



Impact of Online Shopping on Traditional Retail Stores: A Survey-Based Study of Consumer Perceptions

¹Kodi.Manasa Sai,²Dr. Venkateshwara Rao. Podile,³Guduri Nagaveni

¹research scholar, BBA department, KLEF, Vaddeswaram, Andhra Pradesh, India.

²Head of the department, BBA Department, KLEF, Vaddeswaram, Andhra Pradesh, India

³Research Scholar, KL Business School, KLEF, Vaddeswaram, Andhra Pradesh, India

DOI : <https://doi.org/10.55248/gengpi.07.1026.3305>

ABSTRACT :

Online shopping platforms like Amazon, Flipkart, Myntra and Meesho have altered the landscape of consumer buying behavior, and traditional retail stores are now in competition with them to attract the same customers. This paper investigates the consumers' perception of the impact of online shopping on traditional retail stores. A descriptive cross-sectional survey design was employed, and a structured online questionnaire was administered to 34 respondents between 17 September and 3 October 2026. The questionnaire gathered information on demographics and usage patterns, reasons for choosing each channel, and 13 five-point Likert statements. Three independent variables were created from the three sets of statements: Price and Discount Advantage (PD), Online Convenience and Product Variety (CV), and Traditional Store Strengths (TS). The dependent variable was Perceived Impact on Traditional Retail Stores (IMP). The reliability of the measurement instrument was satisfactory (Cronbach's alpha 0.75 to 0.86 for all four constructs; 0.93 for the 12 statements). Respondents rated price and discounts highest (mean 3.86), followed by convenience and variety (3.80) and traditional store strengths (3.72); perceived impact on traditional stores had a mean of 3.65. All three factors were strongly correlated with perceived impact ($r = 0.65$ to 0.84 , $p < 0.001$). In a multiple regression ($R^2 = 0.726$, $F(3, 30) = 26.46$, $p < 0.001$), only Online Convenience and Product Variety was a significant independent predictor ($B = 0.846$, $p < 0.001$). Physical inspection of products (58.8%), immediate purchase (50.0%) and trust (47.1%) were the main reasons for visiting traditional stores, and 61.8% of respondents preferred both channels equally. The sample is small and mostly young, female and student, so the findings are preliminary.

Keywords: Online shopping, Traditional retail stores, E-commerce, Consumer perception, Convenience, Price and discounts, Product variety, Omnichannel retailing.

1. INTRODUCTION

Physical stores have been the source of retail goods for millennia, providing the physical proximity for customers to see and compare things and to establish a personal rapport with a salesperson. E-commerce has created a second route. It is now possible to have a very broad range of goods delivered to the home, with prices and deals updated on the tap of a screen, and to compare prices in seconds, from the convenience of a smart phone. In India, this route is used increasingly to buy through online markets including Amazon, Flipkart, Myntra and Meesho.

What this means in concrete terms for the local shop, the neighbourhood clothing shop and the little merchant: how much has e-commerce shifted the positioning? Customers attend shops less frequently, demand, have, in the end, a cheaper one and merely use the shop as an exhibition point before they purchase from the net. Nevertheless, conventional shop like to sell locations have some advantages which the online note-finding means solely finds difficult to duplicate: check, prospect, wealth to form of real quick, confidence by way of existence is not on the net, intimate service. The influence of web shopping on brick-and-mortar stores thus is not unidirectional. It hinges on the relative draw of shopping online and the draw of shopping in a store. In this paper we analyze both dimensions, by asking shoppers how they choose and are attracted to online stores, and what makes them stay in brick-and-mortar stores. We measure both the online draw (price and discounts, convenience, product-selection) and the pull of brick-and-mortar stores (the ability to physically inspect the product, better personal service), as well as how these affect traditional retailers in terms of decreased trips to the store, intensified competition and lower sales.

2. REVIEW OF LITERATURE

The following reviews are arranged according to four themes. Motives for shopping online, Trust and the choice of channel, Competition between on-

line and store channel and The retailer's reaction.

A. Reasons for shopping online

1. Brynjolfsson and Smith (2000): conducted a study of online versus offline prices for books and CDs and found that online prices were lower on average. That the prices of books and CDs were lower provided some explanation for why online demand may have been initially strong. The study considered only two product categories in the early years of e-commerce.
2. Dholakia and Uusitalo (2002): analysed consumers switching to electronic stores in Finland and revealed that, however, perceived shopping benefits like convenience and saved time distinguished online shopping consumers from another shopper. But the sample was selected from a single country where ecommerce has just begun.
3. Rohm and Swaminathan (2004): grouped on-line buyers according to motivation as consumers searching for comfort, consumers seeking for variety, balanced buyers and buyers oriented towards stores. This indicates that straight shopping has a secure segment of regular users. The typology was based on US sample and it may not be applicable to Indian shopping habits.
4. To, Liao and Lin (2007): stated online shoppers are driven by two types of motives: utilitarian (efficiency, convenience, choice) and hedonic. The study was conducted in Taiwan and it did not make a comparison between online buying and buying in real stores.
5. Jiang, Yang and Jun (2013) created an online shopping convenience scale that measures five components; access convenience, search convenience, evaluation convenience, transaction convenience, possession convenience. But measured convenience from the online side only and failed to test the impact it has on the offline traditional retailer.
6. Chiu, Wang, Fang and Huang (2014): revealed that utilitarian and hedonic value positively influence repurchase intention of business-to-consumer e-commerce, whereas perceived risk negatively affects it. The study is cross-sectional and studied only one market.

B. Trust and choice of channel

7. Gefen, Karahanna and Straub (2003): suggested that trust, perceived usefulness and ease of use influence the purchase intention; however, the sample was a student sample and a specific type of online vendor.
8. Pavlou (2003): showed that trust and perceived risk are perceived as the most influential factors in the consumer's acceptance of the use of electronic commerce. These findings, however, are based on students' respondents and not to suggest similar attitudes towards trust towards real stores.
9. Kacen, Hess and Chiang (2013): conducted a study contrasting online and physical store attitudes and concluded that the channel choice is product specific and depends on consumer risk perceptions, convenience and fun. However, the study was only conducted in one national setting.
10. Chocarro, Cortiñas and Villanueva (2013): "how the shift from online to offline channels, or the other way around, is moderated by the item in question, is somewhat different from an approach which focuses on market-level differences. The research was only conducted in one country and didn't assess the impact on in-store sales."
11. Sinha and Kim (2012): studied Indian online buying behavior and indicated that convenience, price, trust and security issues are a factor in the online buying decision. The limitation was that the research study only interviewed online buyers and not conventional retailers.

C. Competition between online and physical channels

12. Forman, Ghose and Goldfarb (2009): showed that online book sales declined after a local bookstore opened in the local market. Their results suggest that local and online goods are substitutes, and that online benefits are greater when local choices are limited. But this is just one market in the US.
13. Chu, Arce-Urriza, Cebollada-Cavalero and Chintagunta (2010): found a variation in effects of prices and promotions between online and offline grocery channels. One product category (groceries) was used.
14. Verhoef, Neslin and Vroomen (2007): identified the research-shopper phenomenon – where consumers look in one channel but buy elsewhere, draining sales away from the information channel. However, the research relied on data from the European market and a narrow selection of product categories.
15. Rapp, Baker, Bachrach, Ogilvie and Beitelspacher (2015): showed that perceived customer showrooming (shopping in a store and purchasing elsewhere) diminishes retail salespeople's self-efficacy and performance. But the data are based on salespeople's perceptions rather than actual sales records.

D. Response of retailers

16. Pauwels and Neslin (2015): split effect into incremental and cannibalised sales when an online and catalogue retailer opened physical stores, total revenue increased despite channel switching. Only one firm was examined.
17. Cao and Li (2015): found that cross-channel integration enhances the sales increase of retailers. But their sample was on US firms, therefore that finding may not apply for small Indian retailer.
18. Verhoef, Kannan and Inman (2015): defined that between multichannel and omni-channel, " the line between physical and online channels is blurring". On the other hand, the paper is conceptual and there are no primary data.
19. Bell, Gallino and Moreno (2018): showed that offline showrooms increase demand for the retailer, who sells mostly online. However, this evidence comes from an experiment that involved only one retailer.

20. Grewal, Roggeveen and Nordfält (2017): investigated the impact of technology, data and evolving shopper expectations on the future of retailing. The paper provides a conceptual review and does not test customer perceptions in India.

3. RESEARCH GAP

Why consumers shop online (price, convenience, variety, trust) and that online and physical channels are competitors is shown in the literature, but three issues remain. Firstly, most prior research has focused on measuring one dimension, the online channel only, or on individual product categories, and prior research has rarely designed questionnaire items that measured "online pull" and "strengths of traditional stores". Secondly, most of the published research has been conducted in the United States, Europe or East Asia, little is known of the perceived impact on retailers of young Indian consumers. Thirdly, while published research on the retailer's perspective rely on firm data, the perspective of the consumer, the customer at the point-of-sale who chooses where to shop, is rarely measured. This dissertation bridges these issues by testing items that measure online pull, strengths of traditional stores and perceived impact on stores in the same study.

4. PROBLEM STATEMENT

Discounts are available on the internet, there is a very wide choice, you can easily check prices and have goods delivered to your door. Traditional retail outlets - traditional small shops and local stores, say, may therefore be losing visits and sales. But the consumer also values the ability to see and handle goods, make immediate purchases and the personal contact with the seller. Which of these forces is most important for consumers and whether consumers believes that traditional stores can compete is not known. The issue in this research is to identify which aspects of shopping on the internet have the strongest association with the impact on traditional stores and how the effects of traditional stores are associated with the forces on the internet.

5. Objectives:

1. To describe the profile and shopping behavior of the respondents.
2. To analyze the reasons why customers prefer online stores and companies stores. -The reasons for customer loyalty to online stores and companies.
3. To gauge the extent to which respondents felt online shopping affects the high street.
4. In order to test the effect of Price and Discount Advantage and Online Convenience and Product Variety on perceived effect on traditional retail store.
5. To study the impact of each of the traditional store strengths on the traditional retail stores.
6. To see whether frequent or infrequent online shoppers believed in the impact.
7. For noting down the responses of people about the survival of the conventional stores and the steps they should take to take on competition.

6. RESEARCH METHODOLOGY

The research design employed is a descriptive, cross-sectional and a quantitative research. Data were obtained from both primary and secondary sources. Primary data were collected using online structured questionnaires. Secondary data were extracted from published journal articles on the related topics.

6.1 Variables (dependent and independent)

Dependent Variable (DV): Perceived Impact on Traditional Retail Stores (IMP)– this is the dependent variable that is affected by the independent variable – online shopping. It is measured through 3 Likert statements that look at decline in store visits (footfall), increased competition for store and negative impact on store sales. Larger number indicates the respondent perceives a greater impact of online shopping on traditional stores.

Independent variables (IV): the three factors that are hypothesised to account for the dependent variable.

- Price and Discount Advantage (PD): the importance of price, discounts and online price comparison for the respondent when shopping.

- How important convenience is, and the percentage by which the respondent believes online stores are more convenient and offer more variety than traditional stores.

- Traditional Store Strengths (TS): the importance for the respondent of talking to the shop assistant, touching and trying out the product and being served in a traditional store. This was considered a retention factor and was hypothesized to influence in the other direction.

Control and descriptive variables in the background: age, gender, occupation, income per month, frequency of buying online, frequency of going to a store, what platforms, what products, why what platform and what overall channel. The last statement on whether traditional stores should offer digital services (Q24) was separately regressed.

Table 1: Variables, questionnaire items and reliability (n = 34)

Variable	Role	Code	Questionnaire items	No. of items	Cronbach's α
Perceived Impact on Traditional Retail Stores	Dependent	IMP	Q15 Online shopping has reduced my visits to traditional stores; Q20 Growth of online stores has increased competition for traditional stores; Q21 Online stores have negatively affected the sales of traditional stores	3	0.76
Price and Discount Advantage	Independent	PD	Q9 Importance of price when choosing an online store; Q18 Online discounts influence my purchase decisions; Q19 Online price comparison has changed the way I purchase	3	0.79
Online Convenience and Product Variety	Independent	CV	Q10 Importance of convenience in online shopping; Q16 Online stores are more convenient than traditional stores; Q17 Online stores offer more product variety	3	0.75
Traditional Store Strengths	Independent	TS	Q14 Importance of personal interaction with the salesperson; Q22 Traditional stores give better opportunity to examine products; Q23 Personal service is an important advantage of traditional stores	3	0.86

Q10 and Q16 alone gave a low reliability ($\alpha = 0.54$), and Q17 (product variety) is a single item, so convenience and variety were combined into one construct ($\alpha = 0.75$). Each construct score is the mean of its items.

6.2 Hypotheses

Table 2: Hypotheses of the study

No.	Null hypothesis (H0)	Alternative hypothesis (H1)
H1	Price and Discount Advantage has no significant effect on the perceived impact on traditional retail stores.	Price and Discount Advantage has a significant effect on the perceived impact on traditional retail stores.
H2	Online Convenience and Product Variety has no significant effect on the perceived impact on traditional retail stores.	Online Convenience and Product Variety has a significant effect on the perceived impact on traditional retail stores.
H3	Traditional Store Strengths have no significant relationship with the perceived impact on traditional retail stores.	Traditional Store Strengths have a significant relationship with the perceived impact on traditional retail stores.
H4	The three independent variables together do not significantly explain the perceived impact.	The three independent variables together significantly explain the perceived impact.
H5	Frequent and infrequent online shoppers do not differ significantly in the perceived	Frequent and infrequent online shoppers differ significantly in the perceived impact.

No.	Null hypothesis (H0)	Alternative hypothesis (H1)
	impact.	
H6	The three independent variables do not differ in their relative importance to respondents.	The three independent variables differ in their relative importance to respondents.

6.3 Questionnaire development

The questionnaire consisted of 30 questions divided into three sections. Part A (Q1 to Q8) focused on demographics and online shopping information including age group, gender, occupation, monthly income, frequency of online purchase, online shopping platforms used, reasons for online shopping and on which products, online shopping platforms used and reasons for using online shopping platforms. Part B (Q9 to Q24) consisted of ordering of items on an importance and agreement scale (scored on a Likert scale where 1 = Strongly Disagree and Not Important, 5 = Strongly Agree and Very Important). Questions Q11 to Q13 focused on number of store visits by customers. Part C (Q25 to Q30) focused on overall channel preference, biggest advantage of each channel, whether traditional stores will die down and what traditional stores need to do to compete with online shopping, and finally the overall impact of online shopping to traditional stores.

6.4 Sample collection and data gathering

Sampling The study used a convenience sample. The online questionnaire was distributed to shoppers, and the responses were collected from 17 September to 3 October 2026. The completed questionnaires were totaled to 34 and data were included in the analysis. The questionnaires were optional for the shoppers, and no identifiable data was used.

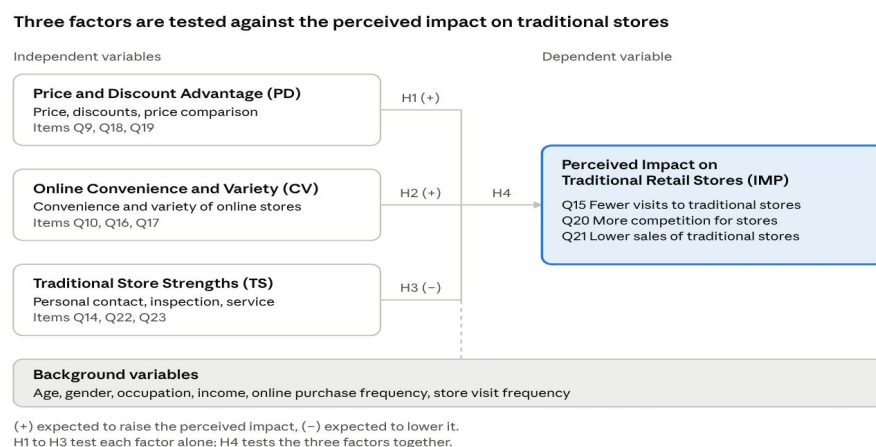
6.5 Data processing and analysis tools

The responses were coded and analyzed in Python (pandas, NumPy and SciPy). The analyses were as follows: frequency and percentage; mean and standard deviation; Cronbach's alpha (0.70 used as the normal threshold for reliability, Nunnally, 1978); one-sample t-test (neutral middle point of 3.00); Friedman (20) test with Wilcoxon (21) sign test to compare the independent variables; Pearson and Spearman correlation; multiple linear regression with variance inflation factors (VIF) and the Durbin-Watson statistic; Mann-Whitney (22) U test and Welch (23) t-test for group comparison; Kruskal-Wallis (24) test; and Chi-square (25) test of association. The significance level used throughout was 5%.

7. CONCEPTUAL FRAMEWORK

This hypothesis assumes perceived impact on traditional stores to be derived from two conflicting forces. The attraction of online stores (price and discounts, convenience, and variety) is expected to have positive influence on the perceived impact. The strengths of traditional stores (personal interaction and examination, personalized service) are expected to act as retention factors, and therefore correlate negatively with impact. Demographic and usage variables are used as background variables.

Figure 1: Conceptual framework of the study



Conceptual framework 3 independent variables 1 dependent variable

Price and Discount Advantage, Online Convenience and Variety, and Traditional Store Strengths. Perceived Impact on Traditional Retail Stores is the dependent variable. The signs represent the expected direction of each effect (H1 to H3), and H4 investigates the combined effect of the three factors.

8. DATA ANALYSIS AND FINDINGS

8.1 Characteristics of participants

Table 3: Respondent characteristics (N = 34)

Variable	Category	n	%
Age	18–25 years	31	91.2
	Below 18 years	3	8.8
Gender	Female	30	88.2
	Male	4	11.8
Occupation	Student	32	94.1
	Homemaker	1	2.9
	Employee	1	2.9
Monthly income	Below ₹15,000	23	67.6
	₹15,001–₹30,000	2	5.9
	₹30,001–₹50,000	1	2.9
	Prefer not to say	8	23.5

The sample is young, mostly female and almost entirely made up of students with low or undisclosed income. The results therefore describe young, student shoppers and should not be read as the view of all consumers.

8.2 Online shopping and store visit behavior

Table 4: Shopping behavior of respondents (N = 34)

Variable	Category	n	%
Frequency of online purchase	Rarely	5	14.7
	Sometimes	14	41.2
	Frequently	8	23.5
	Very frequently	7	20.6
Frequency of visiting traditional stores	Rarely	4	11.8
	Sometimes	15	44.1
	Frequently	13	38.2
	Very frequently	2	5.9
Overall preferred shopping type	Both equally	21	61.8
	Online stores	7	20.6
Platforms used (multiple response)	Traditional stores	6	17.6
	Meesho	18	52.9
	Amazon	17	50.0
	Flipkart	15	44.1
	Myntra	11	32.4
Products bought online (multiple response)	Other	5	14.7
	Clothing	28	82.4
	Beauty and personal care	14	41.2
	Groceries	9	26.5
	Electronics	7	20.6
	Household products	6	17.6
	Books and stationery	1	2.9
	Other	1	2.9

Note: for multiple response questions, 34 respondents and totals more than 100%.

Almost two in five (44.1%) buy online very or fairly frequently and 44.1% also shop in shop traditional stores very or fairly frequently (so most respondents use both). The most common type of purchase made online is clothing (82.4%). Most (61.8%) said they like online and traditional store shopping equally and the rest were divided nearly evenly between the two.

8.3 Reasons for preferring each channel

Table 5: Reasons for choosing online stores and traditional stores (multiple responses, N = 34)

Reasons for preferring online stores	n	%	Reasons for preferring traditional stores	n	%
Convenience	16	47.1	Physical examination of products	20	58.8
Discounts and offers	15	44.1	Immediate purchase	17	50.0
Home delivery	12	35.3	Trust	16	47.1
Lower prices	11	32.4	No waiting for delivery	6	17.6
Wide product variety	7	20.6	Negotiation of price	5	14.7
Easy price comparison	4	11.8	Personal service	3	8.8
Customer reviews	4	11.8	Easy returns and exchanges	3	8.8
			Other	2	5.9

Convenience (47.1%) and discounts (44.1%) were the main reasons for shopping at online stores. Physical examination (58.8%), immediate purchase (50.0%) and trust (47.1%) were the main reasons to choose to shop at conventional stores. When asked for the one single biggest advantage that conventional stores had over online stores, half (50.0%) said the ability to examine and touch products, followed by immediate purchase and trust (20.6%) and assistance from staff (8.8%). When asked for the one single biggest advantage that online stores had over conventional stores, convenience, variety, discounts and delivering to home were each named by 20.6% and lowest prices by 14.7%. Physical examination was also the statement with the largest agreement when directly questioned: 73.5% agreed or strongly agreed that they prefer shopping at conventional stores for things they need to see or examine (mean 4.09, SD 0.79, $t = 8.01$, $p < 0.001$).

8.4 Item wise analysis

Table 6. Descriptive Table of Likert Items (N=34)

Construct	Statement (short form)	Mean	SD	% Agree (4–5)	% Neutral (3)	% Disagree (1–2)	t vs 3.00	p
PD	Q9 Price is important	4.09	1.14	76.5	14.7	8.8	5.58	< 0.001
PD	Q18 Online discounts influence purchase	3.74	0.90	64.7	29.4	5.9	4.77	< 0.001
PD	Q19 Price comparison changed buying	3.76	0.96	67.6	23.5	8.8	4.67	< 0.001
CV	Q10 Convenience is important	4.00	1.26	73.5	14.7	11.8	4.65	< 0.001
CV	Q16 Online stores more convenient	3.65	1.01	55.9	38.2	5.9	3.73	0.001
CV	Q17 Online stores offer more variety	3.76	0.99	64.7	26.5	8.8	4.52	< 0.001
TS	Q14 Personal interaction is important	3.50	1.16	44.1	41.2	14.7	2.51	0.017
TS	Q22 Stores allow better physical examination	3.85	0.96	67.6	26.5	5.9	5.19	< 0.001
TS	Q23 Personal service is an advantage	3.79	0.88	70.6	23.5	5.9	5.26	< 0.001

Construct	Statement (short form)	Mean	SD	% Agree (4–5)	% Neutral (3)	% Disagree (1–2)	t vs 3.00	p
IMP	Q15 Online shopping reduced my store visits	3.56	1.11	50.0	38.2	11.8	2.95	0.006
IMP	Q20 Online growth increased competition	3.91	0.87	70.6	23.5	5.9	6.14	< 0.001
IMP	Q21 Online stores hurt store sales	3.47	1.08	55.9	26.5	17.6	2.54	0.016
Other	Q24 Stores need digital services to compete	3.76	0.99	64.7	26.5	8.8	4.52	< 0.001

Every item has a mean above the neutral midpoint of 3.00 and the difference is statistically significant in all 13 cases. Price importance (4.09) and convenience importance (4.00) are the highest rated items. Within the dependent variable, the strongest agreement was that online growth has increased competition for traditional stores (mean 3.91; 70.6% agree), while the weakest was that online stores have hurt store sales (mean 3.47; 55.9% agree, 17.6% disagree). Personal interaction with the salesperson (Q14) was the least strongly endorsed item, with 41.2% neutral.

8.5 Construct-level analysis

Table 7: Construct means, reliability and comparison with the neutral midpoint (N = 34)

Construct	Items	Cronbach's α	Mean	SD	t (df = 33)	p
Price and Discount Advantage (PD)	3	0.79	3.86	0.84	5.98	< 0.001
Online Convenience and Variety (CV)	3	0.75	3.80	0.89	5.28	< 0.001
Traditional Store Strengths (TS)	3	0.86	3.72	0.89	4.70	< 0.001
Perceived Impact on Traditional Stores (IMP)	3	0.76	3.65	0.84	4.49	< 0.001

All four constructs reach the 0.70 reliability threshold (Nunnally, 1978), and all 12 items measure $\alpha = 0.93$. All four construct means are significantly higher than 3.00. The three independent variables are ranked PD, CV, TS, but differences between means are small and insignificant, Friedman $\chi^2(2) = 2.48$, $p = 0.290$, paired Wilcoxon signed-rank tests (PD and CV, $p = 0.467$; PD and TS, $p = 0.102$; CV and TS, $p = 0.393$). They are therefore evaluated as having all comparable impacts on in-store shopping.

8.6 Relationship with perceived impact (H1 to H3)

Table 8: Correlation of the independent variables with perceived impact. (N = 34)

Independent variable	Pearson r	p	Spearman ρ	p	Result
Price and Discount Advantage (PD)	0.710	< 0.001	0.677	< 0.001	Strong positive
Online Convenience and Variety (CV)	0.843	< 0.001	0.818	< 0.001	Very strong positive
Traditional Store Strengths (TS)	0.651	< 0.001	0.523	0.002	Strong positive

This pattern is generally true for the three factors, which all show a strong positive correlation with perceived impact and the strongest effect is for convenience and variety. The independent variables are highly correlated with each other (PD and CV $r = 0.87$, PD and TS $r = 0.77$, CV and TS $r = 0.70$; all $p < 0.001$) and this implies that respondents who score highly on one factor are highly likely to score highly on the others.

8.7 Multiple regression (H4)

Table 9: Multiple regression predicting perceived impact on Traditional Stores (N = 34)

Predictor	B	SE	Beta	t	p	VIF
Constant	0.581	0.389		1.50	0.145	
Price and Discount Advantage (PD)	-0.207	0.216	-0.207	-0.96	0.344	5.09
Online Convenience and Variety (CV)	0.846	0.184	0.894	4.60	< 0.001	4.12
Traditional Store Strengths (TS)	0.174	0.142	0.184	1.23	0.229	2.45

Model summary: $R = 0.852$, $R^2 = 0.726$, adjusted $R^2 = 0.698$, $F(3, 30) = 26.46$, $p < 0.001$; Durbin-Watson = 1.67.

Online Convenience and Variety hits the model (explains 72.6% of perceived impact and overall the model is significant). When the three factors are entered together, only Online Convenience and Variety is significant: one-point increase in the CV score is associated with an 0.85-point rise in perceived impact. Price and Discount Advantage and Traditional Store Strengths are not significant, controlling for the other factors. However, the VIF of PD (5.09) is slightly more than 5 and CV is 4.12, which suggests that it is not possible to entirely distinguish between the effects of price and convenience, and the p-values should be taken as rough indicators. The residuals are not completely normally distributed ($p = 0.002$), thus the p-values are not exact.

As a test of robustness, the model was rerun without the first respondent who marked 1 on almost every statement ($R^2 = 0.641$), and then again without the first respondent and the six that gave identical ratings to every statement ($n = 27$, $R^2 = 0.588$). In both cases Online Convenience and Variety was the only significant predictor ($B = 0.844$, $p < 0.001$ and $B = 0.827$, $p < 0.001$ respectively).

8.8 Frequent and infrequent online shoppers (H5)

Respondents who buy online frequently or very frequently ($n = 15$) were compared with those who buy rarely or sometimes ($n = 19$).

Table 10: Comparison of frequent and infrequent online shoppers

Variable	Frequent ($n = 15$) mean	Infrequent ($n = 19$) mean	Mann-Whitney p	Welch t-test p
Price and Discount Advantage (PD)	3.91	3.82	0.379	0.782
Online Convenience and Variety (CV)	3.98	3.67	0.121	0.334
Traditional Store Strengths (TS)	3.53	3.86	0.361	0.293
Perceived Impact (IMP)	3.76	3.56	0.476	0.524

Online shoppers scored their convenience slightly higher, their perceived impact, and scored the strengths of conventional stores lower, but none of the differences is statistically significant. The number of online purchases was unrelated to perceived impact (Spearman $\rho = 0.06$, $p = 0.726$), as was the number of store visits ($\rho = 0.25$, $p = 0.161$). We found no relation between the frequency of online purchase and the frequency of store visits ($\rho = 0.15$, $p = 0.411$). This suggests that the same people use the online and offline channels.

Total preference was only marginally related to purchase frequency in a Chi-square test ($\chi^2(2) = 5.41$, $p = 0.067$, Cramér's $V = 0.40$), with 5 of the 15 frequent online buyers having a preference for online stores and only 2 of the 19 infrequent buyers having this preference. There are some expected cell counts below 5, so this test can only be viewed as an indication that there is a relationship. Perceived influence did not vary significantly between the three preference groups (Kruskal-Wallis $H(2) = 1.82$, $p = 0.403$).

8.9 Survival of existing stores, summary effect and alternative suggestions

Table 11: Views on the survival of traditional stores and the overall effect of online growth (N = 34)

Question	Response	n	%
Can traditional stores survive the growth of online stores?	Yes	22	64.7
	Not sure	11	32.4
	No	1	2.9

Question	Response	n	%
Overall effect of online growth on traditional stores	Highly positive	6	17.6
	Positive	12	35.3
	No major impact	10	29.4
	Negative	6	17.6

Table 12: What traditional stores should do to compete (multiple response, N = 34)

Suggested action	n	%
Offer better prices	14	41.2
Improve customer service	10	29.4
Start online selling	10	29.4
Provide home delivery	10	29.4
Improve product variety	8	23.5
Use digital payments and technology	7	20.6
Provide discounts and offers	7	20.6

Almost all but one respondent (64.7%) felt that traditional stores could survive; one even felt they could not. Respondents were also asked to make an overall judgement about how they felt online growth was affecting traditional stores; more than a third (52.9%) felt it was positive or very positive, almost a third (29.4%) felt it did not have a major impact and 17.6% felt it was negative. This is far more positive than the agreement statements which preceded it, where a majority (55.9%) felt that online stores had a negative impact on store sales. It was not asked in the survey why people responded as they did but it can be read that online competition could be seen as a motivator for stores to improve their performance rather than it merely being a negative. Those who rated the overall effect as negative scored the highest of any group (mean 4.17) in perceived impact, where 'no major impact' scored lower (3.43); these two groups were not significantly different (Kruskal-Wallis $H(3) = 3.63$, $p = 0.304$).

64.7% of respondents (mean 3.76) agreed that the statement "Traditional stores need to go online or go digital to be able to compete" was ranked as very important (Q24) and there was a positive correlation with perceived impact of Q25 ($r = 0.69$, $p < 0.001$). The most popular proposed action was providing cheaper prices (41.2%) and the next most popular was customer service or online selling/ home delivery (29.4%).

8.10 Summary of hypotheses

Table 13: Results of hypothesis testing

Hypothesis	Evidence	Decision on H0
H1: Price and Discount Advantage → perceived impact	$r = 0.71$, $p < 0.001$; in regression $B = -0.21$, $p = 0.344$	Rejected on its own; not a unique predictor when other factors are included
H2: Online Convenience and Variety → perceived impact	$r = 0.84$, $p < 0.001$; in regression $B = 0.85$, $p < 0.001$	Rejected (supported)
H3: Traditional Store Strengths ↔ perceived impact	$r = 0.65$, $p < 0.001$; in regression $B = 0.17$, $p = 0.229$	Rejected on its own; positive, not the expected negative, and not a unique predictor
H4: The three factors together explain perceived impact	$R^2 = 0.726$, $F(3, 30) = 26.46$, $p < 0.001$	Rejected (supported)
H5: Frequent and infrequent online shoppers differ in perceived impact	Mann-Whitney $p = 0.476$	Not rejected (not supported)
H6: The three factors differ in relative importance	Friedman $p = 0.290$	Not rejected (not supported)

9. DISCUSSION AND IMPLICATIONS

The biggest factor for perceived impact is the online convenience and variety. Out of the three factors, the convenience and variety was most correlated with perceived impact on traditional stores, and the only significant predictor according to the regression. This is consistent with other research that states convenience and choice is among the three prime reasons for shopping online (Dholakia and Uusitalo, 2002; To, Liao and Lin, 2007; Jiang, Yang and Jun, 2013). Price and discounts had a similarly strong correlation with impact on their own and was rated on average slightly higher, but their effects on perceived impact on stores are not distinguishable from the effect of convenience because of the high correlation between price and discounts and convenience ($r = 0.87$).

Store strengths are correlated in the same direction as the impact. This should not be interpreted to mean that store strengths exacerbate the effect. The most plausible explanation is that respondents who ranked online competition as strong also valued stores. Their rankings of stores and their ratings of online competition tracked each other. Now that people still visit stores, physical examination of products, immediate purchase and trust are the main reasons cited for why they still go to stores, consistent with the channel-specific preferences noted by Rohm and Swaminathan (2004) and Kacen, Hess

and Chiang (2013).

Both channels coexist. Almost two-thirds say they prefer both channels equally, frequency of buying online does not correlate with store visits and most respondents see store survival as possible. This indicates coexistence and reinforces the trend toward omni-channel retailing as proposed by Verhoef, Kannan and Inman (2015) and Cao and Li (2015).

Practical implications for traditional retailers.

- Shrink the convenience gap. As convenience and variety are leading to the perceived impact, stores can deliver by offering home delivery, non-traditional hours, simple over-the-phone or messaging ordering and digital checkout. Respondents themselves expressed a demand for home delivery (29.4%) and online sales (29.4%) and digital payments and technology (20.6%).

- Protect what stores do best. Use your store's strengths, which according to our research are physical inspection, immediate possession, and trust. Make sure you maintain your product displays, have inventory on hand, and keep up your relationships with your regular customers.
- Don't overlook the price. Improved prices was the most popular recommendation (41.2%) but the regression implies that price is only important in combination with convenience.

- Complement the store with online channels. Research by Pauwels and Neslin (2015), and Bell, Gallino and Moreno (2018) shows that physical and online channels reinforce each other. This implies that, for small retailers, they can benefit more by leveraging online channels than from fighting them.

Theoretical implications: The findings reinforce the argument that perceived channel competition is primarily a function of utilitarian value (convenience and choice), not price, and demonstrate that shoppers can simultaneously hold the beliefs that online retailing is an important competitor and that conventional stores have tangible advantages.

10. CONSTRAINTS AND AVAILABILITY OF SCOPE FOR ADDITIONAL STUDY

The limitations of this study are:

1. The sample used here was a convenience sample of 34 interviewees and is small for statistical generalisation (though 34 is actually reasonably large for a qualitative study), so the results cannot be generalised and must be taken as speculative.
2. The respondents were 88.2% women, 94.1% students, 91.2% aged 18–25 (3 under 18), and not representative of the population of shoppers.
3. The study compares perceptions and actual store sales/footfall, and the three-item dependent variable is not balanced.
4. The independent variables correlate strongly (VIF up to 5.09) so can't really be distinguished in effect; the residuals are not perfectly normal.
5. The reliability of a few responses, especially rating all items similarly, is suspect, but they were included here, and Section 8.7 shows that the results are robust to their inclusion.

Future research could:

- use a larger and more diverse probability sample - including older consumers, males and working adults.
- combine consumer surveys with data from shop owners on sales, visitor numbers and return customers.
- add trust, delivery and return policies and ease of use of digital payments as separate variables.
- compare different product categories such as clothing, groceries and electronics.
- employ structural equation modelling.

11. CONCLUSION

This research investigated perceptions of online shoppers' perception of online shopping's impact on traditional retail stores. Mean ratings of price and discounts, convenience and selection, and the strengths of brick-and-mortar stores were all significantly above neutral, and respondents agreed that increased online growth has intensified competition with stores (mean 3.91), taken visits away from stores (3.56) and damaged store sales (3.47). Price and discounts, and Store Strengths both were strongly correlated with perceived impact, but only including Online Growth in a linear regression model showed Online Convenience and Product Variety as a significant predictor, accounting for 72.6% of variance. Traditional stores have clear advantages in physical product selection, immediate purchase, and customer trust, and most respondents like both channels equally well and believe traditional stores can survive.

The findings imply that the most relevant result for brick-and-mortar retailers is to bridge the convenience gap through delivery, online payments and an online presence, while maintaining the advantages of physical stores that cannot readily be replicated online. Due to the small, young and predominantly female student sample, the results are preliminary and require validation with a larger and more diverse group.

REFERENCES

1. 1.Bell, D. R., Gallino, S., & Moreno, A. (2018). 1. Demand and operational benefits of offline showrooms in omnichannel retail. *Management Science*, 64(4), pp.1629-1651.
2. Brynjolfsson, E. and Smith, M. D. 2000. Trade minus friction? Comparison of internet vs traditional retailers. *Management Science*, 46(4), 563-585.
3. Cao, L., & Li, L. (2015). The impact of cross-channel integration on retailers' sales growth. *Journal of Retailing* 91(2) 198–216
4. Chiu, C.-M., Wang, E. T. G., Fang, Y.-H., & Huang, H.-Y. (2014). Understanding repeat purchase intentions of customers in B2C e-commerce: The roles of utilitarian value, hedonic value and perceived risk. *Information Systems Journal*, 24(1), 85-114.
5. Chocarro, R., Cortiñas, M., & Villanueva, M.-L. (2013). Online versus offline channel choice: the role of situational variables. *Electronic Commerce Research and Applications* 12(5), 347-361.
6. Chu, J., Arce-Urriza, M., Cebollada-Cavalero, J.-J., & Chintagunta, P. K. (2010). Empirical study of grocery shopping behaviour across online and offline channels. *Journal of Interactive Marketing*, 24(4), 251-268.
7. Dholakia, R. R. and Uusitalo, O. (2002). Switching to electronic stores Shopping benefits perceived by consumers and consumer characteristics *International Journal of Retail & Distribution Management* 30 (10) 459-469.
8. Forman, C., Ghose, A., & Goldfarb, A. (2008). Competition between local and electronic markets: How the benefit of purchasing online depends on your location. *Management Science*, 55(1): 47-57 .
9. Gefen, D., Karahanna, E., & Straub, D. W. (2003). An integrated model of trust and TAM in e-shopping. *MIS Quarterly*, 27(1), 51-90.
10. Grewal, D., Roggeveen, A. L., & Nordfält, J. (2017). Retailing for tomorrow. *Journal of Retailing*, 93(1), pp. 1–6.
11. Jiang, L., Yang, Z., & Jun, M. (2013). Measuring consumer perceptions of online shopping convenience. *Journal of Service Management*, 24 (2). 191-214.
12. Kacen, J. J., Hess, J. D., and W.-Y. K. Chiang. Clicks or bricks? Consumer attitudes toward traditional and online stores *Global Economics and Management Review*, 18(1), 12-21.
13. Nunnally JC . *Psychometric Theory* (2nd ed.). McGraw-Hill.
14. K. Pauwels & S. A. Neslin (2015). The impact of opening physical stores on revenue in a multichannel environment: Building with bricks and mortar. *Journal of Retailing*, 91(2), 182-197.
15. Pavlou, P. A. (2003). Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model *International Journal of Electronic Commerce*, 7(3), pp. 101-134.
16. Rapp, A., Baker, T. L., Bachrach, D. G., Ogilvie, J., & Beitelspacher, L. S. (2015). The impact of perceived customer showrooming on retail salespersons' self-efficacy and performance. *Journal of Retailing*, 91(2), pp. 358–369.
17. Rohm, A. J., & Swaminathan, V. . Internet shopper typology. *Journal of Business Research*, 57(7), 748-757.
18. Sinha J., Kim J. . (2012). Factors affecting online purchase behaviour of Indian consumers. *Innovative Marketing*, 8(2), 46–57.
19. To, P.-L., Liao, C., & Lin, T.-H. (2007). Shopping motivation on the Internet: A study based on utilitarian and hedonic value. *Technovation*, 27(12), 774-787.
20. Verhoef, P. C., Kannan, P. K., & Inman, J. J. (2015). Editorial: Special Issue on Multi-Channel Retailing: From Multi-Channel to Omni-Channel Retailing. *Journal of Retailing*, 91(2), 174–181.
21. Verhoef, P. C., Neslin, S. A., & Vroomen, B. (2007). Multichannel customer management: The research-shopper phenomenon. *International Journal of Research in Marketing*, 24(2), 129–148.