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ESTABLISHING CUSTOMER LOYALTY BY ANALYZING SELLING RATE OF AUTOMOBILE SPARE PARTS THROUGH E-COMMERCE

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ABSTRACT

The expeditious rate of development of E-commerce completely changes the pattern of human's life style. In current decade, E-commerce is fastest emerging technology of world; with this technology we can easily enhance our diameter of the market area for selling and purchasing of Automobiles and its new or old spare parts comfortably via connecting internet with great efficiency, portability and any time –everywhere existence. The main target of this review paper is to analysis selling rate for the E-business marketing of automobiles, its spare parts and services for establishing the customer loyalty in turn of long and strong relationship for the beneficial growth in profit/revenue.

INTRODUCTION

The environment and modern society are greatly influenced by mobility patterns of mechanically and electronically sound gadgets. In the coming 8-10 years it is expected that majority, if not all, businesses would have an online presence to sell their goods and services to customers [1]. Online shopping sites are providing different offers to the customers to increase interest in online shopping. Some of the offers are as follows-

- Last few hours of sale eg Great Indian Sale.
- Deals from Rs. 49 to Rs.499
- Price off on Products.
- Rock bottom prices 6 pm-12 am.
- Blockbuster Deals.
- Limited offers.
- Half price store
- Golden hour deals
- Big saving on 10 crore products.
- Deals starts midnight today etc
- Last day today
- Recommends items according to the search history rate.

“Change is constant” an appropriate adage for today's scenario. As phrase says, change and advancement in technology is also equally necessary .In current era, E-Commerce is fastest emerging technology of world; with this technology we can easily enhance our businesses by trading in products, services or selling and buying, with thousands of products, via connecting internet with great efficiency. Whenever we are involved in online transaction with the portable devices that is symbolize the concept of E-Commerce [2]. With online scenario it is very easy to purchase and sell thing. It also carries humongous amounts of information and data. The expeditious rate of development of E-Commerce completely changes the pattern of human's life style.

EVOLUTION OF E-COMMERCE

The rapid expansion of internet and hand held devices like mobile phones, notepads and tablets across the world, gives high level of portability to us. Doing various jobs with several applications, software and resources, very effectively within a few seconds has lead to the popularity of internet on handheld devices. New technology developed has been named as “E- commerce” [3].

“Internet + Wireless + Commerce =
E-Commerce”



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Electronic commerce or E-Commerce is the terminology for purchasing and retailing of goods and services using wired, wireless or with mobile devices. An advanced version of E-commerce is called Mobile-commerce. The concept of Mobile commerce was originally derived by “Mr. Kelvin Duffey” in the launch function of the Global Mobile Commerce Forum. He tries to create an advance version of E-commerce, wanted to develop direct capabilities of transaction into the consumer’s hand, anywhere & anytime with low cost through the portable technology [4].

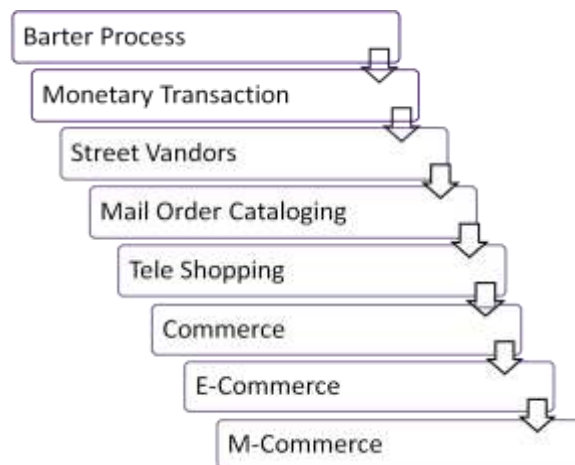


Fig. 1 Flow-chart-Development of E-Commerce

These are the distinct eight steps of evaluation of E-Commerce shown in above diagram.

SCENARIO OF TRADING WITH E-COMMERCE

Electronic-commerce is now becoming “path to purchase” on its head. With the help of portable devices shopping is turning an iterative affair rather a serial process. Customers no longer need to go for purchasing; they always are on shopping portals. Online users get start with giving attention to an item, after then moving to interest with the selected product, and then start making desire for purchasing, and in end finally take an action.

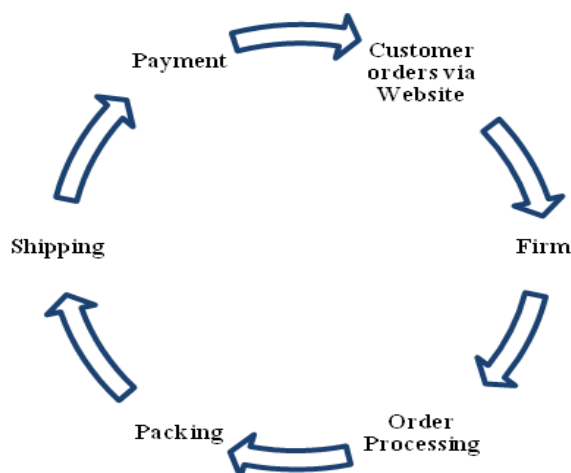


Fig 2 Value Chain of Online Shopping System via Mobile Devices

Value Chain of Mobile Shopping

Mobile trading (selling and purchasing) is become famous because of the convenience; they are providing order deliveries to the doorsteps of valuable customers. This procedure of online trading is very comfortable to learn for each age group persons. In this respect, currently retailers have more interested to increase their potential and



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investments in Mobile shopping websites and apps to deliver information, goods, products, and promotions with advertisement to the customers. These are very simple steps for selling and purchasing through online websites or mobile apps [6].

- First step to create an online web site login account with secure password.
- Second step to start searching for our desired products.
- In next step find the product(s) we wish to order and click on the button “Add to Cart”.
- Then when every, we want to purchase required item, place an order and pay according for purchasing.
- Time to time review our cart for accessing or comparing rates with the other websites.
- Log out.

CUSTOMER BENEFITS

We have several advantages by using online purchasing through mobile devices; some are:

- Quicker Access
- Electronic Wallet
- Saves time and efforts
- More jobs opportunity
- Flexibility accessibility
- Easy to carry portable cell phones
- Facility to compare prices of products.
- Availability of much wider products range.
- Rising standards of living as result of fast decline in poverty rate.
- Work & Play (Ambidextrous): Business purpose +Personal fun.
- The device facilitates storage of data and has Internet, intranet, extranet connections so it is very convenient.
- It provides personal independence; device owner has an exclusive access to the contents/services and the service providers keep the identity of the owner [5].
- Varied users-Elementary school students, grandpas, grandmas are the varied users that uses E-Commerce and from varied location.
- People are aware of the availability of various products in the markets through the help of internet online facility of websites etc. The availability of a new product, its price and other features can be known easily.
- With the increase in small and medium enterprises, investment, foreign direct, multinational companies, creating millions new jobs, a new generation of globally minded consumers [12].
- Online shopping brings benefits to consumers in terms of convenience, search ability, and rich product information.
- M-Pesa: Vodafone teamed up with ICICI Bank for M-Pesa. Users can send money to someone via Mobile Phones. The system is fast and secure. The user has the possibility to send money either a telephone number or a bank account.
- Financial services include mobile banking where customers can use their mobile devices such as smartphones to access their accounts and transfer funds to another account or pay their bills. Funds can be transferred via mobile phones without having to switch to ATM.
- Mobile Refills: Mobile Recharge is the commercial M-spread transaction in India.
- Tele-Communications: This includes the payment of service bills and account reviews can all be performed by the same hand device.
- Increased usage of online classified sites, with more consumers buying and selling second hand goods.
- Mobile Web Information: This includes providing financial news, movie downloads, entertainment, etc. M-training by a single mobile service.

AVAILABILITY OF AUTOMOBILES AND SPARE PARTS

In online website portals, we have huge range of categories are available for Automobiles (two and four wheelers), its accessories and spare parts with reasonable rates, modern designs, various sizes and colors as compare to market price value. In India, two most popular and biggest online website portals are Amazon and flipkart [8]. Both companies are earning well and making high revenue with good profit rate with online business. Analytics



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for online availability of Automobiles, its accessories and spare parts are shown in a table 1.1 in the current web site of “Amazon”.

TABLE 1 Available Online Products for Automobiles on website: Amazon (2018)

Sr. No.	Online Products for Automobiles	Results Available
1	Cars & Motorbike	686694
2	Automobile-Accessory	54,00,343
3	Tools for garage	490
4	Two Wheelers	21,924
5	Automobile Spare part	306,553
6	Automobile Equipment	22,264
7	Automobile Tools	47,744
8	Automobile Tools box	1,709
9	Automobile Tools Kits	16,238
10	Automobile Seat Covers	175,800

Source: Amazon

On the same ground, Analytics data for the online availability of Automobiles, its accessories and spare parts are shown in a table 1.2 of “flipkart”.

TABLE 2 Available Online Products for Automobiles on website: flipkart (2018)

Sr. No.	Online Products for Automobiles	Results Available
1	Cars & Motorbike	72656
2	Automobile-Accessory	12,46,106
3	Tools for garage	1,289
4	Two Wheelers	97,083
5	Automobile Spare part	100
6	Automobile Equipment	60
7	Automobile Tools	63

Source: flipkart

Apart these two famous web sites, many more web portals are also available here for trading of automobiles (two and four wheelers), accessory and its parts. For example:

- Shopclues.com,
- Naaptol.com
- Alibaba.com,
- Homestop18.com,
- Shopping.rediff.com,
- Infibeam.com,
- Automobile18.com,
- Romve.com etc



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E-Commerce is a huge area of an online business and getting bigger day by day [9]. “The highest rate of browsing found in Latin America; Asia-Pacific is in the highest region for online web trading. The popular E-Commerce product categories are non-consumable durables and entertainment-related products.

With online shopping we have distinct types of users, some who are only interested in browsing, some of them; who are only take interest for comparing item prices and others who actually want to trade produces online. A strong online browsing-to-purchase correlation rate for fast-moving consumer goods translates to loyal repeat customers for categories of products [16].

According to the E-commerce report August 2014, we have consumable varieties of different goods and products and three correlation rates for online “Browse-to-Buy” [7]. These are as follows:

Consistent rate of Browsing and Purchasing Goods:

TABLE 3 Percent Rates of Consistent Browsing Vs Purchasing

S r. No.	Categories (Products)	Consisten t Rate (%)	Pur chasing Rate (%)
1	Clothing, Accessories and Shoes	46	46
2	Tours and Hotel Reservations	42	46
3	Event Tickets	38	41
4	Hardcopy Books	37	39
5	Cosmetics	33	31
6	Personal Care	31	29
7	Groceries	30	27
8	Pet related products	24	21
0	Alcoholic Drinks	20	18

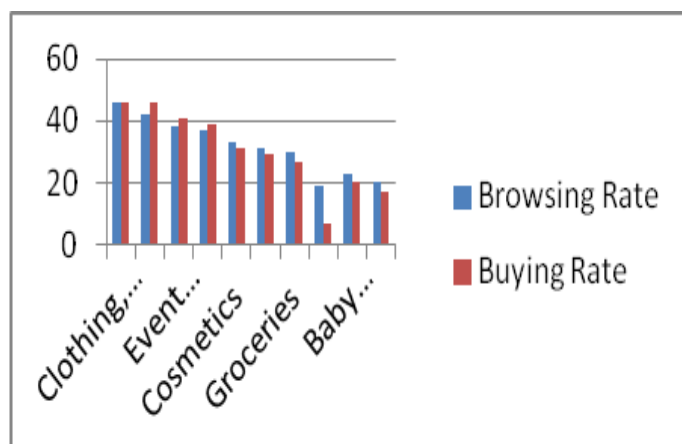


Fig. 3 Rates of Consistent Browsing Vs Purchasing



More browsing than less purchasing:

TABLE 4 Percent Rates of High Browsing Vs less purchasing

S r. No.	Categories (Products)	Consistent Rate (%)	Purchasing Rate (%)
1	Electronic Equipment	43	34
2	Mobile Phone	40	33
3	Computer Hardware	38	30
4	Sporting Goods	35	31
5	Computer Software	35	27
6	Videos, DVDs, Game	33	28
7	Music	33	27
8	Car, Motorcycle and Accessories	28	17

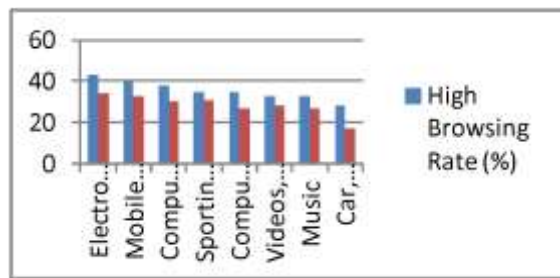


Fig. 4 Percent Rates of High Browsing Vs less Purchasing

More Purchasing than Browsing:

TABLE 5 Percent Rates of Browsing Vs More Purchasing

S r. No.	Categories (Products)	Consistent Rate (%)	Purchasing Rate (%)
1	Airline Tickets and Reservations	40	48

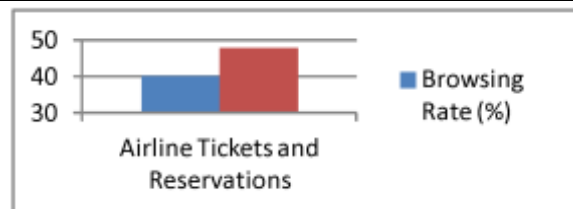


Fig. 5 Rates of Browsing Vs More Purchasing

In the individual comparison of a city Latin (America), five most popular categories of products for browsing/purchasing as presented in below table with graphical representation via graph [10].



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TABLE 6 Percent Rates of Browsing Vs purchasing for most popular categories of products in Latin

S r. No.	Categories (Products)	Con sistent	Pur chasing
		Rate (%)	Rate (%)
1	Electronic Equipment	62	29
2	Mobile Phone	61	27
3	Clothes	54	28
4	Car, Motorcycle	53	11
5	Tours/Hotel Reservations	52	32

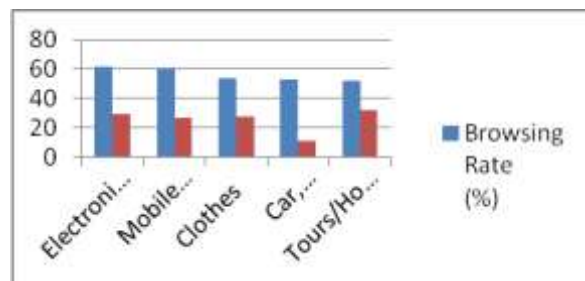


Fig. 6 Percent Rates of Browsing Vs purchasing for most popular categories of products in Latin.

According to the above presented data and comparison reflect the fact that the purchasing rate of automobiles (Car, Motorcycle), Accessories and its spare parts are shows more browsing but very less purchasing of products. In E-Commerce market trading rate of automobiles and spare parts lying in the bottom line. Reason behind the low rate of purchasing of automobiles and spare parts its depends on some factors like firstly when a user required a spare part for his damaged vehicle or his car which is not working because of some specific defective spare part, that time user not in situation to place a order and wait for delivery for that particular spare parts and secondly if he place a order online then his problem is not sorted out, After waiting 3-4 days, he get his ordered product but user has to go to the service centre (garage) for fixing that particular damage part of his vehicle, so it is a another expense which online user has to bear [9]. Another fear of an online buyer of automobile spare parts that he places an order without manually checking a spare part for his vehicle and delivered product didn't watch with his vehicle segment or delivery of damaged spare part. So mainly we observe factors for low rate of online market trading for automobiles and spare parts are [8]:

- Urgency
- Extra Expense
- Time consuming
- Mismatch: Type of model of spare parts regarding vehicle's segment [11]
- Delivery of a damaged spare part
- No personal attention by online ordering of spare part
- User cannot wait for offers, sales and discounts in urgent conditions.
- No customer loyalty in turn of long and strong relationship with online shopping.
- It prevents face-to-face customer services.

CONCLUSION

Mobile-commerce is an emerging technology. It is very fast and consumer likes to adopt this mobile technology in their daily lifestyle. This technology has improved the way of processing our traditional businesses. E-Commerce is a convenient successor of E-commerce and its providing wireless and 24*7 facilities to us with its own unique benefits. Mobile commerce is a technical phenomenon of using portable handheld service devices to communicate, share information, using web services, navigators, data transfer, sharing text and data through an internet connection to the networks of public and private sectors. It offers huge range of online business deals, products, information, study portals, ticket booking, reservation and many more services but in the reference of



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purchasing rate of automobiles (Four wheelers, two wheelers), Accessories and its spare parts, it is not in a good condition regarding online businesses. In our country, it has taken a while for consumers to accept E-Commerce regarding automobile trading purely [13]. We have to suggest some new and innovative models or ideas for making increment in the rate selling automobiles and its spare parts.

FUTURE SCOPE

The future of E-Commerce is very bright in coming decades. This is a next most technical and logical move for our country and its merchants. The success of E-Commerce is inevitable, this is through the global diffusion of the portable devices worldwide with the widespread use of high speed connections of 4G internet services attached with the wireless technologies for this wonderful innovation [15]. It is very convenience and interactivity for use.

Proposal for Future Scope:

For making increment in the rate trading automobile and its spare parts, we should change the procedure which we are using currently with online website. There should be an appropriate process, when a customer place an order for an automobile spare part then fast processing should start from the online vendors side, they must delivered product as soon as it possible with an expert representative for fitting or installing that spare part to the customer's vehicle on the provided address by the customer and when our representative done his work in a giving time slot with the customer satisfaction only then online purchasing area of automobile spare parts start earning trust from customer perspective [14]. This idea will give increment in the rate selling automobile spare parts online. This approach overcomes following factors are:

- No extra expense for garage
- On time visit in giving time slot by customer
- No Mismatch problem regarding vehicle's segment and its spare parts.
- Personal attention
- 24*7 availability
- No tension for the delivery of a damaged spare part
- Customer loyalty increases in turn of long and strong relationship with online shopping of automobiles and spare parts for the beneficial growth in profit/revenue.

REFERENCES

1. Chaithralaxmi.T and Shruthi. N "E-Commerce in India – Opportunities and Challenges" International Journal of Latest Trends in Engineering and Technology 9 Special Issue SACAIM 2016, pp. 505-510 e-ISSN: 2278-621X), 2015
2. Živilė Baubonienė, Gintarė Gulevičiūtė "E-commerce factors influencing consumers' online shopping decision: "Social Technologies : Research Journal" 5(1), p. 74–81, ISSN online 2029-7564, 2015
3. Rupinder Kaur, Sofia Singh, "Mobile Commerce: Indian Perspectives" International Journal of Innovative Research in Compute and Communication Engineering (An ISO 3297: 2007 Certified Organization) Vol. 4, Issue 3, March 2016
4. Satinder, Niharika "The Impact of Mobile Commerce in India: A Swot Analysis" International conference on Science, Technology and management, university of Delhi (DU), 27 September 2015
5. Marcelo Nogueira, Antonio Ghezzi and Filippo Renga "Mobile Applications and Their Delivery Platforms" 1520-9202/11/\$26.00 © 2011 IEEE Published by the IEEE Computer Society computer.org
6. Chuen-He Liou, Duen-Ren Liu "Hybrid Multiple Channels-based Recommendations for Mobile Commerce" Proceedings of the 43rd Hawaii International Conference on System Sciences-978-0-7695-3869-3/10 \$26.00 © 2010 IEEE, IEEE computer society
7. Nielsen N.V. (NYSE: NLSN) "Nielsen-Global-E-commerce-Report-August" New York, USA 2014
8. Dr. (Smt.) Rajeshwari M. Shettar "Emerging Trends of E-Commerce in India: An Empirical Study" International Journal of Business and Management Invention ISSN (Online): 2319 – 8028, ISSN (Print): 2319 – 801X www.ijbmi.org || Volume 5 Issue 9 September. 2016 || PP—25-31
9. E.W.T. Ngai, A. Gunasekaran "A Review for Mobile Commerce Research and Applications" www.elsevier.com/locate/dss, Decision Support Systems 43 – 15, 2007
10. Huei Huang Kuan, Gee-Woo Bock, Vichita Vathanophas, "Conversion and Retention at E-Commerce Websites" Proceedings of the 38th Hawaii International Conference on System Sciences, 0-7695-2268-



Global Journal of Engineering Science and Research Management

8/05/\$20.00 (C) 2005 IEEE

11. Tao Hu, Zhenyu Cheng "Research on Credit Evaluation System of E-Commerce Transactions in Automobile Spare Parts Industry" Computer Science and Engineering, WCSE '09. Second International Workshop, 28-30 Oct 2009, IEEE
12. Sanam Ravish, Chanakyapuri, Rohtak "Mobile -Commerce: Advantages and Disadvantages" An International Indexed Online Research Journal (ISSN 2347-8861) Impact Factor: 0.669 Volume: 2, issue: 1, October-December 2016
13. Anshu Agarwal, Dr. Pravin H. Bhatawal : "M Commerce in India: Promise and Problems" International Journal of Research in Computer and Communication Technology, Volume 4, Issue 4, April -2015
14. Lina Zhou, Liwei Dai, Dongsong Zhang "Online Shopping Acceptance Model -A Critical Survey of Consumer Factors In Online Shopping" Journal of Electronic Commerce Research, VOL 8, NO.1, 2007
15. Nisha Chanana, Sangeeta Goele "Future Of E-Commerce in India" International Journal of Computing & Business Research, ISSN (Online): 2229-6166, 2012
16. Willy Kruh Global Chair, Consumer Markets KPMG International "The truth about online consumers", 2017 Global Online Consumer Report.