correct time. Even festive season sales have completely shifted online due to the “Flash sale” phenomenon.

There is a possibility of a cascading shut-down of local retail stores across localities. This might seemingly look beneficial for the e-commerce giants at the first look; but deeper scrutiny reveals that as per the principles of Game Theory as suggested by the Nobel laureate and mathematician-cum-economist Professor John Nash, such unhealthy competition can lead to a lose-lose situation in the long run wherein the purchasing power of the overall market drops due to large scale loss of income streams. The best way, therefore, is one of cooperation wherein both the retailers, the e-commerce giants and the seldom discussed manufacturers all benefit. Such an ecosystem of cooperation certainly demands for well designed mathematical models and broader consideration of consumer behaviors.

While some might propose the much recent Hyperlocal model as a solution, many firms in the past have suggested otherwise. Quality



and margins are the major concerns. The risk is not just quantified on margin values of products involved, but the very churn of those loyal to the platform in case of compromised quality (both in terms of goods delivered and the delivery experience) cannot be underestimated. In this scenario, a “Hybrid Hyperlocal” model which combines the strength of both the traditional warehouse-inventory model and Hyperlocal model to achieve a category specific distribution mechanism for the arising orders will facilitate the e-commerce giants to provide similar offerings like within day delivery in numerous locations. We believe such an approach would ensure the simultaneous growth of both local retailers and e-commerce giants, giving each an adequate share of the pie.

Briefly, the hybrid hyperlocal model proposes that the e-commerce giants could establish partnerships with local vendors and outsource some (not all) of the orders generated in their system to local vendors. Often, such hyperlocal vendors give very less margin to the e-commerce company as compared to their established sellers and manufacturers. The hybrid hyperlocal model analyses the spatio-temporal demand and selects the orders that can be outsourced to hyperlocal partners based on certain factors. Such factors include shipping costs incurred to ship a product in the main supply line, loss of margin due to outsourcing, reduction in stress on the main supply line due to outsourcing, enhancement in customer satisfaction, retailer reliability, reduction in delivery time etc.

Since these factors might vary significantly depending upon the type of product and retailer involved, the model prescribes different strategies for different types of products. It is often easy to provide same day delivery in cities and in locations near to the company warehouse. However, customers who are farther away from the access points of the company should also be satisfied with the services provided. We believe that the hybrid hyperlocal model would solve this problem effectively. In simple words, such a model would ensure there’s enough cooperation within the retail environment and ensure adequate incentives for the local retailers whilst also catering to the exhaustive product avail-

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ability needs of the e-commerce firms. Though one might rightly ask whether such exhaustive product variety and availability would be a matter of serious concern, it is important to note how customer loyalty has been relatively turbulent for these big firms. The demands of today’s customers are pushing the boundaries of consumer goods supply chains. Also, while the expansion of supply chain resources would seem a good investment to ensure such needs are met, it’s worth leveraging local markets to cater such needs, even at the cost of losing margins due to such outsourcing. Low margin-High volume-high quantity goods can be prioritized towards such outsourcing while maintaining the rest of the orders within the main supply lines. This combined with appropriate marketing efforts would ensure the distribution of high margin goods over the internal supply lines, providing better returns. While it is tough to ascertain what awaits us in the post COVID world, an established incentive structure for quality control and a sustainable growth strategy built on symbiotic grounds between the big players and the local markets would surely help surpass the several challenges to come.