

**A COMPARITIVE STUDY ON THE EFFECTIVENESS OF LAST MILE
DELIVERY IN e-COMMERCE GROCERY INDUSTRY, CHENNAI
(With Special Reference to Grofers.com & Big Basket.com)**

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ABSTRACT

The Indian Logistics Industry is growing at a rapid pace as the customer demands are also growing in a tremendously amplified way. The rise of e-commerce industry has changed the conventional shopping process and has brought in the 'convenience' in shopping for the customers regardless of their location and the product categories. The importance of on-time delivery becomes very crucial especially for perishables and that complicates the logistics planning for e-commerce grocery delivery system. It becomes so important to evaluate the performance of delivery process for such companies to keep ahead of the competition. This study is an attempt to understand the last-mile delivery performance of e-commerce grocery industry. With an interest to identify competitive strategy followed by companies in this industry, this study also makes a comparative representation of two companies of the same industry on various key performance indicators pertaining to last-mile delivery. The study focusses on on-time delivery, quality of product, payment procedures, product return policies, packaging and attitude of the delivery person towards the customers as the key areas of focus. Analysis is based on the opinion driven from the customers through a structured questionnaire. This study is expected to benefit the players of the industry in terms of understanding their current performance in logistics and helps in their future planning to increase their respective market shares.

Key Words: Logistics Industry, e-commerce, e-grocery, last mile delivery, on time delivery, quality of a product, payment procedures, product return policies, packaging, delivery person.

INTRODUCTION

Online grocery shopping is a way of buying food and other household necessities using a web-based shopping service. There are two basic methods that people can use to purchase these items online. One is to order them from a local grocery store that participates in online shopping. A customer can then arrange for a home delivery directly from the store, or he can pick up his order at the store once an employee has assembled it. Another common practice is to order groceries from a large company, such as Amazon or Net grocer that will ship the items to one's home. Ordering groceries online became popular in the 1990s, in the United States, during what has been called the dot-com boom. The popularity was short-lived, however, and several online shopping services faced bankruptcy. Over the next few years, some of them survived economic hardship to remain strong in the market, and today there are numerous online grocery retailers.

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Many market experts currently feel that online grocery shopping is a profitable concept and will continue to grow in popularity.

The last mile is a metaphor used to describe the movement of goods from a fulfilment centre of their final destination. In other words, the last mile is the last leg of your product's trip before it arrives on your customer's doorstep. Although last-mile logistics is only one small link in the supply chain, it's the only one that directly touches the customer. Last mile delivery is the final leg of the supply chain. It is the moment the customer finally receives their order. And it is generally the most expensive, least efficient and most problematic part of the overall delivery process. In the US, last mile deliveries have their own unique set of challenges. Mostly they come down to cost issues, and a retailer's desire to control the final moment of the brand interaction. There are a few main categories for last mile deliveries. First, is parcel delivery? UPS, FedEx, and the Postal Service are the three main players in this area. These companies are delivering thousands and thousands of packages daily from retailers around the globe to customer's front doors and offices. The shipping rates have gone up recently, and these companies provide very little control over the last mile for retailers.

STATEMENT OF THE PROBLEM

Many studies were undertaken on E-Commerce industry but no effort has been made to study exclusively on E-Commerce Grocery which activities include – order receiving, fulfilment, tracking, customer satisfaction, on time delivery. Though some sporadic attempts were made stray articles are found on Last mile distribution in e-commerce (Grocery) but no study is so far carried out.

Since from 2013 only e-commerce (grocery) is available in Chennai, there is no proper article or research have made till now. E-Commerce is one the typical supply chain strategy followed among any other industry. So, this study is an attempt to understand the last-mile delivery performance of e-commerce grocery industry and this study also makes a comparative representation of two companies of the same industry on various key performance indicators pertaining to last-mile delivery.

SCOPE OF THE STUDY

E-Commerce or the Electronic Commerce is more than just buying and selling products online. It also includes the entire online process of developing, marketing, selling, delivering, servicing and paying for products and services. India has shown tremendous growth in the E-commerce segment. With an internet user base of over 300 million, India has third largest internet population after US & China. In Online grocery mart – operations consist of many activities. The present research is confined to a study on a comparison of two e-grocery firms.

OBJECTIVES

- To compare the effectiveness of last mile delivery system of Grofers.com and Bigbasket.com.
- To study the customer satisfaction towards the last mile delivery of e-commerce industry.

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HYPOTHESIS

- H1: There is no significant difference between On time delivery and customer satisfaction.
- H1: There is no significant difference between Fulfilment and customer satisfaction.
- H1: There is no significant difference between Quality and customer satisfaction.
- H1: There is no significant difference between Information and customer satisfaction.
- H1: There is no significant difference between Transaction and customer satisfaction.
- H1: There is no significant difference between Return Policy and customer satisfaction.

RESEARCH METHODOLOGY

Research methodology is to solve the research problem systematically. It may be understood as a science of studying how research is done scientifically. The scope of research methodology is wider than that of research methods. Thus, when researcher talk about research methodology, they not only talk of the research methods but also consider the logic behind the methods researcher use in the context of this research study and explain why researcher is using a particular methods or techniques. So, that the research results are capable of being evaluated either by the researcher himself or by others

This study makes a comparative representation of two companies of the same industry on various key performance indicators pertaining to last-mile delivery. It is an attempt to understand the last-mile delivery performance of e-commerce grocery industry on, on-time delivery, quality of product, payment procedures, product return policies, packaging and attitude of the delivery person towards the customers as the key areas of focus. The research is expected to benefit the players of the industry in terms of understanding the current performances in logistics and to help in the future planning to increase their respective market shares. As it is a comparative study, correlation analysis has been used to relate the two companies.

DATA ANALYSIS AND INTERPRETATION

Degree and type of relationship between any two or more quantities (variables) in which they vary together over a period; for example, variation in the level of expenditure or savings with variation in the level of income. A positive correlation exists where the high values of one variable are associated with the high values of the other variable(s). A 'negative correlation' means association of high values of one with the low values of the other(s). Correlation can vary from +1 to -1. Values close to +1 indicate a high-degree of positive correlation, and values close to -1 indicate a high degree of negative correlation.

		Satisfaction	On time	Fulfilment	Quality	Information	Transaction	Return
Satisfaction	Pearson Correlation	1	.272	-.203	.001*	.628	.020**	-.541
	Sig. (2-tailed)		.658	.744	.042	.256	.003	.346
	N	5	5	5	5	5	5	5
Ontime	Pearson Correlation	.272	1	.733	.677	.001*	.379	-.037
	Sig. (2-tailed)	.658		.159	.210	.043	.530	.953

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	N	5	5	5	5	5	5	5
Fulfillment	Pearson Correlation	-.203	.733	1	.188	.368	-.159	.586
	Sig. (2-tailed)	.744	.159		.762	.542	.798	.299
	N	5	5	5	5	5	5	5
Quality	Pearson Correlation	.001*	.677	.188	1	.008*	.009*	-.431
	Sig. (2-tailed)	.042	.210	.762		.039	.022	.469
	N	5	5	5	5	5	5	5
Information	Pearson Correlation	.628	.001*	.368	.003*	1	.728	-.418
	Sig. (2-tailed)	.256	.043	.542	.039		.163	.483
	N	5	5	5	5	5	5	5
Transaction	Pearson Correlation	.020**	.379	-.159	.009*	.728	1	-.635
	Sig. (2-tailed)	.003	.530	.798	.022	.163		.249
	N	5	5	5	5	5	5	5
Return	Pearson Correlation	-.541	-.037	.586	-.431	-.418	-.635	1
	Sig. (2-tailed)	.346	.953	.299	.469	.483	.249	
	N	5	5	5	5	5	5	5

*. Correlation is significant at the 0.05 level (2-tailed).

*. Correlation is significant at the 0.01 level (2-tailed).

Interpretation:

Since the calculation was done under two significant level, ie 0.05 and 0.01 the following hypothesis have accepted.

H1: There is significant relationship between On time delivery and customer satisfaction.

H1: There is significant relationship between Fulfilment and customer satisfaction.

H1: There is significant relationship between Quality and customer satisfaction.

H1: There is significant relationship between Information and customer satisfaction.

H1: There is significant relationship between Transaction and customer satisfaction.

H1: There is significant relationship between Return Policy and customer satisfaction.

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FINDINGS

- Apart from other e-commerce, grocery is one of the crucial industry on time delivery of products with high quality is must still company lacks in 30%
- Customers order fulfillment rate are above **60%** yet **40%** have to improved by both the firms
- While these products are foods and non-eatables care must be given to both sides not yet any one the firm had **100%** Quality in their products
- The study says that due to small mistakes many firms have closed to avoid that ease of transaction and order information also play an vital role where these two firms lacks in **25%**. It should be improved.
- Return policy is must for e-grocery but it should at the level of below **5%** but its above that level where the at most care should be taken
- Customer satisfaction results that most of the customers were in dynamo don't have clear clarification about the companies' services.

SUGGESTIONS

The Study was conducted in two e-grocery companies in Chennai based on their on time delivery, order fulfillment, order quality, ease of transaction ,return policy and customer satisfaction with respect to 240 respondents.

From the study found that most of the customers were satisfied in buying products in online which indicates e-grocery have good market in metropolitan city.

On the basis of study have formulated seven strategy which will reduce the complexity and increase efficiency Both start up and Developing firm(Big Basket)

- Phase 1: Ad hoc delivery.
- Phase 2: Low volume outsourced arms length arrangements.
- Phase 3: Start-up of defined delivery “runs”
- Phase 4: Minimum Regional delivery runs with high-percentage regional coverage & low capital investment strategy
- Phase 5: Sophisticated regional delivery runs
- Phase 6: Growing regional delivery runs
- .Phase 7: Range-increasing capabilities
- Technology can improve customer service, with some carriers investing in messaging services to help consumers manage deliveries around their daily schedule. ie providing smart phone like device to the delivery people.

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- While packing up product Standard SOP should be followed for all the orders rather than the each product.
- To avoid reverse logistics products should be delivered without any damage and shelf life should be checked before pickup point.
- Both Firms should describe a refund payment to customer as notification when they order so that it will avoid redundancy among customers.

CONCLUSION

Each analysis gives us same result based on metrics framed except return policy maintained by the both companies (Reverse logistics), it is the crucial area they need to concentrate. Apart from that if any firm follows these metrics and suggested strategy will have successful in their e-grocery business. From the study have found that there are many firms (E-Grocery) have been shutdown in Chennai e.g. Peper Tab, Red cart due to thier lack in Last mile delivery so to avavoid that in Grofers and bigbasket still Seven startegy have been formulated to sustain in the field as mentioned above. Despite the three “last mile” delivery modes are concurrence in practice, a little theoretical research aims at choosing them according to different scenarios so far.

This paper makes the quantitative study of different delivery modes’ competitiveness through analyzing “last mile” activities’ operation efficiency in different scenarios. The major conclusions of this paper are concluded as follows. (i) Total cost of “last mile” delivery relies on the price of manpower and material resources and operation efficiency. (ii) Operation efficiency is affected by order quantity (iii) When Return products are high (Reverse Logistics) it could be grater deal. (iv) Flow of information is right (v) Payment gateway it is indirectly implies one the bullwhip effect in last mile delivery.

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