

ONLINE GROCERY CUSTOMERS BUYING BEHAVIOR IN METROPOLITAN CITIES- WITH SPECIAL REFERENCE TO BENGALURU CITY OF KARNATAKA STATE

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Abstract:

Online Grocer refers to a grocery store that allows private individuals and businesses to purchase groceries and grocery products online. Despite the growth and importance of online grocery, little is known about how people shop online for groceries. Previous studies identified factors influencing on-line buying behavior; challenges faced by on-line retailers but could not identify the purchase behavior of Indian grocery consumers. In order to study the online grocery retailing influence on customer buying behavior in a systematic manner a model is developed with stimulating & restraining factors with an objective to investigate the effect of stimulating and restraining factors on perceived value towards purchasing grocery online in Bengaluru City. To collect the primary data research questionnaire consisting of 69 questions was distributed to 650 respondents, out of which 632 questionnaires were found suitable for data analysis, SPSS version 21.0 has been employed for tabulation and graphical representation of data. Statistical tools like Percentage analysis, multiple regression analysis, Sobel test for mediation analysis, and One –way ANOVA were used to test the research hypothesis. The findings of the study revealed that, the stimulating factors such as website / mobile app's environment, hedonic motivations, perceived usefulness, perceived ease of use, vendor goodwill, pricing and promotion, purchase/ return policy, product assortment, convenience, and quality of service has a significant positive influence on perceived value towards online grocery shopping. Whereas the restraining factors such as perceived risk, intangibility has a significant negative influence on perceived value towards online grocery shopping, evidently discouraging customer intention to purchase grocery online. Perceived trust exhibited a significant positive influence on perceived value, which in turn significantly influenced intention to purchase grocery online. From sobel test it was evident that, the perceived value towards online grocery shopping mediates the relationship between the exogenous factors and intention to purchase grocery online.

Keywords- Online Grocery Retailing, Customer Buying Behavior, Stimulating Factors, Restraining Factors, Perceived Trust, and Perceived Value

1.1 Need for the Study

Purchasing of grocery have realized a revolution in retail market in India with the noticeable deviations in the consumer buying behavior motivated by robust growth in income, changes in lifestyles and cost effective and efficient online and mobile technologies. Since, customers allot less time to shop and much time to other activities, his/her want for comfort has driven their attention, have been frequently focused to internet shopping as a substitute mean. Hence, the quick progression of internet is altering the way consumers purchases goods and services and has quickly changed into a worldwide phenomenon. Hence, the purchase convenience has been one of the major motivations underlying consumers tendency to accept online purchasing. Even though Online grocery retailing is still fairly small, but it is gaining traction and is becoming increasingly unified into the day to day lives of Indian customers, specifically in urban areas. In spite of the progress and importance of online grocery, less is known about how individuals shop online for groceries. Previous studies identified variables affecting online buying behavior, challenges faced by online retailers but couldn't recognize the buying behavior of Indian grocery consumers.

This study will help in understanding the impact of online grocery retailing on customers' decision making in buying groceries. It also helps in identifying the perceived blockades and benefits for online grocery retailing adoption. The study is significant, because it throws lights on the unique and ever-changing factors influencing the buying habits. Additionally, Bengaluru City, (study area) is socially, economically, educationally and technologically developed with population of 65, 95,013 as per Bruhat Bengaluru Mahanagara Palike (Palike, 2018)[1]. The Bengaluru City is known as Silicon Valley and it's also the IT hub, due to the dynamism of the market and ever developing technology, online shopping implementation is becoming necessary in Bengaluru. This is the natural process of transition towards E- grocery retailing which creates possibilities of better connections with customers.

1.2 Statement of the Problem

Over last couple of years several online consumer behavior models has been developed to comprehend and forecast the extensive array of decisions that customers take based on the background of customer profile, online shopping profile, and other prevailing factors. The study makes an effort to define the impact of online grocery retailing stimulating and restraining factors on customers buying behavior in Bengaluru City. The significance of the topic "*A Study on Buying Behaviour of Customers towards Online Grocery Products: Special Reference to Bengaluru City of Karnataka*" and reasons why it is decided to explore this field are given shortly below,

1. Which are the probable factors affecting Online Shopping Behaviour of Customers in selecting Grocery products?
2. What is level of influence of Stimulating and Restraining Factors towards perceived value?
3. How the perceived value influences in intention to purchase grocery online?

1.3 Objectives of the Study

1. To investigate the effect of stimulating and restraining factors on perceived value towards purchasing grocery online in Bengaluru City.

2. To analyze the influence of customer perceived value on intention to purchase grocery online in Bengaluru City.

1.4 Scope of the Study

- The scope of the study is confined to understanding the customer buying behavior towards online grocery shopping in Bengaluru city.
- The independent variables considered in the study are stimulating and restraining factors. Customer purchase intention towards online grocery shopping is considered as a dependent variable. Perceived value is considered as mediating variable between independent variables and purchase intention.
- The study tries to investigate the effect of stimulating and restraining factors on customers perceived value towards online grocery shopping. The study also tries to understand the effect of customer's perceived value towards online grocery shopping on online grocery purchase intention.

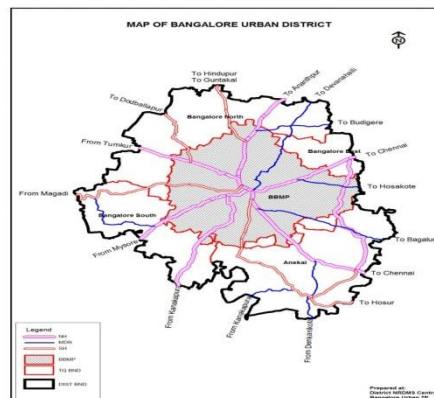


Diagram No: 1.1: Map showing of division of Bengaluru City

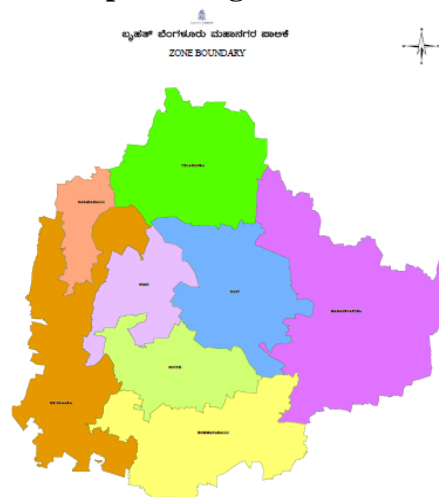


Diagram No: 1.2: Map showing of Zones in Bengaluru City under BBMP[6]

1.5 Research Model

E-commerce is one among the foremost dynamically growing sorts of trade. Customers can buy almost anything through the Internet. Several researches exhibit that there is a significantly raising popularity of online grocery shopping. The research model developed in this research is based on the inferences from literature review. Literature review

has given the theoretical foundation for construction of the model and move towards further research work.

From an extensive review of the literature, we found that, the customer buying behavior towards online grocery shopping is determined by push or the stimulating factors such as Website / Mobile App's Environment, Hedonic Motivations, Perceived Usefulness, Perceived Ease Of Use, Vendor Goodwill, Pricing & Promotion, Purchase/ Return Policy, Product Assortment, Convenience, And Quality Of Service which positively impacts the perceived value towards online grocery shopping. The pull or restraining variables such as perceived risk, perceived trust and intangibility of the products in purchase process negatively impacts the perceived value towards online grocery shopping. If the customer realizes the value, it motives the customer to purchase the grocery though online mode. Exogenous variables in the model are stimulating and restraining factors. Endogenous variables are perceived value and online grocery purchase intention. The research model is depicted in diagram No.1.3 The theoretical frame work of the study addresses the relationship between the identified thirteen constructs and perceived value towards online grocery shopping and in turn its effect on online grocery purchase intention.

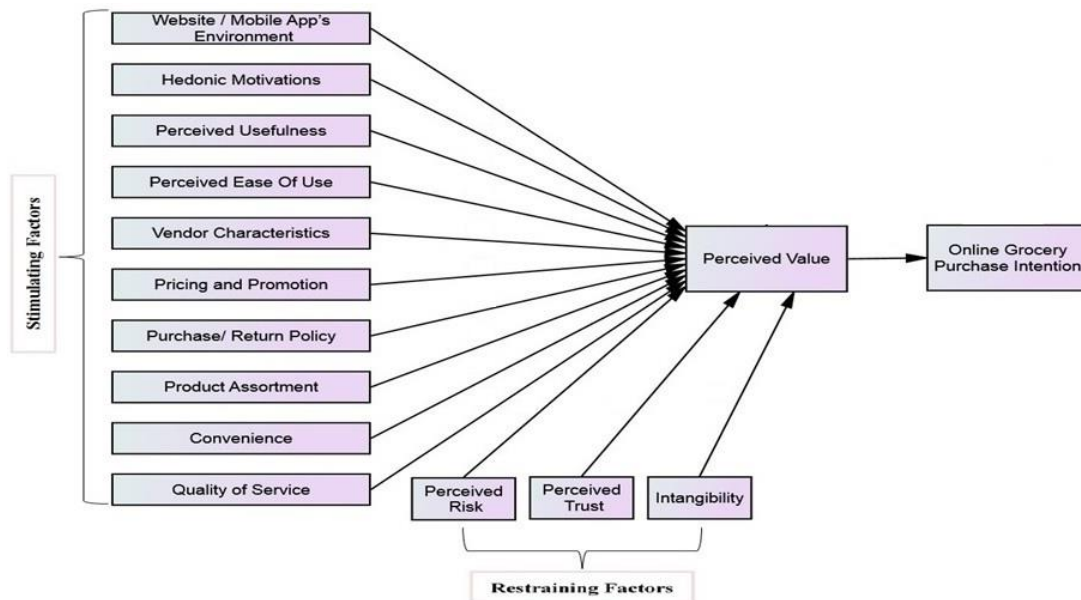


Diagram No.1.3: Research Model for Customer Buying Behaviour towards Online Grocery Shopping

Research Hypothesis

H₀₁: Website / Mobile App's Environment has no influence on customer's perceived value towards online shopping of grocery

H_{A1}: Website/ Mobile App's Environment has a significant influence on customer's perceived value towards online shopping of grocery

H₀₂: Hedonic motivation has no influence on perceived value towards online shopping of grocery

H_{A2}: Hedonic motivation has a significant influence on perceived value towards online shopping of grocery

H₀₃: Perceived usefulness has no influence on perceived value towards online shopping of grocery

- H_{A3}**: Perceived usefulness has a significant influence on perceived value towards online shopping of grocery
- H₀₄**: Perceived ease of use has no influence on perceived value towards online shopping of grocery
- H_{A4}**: Perceived ease of use has a significant influence on perceived value towards online shopping of grocery
- H₀₅**: Vendor characteristics has no influence on perceived value towards online shopping of grocery
- H_{A5}**: Vendor characteristics has a significant influence on perceived value towards online shopping of grocery
- H₀₆**: Pricing and promotions offered by vendors has no influence on perceived value towards online shopping of grocery
- H_{A6}**: Pricing and promotions offered by vendors has a significant influence on perceived value towards online shopping of grocery
- H₀₇**: Purchase, return policy of the vendor has no influence on perceived value towards online shopping of grocery
- H_{A7}**: Purchase, return policy of the vendor has a significant influence on perceived value towards online shopping of grocery
- H₀₈**: Availability of range of product assortment has no influence on perceived value towards online shopping of grocery
- H_{A8}**: Availability of range of product assortment has a significant influence on perceived value towards online shopping of grocery
- H₀₉**: Convenience in online shopping has no influence on perceived value towards online shopping of grocery
- H_{A9}**: Convenience in online shopping has a significant influence on perceived value towards online shopping of grocery
- H₀₁₀**: Quality of service provided by the vendor has no influence on perceived value towards online shopping of grocery
- H_{A10}**: Quality of service provided by the vendor has a significant influence on perceived value towards online shopping of grocery
- H₀₁₁**: Perceived Risk towards online shopping of grocery has no influence on perceived value towards online shopping of grocery
- H_{A11}**: Perceived Risk towards online shopping of grocery has a significant influence on perceived value towards online shopping of grocery
- H₀₁₂**: Perceived Trust towards online shopping of grocery has no influence on perceived value towards online shopping of grocery
- H_{A12}**: Perceived Trust towards online shopping of grocery has a significant influence on perceived value towards online shopping of grocery
- H₀₁₃**: Intangibility of the product in the purchase process has no influence on perceived value towards online shopping of grocery
- H_{A13}**: Intangibility of the product in the purchase process has a significant influence on perceived value towards online shopping of grocery

H₀₁₄: Perceived Value in the purchase process has no influence on Purchase Intention towards online shopping of grocery

H_{A14}: Perceived Value in the purchase process has a significant influence on Purchase Intention towards online shopping of grocery

H_{015.1}: Perceived value does not mediate the relationship between stimulating factors influencing buying behavior and intention to purchase grocery online.

H_{A15.1}: Perceived value mediates the relationship between stimulating factors influencing buying behavior and intention to purchase grocery online.

H_{015.2}: Perceived value does not mediate the relationship between restraining factors influencing buying behavior and intention to purchase grocery online.

H_{A15.2}: Perceived value mediates the relationship between restraining factors influencing buying behavior and intention to purchase grocery online.

1.6 Research Design

In the present study, researcher has adopted descriptive research. Researchers have employed a structured questionnaire as a research instrument to collect the required data from respondents in the study area. After the collection of data, critical analysis will be carried-out on the available facts and figures. To present the collected facts the researcher has used descriptive and inferential analysis.

1.6.1 Sources of Data

1. Primary Source Data

The primary data in the present study was collected through a structured questionnaire containing 69 closed ended questions and will be distributed among the respondents from selected in Bengaluru city.

2. Secondary Source Data

The secondary source of data was collected from magazines, books, journals, articles and from the survey reports of KPMGetc

1.6.2 Sampling Unit

Proper care was taken to identify and select only those respondents who purchase grocery online in eight zones of Bengaluru city.

1.6.3 Sampling Size

In the current study, the sample size was determined using Slovin's formula. Slovin's formula[2] permits an investigator to determine the sample size with a required degree of accuracy. The formula provides the required sample size which is required to ensure a judicious accuracy of results. Slovin's formula was used to compute the sample size (n) for the given the population size (N) with a margin of error (e) is given by,

$$n = \frac{N}{1 + (Ne^2)}$$

Where:

N is the sample size

N is the population size

E the desired level of precision (i.e. the margin of error),

In the study, since, Bengaluru city population is 6595013 [1] which is very large, hence taking the city wide representation is difficult. Assuming, at least 4 percent plus or minus precision, ie., the margin of error= 4%, so we get

$$n = \frac{N}{1 + (Ne^2)}$$

$$n = \frac{6595013}{1 + ((6595013) * (0.04)^2)}$$

$$n = \frac{6595013}{10553.02}$$

n = 624.94~625 Samples

Hence, the sample of 625 respondents in the target population should be enough to give the confidence levels the researcher needs.

1.6.4 Sampling Technique:

As the Bengaluru city population was large and heterogeneous in nature, the researcher employed the non-probability convenience sampling technique to collect 650 responses. To ensure city-wide response, 650 samples were drawn from eight zones of Bengaluru city, proportionately based on the zone wise population as per Bruhat Bengaluru Mahanagara Palike[3]. In this study, research questionnaire was circulated to 650 respondents, out of which 632 questionnaires were found suitable for data analysis. The remaining 18 questionnaires were biased or incomplete.

Table 1.1: Sampling Size

Bengaluru City	8 Zones under BBMP, Bengaluru City	Population Size	Proportion	Sample Size
	East Zone	1877635	28.5%	185
	West Zone	1661753	25.2%	164
	South Zone	947169	14.4%	94
	RR Nagar Zone	283936	4.3%	28
	Mahadevpura Zone	519663	7.9%	52
	Bhomanahalli Zone	431867	6.5%	41
	Dasarahalli Zone	411056	6.2%	40
	Yelahanaka Zone	461934	7.0%	46
Total	65,95,013	100%	650	

Source: Bruhat Bengaluru Mahanagara Palike [3]

1.7 Research Instrument:

A Structured questionnaire containing 69 closed ended questions will be used for collecting primary data. The questionnaire consists of six sections, Demographic Information (Section I), Internet Usage and Grocery Purchases (Section II), Stimulating Factors Of Online Grocery Retailing (Section III), Restraining Factors Of Online Grocery Retailing (Section

VI), Perceived Value and Purchase Intention (Section V). A structured questionnaire containing dichotomous, factual questions and multiple-choice response type questions.

2.1 Analysis

2.2 Hypothesis Test Results

One way ANNOVA test were conducted from Hypothesis 1 to 14 following are the end results.

Hypothesis Test Results
Hence, H_{A1}Accepted ; Website Environment / Mobile App’s Environmenthas a significant influence on customer’s perceived value towards online shopping of grocery .
Hence, H_{A2}Accepted ; Hedonic motivation has a significant influence on perceived value towards online shopping of grocery
Hence, H_{A3}Accepted ; Perceived usefulness has a significant influence on perceived value towards online shopping of grocery
Hence, H_{A4}Accepted ; Perceived ease of use has a significant influence on perceived value towards online shopping of grocery
Hence, H_{A5}Accepted ; Vendor characteristics has a significant influence on perceived value towards online shopping of grocery
Hence, H_{A6}Accepted ; Pricing and Promotions offered by vendors has a significant influence on perceived value towards online shopping of grocery
Hence, H_{A7}Accepted ; Purchase, return policy of the vendor has a significant influence on perceived value towards online shopping of grocery
Hence, H_{A8}Accepted ; Availability of range of product assortment has a significant influence on perceived value towards online shopping of grocery
Hence, H_{A9}Accepted ; Convenience in online shopping has a significant influence on perceived value towards online shopping of grocery
Hence, H_{A10}Accepted ; Quality of service provided by the vendor has a significant influence on perceived value towards online shopping of grocery
Hence, H_{A11}Accepted ; Perceived Risk towards online shopping of grocery has a significant influence on perceived value towards online shopping of grocery
Hence, H_{A12}Accepted ; Perceived Trust towards online shopping of grocery has a significant influence on perceived value towards online shopping of grocery
Hence, H_{A13}Accepted ; Intangibility of the product in the purchase process has a significant influence on perceived value towards online shopping of grocery
Hence, H_{A14}Accepted ; Perceived Value in the purchase process has a significant influence on Purchase Intention towards online shopping of grocery

2.3 Mediation Analysis

2.3.1 Effect of perceived value between Stimulating Factors and purchase intention

H_{015.1}: Perceived value does not mediate the relationship between stimulating factors influencing buying behaviour and intention to purchase grocery online.

H_{A15.1}: Perceived value mediates the relationship between stimulating factors influencing buying behaviour and intention to purchase grocery online.

Table No:1.2: Coefficients^a for mediation effect between stimulating factors and purchase intention

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.062	.235		8.772	.000					
	Stimulating Factors	.506	.056	.388	9.020	.000	.388	.388	.388	1.000	1.000

a. Dependent Variable: Perceived Value

Table No:1.3: Coefficients^a for mediation effect between stimulating factors and purchase intention

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.212	.301		3.704	.000					
	Perceived Value	.474	.054	.354	8.858	.000	.387	.382	.352	.991	1.009
	Stimulating Factors	.463	.052	.355	8.884	.000	.388	.383	.353	.991	1.009

a. Dependent Variable: Purchase Intention

Table No:1.4: Coefficients^a for mediation effect between stimulating factors and purchase intention

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	3.899	.189		20.596	.000					
	Stimulating Factors	.090	.045	.093	18.004	.000	.093	.093	.093	1.000	1.000

a. Dependent Variable: Purchase Intention

Mediation effect of perceived value between Stimulating Factors and purchase intention using Sobel test

Input:		Test statistic:		p-value:	
t_a	9.020	Sobel test:	6.32004906	0	
t_b	8.858	Aroian test:	6.30036953	0	
		Goodman test:	6.33991416	0	
Reset all			Calculate		

Interpretation

Coefficients between stimulating factors and purchase intentions showed that there is significant mediation effect between them. Based on the result of Sobel test and as p-value is

zero, it could be concluded that Perceived value mediates the relationship between stimulating factors influencing buying behaviour and intention to purchase grocery online.

2.3.2 Effect of perceived value between Restraining Factors and purchase intention

H_{015.2}: Perceived value does not mediate the relationship between restraining factors influencing buying behaviour and intention to purchase grocery online.

H_{A15.2}: Perceived value mediates the relationship between restraining factors influencing buying behaviour and intention to purchase grocery online.

Table No:1.5: Coefficients^a for mediation effect between restraining factors and purchase intention											
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	4.244	.259		16.407	.000					
	Restraining Factors	-.018	.063	-.013	10.281	.000	-.013	-.013	-.013	1.000	1.000

a. Dependent Variable: Perceived Value

Table No:1.6: Coefficients^a for mediation effect between restraining factors and purchase intention											
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	3.102	.224		13.831	.000					
	Restraining Factors	-.007	.043	-.007	9.155	.00	-.012	-.007	-.007	1.000	1.000
	Perceived Value	.288	.032	.387	8.982	.000	.387	.387	.387	1.000	1.000

a. Dependent Variable: Purchase Intention

Table No:1.7: Coefficients^a for mediation effect between restraining factors and purchase intention											
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	4.325	.193		22.420	.000					
	Restraining Factors	-.012	.047	-.012	14.252	.000	-.012	-.012	-.012	1.000	1.000

a. Dependent Variable: Purchase Intention

Mediation Effect of Perceived Value between Restraining factors and Purchase Intention Using Sobel Test

Input:		Test statistic:	p-value:
t_a	10.281	Sobel test: 6.76416588	0
t_b	8.982	Aroian test: 6.74609195	0
		Goodman test: 6.78238586	0
Reset all		Calculate	

Interpretation

Coefficients between restraining factors and purchase intentions showed that there is significant mediation effect between them. However, based on the result of Sobel test and as p-value is zero, it could be concluded that Perceived value mediates the relationship between restraining factors influencing buying behaviour and intention to purchase grocery online.

2.4 CONFIRMATORY FACTOR ANALYSIS (CFA)

In this study CFA was employed to ascertain the structural validity model. The current study conducted the CFA using co-variance based structural equation modelling (CB-SEM); for which AMOS version 21.0 software was used.

Analysis Summary

The model is recursive.

Sample size = 632

TableNo.1.8: Variable counts (Group number 1)

Number of variables in your model:	15
Number of observed variables:	15
Number of exogenous variables:	13
Number of endogenous variables:	2

Source: Field Survey

Table No.1.9: CMIN (Chi-Square/Degrees of Freedom) χ^2 /df -CFA

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	28	79.499	17	.000	4.676
Saturated model	45	.000	0		
Independence model	15	5910.390	36	.000	164.178

Source: Field Survey

Interpretation

Chi square is often called the ‘badness of fit’ indicator with higher values significance levels indicating a bad fit of the research data to the proposed model.

From **Table No.1.9**, the normed chi square for the model was 4.676 and considered well within the acceptable limit of 5.0 (Wheaton et al, 1977) [305] indicating a good model fit.

Table No.1.10: Baseline Comparisons-CFA

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.987	.972	.989	.977	.989
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Source: Field Survey

Interpretation

NFI & NNFI (Normed Fit Index & Non-Normed Fit Index) are incremental fit index and compare the chi square value of the model to chi square value of the null model. The value of NFI above 0.90 and above is considered a good indicator of fit. Form **Table No.1.10**, The model returned NFI value of 0.987 which is more than 0.90 representing a good model fit.

As NFI is sensitive to sample size, NNFI or TLI (also called the Tucker Lewis index) adjusted for sample size, is widely used. The current model had a NNFI of 0.977 which indicates a good model fit (Hu & Bentler, 1999).

CFI (Comparative Fit Index) is an extension of NFI that takes in to account the impact of sample size. Introduced by Bentler, it is one of the most popular fit index and values close to 1 are considered desirable. The current research model had a CFI of 0.989 and can be considered an indication of good model fit as it is above the recommended level of 0.90 (Hu & Bentler, 1999) .

TableNo.1.11: Root Mean Square Error of Approximation -CFA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.078	.061	.096	.004
Independence model	.522	.511	.533	.000

Source: Field Survey

Interpretation

RMSEA (Root Mean Square Error of Approximation)

RMSEA is considered to be the most widely used and informative fit index. According to Mac Callum et al (1996) [4], an RMSEA of less than 0.08 indicates a good

model fit. From **Table No1.11**, The CFA returned a RMSEA of 0.078 indicating a good fit between the descriptive data and the proposed research model.

The summary of all the indices are provided in **Table No.1.12**. Based on the standardized regression coefficient between the study variables, obtained through the CFA, hypotheses from 1 to 11 were tested.

Table No.1.12: Summary of Model Fit Indices – CFA

Fit Index	Value Obtained	Value Desired
CMIN (Chi-Square/Degrees of Freedom) χ^2 /df	4.676	Between 2 and 5
Normed Fix Index (NFI)	0.987	0.9 or more
Comparative Fit Index (CFI)	0.989	0.9 or more
Tucker Lewis Index TLI (NNFI)	0.977	0.9 or more
Root Mean Square Error of Approximation (RMSEA)	0.078	0.08 or less
P value	0.000	0.05 or less
PCLOSE	0.004	0.05 or less

Source: Field Survey

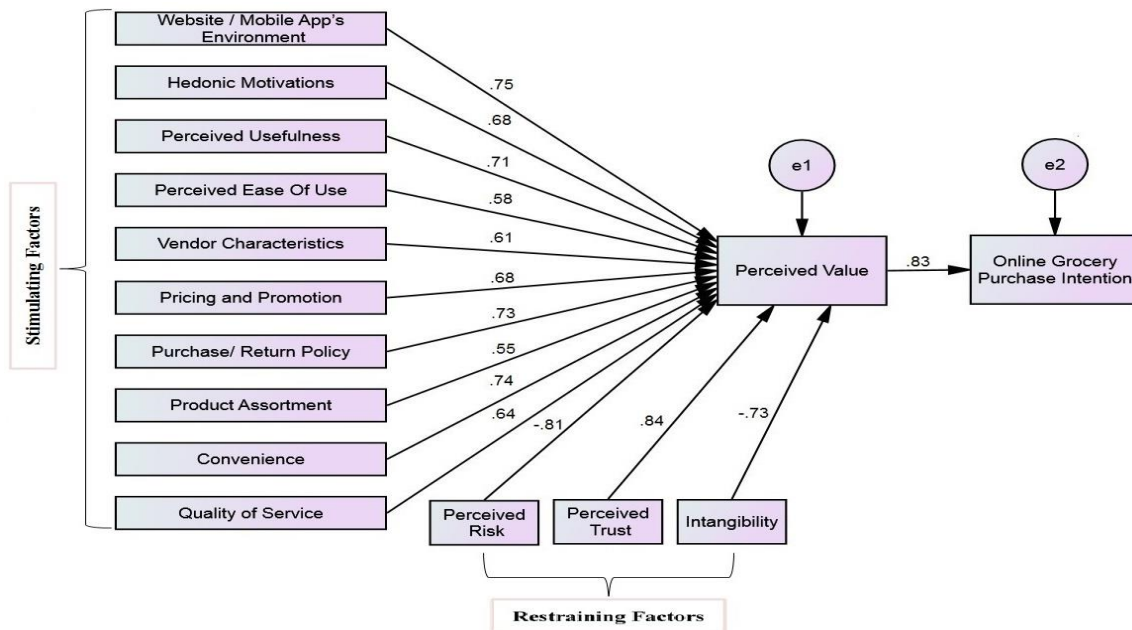


Diagram No.5. 1: Final Model for Customer Buying Behaviour towards online shopping of grocery

Table No.1.13: Hypothesis Testing Results: Construct – CFA

Construct Variables	Path Coefficient	P	Conclusion
PV<---WME	.752	***	Hence, H_{A1}Accepted ; Website Environment / Mobile App's Environment has a significant influence on customer's perceived value towards online shopping of grocery .
PV<---HM	.681	.015	Hence, H_{A2}Accepted ; Hedonic motivation has a significant influence on perceived value towards online shopping of grocery
PV<---PU	.713	***	Hence, H_{A3}Accepted ; Perceived usefulness has a significant influence on perceived value towards online shopping of grocery
PV<---PUE	.579	***	Hence, H_{A4}Accepted ; Perceived ease of use has a significant influence on perceived value towards online shopping of grocery
PV<---VC	.612	.003	Hence, H_{A5}Accepted ; Vendor characteristics has a significant influence on perceived value towards online shopping of grocery
PV<--- PP	.681	***	Hence, H_{A6}Accepted ; Pricing and Promotions offered by vendors has a significant influence on perceived value towards online shopping of grocery
PV<--- PRP	.732	***	Hence, H_{A7}Accepted ; Purchase, return policy of the vendor has a significant influence on perceived value towards online shopping of grocery
PV<--- PA	.547	.023	Hence, H_{A8}Accepted ; Availability of range of product assortment has a significant influence on perceived value towards online shopping of grocery
PV <--- CON	.736	***	Hence, H_{A9}Accepted ; Convenience in online shopping has a significant influence on perceived value towards online shopping of grocery
PV <--- QOS	.638	.002	Hence, H_{A10}Accepted ; Quality of service provided by the vendor has a significant influence on perceived value towards online shopping of grocery
PV<--- PR	-.813	***	Hence, H_{A11}Accepted ; Perceived Risk towards online shopping of grocery has a significant influence on perceived value towards online shopping of grocery
PV<--- PT	.841	***	Hence, H_{A12}Accepted ; Perceived Trust towards online shopping of grocery has a significant influence on perceived value towards online shopping of grocery

PV <--- INT	-.732	***	Hence, H_{A13}Accepted ; Intangibility of the product in the purchase process has a significant influence on perceived value towards online shopping of grocery
PI <--- PV	.831	***	ce, H_{A14}Accepted ; Perceived Value in the purchase process has a significant influence on Purchase Intention towards online shopping of grocery

Source: Field Survey

Interpretation

The objective of conducting CFA was to identify and explain the influence of exogenous variable son perceived value towards online shopping of grocery , and in turn its influence on online grocery purchase intention. The researcher found that, all the variables considered in the fifteen construct namely Website / Mobile App’s Environment, Hedonic Motivations, Perceived Usefulness, Perceived Ease Of Use, Vendor Goodwill, Pricing And Promotion, Purchase/ Return Policy, Product Assortment, Convenience, Quality of Service on Perceived value for this research, 15 variables formed part of the structural equation model fit. It was found that all 13 variables contributed towards supporting the relevant hypothesis. It is also evident that perceived value positively affects online grocery purchase intention.

3.1 Findings based on Objectives and Hypotheses Testing

Following findings are brought-down based on the testing of hypotheses?

Objective 1: To investigate the effect of stimulating and restraining factors on perceived value towards purchasing grocery online in Bengaluru City.

- The website or mobile app related to online shopping will be featured in such a way that it will be more user friendly, attracting more customers and bring them into the stream of online shopping of grocery. Majority of the respondents accepted all the factors considered for the study except for the factor where they preferred to buy from online grocer whose website/ mobile app design is attractive and helps them in searching grocery online. There is significant influence of website/mobile app environment on perceived value of online grocery shopping (Based on the results of ANOVA, the P-value is 0.00 which is less than critical value 0.05).
- Majority of the respondents widely accepted that buying grocery online make them feel a sense of pride and buying groceries online make them feel more inclusive in social group. It was evident from the one-way ANOVA that, hedonic motivation has a significant influence on customer’s perceived value towards online shopping of grocery .
- Online shopping of grocery is gaining more popularity due to its perceived usefulness, Majority of the respondents accepted that, online shopping of grocery has various perceived usefulness. The reason might be, through online shopping of grocery they were able to reduce the hassle of store crowds and queuing during payment. The one-way ANOVA test revealed that, Perceived usefulness has a significant influence on perceived value towards online shopping of grocery .

- All the perceived ease to use factors was accepted by around fifty percent of the total respondents. The majority of respondents disagreed that, they are unable to use existing usefulness in online shopping of grocery. Majority of the respondents opinioned that, through online shopping of grocery they were easily able find the desired grocery products and they were easily able to compare the prices with different products. They also felt that, it is very easy to shop grocery online through their personal devices like smart phones or tablets. The one way ANOVA test revealed that, perceived ease to use has a significant influence on perceived value towards online shopping of grocery .
- The majority of the respondents opinioned that, advertisement and promotional activities along with the goodwill of the vendor are the most influential characteristics in online grocery shopping. The one way ANOVA test revealed that, vendor characteristics has a significant influence on perceived value towards online shopping of grocery .
- The majority of the respondents felt that, through online grocery shopping they get value for their money which might be due of the reward points, promo and loyalty points they gain while online shopping. 44.3 percent of the respondents opinioned that, they are benefited with the offers and discounts given by online grocery retailers at the time of online shopping. 42.1 percent of the respondents were satisfied with online grocery shopping as it allowed them to buy the same or similar products at cheaper prices than purchasing the same at physical stores. The one-way ANOVA test supported the hypothesis that, pricing and promotion has a significant influence on perceived value towards online shopping of grocery
- The majority of respondent comprehend that, pre-registration is required for every purchase. It was identified from the analyses that, respondents would like to shop groceries in more if the product return procedure were still easier. It was also found that, online purchase of grocery is not hassle free. The one way ANOVA test supported the hypothesis that, purchase/return policy has a significant influence on perceived value towards online shopping of grocery .
- It was found from analysis that, online shopping of grocery allows them to buy the products that are not available in physical store and through online shopping they get fresh products with longer durability. The respondents pointed out that, online shopping of grocery doesn't always offer them a variety of products as they get while shopping other than groceries products. The one-way ANOVA test revealed that, product assortment has a significant influence on perceived value towards online shopping of grocery.
- The majority respondents felt that, online grocery shopping can save time when compared to traditional grocery shopping. The respondents felt that, through online shopping they can shop anytime, anywhere at their convenience. Which is one of the major merits in online grocery shopping. The one-way ANOVA test showed that, convenience in using online grocery shopping has a significant influence on perceived value towards online shopping of grocery .
- With regard to the quality of service in online shopping of grocery, it was noted that, majority of the respondents feel that products are delivered as per the promised time. The respondents opinioned that, they would prefer that vendor who will understand their needs and encourage them to give suggestions. It was also observed that, the respondents have received personalized customer service if they purchase grocery through online. The one-way

ANOVA test showed that, quality of service offered by the vendor has a significant influence on perceived value towards online shopping of grocery.

- The majority of the respondents complained that, they are not getting exact product in accordance to the order, they also felt that, delivery charges are very high in online shopping of grocery. The majority of the have a doubt in mind regarding quality of the product purchased and also doubt of receiving the product purchased online. The one-way ANOVA test indicated that, perceived risk towards online shopping of grocery has a significant influence on perceived value towards online shopping of grocery.
- Majority of the respondents felt that, their trust towards online shopping of grocery motivates them to buy grocery products online. It was observed that, respondents would prefer cash payment at the time of delivery for online purchase of grocery products, which might connote that, there exist distrust to some extent towards the vendors. The one-way ANOVA test revealed that, perceived trust towards online shopping of grocery has a significant influence on perceived value towards online shopping of grocery .
- Majority of the respondents felt that, there is a need to see and touch the product before they buy grocery online and absence of personal quality check makes them to avoid online shopping of grocery. The one-way ANOVA test indicated that, intangibility in online grocery shopping has a significant influence on perceived value towards online shopping of grocery .

Objective 2: To analyze the influence of customer perceived value on intention to purchase grocery online in Bengaluru City.

- Majority of the respondents conveyed that, it was good for them to buy online grocery product that may because through online shopping of grocery they accessed the products in accordance to their desire and taste. They also felt that, the value of the products purchased online was worth when compared with the money they have paid for it. The respondents preferred to buy groceries online rather than buying it from physical stores.
- Majority of the respondents accept that they will shop grocery online in future also and would like to continue to purchase grocery online. And they will recommend their friends and relatives to buy groceries online. The one-way ANOVA test exhibited that, perceived value towards online shopping of grocery has a significant influence on perceived value towards online shopping of grocery.
- Coefficients between stimulating factors and purchase intentions showed that there is significant mediation effect between them. Based on the result of Sobel test and as p-value is zero, it could be identified that, perceived value mediates the relationship between stimulating factors influencing buying behaviour and intention to purchase grocery online.
- Coefficients between restraining factors and purchase intentions showed that there is significant mediation effect between them. However, based on the result of Sobel test and as p-value is zero, it could be identified that, Perceived value mediates the relationship between restraining factors influencing buying behaviour and intention to purchase grocery online.

6.3 CONCLUSION

- Online grocery shopping is a totally new method of purchasing favorite grocery products for domestic consumption. In the current highly competitive grocery retailing in India, devising a

successful and sustainable online grocery retailing has become a immediate importance for several online grocery businesses, even though shopping online for groceries varies significantly from general online shopping, because of perishability and assortment of the product. The research focused on the three questions: 1) Which are the probable factors affecting Online Shopping Behaviour of Customers in selecting Grocery products? 2) What is level of influence of Stimulating and Restraining Factors towards perceived value? 3) How the perceived value influences in intention to purchase grocery online? The scope of the study was confined to understanding the customer buying behaviour towards online shopping of grocery in Bengaluru city. The independent variables considered in the study are stimulating and restraining factors. Customer purchase intention towards online shopping of grocery is considered as a dependent variable. Perceived value is considered as mediating variable between independent variables and purchase intention.

- The findings of the study revealed that, the stimulating factors such as website / mobile app's environment, hedonic motivations, perceived usefulness, perceived ease of use, vendor goodwill, pricing and promotion, purchase/ return policy, product assortment, convenience, and quality of service has a significant positive influence on perceived value towards online shopping of grocery. Whereas the restraining factors such as perceived risk, intangibility has a significant negative influence on perceived value towards online shopping of grocery, evidently discouraging customer intention to purchase grocery online. Perceived trust exhibited significant positive influence on perceived value, which in turn significantly influenced intention to purchase grocery online. From sobel test it was evident that, the perceived value towards online shopping of grocery mediates the relationship between the exogenous factors and intention to purchase grocery online.
- Purchase intention was also influenced by demographic factors like, education and annual income. But surprisingly the demographic factors such as, gender, martial status and age of the respondents had no influence on purchase intention towards online shopping of grocery. Finally, the study offers a unique perspective on online grocery purchase intention. The suggestions of the research may help vendors to trigger purchase intention in the minds of the customers in Bengaluru City.

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