


# Exploring the Factors Impacting Seller Performance During Online Sales Events in the E-Commerce Marketplace in India

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## ABSTRACT

The Indian ecommerce industry has been growing substantially because of the changing mindset of the Indian customers and ease of shopping online. A large number of sellers have registered on online marketplaces so that the sellers could reach a larger pool of customers. The goal for sellers was towards increasing sales substantially with optimal efforts. Some sellers were able to accomplish this goal successfully, but a majority of the sellers struggled finding the right formula for success. Ecommerce websites conducted online shopping heavy discount sales events for limited time periods. The objective of this research was to understand the various factors that influenced and impacted the performance of sellers on Indian e-commerce websites during such events. A total of 11 interviews were conducted with Indian e-commerce sales experts. The data was thematically content analysed. The five most significant factors that helped gauge sellers' performance were late shipment rate, poor order fulfilment rate, limited product selection, high price, and low glance views.

## KEYWORDS

Gross Merchandise Sale (GMS), Indian E-Commerce Market, Online Sales Events, Seller Performance

## 1. INTRODUCTION

E-commerce, the platform where sellers registered to sell & buyers registered to buy, has been redefining retail industry in India (Joshi, 2017). A report by NASSCOM and Akamai technologies predicted that three out of every four internet users in India came from the rural part of the country (Nasscom Report, 2019). There were certain factors that had contributed towards this growth story. First being the rise in the quality of internet services (Li *et al.*, 2016). Second, increasing number of middle-class populations with disposable income also contributed to this narrative (Li *et al.*, 2016; Bhattacharyya, 2011a). Third, the enhanced user experience on marketplaces combined with the increased mobile penetration gave the required impetus for the growth registered (Li *et al.*, 2016). Other reasons for the rise of online retail industry in India have been attributed to the better living standards and growth in urban areas beyond metros in the last few decades (Piccoli & Dev, 2012). The B2B e-commerce market in India has been expected to reach US\$ 700 billion by the year 2021 whereas the B2C e-commerce market has been expected to reach US\$ 102 billion by the year 2021 (CCI & Deloitte Touché Tohmatsu India LLP).

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Indian market has been generally viewed as chaotic and challenging (Bhattacharyya, Rangarajan & Vyas, 2012; Bhattacharyya, and Thakre, 2021). Internet had revolutionized the way people have been shopping, customers have reaped benefits of online shopping (Singh & Kushwah, 2019; Bhattacharyya, 2011b). Online customer base in India had increased by 1400% from 20 million to 300 million shoppers between the years 2008 to 2019 (Kanchan, Kumar & Gupta, 2019). Indian customers engaged in online shopping because they found it comfortable when compared with conventional shopping (Singh & Kushwah, 2019). The reasons enlisted for this were convenience, high selection (variety), reduction of indirect expense on shopping and attractive prices (Singh & Kushwah, 2019; Nair, and Bhattacharyya, 2019). A major driver of e-retailing has been the offering of deep discounts (Jayakumar, 2015). This combined with the specifics of festive season purchase behavior of Indians had led to launch of sales events on internet-based ecommerce websites (Jayakumar, 2015). Attractive pricing during sales has been carried out in such a way that the conversion of inventory to cash became quick (Berezina & Semrand, 2015). The prime goals that were accomplished by sales events included, increased profits, acquiring new customers, better management of inventory, more brand usage and higher market growth (Berezina & Semrand, 2015). Some other goals which were accomplished by sale events included, filling immediate occupancy needs, increased exposure, reaching to new customer market segments (Berezina & Semrand, 2015). The sales on ecommerce websites had been enhanced by various tools, one such tool had been the usage of social media (Kanchan, Kumar & Gupta, 2019). Social media has been a strong tool to track the online activities of shoppers on social networks to establish a buying pattern, (Kanchan, Kumar & Gupta, 2019; Bhattacharyya, & Neenu, 2021). This generated enormous data to be analyzed for obtaining a buying pattern of online customers who were onboarded on social media as well (Clement, 2020; Bhattacharyya, & Neenu, 2021). The opportunity was huge for sellers as the Indian Brand Equity Foundation had estimated that a sectorial growth of 51% was registered (Clement, 2020).

## **2. LITERATURE REVIEW**

In this section, the literature review undertaken for the study has been discussed. The objective of the literature review was to understand the e-commerce industry in India. While the authors of this study were going through the literature available on the topic of online sales, a total of more than 10,750 documents were available across various sources. An analytical snapshot of the documents, based on filters like documents by year by source (displayed in figure 1), by authors (displayed in figure 2), by country/territory (displayed in figure 3) and by subject area (displayed in figure 4) have been discussed.

Highest number of publications were witnessed between the years 2018 to 2019. The source which published the maximum number of papers during the aforementioned year was ACM International Conference Proceeding Series. This was followed by lecture notes in computer science including subseries lecture notes in artificial intelligence and lecture notes in bioinformatics.

Highest number of publications were seen in the year 2018-19. The authors that published the maximum number of papers was Ye. Q. with a total of 23 articles. This was followed by Anon who had managed to publish a total of 21 articles related to the topic.

The number of documents published on the topic were more than 10750. However, the maximum number of documents were published in journals and conferences held at the United States of America. The second highest number of documents were published in journals and conferences held in China. The number of documents published were more than 2700 and 2000 respectively.

The documents published were categorized in a total of 11 categories. There were ten major and one others' category which was used to sort documents using subject area. The maximum documents were under the computer science category. This was followed by the business, management category. Cumulatively both categories have a share of more than 45% of the total documents published by subject area. The authors studied the title, abstract and keywords of the articles initially and narrowed

Figure 1. Documents by year by source

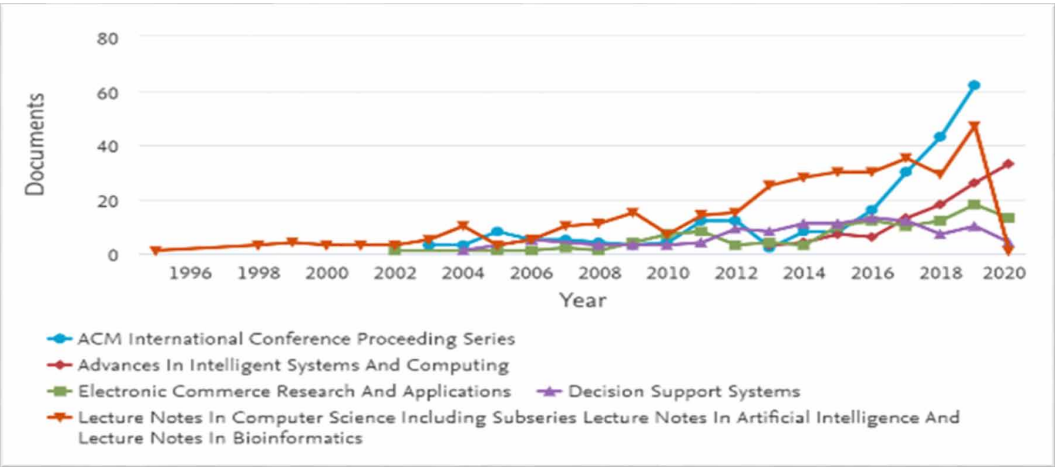
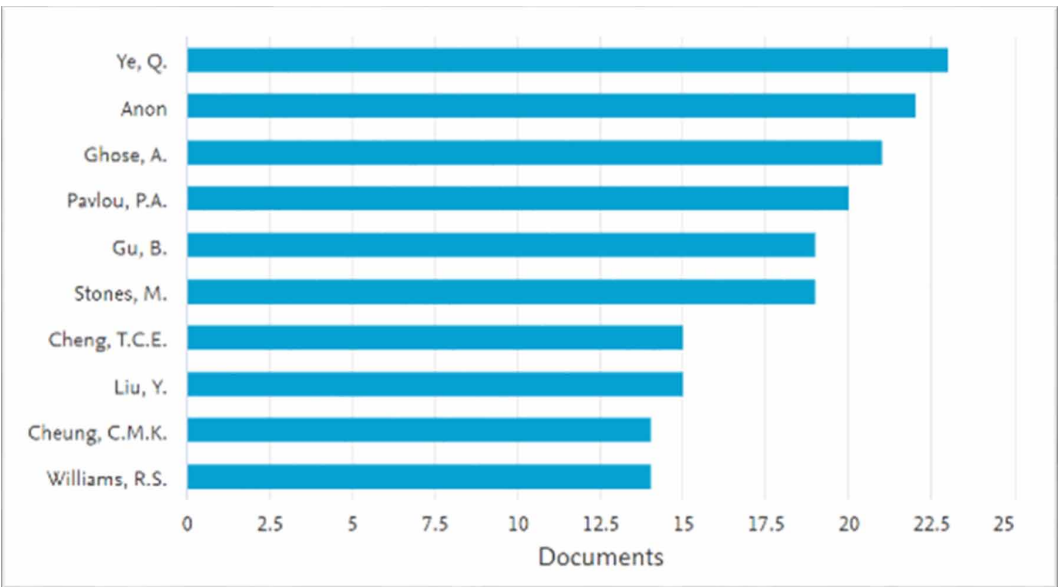


Figure 2. Documents by authors



down to twenty one articles for detailed study based upon relevance and immediacy. These twenty articles were studied in detail by the authors. The findings, methodology and remarks from these twenty-one articles most relevant for the study has been tabulated in table 1.

One must note that the impact of online sale events on customer behavior and the seller performance on various e-commerce marketplaces was also explored during the literature review activity (Richa and Vadera, 2019). Sales events generally made a positive impact in generating substantive revenues for sellers in general (Joshi, 2017). In Indian market being first to market has been a key to capture market (Jha & Bhattacharyya, 2018). There was also a drastic increase in the logistic support that was required during such online sales event windows (Joshi, 2017). Such studies also indicated that value conscious customers were more likely to participate in the online sale events

Figure 3. Documents by country

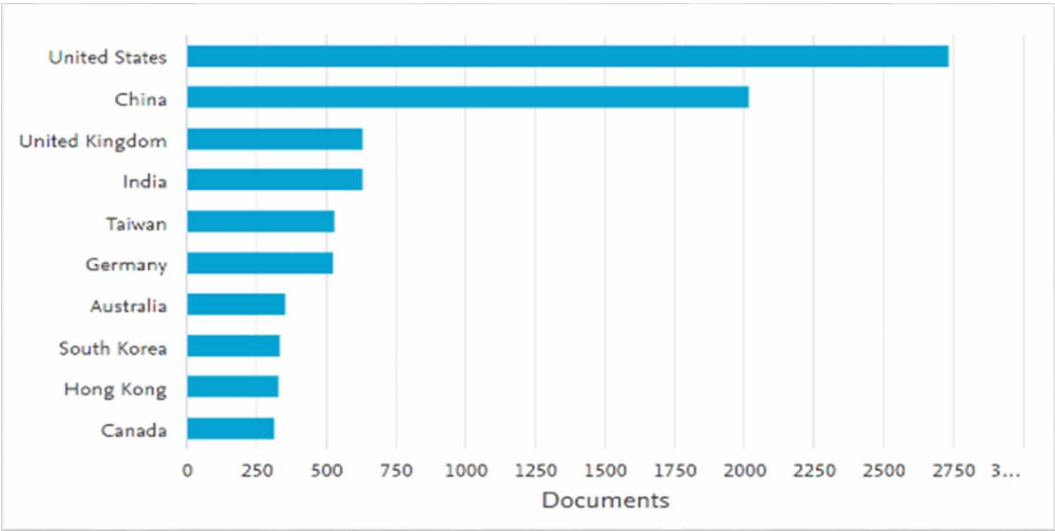
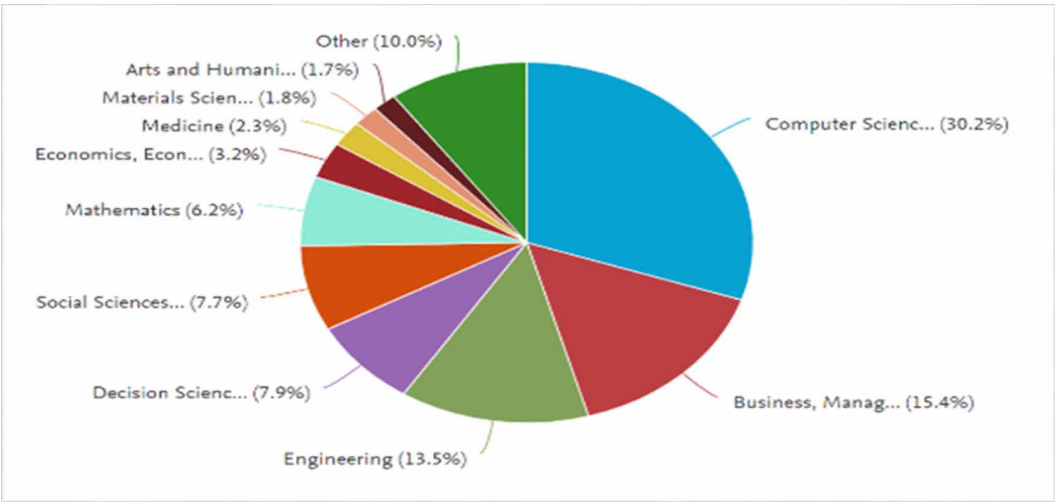


Figure 4. Documents by subject area



(Athira *et al.*, 2017; Bhattacharyya, et al., 2021). The personality characteristics of customers, such as competitiveness, also had a significant impact on the purchase behavior during such online sale events (Athira *et al.*, 2017). The literature review helped authors to arrive at the researchable gaps. Subsequent to the literature review the authors realized that first, there were very few numbers of studies in this domain. These studies lacked focus on why uptake of sale didn't manifest for some sellers while deep discounts and festive sales events were organized on online platforms. A second gap observed was that there were limited studies focused on why certain set of sellers were unable to meet the stated objectives of their sale goals. Last, the authors observed that there were very few studies that captured how sellers could engage on online platforms to attract customers and convert customer visits in to purchases. Thus, the study research objective was to ascertain how to improve the

**Table 1. Summary of Literature Review for exploring the factors impacting seller performance**

S. No.	Author(s)	Findings	Methodology	Remarks
1.	Pallant <i>et al.</i> , (2017)	The authors of this study found that there were four types of customer visits that were consistent across brands. They suggested that there were underlying similarities in how consumers used different brands' websites. Brands which were more focused on the in-store channel had a higher proportion of visits to its websites. However, more focus on the online channel resulted in a unique type of visit which the authors called as considered visits.	The research question was addressed by analysing the data which included details such as the number of pages viewed, the usage of shopping cart, whether a purchase was made or not and such others. The authors used a Latent Cluster Model (LCM) to develop typologies for the visits that occurred for each brand to its website.	Some of the limitations of this paper were that the data collected only included browsing at websites owned by the same retailer. This meant the authors of this paper ignored the browsing consumers might perform across different retailers. This study was also limited to new customers of a brand.
2	Jayakumar (2015)	The author of this study found that with growing internet penetration in India, e-retail had high potential. However, the task of acquiring new customers through deep discounts and deals by e-tailers might not work. Firms might strategize using principles of behavioural economics including confirmatory bias, framing effects, principles of loss aversion, heuristics to influence customer decision making in their favour. These websites must also guard against any events which invoked the representativeness heuristic or negative confirmatory biases towards e-commerce portals.	This paper followed a case study approach. Secondary data from various sources like library, company website and newspaper articles were used to analyse the application of principles of behavioural economics to marketing problems faced by e-retailers.	E-tailers in countries like India should have understood the behavioural implications of deep discount strategies and deals offered by them as a means of gaining competitive advantage.
3	Eric <i>et al.</i> , (2016)	The authors of this research found that customer reviews for any product listed on the e-commerce website had significant relationship for sales prediction. The three critical managerial variables- brand value, price and product type were only important when a product got sufficient customer reviews. The number of negative reviews had significant impact unless the total number of reviews were low. Also, the actual content of the customer reviews was not critical in most cases.	For this research, transactional data of four clothing shops on Tmall.com in the period from 25 <sup>th</sup> October 2015 to 30 <sup>th</sup> November 2015 was collected. The formats of the data included structured transactional records and unstructured customer reviews. Some of the variables available in the big data were- sales volume, stock, shop id and price. This study employed Akaike information criterion (AIC) weights to measure the fit between the actual sales data and the chosen functional form of the demand distribution.	This research offered great insights for managers in following three aspects. First, sales of online stores could be forecasted with customer reviews from the online platform with even the simple models the authors proposed. Second, with real time sales forecasting, it offered an optimized solution for the online stores to manage its inventory. Third, it helped finance managers to modify investment activities and develop different strategies based on forecasting results.
4	Joshi (2017)	The author of this research found that flash sales made a positive impact in generating high revenues for the websites. Flash sales caused high traffic loads and led to website slowdown. Discount strategies led to more sales of products. Flash sales led to drastic increase in logistics support.	A detailed secondary research was conducted from different newspaper articles, magazines, research papers, reports and journals from the year 2010 to 2016. By studying the flash sales of 3 major online retailers, the author tried to analyse the impact of flash sales on Ecommerce companies with respect to sales, revenues, website traffic and logistics.	The study and the analysis indicated that flash sales helped e- retail companies to increase its revenues multifold, each year. Also flash sales helped highly competitive e-retail platforms to survive in the growing industry of online shopping. Managers needed to set their goals realistic, keep the sale simple, choose a right date and time for it.
5	Yuan <i>et al.</i> , (2017)	The main contribution of this research was the design of a novel methodology that extracted consumers' sentiments and topics simultaneously to enhance sales forecast. Finally, the qualitative sentiment distributions and other quantitative features were applied to predict sales volume of the following period. Based on a case study conducted in one of the largest e-commerce companies in China, the empirical tests indicated that topic sentiments together with other quantitative features have more accurately predicted sales performance when compared with using quantitative features alone.	Descriptive research based on secondary data collected from various journals and articles published in newspaper were considered for this research.	First, though the reviews were incorporated into the sales performance prediction in the big data background, the hyper-parameters of the joint sentiment topic (JST) model were estimated by using a small corpus. So, the sentiment sampling was not optimal. Second, the sentiment lexicon in the research was a general lexicon. However, once the topic sentiment analysis was adopted in e-commerce, even specific product sentiment lexicon could be constructed to expect more accurate sentiment results and then the results could be applied in sales prediction. Thirdly, considering the big volume of product reviews posted on online social media, traditional topic model couldn't process such large volume of textual information.

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Table 1.. Continued

S. No.	Author(s)	Findings	Methodology	Remarks
6	Sahay (2017)	The author of this research found that the factors that influenced the customer to choose between online and offline were convenience and price. The price of electronic products was low because there was no form of an intermediary. The most common form of buying found in customers was, first browse the products offline in store and then buy online.	For this study, a questionnaire was distributed to 100 respondents who had purchased any item online. Then expert interviews were also conducted with respondents who had changed from offline to online purchase. Interviews were also conducted with the employees of the online stores to know about the change in their buying pattern. A detailed analysis was done on the customer reviews which helped the authors to find out the reasons for the customers to go offline.	Customers often resisted from purchasing online when it came to touch and feel of the goods. Customers browsed various products in physical stores to get the touch and feel. They then purchased the products online to get it at reduced prices.
7	Athira <i>et al.</i> , (2017)	The authors of this research found that the value conscious consumers were more likely to participate in flash sales. Personality type such as competitiveness also demonstrated a significant impact on the purchase behaviour during flash sales.	For this study, the methodology used was survey research. The objective of the survey was to discover the variables that affected the user's behaviour and the relationship between these variables in multidimensional manner.	Even though the time pressure created during the flash sales had an impact on the likelihood to shop on flash sales, the limited quantity didn't have a significant impact as suggested by literature. Future studies could focus on this aspect to understand the reasons for such an effect.
8	Kaur <i>et al.</i> , (2017)	The authors of this study found that flash sales helped to increase revenues. Flash sales caused high web traffic that led to slowdown of website. Also discount strategies led to more sales.	For this research, around 300 questionnaires were distributed through online via Facebook and emails. Further some data was collected manually to fill the questionnaire on voluntary basis. On this data, various statistical techniques such as ANOVA, ANCOVA were performed.	Overall, sales promotion tools played an important role to stimulate customers towards buying any promoted product. This would increase dealers and retailers' profit and market share. This study also found that promotion tools such as coupons had no influence on consumer buying behaviour.
9	Zheng <i>et al.</i> , (2018)	The authors of this research found that the relationship between store advertising, store traffic and store sales was both positive and significant. An increase in the amount of advertising expense led to more browsers visiting the store. The results of the models used also indicated that well-deserved service quality rating could attract customers to visit stores and could increase their purchase conversion probability.	For this research, the store traffic and sales data (key dependent variables) for cosmetic products was collected from one of the largest C2C e-commerce platforms in China. The authors developed two models (store traffic model and store sales model) described. In store traffic model, on the data collected, a negative binomial regression model was used that mixed Poisson and gamma distribution by incorporating individual, unobserved effects into the conditional mean. While in the store sales model, the Tobit model was used that incorporated zero values of the dependent variable (store sales amount) in order to eliminate biases that raised from dropping such zero values.	The current research had several restrictions on areas of study that had room for improvements in future. First, the data used was restricted to only one product category in a random single week. Second, the comparison of other influential factors such as in-store promotion or discounts across various product categories would give a better understanding into the distinctions between the relative impacts of the antecedents on ST and SS models.
10	Suman <i>et al.</i> , (2019)	The authors of this research found that the influence of gender on 'Round the clock availability' and 'Range of discounted products' while purchasing online differed for males and females. The influence of gender on 'transaction safety' and 'delay in deliveries' didn't differ for males and females. The influence of age on 'Round the clock availability', 'Range of discounted products' and 'transaction safety' didn't differ for different age groups.	This study was carried out in 2 phases. A pilot survey was followed by a main survey to analyse the behaviour of online shoppers towards online discounted products. Variables identified based on the pilot study were, round the clock availability, range of products, transaction safety and delay in deliveries. The data was analysed using SPSS 16.0. Reliability (Cronbach's alpha) was tested for the scale used for study and was found to be 0.779.	Future studies could be conducted to analyse the gender and age differences towards specific online discounted products like electronics, apparels and such others. Future studies could also focus on the demographic differences towards online discounted products by comparing India and neighbouring countries.

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Table 1.. Continued

S. No.	Author(s)	Findings	Methodology	Remarks
11	Huseynov <i>et al.</i> , (2019)	The authors of this research found that in all consumer segments, statistically significant and positive relationship existed between attitude towards online shopping and behavioural intention to shop online. Further, in all consumer segments, consumers perception about usefulness of online shopping, compatibility of online shopping with consumers lifestyle are positively related to formation of favourable attitudes toward online shopping. In shopping lovers and incompetent consumer segments, perceived information security was found to be positively related with consumers attitude towards online shopping.	For this study, the authors used quantitative research techniques and hence Likert survey were done. Respondents of the study were asked to fill two kind of surveys: One used for psychographic segmentation and the other for theoretical model testing. The main statistical tools used for this study were exploratory factor analysis, confirmatory factor analysis, SPSS two step cluster analysis and multigroup structural equation modelling.	This study had few limitations such as respondents of this study were limited to university students living in a specific location. Future studies could carry out similar analysis with nonstudent participants and with expanded geographical area to increase the generalizability of the study findings. Second, this study depended on the respondents self-reported data both in segmentation analysis and model testing process. Self-reported data sometimes did not reflect the respondents' actual behaviours. Future researches could utilize respondent's actual behaviour in the segmentation and/or model testing process.
12	Hamadan <i>et al.</i> , (2019)	The authors of this study found that online digital media (websites, Facebook, and Instagram) were used together to support product sales. The media was informed about products related to size, colour, model, price and how to order. Supporting media for transactions was provided by telephone contact numbers via WhatsApp.	This research used case studies to get a holistic and meaningful characteristic of real-life events. The respondents of this study were selected based on purposive sampling and the respondents were women entrepreneurs who were active at Indonesian Women Entrepreneurs Association (IWAPI).	Some e of the insights from this study were as follows. First, the website and Facebook were used by women entrepreneurs to convey product information. Second, Instagram was used as a medium for interaction between entrepreneurs and consumers including the quality, benefits, and product model. The use of this media was very supportive in informing and persuading potential customers to be willing to buy the products offered. Third Website, Facebook, and Instagram were used in an integrated manner by entrepreneurs in supporting product sales.
13	Zhijie <i>et al.</i> , (2019)	The authors of this research found that Customers paid close attention to the product information conveyed by online reviews when making purchase decisions. Therefore, e-commerce platforms and sellers might strengthen the control and management of online reviews. This would make it easier for potential and existing customers to obtain relevant information about products and services. Second, e-commerce platforms could increase the usefulness of voting on online review curation and management, and could sort those sentiment words according to their numbers and number of votes. E-commerce platforms could also allow customers to vote on the usefulness of online review curation and management, with sorting according to their emotional number or number of votes. Third, when sellers launched promotions on e-commerce platforms, they should pay attention to the discount rate for online sales of lower-priced products. At the same time, as electronic products were continually being enhanced, customers should be informed on time about such upgrades to increase sales per unit of time.	This study used data acquired from Taobao.com. Electronic products such as earphones, data lines, mobile power, and mobile phone cases were also considered for the analysis as these products had shorter product shelf lives. The Stochastic feed forward neural network (SFNN) model in this paper included 14 influencing factors as input variables and considered the 30-day sales figures of the products as output variables. The MATLAB R2016b neural network toolbox was also used in this study.	Some of the limitations of this study were- First, this study primarily analysed factors that influenced online product sales according to four aspects: online reviews, review system curation, online pro- motional marketing, and seller guarantees. Second, the sample used in this study was limited to electronic products. This meant that future research could be extended to include other products. Third, the research data were considered only from Taobao. In future research, data from other ecommerce platforms such as Jingdong and Amazon, could be analysed to reach more comprehensive and objective conclusions.

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Table 1.. Continued

S. No.	Author(s)	Findings	Methodology	Remarks
14	Pirani <i>et al.</i> , (2017)	The authors of this research found that firstly, affinity analysis, a technique that discovered co-occurrence relationships among activities performed by specific groups; Secondly, Logistic regression, a statistical way of modelling binomial outcome and; Thirdly, Linear regression, a statistical model when relationship between dependent and independent were almost linear, were the primary techniques of data analysis that were used by the sales analytics tools to categorize the fast-selling and less-selling goods on any e-commerce marketplace.	The authors of this research had designed a questionnaire and circulated it among 22 respondents. The survey data was analysed to establish that affinity analysis, logistic regression and liner regression were the primary data analysis techniques used in sales analytics tools.	The study was limited to analyse data to categorise fast selling and less selling goods and maintain adequate inventory levels. The future studies must include data analysis techniques used in marketing, product improvement and operational excellence.
15	Kusdibyo and Februadi (2019)	With context to online shopping, the authors of this research found that service quality of online businesses had a positive influence on consumer satisfaction. Customer satisfaction was an important variable in positively shaping customer loyalty.	The authors designed a questionnaire and distributed them online via emails and cross-platform messaging applications. A total of 305 responses to the questionnaires were received. However, only 282 were valid for further data analysis. The study used a qualitative approach to analyse the data. Structural equation modelling by means of partial least square (SEM-PLS) was used to test the hypothetical analysis.	This study was not consistent with the previous study conducted by reference. Two factors, (product design and personalisation), which were accounted for in the previous study had been discarded in this study because the loading factor for them was below the cut-off value.
16	Yunanto and Paizal (2019)	The authors of this research found that the income of the online businesses came from product sales (self-owned brand), profit share from credit card and profit share from online marketplace. The income was derived from the customer segment as a result of product quality and customer satisfaction.	The method used for this study was descriptive research method that described the situation related to several existing variables. The model considered parameters like relationships, needs, cost, activities and income.	The limitation of this study was that the authors carried out the research based on only one online retailer that offered various types of shoe products.
17	Lou, Dan and Hu (2019)	The authors of this study found that in B2B vertical e-market, the tiered pricing mechanism was better than the one-price mechanism. The gradient of tiered pricing had a positive effect on the purchased volumes. The quality gradient of tiered pricing had positive influence on the purchased volumes.	The authors used secondary research as the fundamental method to carry out this research. A total of 2769 questionnaires were captured by GOOSEKER and SPSS was used for multivariate correlation analysis and regression analysis to draw insights from the data.	The authors obtained the data for a single category. The future study could be performed across the categories to obtain better inferences. The seasonal variable could be taken into consideration for future studies.
18	Richa and Vadera (2019)	The authors of this study found that there were six factors that emerged that governed the consumer behaviour while shopping online in India. These factors were utilitarian attributes, post purchase issues, hedonic motives, freedom, intrusion and convenience.	The authors used a structured, non-disguised questionnaire to collect the data. The questionnaire was designed based on adaption from 26 male and female online shoppers. The questionnaire followed a 5-point scale for responses. A total of 288 online and 290 offline responses were recorded for the questionnaires.	The factors obtained in the study by the researchers were consistent with the global studies, but freedom emerges as a new factor in the Indian context.
19	Unni, Nair and Gunasekar (2015)	The authors of this study found that the delivery time and website information played a key role in determining the overall satisfaction with the e-retailer. The people who were highly satisfied with the delivery time in non-metros were more likely to be satisfied overall with the e-retailer.	The authors used primary research as the fundamental method to carry out this research. A survey was distributed through e-mails to a total 129 participants. The respondents were asked to choose the e-retailer with which the participants were satisfied the most and the questions were answered with respect to the selected e-retailer.	The study was done in Indian context and the study revealed that delivery time played a very significant role in the overall satisfaction of online customers with the e-retailer.
20	Mulyani <i>et al.</i> , (2019)	The authors of this study found that social media and technological innovation had a positive and significant influence on the customers' purchase intentions. Social media's unique features were prominent in its technology and offered unlimited possibilities in processing and spreading the news.	The authors obtained data through distribution of 100 questionnaires to the respondents. The study was analysed using multiple linear regression techniques to quantitatively obtain the results of the study.	In this study, the researchers had considered just Instagram as the social media platform. The future studies could be broadened with other popular social media platforms as well.



performance of the sellers with low gross merchandise sales (GMS) during events on the e-commerce marketplace in India. There were two research questions. First, being what were the factors affecting the sellers' performance during events on an e-commerce marketplace in India? Second being, based on these factors, how could the sellers' performance be enhanced?

### 3. RESEARCH METHODOLOGY

In this section, the research methodology has been discussed. The authors studied the selected research papers and identified that sale on ecommerce websites was a relevant field of study during the literature review process. The authors observed that in the research articles, sales (events) on ecommerce websites were thoroughly analysed, both from qualitative & quantitative studies. As indicated based upon the literature review very few empirical studies from the customers' perspective were existing. However, there were very few studies from the sellers' perspective. Thus, the authors decided to focus this research work from the sellers' perspective during sale on ecommerce websites. Primarily, this was with regard to improving the sellers' performance in the ecommerce marketplace. The authors connected with the experts of the online e-commerce marketplaces in India to get better insights about seller performance at an overall level. As Morgan & Smircich, (1980) had argued for exploratory studies a qualitative research approach was followed. In-depth interviews were used to explore the topic (Legard, Keegan & Ward, 2003). The authors applied convenience non probabilistic snowball sampling as advocated by scholars for qualitative exploratory research (Legard, Keegan & Ward, 2003). The ecommerce experts were able to categorize the sellers based on generic industry parameters. Also, the ecommerce experts provided a comparative analysis from their holistic perspectives and rich experiences. Moreover, the ecommerce experts would be able to ideate and strategize suggestions to improve seller performance based on their experiences. Amongst the eleven ecommerce experts, there were four account managers, four operations managers and three category managers of different ecommerce marketplaces in India. The interview questions were -

- Question 1 - Which category do you handle and how does the seller vs GMV distribution look like during events?
- Question 2 - What are the factors on which the seller performance is measured during events?
- Question 3 - Are there sellers who can do better sales during events but are unable to? If yes, why?
- Question 4 - How different are these sellers in comparison to top performing sellers during events based on the enlisted factors?

The average experience of the ecommerce experts was eight years. Given the nature of the ecommerce industry in India the respondents were representing top management teams. All the eleven interviews were conducted within the period of January - February 2020. Data collection was closed post thematic saturation of themes (Myers, 2019). As a part of these interviews the authors covered various categories such as home appliances, jewellery, apparels, pantry, electronics, and personal care products. The collected data was transcribed within 72 hours of the interviews and the thematic findings were arrived at as advocated in literature (Terry *et al.*, 2017). The authors concluded that improvement on these factors would ensure the success of sellers during such events. Hence, the authors decided to gather responses from ecommerce experts holding executive positions in different ecommerce companies in India. The authors took a qualitative approach to have an in-depth comparative analysis of the sellers' performance (Myers, 2019). The aim was to obtain real world knowledge on the factors affecting sellers' performance. The qualitative approach used for organising the research included, conducting exhaustive in-depth interviews with a set of semi-structured open-ended questionnaire (Whiting, 2008; Grindsted, 2005). The ecommerce experts were from different e-commerce companies in India who were in regular contact with the sellers during online sales events. The authors connected with category managers, account managers and operation managers for

interviews. Each interview duration was about 35 minutes. The interviews were conducted in a semi structured form and the responses were noted and thematically content analysed (Smith et al., 1992; Javadi & Zarea, 2016; Armbrorst, 2017). The inter coder reliability was 91% whereas the intercoder reliability was 93%. The inter coder reliability was done simultaneously by all the authors whereas the intra-coder reliability was carried out by one author past one week of the first thematic analysis. Both the inter coder and intra coder reliability values adhered to the expected process and values advocated by scholars (Kirk, Miller & Miller, 1986; Johnson, 1997). In the subsequent section the findings from the thematic content analysis were presented.

#### 4. FINDINGS AND DISCUSSION

The ecommerce expert interviewees spanned across various designations such as account managers, operations managers and category managers across various marketplaces in India. As a part of these ecommerce expert interviews the authors were able to cover various categories such as home appliances, jewellery, apparels, pantry, electronics and personal care products. Some excerpts from the expert interviews conducted for the research are presented as findings in table 2. In table 2, R1 to R11 represented the responses of the experts of the research from numbering from one to eleven. While Q1 to Q4 represented interview questions of the research from question number one to number four.

The following were the seven most significant factors that helped gauge the sellers' performance during the events. The first being late shipment rate, which meant the percentage of the orders the seller shipped late to the customers out of the total number of orders the seller has shipped. Lower the late shipment rate, better was the sellers' performance. The second factor was order fulfilment rate, which meant the percentage of orders the seller was able to fulfil out of all the orders the seller had received. Higher the order fulfilment rate, better was the seller performance. The third factor was relevant product selection the seller offers, which meant the relevant product listing the seller had offered on the marketplace during the event window. Higher the relevance, higher was the traffic on such products. The fourth factor was attractive pricing, better the price, better was the customer satisfaction. The fifth factor was glance views, which meant the number of times a product detail page was viewed. Higher the glance views, better was the listing. The sixth factor was inventory turnover rate which meant the percentage of times inventory was sold or used in a time period such as a year. Higher the inventory turnover rate, better was the sellers' performance. The seventh factor was returns handling capacity of a seller. Higher the returns handling capacity of sellers' higher was the customer satisfaction. This improved the customer experience on the ecommerce portal and thus boosts the revenues for such sellers. All these respondents had often observed that there were sellers who were capable of doing good business during the event windows but were unable to perform to the expectations because of varied reasons such as lack of preparedness for the event in terms of inventory, delivery mechanisms, lack of relevant selection / listing on the website, lack of good quality products in stock. If the sellers ensured the correctness of above-mentioned factors, they could perform well during the event windows and improve their GMS as well.

In the literature review, it was observed that logistics was one of the significant parameters that influenced sellers' performance. To be successful in Indian market firms had to properly manage a set of organizational factors (Bhattacharyya, Jha & Fernandes, 2015). One of the studies conducted by Joshi (2017) found that drastic increase in logistic support led to higher customer satisfaction which improved the sales on marketplace. Another study by Suman et. al. (2019) observed that irrespective of the customer's gender, delay in deliveries was highly correlated with the sales on online marketplaces. Unni, Nair & Gunasekar (2015) found that delivery time played a key role in determining the overall satisfaction of the customer with the e-retailer. The study conducted by authors of this research had similar findings like the late shipment rate of sellers led to dissatisfaction of customers. This subsequently had a negative impact on sellers' performance. Pallant *et al.*, (2017) found that offline stores that had brandings about their online presence received higher glance views

Table 2. Key excerpts from the interviews conducted for this research

Respondent	Q1	Q2	Q3	Q4
	Category and Pareto is mentioned below:	Below were the factors to analyse sellers' performance during events	Yes/No is mentioned combined with a reason:	Some of the suggestions to improve sellers' performance were:
R1 (Account Manager)	Category: Home Appliances Pareto: 80% of the GMV is contributed by 15% of sellers <i>Note:</i> Especially small sellers do good business during the events.	<ul style="list-style-type: none"> <li>• % of the sellers' products that have deals/coupons</li> <li>• Number of glance views that sellers get during events compared to a normal day</li> <li>• Percentage of the marketing budget the seller is allocating for the events (Spend).</li> <li>• Relevant Selection</li> <li>• Availability of the products especially the FBA [Fulfilled by Amazon]</li> </ul>	Yes, there were sellers who could do good business but weren't doing Reasons: <ul style="list-style-type: none"> <li>• Lack of inventory</li> <li>• Absence of Deals on top products</li> </ul>	<ul style="list-style-type: none"> <li>• Proper Inventory Planning considering the seasonality effect</li> <li>• Proper allocation of budget</li> <li>• Having Deals on Top products to maximize the sales.</li> </ul>
R2 (Account Manager)	Category: Across all categories Pareto: N/A	<ul style="list-style-type: none"> <li>• Seller amount health</li> <li>• Fulfilment channel</li> <li>• To how many places the seller is able to deliver from (Fastrack)</li> <li>• Order Defect rate</li> <li>• Counterfeit rate</li> <li>• Return rate</li> </ul>	Yes, there were sellers who could do good business but weren't doing Reasons: <ul style="list-style-type: none"> <li>• Improper inventory</li> <li>• Not locally available (not registered in various clusters)</li> <li>• Price</li> <li>• Lack of sponsored Ads</li> </ul>	<ul style="list-style-type: none"> <li>• Better return handling capabilities</li> <li>• Proper inventory management &amp; Quality checking standards</li> </ul>
R3 (Account Manager)	Category: Furniture and large Appliances Pareto: Top 10% of sellers account for about 70% of the revenue	<ul style="list-style-type: none"> <li>• GMS/ GMV</li> <li>• Pricing</li> </ul>	Yes, there were sellers who could do good business but weren't doing Reasons: <ul style="list-style-type: none"> <li>• Lack of preparedness in terms of demand planning &amp; inventory management</li> <li>• Wrong Pricing</li> </ul>	<ul style="list-style-type: none"> <li>• Make sure the seller had proper selection</li> <li>• Competitive Pricing</li> <li>• SKUs should be Discoverable (visibility)</li> <li>• Seller must have right cataloguing</li> <li>• Ensure proper product quality</li> </ul>
R4 (Account Manager)	Category: All categories in Market place Pareto: N/A	<ul style="list-style-type: none"> <li>• Percentage of purchase orders fulfilled (fulfilment rate)</li> <li>• Ensuring availability of products (Inventory management)</li> </ul>	Yes, large number of sellers have the capacity to perform well during events but couldn't. Reasons: <ul style="list-style-type: none"> <li>• Improper Inventory mgmt.</li> <li>• Lack of readiness in systems to tackle high traffic during events</li> </ul>	<ul style="list-style-type: none"> <li>• Sellers should segregate the stock separately for various online marketplaces to satisfy the demand</li> </ul>
R5 (Category Manager)	<b>Category:</b> Apparels, Footwear <b>Pareto:</b> Top 15% sellers contribute to 80% of sales	<ul style="list-style-type: none"> <li>• Customer cancellation rate</li> <li>• Fulfilment rate</li> <li>• Quality rejection percentage</li> </ul>	Yes, there were some sellers who could have done better. Reasons: <ul style="list-style-type: none"> <li>• Improper stacking of material</li> <li>• Lack of central ERP system</li> </ul>	<ul style="list-style-type: none"> <li>• Sellers should have proper software systems to pace up the order acceptance &amp; deliveries</li> </ul>
R6 (Category Manager)	<b>Category:</b> Jewellery <b>Pareto:</b> <b>Gold and Diamond Jewellery:</b> Top 5% Sellers do 90% Business <b>Silver Jewellery:</b> Top 20% Sellers do 50% Business	<ul style="list-style-type: none"> <li>• Selection (Fast Track selection: This means what percentage of selection has 1 day / 2-day delivery</li> <li>• Pricing: Adequate Inventory</li> <li>• Marketing Spend by sellers (how much are they spending on sponsored Ads. Etc)</li> <li>• How well are they diverting the traffic towards their products?</li> <li>• Deals (golden hour deals etc.)</li> </ul>	Yes. Reasons: <ul style="list-style-type: none"> <li>• Improper Forecasting</li> <li>• Improper Warehouse Management and lack of marketing spend to direct the traffic towards its products</li> </ul>	<ul style="list-style-type: none"> <li>• Optimize the spending on sponsored Ads</li> <li>• Improve Selection (FastTrack Selection)</li> <li>• Carrying relevant selection (Seasonal selection)</li> <li>• In-stock (having products in the inventory)</li> </ul>
R7 (Category Manager)	<b>Category:</b> Amazon Pantry <b>Pareto:</b> 20% of sellers do 80% of business	<ul style="list-style-type: none"> <li>• GMS</li> <li>• Selection carried by seller</li> <li>• Pricing</li> <li>• Inventory Management</li> </ul>	Yes, there are sellers who could do business during events but couldn't. Reasons: <ul style="list-style-type: none"> <li>• Lack of proper selection [20% of selection drives 50% of business]</li> <li>• Lack of proper Pricing</li> <li>• Lack of Readiness</li> <li>• Head torso and tail in the right selection</li> <li>• Head Torso: Top Seller product in the selection</li> <li>• Tail: Lower range products to garner large pool of customers &amp; lock them up.</li> </ul>	<ul style="list-style-type: none"> <li>• Improve product selection to drive the sales &amp; attract traffic.</li> <li>• Proper Inventory Management &amp; returns handling capacity.</li> </ul>

continued on following page

Table 2. Continued

Respondent	Q1	Q2	Q3	Q4
R8 (Operations Manager)	<b>Category:</b> Home Category (Kitchen) <b>Pareto:</b> 25% of sellers constitute 60% of business	<ul style="list-style-type: none"> <li>Counter Fit Rate (CFR)</li> <li>Order Defect Rate (ODR)                             <ul style="list-style-type: none"> <li>Late Ship Rate</li> <li>Cancellation Rate</li> </ul> </li> </ul>	Yes, bunch of sellers could have done better. Reasons: <ul style="list-style-type: none"> <li>Which products should they advertise mostly?</li> <li>Which ones should they price competitively?                             <ul style="list-style-type: none"> <li>Paid Account</li> </ul> </li> </ul> Management (some can't afford).	<ul style="list-style-type: none"> <li>Improve fulfilment channels</li> <li>Provide warehouse management solutions (Software)</li> <li>Sellers must be ready in terms of flexible networks during peak demand periods.</li> </ul>
R9 (Operations Manager)	<b>Category:</b> Large Appliances <b>Pareto:</b> 20% of sellers constitute 70% of business	<ul style="list-style-type: none"> <li>Order Fulfilment Rate</li> <li>Returns Handling Rate                             <ul style="list-style-type: none"> <li>Pricing</li> <li>Packaging</li> <li>Product Quality</li> </ul> </li> </ul>	Yes. Reasons: <ul style="list-style-type: none"> <li>Lack of readiness in terms of W/H &amp; delivery network</li> <li>Lack of adequate Human Resources</li> <li>Improper Advertising</li> </ul>	<ul style="list-style-type: none"> <li>Readiness in terms of fulfilment Channels</li> <li>Proper Marketing is very important</li> <li>Competitive Pricing</li> <li>Maintain Good Quality</li> <li>Return Policy</li> </ul>
R10 (Operations Manager)	<b>Category:</b> Apparels <b>Pareto:</b> Top 20% of Sellers do around 80% of business	<ul style="list-style-type: none"> <li>Shift from Business as usual (BAU)                             <ul style="list-style-type: none"> <li>Cancellation Rate</li> <li>Late Shipment Rate</li> <li>Order Defect Rate</li> <li>Valid Tracking</li> </ul> </li> </ul>	Yes, a large no. of sellers could have done better. Reasons: <ul style="list-style-type: none"> <li>Lack of preparedness in terms of Operations.</li> </ul>	<ul style="list-style-type: none"> <li>Have adequate Safety Stock</li> <li>Improve Brand Visibility during event window                             <ul style="list-style-type: none"> <li>Don't stress on Price</li> </ul> </li> <li>Be prepared in terms of inventory, Human Resources.</li> </ul>
R11 (Operations Manager)	<b>Category:</b> All categories in Market place <b>Pareto:</b> N/A	<ul style="list-style-type: none"> <li>Quality rejection percentage                             <ul style="list-style-type: none"> <li>Inspection</li> </ul> </li> <li>Physical damage of goods</li> </ul>	Yes, there are sellers who could have done better. Reasons: <ul style="list-style-type: none"> <li>Lack of adequate manpower and preparedness for the event</li> </ul>	<ul style="list-style-type: none"> <li>Motivate the employees at the sellers' end</li> <li>Sellers must handle returns properly</li> <li>Conduct regular seller audits to minimize returns</li> </ul>

on its portal. Similar study conducted by Hamadan et.al. (2019) & Mulyani *et al.*, (2019) observed that digital and social media were used to boost product sales by increasing traffic on marketplaces. The study conducted by authors of this research had similar findings viz. low glance views adversely affected the performance of sellers on various marketplaces. Yuan *et al.*, (2017) found that better prediction of sales volume led to higher fulfillment of orders by seller on a marketplace. The study conducted by authors of this research had similar findings viz. poor order fulfillment rate adversely affected the performance of sellers.

Studies conducted by Eric et.al. (2016) & Zhijie *et al.*, (2019) observed that the customer reviews for any product listed on e-commerce websites had significant relationship with sellers' GMS. Indian market was accommodating technology in many forms (Verma & Bhattacharyya, 2016). Sahay (2017) & Richa, Vadera (2019) found that convenience of shopping online over offline had a positive effect on the sales volume of sellers. Kusdibyo & Febuadi (2019) concluded that service quality of online businesses had a positive influence on consumer satisfaction. The study conducted by Lou, Dan and Hu (2019) found that gradient of tiered pricing had a positive effect on the purchased volumes. The parameters like good customer reviews, high convenience, admirable quality of service and effective tiered pricing was a part of the outcomes of literature review. However, such observations didn't emerge in the findings of this research. In this research, relevant product selection, inventory turnover rate and returns handling capability are the three newly emerged factors affecting the sellers' performance.

## 5. CONCLUSION

The objective of this study was to explore and establish the factors that impacted the sellers' performance on the marketplace during events. This study focused on sale events on e-commerce marketplace during festive seasons in India. The study was conducted from the sellers' perspective. In marketplace it wasn't just important to create value but also to capture value (Bhattacharyya & Sivanand, 2011). The twenty relevant articles were considered for this study. There were certain findings which were in line with what was observed during the literature review. In the research conducted by Jayakumar (2015), it was observed that the online sale events acquired large number of

customers through deep discounts. This improved the sales volume of sellers on various marketplaces. The study conducted by Joshi (2017) & Kaur et.al. (2017) found that discounting strategies had positive impact on the sales of products on sale. This led to higher revenue generation for sellers on the marketplace. Indian firm had to be proactive to gather market intelligence (Bhattacharyya & Jha, 2015). The study conducted by Sahay (2017) indicated that customers were browsing the offline stores first and subsequently purchased the products online. This was due to low pricing of products on online marketplaces as there were no intermediaries. In another study, Athira et. al. (2017) found that value conscious consumers were more likely to participate in online sales. Suman et.al (2019) found that the range of discounted products positively influenced the revenue during sale events on online marketplaces. The study conducted by authors of this research had similar findings like high pricing led to declining revenues of sellers on online marketplaces. This had a negative effect on sellers' performance.

The conclusive parameter of late shipment rate was impacted positively by five system variables (namely sourcing hinderance, lack of goods, lack of working capital, lack of manpower and lack of investment capital). It was impacted negatively by two system variables (namely efficient inventory management and correct entry system). This meant supply chain or financial hinderances observed by the seller in sourcing process improved the late shipment rate. Similarly, lack of manpower was making the order packing and dispatching process difficult for the seller which skyrocketed the late shipment rate. Lack of working and investment capital was making it difficult for the seller to carry on day-to-day operations and built new asset respectively, thereby the late shipment rate climbed sharply. Further, lack of availability of goods ordered by customers in the inventory was responsible for a rapidly increased late shipment rate. However, better the inventory management system, lower was the late shipment rate. Moreover, higher number of instances with correct entry in the system observed by the seller, dropped the late shipment rate. Furthermore, the conclusive parameter of attractive pricing was impacted positively by four system variables (namely volume of sales, dynamic pricing, competitor benchmarking and promotions & discounts). It was impacted negatively by five system variables (namely branding, cost of goods, margins, shelf life of a product and holding/shipping cost). This meant that attractive pricing on the marketplace shot up the volumes of sale. Application of dynamic pricing technique further increased the probability of the listed price to be appealing to the customers. When the process of competitor benchmarking was applied it improved the attractiveness of the products' pricing. Promotion & discount strategies brought prices of products down along with giving products extra visibility which meant attractive pricing for the customers. However, branding on marketplace burdened the seller with extra cost which resulted in making the products' price less attractive. Moreover, higher the cost of goods to the seller combined with the holding/shipping costs led to lower attractiveness of price. Higher the profit margins sellers maintained, lower was the attractiveness of the price. Products with lower shelf life had a risk of perishability along, this forced the seller to increase the products' price reducing its attractive pricing. The conclusive parameter of inventory turnover rate was impacted positively by two system variables (namely adequate lead time and promotions & discount) and another conclusive parameter (namely attractive pricing). It was impacted negatively by five system variables (namely seasonality, sourcing hinderance, efficient inventory management, lack of working capital and lack of investment capital). This meant that adequate lead time for replenishing the inventory enhanced the inventory turnover rate. Promotions & discounts combined with attractive pricing increased the flow of stock thereby improving the inventory turnover rate. However, the lack of certainty attached to seasonality reduced the inventory turnover rate. Moreover, better the inventory management system, lower was the inventory turnover rate. Similarly, lack of working and investment capital was making it difficult for the seller to effectively carry out operations, thereby reduced the inventory turnover rate. Supply chain and financial hinderances observed by the seller during sourcing process reduced the inventory turnover rate. Also the conclusive parameter of glance views was impacted positively by four system variables (namely promotions & discounts, branding, comprehensive product description

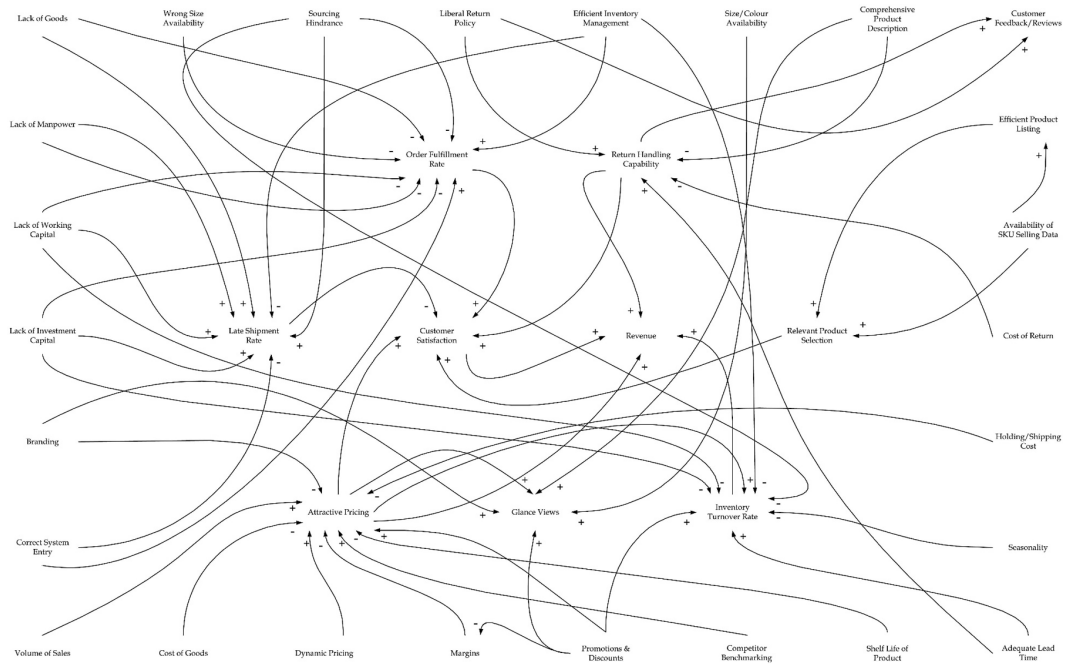
and size/colour availability) and another conclusive parameter (like attractive pricing). This meant that through promotions & discounts combined with branding, the glance views of the products increased tremendously. Moreover, when the product description was comprehensive enough the customers found it useful which led to increase in glance views. Products available in desired colours and sizes to the customers guided the rise in glance views for the product. Customers with high price sensitivity were attracted to the pricing leading glance views to skyrocket. The conclusive parameter of return handling capability was impacted positively by two system variables (namely adequate lead time and liberal return policy). It was impacted negatively by two system variables (namely cost of return and comprehensive product description). This meant that with lower lead time to pick up and exchange the product impacted positively to the return handling capability of the seller. Sellers with liberal policy for return and exchange of goods resulted in positively impacting return handling capability of the seller. Cost of returns increased the financial burden on the seller thereby impacting the return handling capability of the seller negatively. Comprehensive product description ensured that detailed information was passed on to the customers owing to which purchase decision was made. This ensured that the number of returns were reduced thereby negatively impacting the return handling capability of the seller. Also the conclusive parameter of relevant product selection was impacted positively by two system variables (namely efficient product listing, availability of SKU selling data). This meant that effectively listing the products on the marketplace, based on customers' choice and feedback, offered the customer a better range of relevant product for selection. The SKU selling data ensured that the seller takes an informed decision to list the desired products thereby improving the product selection catalogue of the seller. The first key performance indicator, customer satisfaction, was impacted positively by four conclusive parameters (like order fulfilment rate, return handling capability, relevant product selection and attractive pricing). It was impacted negatively by one conclusive parameter (like late shipment rate). This meant that higher the order fulfilment rate, lower the late shipment rate, better the return handling capability, exhaustive the relevant product selection and higher degree of attractiveness in pricing offered by a seller resulted in higher degree of customer satisfaction. The second key performance indicator, revenue, was impacted positively by three conclusive parameters (namely attractive pricing, inventory turnover rate and return handling capability) and another key performance indicator (like customer satisfaction). This meant that having attractive pricing, a desirable inventory turnover rate, robust return handling capability and high degree of customer satisfaction convinced the customer to make a purchase resulting in higher revenue for the seller.

## **6. MANAGERIAL AND THEORETICAL IMPLICATIONS**

This study had managerial implications. The study and the analysis indicated that, metrics such as late shipment rate, order fulfilment rate, selection, price and glance views were essential for evaluating the sellers' performance on the marketplace. The study could be used by the managers in future to locally develop quantitative models for the evaluation of the sellers' performance and monitoring it for effective seller management. This study was done taking the perspective of marketplace managers working with sellers, however the study in future could be carried out by collecting data from sellers, registered on ecommerce marketplace. The data collected by the sellers would give a clear picture from the sellers' perspective and aid to attain depth in the research. The future studies could be conducted in countries like US, China and Japan where e-retailing has different challenges and also, in poor countries where the logistics and last mile delivery infrastructure is weak. The internet connectivity could be one of the levers based on which the future study could be conducted. This study had theoretical implications. The authors had referred to Sterman, (2000) and developed a system dynamics model which was displayed in figure 5.

In table 3 the legends of figure 5 has been tabulated.

**Figure 5. System Dynamics Model to display the causal relationships between the existing system variables and findings of the research**



The model in figure 5 which was developed referring to Sterman, (2000) included three key elements, first, the system variables, secondly, the conclusive parameters and thirdly, the key performance indicators for business. The system variables were those variables that were already present in the online marketplace system. In this model, the system variables taken into consideration were adequate lead time, availability of SKU selling data, branding, competitor benchmarking, comprehensive product description, correct system entry, cost of goods, cost of return, customer feedback/reviews, dynamic pricing, efficient inventory management, efficient product listing, holding/shipping cost, lack of goods, lack of investment capital, lack of manpower, lack of working capital, liberal return policy, margins, promotions & discounts, shelf life of product, size/colour availability, sourcing hindrance, volume of sales and wrong size availability. The conclusive parameters were the seven findings by the authors of this study. The conclusive parameters were late shipment rate, order fulfilment rate, relevant product selection, attractive pricing, glance views, inventory turnover rate and returns handling capability. The key performance indicators for the business were customer satisfaction and revenue. The system variables present in the online marketplace system had positive or negative effects on the conclusive parameters. The conclusive parameters thereby affected the key performance indicators of the business positively or negatively. The authors had exhaustively studied the impact of system variables, conclusive parameters and key performance indicators on each other and thereby developed the system dynamics model to explain the conclusions of this study. One must note that the conclusive parameter of order fulfilment rate was impacted positively by two system variables (namely efficient inventory management and correct entry system). It was impacted negatively by six system variables (namely sourcing hinderance, lack of goods, wrong size availability, lack of working capital, lack of manpower and lack of investment capital). This meant that better the inventory management system, higher was the order fulfilment rate. Furthermore, higher the number of instances with correct entry in the system observed by the seller, higher was the order fulfilment rate. Also, the lack of availability of goods ordered by customers or availability of goods

**Table 3. Legends of the System Dynamics Model displaying causal relationship**

S. No.	Legend	Remarks
1	Adequate Lead Time	Lead time taken for goods to be sourced. Also, lead time taken for the returned goods to be delivered.
2	Attractive Pricing	Pricing that was attractive to users encouraging the transaction.
3	Availability of SKU Selling Data	Availability of past selling data of a SKU that identified sale trends and determined attractive pricing.
4	Branding	Tool used for marketing goods on the online marketplace for better visibility.
5	Competitor Benchmarking	Process that compared attributes of products on marketplace against several competitors.
6	Comprehensive Product Description	Comprehensive Description of product that described enough information about its features and benefits that drew customers in and compelled them to make a purchase.
7	Correct System Entry	Correct SKU details entered by the seller on the seller side interface of the online marketplace for each product.
8	Cost of Goods	Cost at which the seller or reseller purchased the goods from wholesaler or manufacturer.
9	Cost of Return	Cost incurred by the seller or online marketplace to complete the return/exchange cycle of the sold goods.
10	Customer Feedback/ Reviews	Customer Feedback/Reviews provided by the customers to rate the product, seller, delivery service and return service.
11	Customer Satisfaction	Measurement that determined how happy customers were with a product, seller, and capability.
12	Dynamic Pricing	Method that varied the price of a product/service to react to the changing market conditions.
13	Efficient Inventory Management	Efficient inventory management meant spending less on storage, having minimum stock redundancy, and lowering the amount of money invested in goods.
14	Efficient Product Listing	The products listed on the marketplace by the seller must be the ones that interested the customers.
15	Glance Views	Glance views showed the number of times a product detail page is viewed. It is used to measure how branding is working.
16	Holding/ Shipping Cost	Cost incurred by the seller to hold and ship the goods.
17	Inventory Turnover Rate	Inventory turnover rate was a ratio showing how many times a company had sold inventory during a given period.
18	Lack of Goods	Unavailability of goods that had been requested by the customers on the online marketplace.
19	Lack of Investment Capital	Unavailability of investment capital with the seller that enabled the seller to increase its assets (ex. augmenting warehouse capacity).
20	Lack of Manpower	Unavailability of manpower with the seller that fulfilled the orders placed by customers on the online marketplace.
21	Lack of Working Capital	Unavailability of working capital that jeopardized the sellers' ability to finance its day-to-day operations.
22	Late Shipment Rate	Percentage of orders the seller shipped late to customers out of the total number of orders the seller has shipped.
23	Liberal Return Policy	Return policy of the seller that wasn't too stringent for its customers.
24	Margins	Amount by which revenue exceeded costs for a seller on the online marketplace.
25	Order Fulfilment Rate	Percentage of orders the seller was able to fulfil out of all the orders the seller had received on the online marketplace.
26	Promotions & Discounts	The branding done on the online marketplace combined with the discounts offered by the sellers during online sale events.
27	Relevant Product Selection	Relevant product selection was listing of appropriate products by the seller for customers on the online marketplace.
28	Return Handling Capability	Capability of the seller to successfully returned or exchanged the sold goods for a legitimate reason provided by the customer.
29	Revenue	Income generated by the seller while operating on the online marketplace.
30	Seasonality	Characteristic of a time series in which the data experienced regular & predictable changes that recurred every calendar year.
31	Shelf Life of Product	Length of time that a commodity was stored without becoming unfit for sale.
32	Size/Colour Availability	Goods that were enlisted on the marketplace with certain size and colour characteristics were actually available with the seller.
33	Sourcing Hindrance	Challenges faced by the sellers while sourcing the goods from a wholesaler or manufacturer.
34	Volume of Sales	Sales volume were the number of units sold within a period.
35	Wrong Size Availability	Goods that were enlisted on the marketplace with certain size characteristics were actually not available with the seller.



in wrong sizes in the inventory was responsible for a lower order fulfilment rate. Similarly, lack of working and investment capital was making it difficult for the seller to carry on day-to-day operations and built new asset respectively, thereby reduced the order fulfilment rate. Lack of manpower was making the order packing and dispatching process difficult for the seller which lowered the order fulfilment rate. Supply chain or financial hinderances observed by the seller in sourcing process reduced the order fulfilment rate.

## **7. SCOPE AND FUTURE DIRECTIONS**

This research study analyzed various factors that directly impacted a sellers' performance during sale events on an e-commerce marketplace in the Indian context. This was the scope of this research. It further gave a direction for managers to use this study as a basis to suggest improvements to the sellers with low GMS. There were several managerial implications. Managers of various e-commerce companies could use this research findings as insights to help sellers cater the demand. This would be enabled with relevant product portfolio selection which would in turn help increase the sellers' GMS. This research would also aid the ecommerce retailers to improve the sales funnel conversion rate and ultimately improve the customer satisfaction index. The study could be used by the managers in future to locally develop quantitative models for the evaluation of the sellers' performance and monitoring it for effective seller management. This study was done taking the perspective of managers working at a online marketplace having frequent contact with sellers, however studies in future could be carried out by collecting data from sellers, registered on ecommerce marketplace. The data collected by the sellers would provide a better picture from the sellers' perspective and aid to attain depth in the research. The future studies could be conducted in countries like US, China and Japan where e-retailing had different set of challenges. Also, future studies could be conducted in poor countries where the logistics and last mile delivery infrastructure was weak. Internet connectivity could be one of the levers based on which the future studies could be focused on. The authors expected that this research to initiate a thread of conversation in this domain of research.

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