

Checking Mobile Users Experience During Checkout Process with Big Data

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Abstract- In this era of Big Data, today business /service firms collect information from the customers as they shop and use this valuable data to offer a better and improved shopping experience to them. Creating a superior customer experience is a key to remain profitable, sustain competition and gain customer loyalty. Customers always expect an unique experience every time when they shop online With the increasing number of customers for mobile shopping, providing a pocket-friendly shopping experience to customers becomes important. To finalize the purchase online the checkout process plays an important role in the entire M-commerce journey of the customers which brings revenue to business. This study is been conducted with the objective of understanding the mobile users experience during an online checkout process, analyse the factors responsible for checkout abandonment and identify best practices to optimize their experience using big data. This study tries to provide insights into these related issues.

Keywords – Users experience, M-Commerce, Checkout process, Abandonment, Big data

I. INTRODUCTION

The checkout process is one of the most critical and complex part of the online shoppers journey. Though the last step but the most important step in conversion. This is because the checkout path influences the brand perception, propensity of customers to revisit the site and also earn more business through online. The checkout process involves multiple interactions such as login credentials, finalize the choices about the product, select any add-ons to the shopping cart, confirm shipping and delivery options and then make payment after order confirmation. A smooth and easy checkout creates the user's virtual shopping experience a memorable one which leads to higher conversions and lower shopping cart abandonment. Additionally, on line shoppers will always remember the positive experience and are more likely to return in the future. On the other hand, sometimes checkout abandonment also takes place even after the purchase decision has been made. When online-shoppers have initiated a checkout it means that they have already decided on the product, agreed upon the price, the seller and the service level. Even after all this, if shoppers experience any trouble in the online checkout process before reaching the completion stage a ready-to-buy customer may get frustrated and leave without making a purchase. Hence, it becomes imperative to create exceptional experience to the customers by optimizing their checkout experience and achieve high conversion rates. With the rise of mobile device users and their increased engagement to do shopping with their mobile devices, providing a distinctive mobile friendly shopping experience to the users through a clear navigation, well merchandised products and an easy flow to checkout in order to finalize the purchase becomes necessary. Big data plays a major role to enhance and offer a rich experience to the customers. It has the potential to help m-retailers to collect, analyse and utilize data to reach out to customers. Analytics are helping companies to get new in-sights into how customers behave, personalize every interaction, increase revenue, retain customers and improve operations. This research is been conducted to understand how to optimize mobile users checkout experience with big data technology.

II. STUDY OBJECTIVES

1. have knowledge about the mobile users shopping experience during an online checkout process;
2. to analyse the factors responsible for mobile checkout abandonment and ;
3. to identify the best practices to optimize the mobile users experience using big data.

III. BACKGROUND OF THE RESEARCH / LITERATURE REVIEW

Kumar et al.,(2013) stated that the delivery of superior customer experience is the central concern in retail management. Zomerdijk, L.G. and Voss, C.A.,(2010) study revealed that experience includes both pre and post purchase, past service engagements, and their influence on future experience expectations. In the context of online

shopping behavior, Oliver and Shor (2003) found that most online shopping carts were abandoned because consumers did not have any promotional codes during checkout stage. Shankar et al.,(2010) has identified that the organizations that understands the importance of big data will know the business environment better in order to solve their problems

IV. RESEARCH GAP

The background of the research study has identified elements namely, users type, platform used, purchase category, amount spent, payment mode, time spent during checkout, users experience during checkout and reasons for checkout abandonment. The research gap shows that not much studies are been conducted to know about the mobile users shopping involvement during an online checkout process. The paper throws light on these areas. In addition, this study identifies the strategies which can be applied in this regard using big data.

V. RESEARCH METHODOLOGY

The primary source of information is collected from 60 m-shoppers who use only mobile devices for shopping. The responses towards their experiences during online checkout process and the reasons for checkout abandonment during the last one year have been collected through a well structured questionnaire. The m-shoppers from Chennai city have been selected on the basis of convenience. Primary information was collected from m-shoppers belonging to different age groups on the basis of their availability and interest. Secondary sources comprised of information from various books/ journals/ periodicals and website. The percentage method and ranking method has been used to analyse the data.

VI. DATA ANALYSIS

6.1 Personal Profile

Table – 1 Personal Profile

		Frequency	Percentage
Age (in years)	Below 25	5	8.33
	25-35	7	11.69
	36-45	15	25.00
	46-55	10	16.66
	56-65	13	21.66
	Above 65	10	16.66
	TOTAL	60	100
Gender	Male	33	55
	Female	27	45
	TOTAL	60	100
Qualification	Schooling	6	10.00
	Graduate	26	43.4
	Post graduate	13	21.6
	Profession	12	20.00
	Others	3	5.00
	TOTAL	60	100
Status	Working class	18	30.00
	Own- Business	13	21.66
	Home maker	15	25.00
	Learner	12	20.00
	Others	2	3.34
	TOTAL	60	100

Monthly/family income	Below Rs.10000	5	8.33
	Rs.10000-Rs. 20000	6	10.00
	Rs.20001-Rs.30000	10	16.67
	Rs.30001-Rs.40000	16	27.00
	Rs.40000-Rs.50000	6	10.00
	Above Rs.50000	17	28.00
	TOTAL	60	100
M-shopping (in years)	Less than 1yr.	19	31.67
	1-3yrs	18	30.00
	3-5yrs	13	21.66
	Above 5yrs	10	16.67
	TOTAL	60	100
Frequency of m-shopping	Once a month	9	15.00
	Between 1-3 months	14	11.66
	Between 3-6 months	18	23.34
	Between 6-12months	12	30.00
	During festive seasons/ discount offers	7	20.00
	TOTAL	60	100
Amount spent per transaction (in Rs.)	Below Rs.1000	20	33.33
	Between Rs.1000-Rs. 5000	26	43.34
	Between Rs.5000-Rs.10000	10	16.66
	Above Rs.10000	4	6.67
	TOTAL	60	100

Source : Primary Data

Interpretation: Table 1 shows 25% of the m-shoppers fall under 36-45 years of age; 55% are male & 45% female; 43.4% of the m-shoppers have completed graduation, while 30% belong to working class; and 28% have income of above Rs.50000 per month ; while 31.67% do shopping online with their mobile device for a period of less than a year; while frequency of mobile shopping reveals that 30% of the m-shoppers do mobile shopping between 3-6months; and 43.34% of the respondents spend between Rs.1000 - Rs.5000 per transaction.

6.2 User Experience

Table – 2 Types of Users, Platform Used, Time Spent During Checkout and Checkout Process Experience of Respondents

		Frequency	Percentage
User type	New user	28	46.66
	Repeat user	32	53.34
	TOTAL	60	100
Platform used	Mobile application (app)	36	60
	Mobile website	24	40
	TOTAL	60	100
Network type	WI-FI	39	65.00
	Mobile data	13	21.66
	Both	8	13.34

	TOTAL	60	100
Online purchase	Goods	32	53.34
	Services	14	23.33
	Both	14	23.33
	TOTAL	60	100
Payment mode	Cash on delivery	14	23.33
	Credit/debit card	24	40.00
	Mobile wallet	22	36.67
	TOTAL	60	100
Time spent during checkout (in Hrs)	Less than 15 minutes	19	31.67
	Between 15 minutes -30 minutes	18	30.00
	Between 30 minutes -1hr	13	21.66
	More than 1hr	10	16.67
	TOTAL	60	100
Users Experience during checkout	Excellent	18	30.00
	Good	13	21.66
	Average	15	25.00
	Poor	12	20.00
	Worst	2	3.34
	TOTAL	60	100

Source : Primary Data

Interpretation: Table 2 reveals that 53.34% are repeat users, 60% use mobile application (apps) platform for purchase, while 53.33% purchase goods online, 40% use debit/credit cards for making online purchase, 31.67% of the respondents stated that they spend less than 15 minutes during checkout to complete their purchase and 30% of the respondents have stated that the checkout experience is excellent during mobile checkout.

6.3 Checkout Process Abandonment

Table – 3 Number of Attempts Made, Frequency of Abandonment and Reasons for Checkout Abandonment of Respondents

		Frequency	Percentage
Number of attempts made if transaction fails during check out	Once	31	51.67
	Twice	9	15.00
	Thrice	4	6.66
	More than 3 times	2	3.33
	Never	14	23.34
	TOTAL	60	100
Frequency of checkout abandonment	Always	14	23.33
	Sometimes	10	16.67
	Rarely	20	33.33
	Never	16	26.67
	TOTAL	60	100
Reasons for checkout process abandonment	Lengthy checkout process	RANK II	
	Privacy/security concerns	RANK I	

	No guest checkout option	VII	
	Technology glitches	IV	
	High price/cost of the order	V	
	Slow delivery	VIII	
	Non availability of products	IX	
	No discount/promotion coupons	VI	
	Postponement of purchase	XI	
	Limited payment options	III	
	Friends/Family advice	X	

Source : Primary Data

Interpretation: Table 3 reveals that 51.66% of the m-shoppers will make an attempt at least once, if transaction fails; while 33.33% have stated that only rarely they do checkout abandonment. Further, ranking method has been applied to find out the reasons for checkout process abandonment. Privacy/security concerns have been ranked first, while lengthy checkout process has been ranked second consequently according to this study.

6.4 Revisit Intentions

Table – 4 Re-Visit Intentions of the Respondents

		Frequency	Percentage
Revisit intentions	Yes	42	70.00
	No idea	5	8.33
	No	13	21.67
	TOTAL	60	100

Source : Primary Data

Interpretation: Table 4 reveals that 70% of the respondents have all intentions to revisit the same m-commerce site in the future.

VII. MANAGERIAL IMPLICATIONS

Following strategies can be applied to optimize checkout process experience of mobile users via big data :

- **Problem solving :** When m-shoppers experience any problem during the checkout process, by using big data technology it is easy to trace out and respond to customer problems. Speed up the response time and proactively fix customer related issues. Live –chat, customer call back options can save time. Such interactive options may activate that necessary last step to trigger customers to make a purchase. Further, this will also make them feel much valued.
- **Track order status :** When shoppers make a checkout, m-retailers should provide their customers with the tracking status of their products ordered online, the exact location of the product and the expected time taken to reach them. Big data analytics (BDA) can collect information from different persons on various products, and advice the expected date of delivery to m-shoppers with precision thereby creating a positive experience to mobile-shoppers during checkout.
- **Secured on line payment :** Big data can help in securing online payment processing. Big data technology integrates all different payment functions into one centralized platform which can ease and simplify payment process for the users. This can build trust and thereby enhance users experience during the checkout process.
- **Creating personalized shopping experience :** M-commerce firms can provide personalized service by offering product recommendations to their customers based on purchase history through e-mails, text messages and other channels. Real-time data analytics enables firms to target every customer individually which is tailor made suiting their preferences thereby making the customer journey a memorable one resulting in a smooth checkout process.
- **Use of multi channel :** Customers, today interact more than they transact. Customer surveys and feedback tools, call transcripts and social media comments can provide valuable insights into how to improve

support and experience of m-shoppers. Big Data technology can unite these feedback mechanism to help to find out as to what went wrong, where to improve and how to maximize experience and provide greater satisfaction and build loyalty to its customers.

VIII. CONCLUSION

Customer experience is a top priority in any business today. Delivering a superior experience makes any company gain a competitive advantage, increase retention and bring revenue to the company. More and more users today are opting for mobile shopping. Every business has started making their business mobile friendly to create an enriched shopping experience by making the checkout process the least difficult one. This is because, after finding a product and have filled the cart with items, customers proceed to checkout and when they are closer to make a purchase a small distraction can make customers abandon their checkout.. This study helps to recognize the value of big data as a tool to enhance customer experience which will in turn lead to higher conversion rates, satisfaction and loyalty of the customers successfully.

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