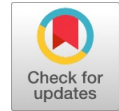


The Impact of Digital Transformation in Singapore e-Tail Market



Kamaladevi Baskaran

Abstract: *The radical and rapid customer shift from Bricks-and-Mortar retail to e-Tail (electronic retail) in the e-commerce landscape demands the enterprise to relook their business model by adding innovative strategy to survive in the highly competitive and digitally driven marketplace. To succeed in today's business world i.e., e-business world, the e-tailers must focus on leveraging the right digital technologies for enhancing the e-customer shopping experience. In order to provide a better customer shopping experience, e-tailers need to seamlessly enable customers to quickly and easily locate their desired products/services both online and in-store. Retail industry is one of the few top segments that is projected to reap the benefits of today's digital transformation waves. In recent years, a number of fundamental changes have occurred in the corporate world which have caused the emergence of Customer Experience Management as both a strategic field and a rapid-growing enterprise, complete with a wide array of tools and solution sets. This study aims to reveal the challenges experienced by Singapore customers during online shopping and identify the ways to overcome the customer challenges in online shopping which create the opportunities for web store owners. Given the importance of the data for this research, quantitative data has been collected through primary data source. The individual email of Singapore online shoppers has been collected and validated using the "Atomic Email Studio" Software. A structured questionnaire has been sent using Google forms. 164 samples were collected and considered for research. To attain the given objectives, the statistical tools such as Measure of Central Tendency, Standard Deviation, Analysis of Variance (ANOVA), Levey-Jennings Control, Correlation and Multiple Regression have been used. NCSS Version 10.0.5 software has been used in this research to execute the statistical and graphical tests. Customer Perceived Value (CPV), which is modern industry accepted measure of the Customer Experience, derived from customer responses to the questionnaire. The results highlights that there is a significant relationship between e-tail factors and Customer Experience.*

Keywords : *Digital Transformation, Singapore customers, E-tail factors, Customer Perceived Value, Customer Experience Management, Online Shopping*

I. INTRODUCTION

In the present digital transformed retail scenario, the retailer ought to focus on the customer's e-tailing experience to survive and sustain in the digital world. To focus an e-customer's experience towards e-tailing, the retailers have to apprehend what "e-tailing" truly approach. E-tailing is a form of electronic commerce which permits e-customers to directly buy products or services from the e-tailer over the

Internet with the use of a web browser. E-tailing can be referred as e-web store, e-shop, e-store, Internet shop, web-shop, web-store, online store, and virtual store. Customer experience is the sum total of all the interactions a customer has with the brand during their customer lifecycle—has come to be the critical differentiator in current hypercompetitive, hyper-related worldwide market place. The study suggests that 86 percent of customers said they would be willing to pay large amount for a better customer experience, according to Harris (2011). Nowadays, whilst customers have an awful experience with the company, they don't maintain it to themselves; they right away start venting on social networks. This means you don't simply lose one customer; you lose many, hindering new and current possibilities to develop your commercial enterprise. (Oracle white paper). In today's e-world, e-tail is the powerful platform, in which e-tailers raise order to purchase A-Z products at the finger-tip to deliver at the door step. E-customer experience has easily been understood through their option towards e-tail factors ie., E-Store Information Quality, E-Shopping Cost, E-Store Design Quality, E-Privacy/Security, E-Customer Service and E-Delivery Service Quality factors.

II. REVIEW OF LITERATURE

The review of literature explores the pragmatic output specified by erstwhile researchers. Süleyman Barutçu's research recommends that the customers are intend to buy online due to low cost, website design and better customer service compared to offline stores, but not comfortable with their shipping policies and information provided in the website. His research suggests online store owners to overcome the problem to boost the customer satisfaction and sales. According to C. Liu, K.P. Arnett, the success of e-store is based on updated information provided in the website, usage of system, playfulness and system design quality. Mehrbakhsh Nilashi & et al.'s research framework proposes the three key online quality dimensions focused on service, information and system. Hadrian Djajadikerta and Terri Trireksani's research instrument attempts to measure the quality of website validated from the user and content perspective with the total of 23 indicators. Andrea Pozzi focuses on the cost which plays the major role in online grocery shopping. Wen Gong & et al. attempts to perceive the online purchase behavior of Chinese and American customers and found that Chinese customers are more complicated to perceive online shopping due to lack of supply chain management, ineffective online payment and preferred cash payment. Kirsten A.

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Passyn, Memo Diriker & Robert B. Settle's research insists to make self-regulation and self-governance to strengthen privacy and security in e-store.

The researcher found the research gap based on the literature review i.e., the six macro factors influencing E-Customer Experience i.e., e-Store information quality, e-Shopping cost, e-Store design quality, e-Privacy/Security, e-Customer Service and e-Delivery service quality.

III. RESEARCH METHODOLOGY

This research intends to examine the challenges experienced by Singapore customers during online shopping and identify the ways to overcome the customer challenges in online shopping which create the opportunities for e-tailers i.e., web store owners. Here the dependent variable is e-Tailing and the independent variables are e-Store information quality, e-Shopping cost, e-Store design quality, e-Privacy/Security, e-Customer Service and e-Delivery service quality.

In the hypothesis testing, the goal is to either accept or reject the null hypothesis.

H₀: Customer's shopping experience is not positively correlated to E-tailing.

H_a: Customer's shopping experience is positively correlated to E-tailing.

Descriptive research design suits the research need. The Likert scale questionnaire has been designed as per standard guidelines given in the literature review for collecting the needed information from the respondent for this e-tail customer experience analysis research. The first section of the questionnaire covers the questions relate to the demographic factors, i.e., country of residence, gender, age, marital status, education & income level of the e-customers and psycho-graphic profile i.e., Occupation of e-consumer. The second section of the questionnaire covers the internet usage, frequency of purchase over the internet, enjoyment and safety of e-shopping, key product and service categories bought online by e-customers. The third section highlights the factors influencing online shoppers and the impact of e-tail drivers towards e-customer's buying behaviour. These factors include e-Store information quality, e-Shopping cost, e-Store design quality, e-Privacy/Security, e-Customer Service and e-Delivery service quality. Under each factor 5 points had been given. All questions in this section are constructed with 5 point Likert scale ranging from 1. Strongly Disagree 2. Somewhat Disagree 3. Neither Agree nor Disagree 4. Somewhat Agree 5. Strongly Agree.

An extensive data collection for the research has been administered through the following online process. Firstly, the emails of the potential participants from Singapore has been collected using the e-marketing tool "Atomic Email Studio". 1000 emails from Singapore has been extracted from the tool. Next, the customers are requested to participate in the online research survey via "Google Forms" has been distributed to the collected 1000 email IDs. In order to motivate the people to participate in the online survey, Amazon gift voucher has been announced for one lucky draw from Singapore. Out of 1000 email users, we have received the responses from 164 email users. The sample size is determined using Sample size calculator of National Statistical Service, Australian Bureau of Statistics. The

reliability and validity test has been conducted. To attain the given objectives, the statistical tools such as Percentage Analysis, Item Analysis, Analysis of Variance (ANOVA), Levey-Jennings Control and Customer Perceived Value have been used.

The Percentage analysis is used in Descriptive Statistics to study the demographic profile of the respondents. Also it is used to understand the Level of agreeability on e-Store information quality, e-Shopping cost, e-Store design quality, e-Privacy/Security, e-Customer Service and e-Delivery service quality by the respondents. Analysis of Variance (ANOVA) is a statistical technique used here to test the hypothesis. CPV is a measure of the customer experience and is derived from customer responses to the Customer Experience Survey (CES). CPV is worked out for a single customer entity or account. CPV is derived from their scores between 1 and 5 in response to four questions in each criterion.

CPV is a figure between 0% and 100%:

- CPV = 0% implies the lowest Value the customer has ever experienced
- CPV = 100% implies the highest Value the customer has ever experienced
- CPV = 50% implies that the current Value is at the average level of all prior customer experiences

IV. DATA ANALYSIS AND INTERPRETATION

The data analysis has been carried out to analyses the challenges experienced by Singapore customers during online shopping. From the review of literature, it is found that E-store information quality, E-shopping cost, E-store design quality, E-privacy/ security, E-customer service and E-delivery service quality are the six dominant factors which influence consumer perceptions to do their purchased online. This descriptive study tests the primary objectives using statistical tool to check the null hypothesis, whether it is accepted or rejected. Based on the analysis, the results states that male are highly satisfied with E-Store Design Quality and female are less satisfied with E-Shopping Cost. The age group of above 50 years are comfortable with E-Store Information Quality and the age group between 20-29 years are not much comfortable with E-Shopping Cost. In the category of marital status, the single category is comfortable with E-Store Delivery Quality and the single category is not much comfortable with E-Shopping Cost. The high school educated e-customers are comfortable with E-Customer Service and not much comfortable with E-Shopping Cost.

The business owners are comfortable with E-Store Design Quality and the teachers/lecturers are not much comfortable with E-Shopping Cost. The income group of \$20000 - \$29999 per annum are comfortable with E-Store Information Quality and the income group of \$50000 - \$59999 per annum are not much comfortable with E-Privacy/Security. The e-customers never shopped online are comfortable with E-Store Design Quality and the same category is not much comfortable with E-Privacy/Security.

The e-customers who don't enjoy the e-shopping are comfortable with E-Store Design Quality and the same category are not much comfortable with E- Delivery Service Quality. The e-customers who felt that the e-shopping is safe are comfortable with E-Store Information Quality and the e-customers who don't felt that the e-shopping is safe are not much comfortable with the same.

Customer Perceived Value (CPV) quantifies a customer's current perception of value by keying on specific survey questions and comparing current responses relative to historic scoring. The result is a percentile score between 0% (worst) and 100% (best), with 50% being the historic average. CPV has been computed from four precisely structured questions from each e-tail factors to get the true 360 degree perspective of the Customer's perception of

Value.

CPV has been calculated with the formula,

$$CPV = (\text{Experience} + \text{Expectation}) / 2$$

$$\text{Experience} = \text{Benefit} / (\text{Benefit} + (1 - \text{Satisfaction}))$$

$$\text{Expectation} = \text{Strategic Fit} / (\text{Strategic Fit} + (1 - \text{Recommend}))$$

Average true value = Sum of the individual true values divided by the number

Benefit describes we ask the customer to think about performance in the past. Strategic Fit narrates we ask the customer to think about likely future performance. Satisfaction portrays what the customer is asked to think about how much has been achieved. Recommend narrates what the customer is asked to think about how much is still to be done.

Table I: Computation of Customer Perceived Value

eTail Factors	Benefit	Satisfaction	Strategic Fit	Recommend	Experience	Expectation	CPV=(Experience + Expectation)/2
E-Store Information Quality	0.788	0.758	0.846	0.824	0.765	0.828	0.8
E-Shopping Cost	0.76	0.734	0.826	0.664	0.741	0.711	0.73
E-Store Design Quality	0.732	0.934	0.8	0.856	0.917	0.847	0.88
E-Privacy / security	0.738	0.738	0.742	0.75	0.738	0.748	0.74
E-Customer Service	0.74	0.804	0.858	0.778	0.791	0.794	0.79
E- Delivery Service Quality	0.87	0.794	0.766	0.722	0.809	0.734	0.77

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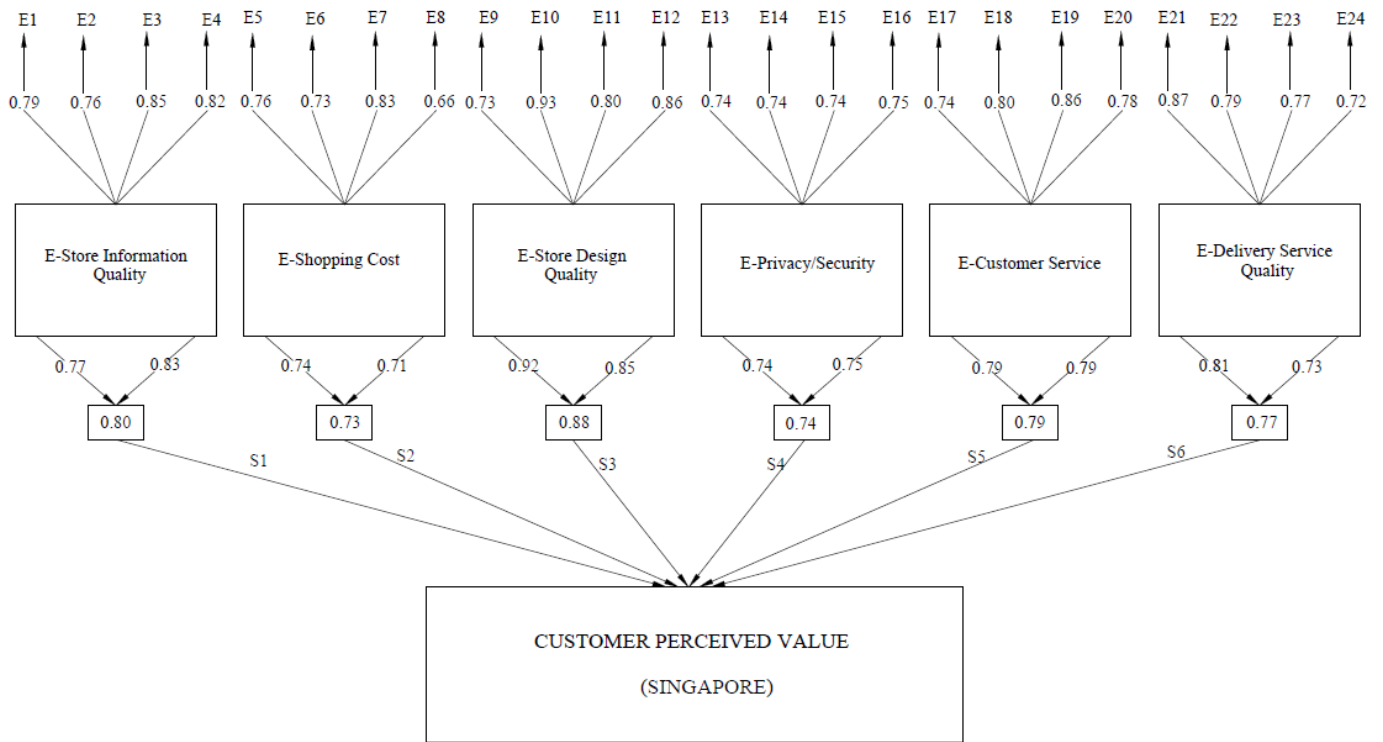


Figure 1: Customer Perceived Value Model

Table II: Customer Perceived Value in Singapore

Country	E-Store Information Quality	E-Shopping Cost	E-Store Design Quality	E-Privacy / security	E-Customer Service	E- Delivery Service Quality
Singapore e-customers CPV	80%	73%	88%	74%	79%	77%
Rank	3	5	1	2	6	3

Singapore e-customers have given 88% of CPV to E-Store Design Quality factors. Lim, S. S. research states that the website design have higher percent of stimulation for online shoppers in online shopping behavior. The results highlights that there is a significant relationship between E-tailing factors and the Customer shopping Experience with respect to Singapore which turns the web traffic into actual purchasing behaviour. It states that the web store owners have to strengthen the e-tail factors to increase the volume of their e-tail business.

The ways to overcome the e-customer challenges in e-shopping which create opportunities for e-tailers are as follows. E-Store information quality can be improved by providing high quality service and high quality information during pre-sale and after sale stages. E-Shopping cost can be retailed by offering low prices than off-line shops. E-Store Design can be more qualitative by improve the website usability, design and information quality using creativity, simplicity, less loading time, big and high quality images, contact details of registered address of business, complete information about the consumer reviews, easy check out and accurate shipping date are the keys for the achievement of

online business as for E-Store Design Quality. E-Privacy/Security can be strengthened by installing the privacy and security tools in e-tail sites. E-Customer Service has to be measured through Satisfaction surveys, immediate response & e-loyalty programmes. E-delivery service quality will increase the customers' perceived value when the products are delivered quickly and product quality should exceed the customers' expectation.

V. CONCLUSION, IMPLICATIONS AND SCOPE FOR FUTURE STUDY

This research paper analyses the e-tail factors influencing Singapore e-customers to do e-shopping. In Singapore, the highest perceived value given to E-Store Design Quality and the lower perceived value to E-Shopping Cost. Mohd Fazli Mohd Sam & Md Nor Hayati Tahir (2009) study suggests that usability, website design, information quality, trust and empathy are positively related online purchase intention.

The findings reinforce the need to develop website quality, trust and empathy to increase online purchase intention.

The managerial implication of the study indicates that when the internet purchase emerges and booms, we will be better able to advise e-tailers to address the challenges in e-customer shopping experience in order to increase their Website traffic. In this study, the research findings that may help e-tailers to concentrate on e-tail factors. The results highlights that there is a significant relationship between E-tailing factors and the E-Customer Experience, irrespective of any country which turns the web traffic into actual purchasing behaviour. It states that the e-tailers have to strengthen the e-tail factors to increase the volume of their e-tail business. E-Store information quality can be improved by providing high quality service and high quality information during pre-sale and after sale stages. E-Shopping cost can be retained by offering low prices than off-line shops. E-Store Design can be more qualitative by improve the website usability, design and information quality using creativity. E-Privacy/Security can be strengthened by installing the privacy and security tools in e-tail sites. E-Customer Service has to be measured through Satisfaction surveys, immediate response & e- loyalty programmes. E-delivery service quality will increase the customers' perceived value when the products are delivered quickly and product quality should exceed the customers' expectation.

The scope of the study can be the questionnaire reaches only the customer who uses the internet. The future study could focus on the customers who do online shopping through third parties and the shoppers who hesitates to do the online shopping. The sample size is again a major drawback. Out of multi million users, only 1000 copies of questionnaire sent to the customers. The larger sample with more diversity would have benefited our results, which couldn't be the opportunity for further research. The questionnaire is designed like scaling system; they couldn't have a chance to express their opinions verbally. The questionnaire used in the future research could possible include the verbal opinions as well.

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AUTHOR PROFILE



Dr. Kamaladevi Baskaran has over 13 years of International work experience in Industry, Applied Research & Academics. She is currently Head of Industry Relations, Department of Management and Commerce at Amity University, Dubai Campus, UAE. In the past, she worked as Director Sales with multimillion revenue Target Company in Dubai, UAE. Dr. Kamaladevi has vast skill & experience in creating, producing & executing large scale corporate & academic events. She has managed more than 120 large scale International professional events including business conferences & corporate incentive programs globally. Dr. Kamaladevi completed her Ph.D in Management at Bharathiar University, India and her graduate studies M.Phil & MBA at Dravidian University and Bharathidasan University respectively from India.

Dr.Kamaladevi's research interests lie in the area of ecommerce and digital marketing ranging from theory to design to implementation. She has collaborated actively with researchers in several other disciplines of Management & Engineering, particularly in the areas of Search Engine Optimization & Digital Transformational Technologies in addressing real world problems at the process to root cause analysis level for the success of online stores. In her areas of research, Dr. Kamaladevi has published more than 25 peer-reviewed research articles in International journals. She has been authored for three books in the field of management. She is a recipient of Best Presenter Award at various International conferences held in France, Spain, Thailand, UAE, India & Malaysia. Also she received the Best Manager Award and Best Women Achiever Award in her career. Dr. Kamaladevi also has substantial influence in professional, community, and outreach activities that is demonstrated by the various roles she has undertaken.