Drivers of Online Shopping Cart Abandonment in South Africa

Wayne WILSON and Tinashe Tsungai Raphael NDORO[*]

University of Pretoria, South Africa

In today's modern society, the multitude of technological advancements are encouraging an increasing number of people to utilize online shopping platforms. However, from the literature it has been noted that a large portion of consumers who add items to their virtual cart eventually abandon their shopping carts, and this behavior is related to several factors. The study aims to investigate the factors that influence online shopping cart abandonment, namely hedonic purposes, perceived transaction convenience, and organization and research within the South African context. A total of 247 responses were gathered by means of self-administered online questionnaires from South Africans over the age of 18 who had shopped online in the past. The results indicate that for both hedonic purposes and organisation and research, there is a positive statistically significant relationship with online shopping cart abandonment, yet no positive statistically significant relationship with online shopping cart abandonment, yet no positive relationship for perceived transaction inconvenience exists. For an online business to be successful, the above factors need to be taken into consideration when taking managerial decisions, which can lead to business implementing the necessary changes to maximise their online sales.

Keywords: *online, cart abandonment, organization and research, inconvenience, hedonic*

JEL Classification M10

1. Introduction

With the recent exponential advancement in technology, especially online platforms, it is evident that a growing number of consumers have started to prefer shopping online over visiting traditional brick-and-mortar stores. Online shopping is considered to be an extension of traditional brick-and-mortar shopping, but these channels differ in many aspects (Kukar-Kinney and Close, 2009, pp.240). Contrary to consumer shopping habits in traditional stores, a common occurrence online is that of shopping cart abandonment (Rubin et al., 2020, pp.495). This phenomenon of consumers placing items in their online shopping cart and thereafter abandoning the purchase before the transaction phase (Kukar-Kinney & Close, 2009:240) has been a topic of interest among both academics and marketers. According to a study by Statista (2019), an investigation of the global shopping cart abandonment rate reported that shopping cart abandonment increased from 66.08% in 2009 to 69.57% in 2019 – a total of 3.49% over a ten-year period. This increase indicates that online retailers

are losing almost seven out of ten online sales. With the impact of the coronavirus disease (COVID-19) pandemic on the retail landscape, it becomes increasingly important to focus on electronic-commerce (e-commerce), as a rise in online shopping habits due to avoidance of traditional retail stores and restrictions of movement are expected in the future (Kohan, 2020; PwC, 2020, p.9). The objective of this study is to investigate three of the factors that determine online shopping cart abandonment, namely i) hedonic purposes; ii) perceived transaction inconvenience; and iii) organisation & research. The study of the relationship of these factors with online shopping cart abandonment is essential for managers and marketers to better understand the reasoning surrounding the termination of the transaction, as this can not only negatively affect the revenue of a company, but can also lead to wasted time and effort on the consumers' side (Rubin et al., 2020, pp.496).

The reasons for online shopping cart abandonment are not well known and insufficient literature is available on the subject (Huang et al., 2018, pp.165; Krithika amd Rajini, 2018, pp.739; Rajamma, Paswan and Hossain, 2009). This lack of literature is highlighted by Kukar-Kinney and Close (2009, pp.240), stating that the phenomenon of online shopping cart abandonment has not yet been explained by scholars. The data obtained in this study will fill a large gap in the research and contribute to the understanding of marketers and researchers of consumerist behaviour in the online realm, specifically online shopping cart abandonment. This is of great importance, as online behaviour may be different from physical buying behaviour, which allows marketers to adjust their strategies accordingly in order to better target online consumers (Egeln and Joseph, 2012). Limited studies exist within the African context, specifically South African context, where previous studies on the subject have mostly been conducted in Asia (Huang et al., 2018; Krithika and Rajini, 2018; Nair, 2016) and the United States of America (Egeln and Joseph, 2012; Kukar-Kinney and Close, 2009; Rajamma et al., 2009).

2. Literature Review

Online shopping cart abandonment is defined by Kukar-Kinney and Close (2009, p.240) as "…consumers' placement of item(s) in their online shopping cart without making a purchase of any item(s) during that online shopping session". Other definitions include descriptions such as a shopper placing items in the cart without completing the purchase (Nair, 2016, p.13), or when a customer leaves a website due to hesitation of whether they should finish the transaction (Cho, Kang and Cheon, 2006, p.262). It is evident that there are two main consistencies amongst various definitions, i) items are selected and added to the cart, and ii) the transaction is not completed. It is vital to understand what drives this behaviour, as online cart abandonment is not the problem, but merely a symptom of (several) problems surrounding consumer habits. Identifying the factors that influence online shopping cart abandonment can help e-commerce sites mitigate this issue and increase their sales (Nair, 2016, p.13).

Previous research on the topic of online shopping cart abandonment has explored various different factors, such as costs (Kukar-Kinney and Close, 2009; Nair, 2016; Xu and Huang, 2015); perceived risk (Egeln & Joseph, 2012; Krithika & Rajini, 2018; Kukar-Kinney & Close, 2009; Nair, 2016; Rajamma et al., 2009; Xu and Huang, 2015); intention to wait for a lower price (Kukar-Kinney and Close, 2009; Song, 2019); hedonic purposes (Kukar-Kinney and Close, 2009; Nair, 2016; Song, 2019); organisation and research purposes (Kukar-Kinney and Close, 2009; Song, 2019; Xu and Huang, 2015); perceived transaction inconvenience (Erdil, 2018; Rajamma et al., 2009); payment intention (Xu and Huang, 2015); perceived waiting time (Krithika & Rajini, 2018); perceived online behavioural tracking (Krithika and Rajini, 2018; Rajamma *et al.*, 2009), perceived ownership (Egeln and Joseph, 2012); and technical glitches (Nair, 2016). Hedonic purposes and perceived transaction inconvenience were chosen to be investigated in this study due to the lack of focus on these factors in previous research. Organisation and research of items in the cart has been chosen as a third factor being investigated.

Researchers have made use of several theories to explain why consumers abandon online shopping carts. Rajamma *et al.* (2009, p.189) utilised the Expectancy Disconfirmation Theory, defined by Oliver (1980, p.460) as a consumer's satisfaction/dissatisfaction being a product of the disconfirmation of their expectations. However, according to Kukar-Kinney and Close (2009, p.240), consumers are not necessarily dissatisfied with their purchase, the retailer, or shopping process when they abandon their online shopping carts.

2.1 Research Premises

In many cases, consumers do not have an immediate need to fulfil in terms of purchasing products when they do online shopping. Some consumers merely browse the internet and add items to their cart to assess product availability (Nair, 2016, p.17). This agrees with Kukar-Kinney and Close (2009, pp. 240), who explain that online shopping without buying is entertaining and relieves boredom for customers. According to these authors, virtual shopping carts were believed to be comparable to traditional shopping carts and baskets in the past. They challenged this belief, arguing that unlike utilitarian traditional shopping carts, online shopping carts may be more hedonic in nature, which in this context refers to providing some sort of entertainment value to the consumer. Kukar-Kinney and Close (2009, pp. 240) also warn companies of the implications of an interactive and entertaining website, which does not necessarily translate into increased sales - using an online shopping cart for hedonistic purposes is positively related to online shopping cart abandonment.

Both Song (2019, p.362) and Kukar-Kinney and Close (2009, p.242) indicated that the experiential aspect of online shopping involves searching, which extends the purchase process and can lead to abandonment. Therefore, the following hypothesis is proposed:

H₁: There is a positive relationship between hedonic purposes of using online shopping carts and online shopping cart abandonment.

The perception of transaction inconvenience is created by several factors, such as long order forms, the absence of flexibility in information input, and technical glitches that delay order placement time (Rajamma *et al.*, 2009, pp. 190). It also describes being delayed or burdened during the purchase process by means of late disclosure of additional fees, or detailed order forms that need significant time to be completed (Seiders, Berry and Gresham, 2000, p.87). The study by Rajamma et al. (2009, pp.190) suggests that perceived transaction inconvenience was the biggest reason for online shopping cart abandonment, and that perceived waiting time also contributed to the perceived transaction inconvenience experienced by customers. Xu and Huang (2015, p.1625), however, argue that Rajamma *et al*. (2009) did not consider the intermediary role of the organisation and research of products. If the customer experiences transaction inconvenience, they would abandon the cart early without adding anything to their virtual shopping cart and continue their search elsewhere. Nair (2016, p.17) found that consumers also abandoned their shopping cart halfway through the buying process due to slow internet, or a lack of payment options. From the above, the following hypothesis is proposed:

H₂: There is a positive relationship between perceived transaction inconvenience and online shopping cart abandonment.

An online shopping cart can be used to hold items for organisational purposes and to research items; this in terms of keeping track of prices for purchase at a later stage (Kukar-Kinney and Close, 2009, p.240). Xu and Huang (2015, p.1625) agrees with this observation and suggests that the more research is conducted by the potential buyer, the more cautious they become about buying a specific product. For consumers who use online shopping carts as a space to organise items of interest whilst researching other options, these carts may provide an easy way to refer back to the items they selected after considering alternatives (Kukar-Kinney and Close, 2009, p.242). Xu and Huang (2015, p.1626) suggest that comparing product options to other websites significantly influences the consumer tendency to abandon the purchase. This aligns with the findings of Harrison-Walker (2002, p.19), which suggest that leaving an online store might indicate that customers are researching product alternatives on other online stores, and these customers will possibly make their purchase in a brick-and-mortar store instead. The following hypothesis is proposed:

H₃: There is a positive relationship between using an online shopping cart for research & organisation purposes and online shopping cart abandonment.
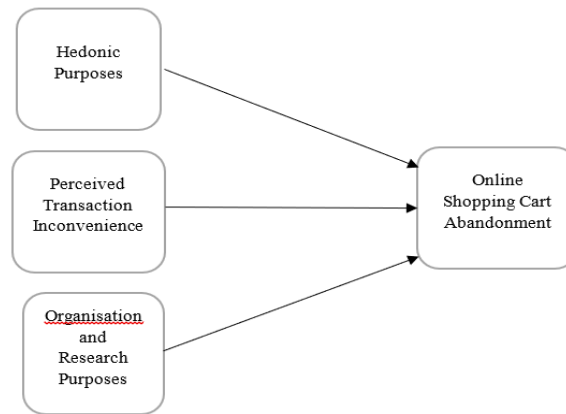
Figure 1. Proposed Conceptual Model
Source: Author

3. Research Methodology

In this study, a quantitative research design was adopted, meaning that the objectives set out in this study was achieved using empirical assessments through means of numerical measurement and analysis (Zikmund and Babin, 2010, p.94). The target population consisted of South African citizens over the age of 18, who have used an online shopping cart. Survey questionnaires were used as the data collection method, and convenience sampling was used to gather data. Convenience sampling entails obtaining responses from individuals who can be conveniently reached to participate in the research (Zikmund and Babin, 2010, p.312). A self-administered questionnaire was posted on social media and distributed via email to those who fell into the unit of analysis. Online questionnaires are appropriate for this research due to a sound spread and easy distribution to a large sample of participants. Another reason online questionnaires are appropriate are because the topic being researched is based online; email questionnaires are a quick, easy, and a cost-effective way to gather responses (Zikmund and Babin, 2010, p.172).

The questionnaire consisted of five major sections, preceded by a description of what the research aimed to achieve, surety of anonymity, as well as acknowledgement of participation. The first section consisted of screening questions to determine whether the respondent was over 18, a South African citizen, and had used an online shopping platform before. The subsequent four sections each consisted of questions that adopted a Likert scale answering format. These questions pertained to each of the identified factors influencing online shopping cart abandonment, namely hedonic purposes, perceived transaction inconvenience, and organisation & research, as well as online shopping cart abandonment. The questions used in each section were derived from previous research to ensure the validity and reliability of the scales. Reliability was tested using Cronbach's Alpha. The fifth and final section consisted of demographic questions pertaining to the age, gender, race, and income bracket of the respondents.

The first phase of data collection consisted of a pilot test, distributing 20 test questionnaires by means of convenience sampling. These questionnaires were distributed via email to 20 individuals who have engaged in online shopping in the past. After the pilot test had been conducted and necessary changes had been made to the questionnaire to eliminate ambiguity, convenience sampling was used to gather data by posting a self-administered questionnaire on social media, as well as sending emails to those who fell into the unit of analysis. The collected data was cleaned by removing questionnaires not suitable for the unit of analysis or containing unanswered questions. Online questionnaires were appropriate for the research due to the large number of responses that can be obtained. The use of online channels to distribute the questionnaires is a sound mechanism because online administered questionnaires are quick, easy, and cost-effective (Zikmund and Babin, 2010, p.172).

4. Analysis and Results

A total of 247 responses were gathered and Table 1 summarises the demographic data of the sample profile. The majority of the sample consisted of females (69.2%), followed by males (30.8%). The highest income bracket of ≥ R55 000 made up the largest group of the sample (27.5%), followed by the lowest income

bracket of ≤ R14 000 (23.9%), and finally respondents earning between R15 000–R24 999 (16.2%). More than a third of the respondents had obtained an honours degree (36.8%), followed by a bachelor's degree (31.2%), a matric certificate (12.6%), a master's degree (10.1%), diploma (5.3%), and a higher certificate (3.2%). More than half of the respondents were full-time employees (52.6%), followed by unemployed respondents (19.4%). The largest portion of the sample group consisted of White respondents (79.4), followed by African (9.7%) and Other racial categories (10.9%). More than a third of the sample profile was between the ages of 19–28 (70%) followed by 29 to 38-year olds (15.4%). A quarter of the respondents were 23 years of age (25.1%), with the youngest respondent being 19 years old and the oldest 67 years old.

Table 1. Sample Profile

Variable	Response Category	N	Percentage
Sex	Male	76	30.8
	Female	171	69.2
Income	R14 999 or less	59	23.9
	R15 000-R24 000	40	16.2
	R25 000-R34 999	21	8.5
	R35 000-R44 999	20	8.1
	R45 000-R54 999	17	6.9
	R55 000 or more	68	27.5
	Prefer not to answer	22	8.9
Education	Matric Certificate	31	12.6
	Higher Certificate	8	3.2
	Diploma	13	5.3
	Bachelor's Degree	77	31.2
	Honours Degree	91	36.8
	Master's Degree	25	10.1
	Prefer not to answer	2	0.8
Employment	Unemployed	48	19.4
	Full time employed	130	52.6
	Flexi time employed	33	13.4
	Contract basis	27	10.9
	Prefer not to answer	9	3.6
Race	African	24	0.7
	Asian	1	0.4
	Coloured	5	2.0
	Indian	6	2.4
	White	196	79.4
	Other	1	0.4
	Prefer not to say	14	5.6
Age	19-28	173	70
	29-38	38	15.4
	39-48	16	6.5
	49-58	12	4.9
	58-69	8	3.2

Source: Author

Exploratory Factor Analysis

In order to determine the validity of the responses gathered, an Exploratory Factor Analysis (EFA) was conducted using principal axis factoring with a Varimax rotation, and supressing coefficients smaller than 0.4. An EFA was conducted (Table 3) because the sample size was larger than 150 and had more than ten cases per variable being measured (Pallant, 2016, p.188). The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) value was satisfactory at 0.768, which is above the recommended 0.6 (Stehlik-Barry and Babinec, 2017, p.326). According to Barlett's Test of Sphericity, it is significant at 0.001, which means the data is suitable for a factor analysis because a correlation is detected (Humble, 2020, p.35). Initially, five factors were extracted during the EFA instead of four, due to the item relating to whether the site required the

respondent to register before purchasing loading on its own factor. Another item had a low factor loading of below 0.4. These items were removed and the EFA was run again. Four factors were finally extracted.

Validity and Reliability

Validity and reliability of the constructs were measured by looking at the Cronbach Alpha of each of the factors, as well as the Average Variance Extracted (AVE) and the Composite Reliability (CR). As indicated in Table 2, all factors indicated a high consistency with Cronbach's Alpha above 0.7, which is an ideal value to have in order to measure reliability (Pallant, 2016, pp.101).

Table 2. Validity and Reliability

Measure Item	Mean	Standard Deviation	Cronbach's Alpha
Organisation & Research			0.802
I use the shopping cart as a form of information gathering	3.08	1.429	
I use the shopping cart as a shopping research tool.	2.68	1.388	
I place items in the shopping cart so I can more easily evaluate a narrowed-down set of options.	3.72	1.394	
Hedonic Purposes			0.843
I select and place items in the shopping cart to entertain myself.	1.74	1.110	
I select and place items in the shopping cart when I am bored.	1.85	1.243	
I select and place items in the shopping cart for fun.	1.89	1.251	
I find placing items in the shopping cart enjoyable.	2.78	1.415	
Perceived Transaction Inconvenience			0.702
I got logged off in the middle (for some reason) and had to go through the entire process of completing information again.	2.74	1.372	
Technical glitches in the site made the transaction difficult.	2.91	1.302	
The order forms were very lengthy.	2.74	1.178	
Online Shopping Cart Abandonment			0.880
I often leave items in my online shopping carts without buying	3.62	1.347	
I often place an item in my online shopping cart, but do not buy it during the same internet session.	3.77	1.238	
I often abandon my online shopping cart.	3.62	1.236	
I often close the web page or log off the internet before I buy the item(s) in my online shopping cart.	3.55	1.292	

Source: Author

In addition, all AVE values were above 0.5 except for Perceived Transaction Inconvenience, which had an AVE value of 0.4642. All CR values were above the required 0.7 threshold. The AVE and CR values are displayed in Table 3. There were no cross loading between items and therefore there is evidence of discriminant validity (Pallant, 2016, pp.151).

Table 3. Factors uncovered, composite reliability, average variance extracted

Item	Online shopping cart abandonment	Hedonic Purposes	Organisation & Research	Perceived Transaction Inconvenience
I often leave items in my online shopping cart without buying them?	.813			
I often place an item in online shopping cart, but do not buy it during the same internet session?	.806			
I often abandon my online shopping cart?	.753			
I often close the webpage, or log off the Internet before I buy the item(s) in my online shopping cart?	.739			
I select and place items in the shopping cart to entertain myself		.915		
I select and place items in the shopping cart when I am bored		.894		
I select and place items in the shopping cart for fun		.733		
I find placing items in the shopping cart enjoyable		.467		
I use the shopping cart as a form of information gathering			.899	
I use the shopping cart as a shopping research tool			.768	
I place items in the shopping cart so I can more easily evaluate a narrow-down set of options			.552	
I got logged off in the middle (for some reason) and had to go through the entire process of completing information again.				.789
Technical glitches in the site made the transaction difficult				.752
The order forms were very lengthy				.463
Average Variance Extracted	0.6036	0.5972	0.5691	0.4642
Composite Reliability	0.8587	0.8485	0.7928	0.7131

Source: Author

Multiple Regression Analysis

In order for standard multiple regression to be conducted to determine whether Organisation & Research, Hedonic Purposes, and Perceived Transaction Inconvenience predict Online Shopping Cart Abandonment, several assumptions need to be met (Pallant, 2016, p.151; Stehlik-Barry and Babinec, 2017, p.326):

- The sample size must be deemed large enough. Since this study made use of three independent variables and the formula by Pallant (2016, p.151) states a requirement of 50 + (8 x number of independent variables) for a suitable sample size, the 247 usable responses from this study meet the criteria. In this case, 74 was the minimum sample size required.
- No multicollinearity or singularity was found, since the predictor variables correlate with the dependant variable (Online Shopping Cart Abandonment) for all except Perceived Transaction Inconvenience, and the independent variables' correlation with each other do not exceed 0.7.
- The tolerance was not smaller than 0.1, and the Variable Inflation Factor (VIF) index values were not larger than ten.
- The diagonal line from the bottom left to the top right of the Normal Probability Plot (P-P) of Regression Standardised Residual is reasonably straight, and the points on the scatterplot are concentrated in the middle (0) and is rectangular.

- The Mahalanobis distance is 10.809, which is below the maximum chi-squared value of 16.27 suggested by Pallant (2016, p.161). The maximum Cook's distance is below one at 0.073, and thus the case identified in the Casewise Diagnostics table does not need to be removed.

From the above, it is evident that all the necessary assumptions were met, and thus regression analysis was performed. As displayed in Table 4, the R^2 value is 0.202 and the conclusion is that the model (Organisation & Research, Hedonic Purposes, Perceived Transaction Inconvenience) explains 20.2% of the variance in the dependant variable (Online Shopping Cart Abandonment). This is a relatively low percentage and may indicate that there are other factors that also predict Online Shopping Cart Abandonment.

An ANOVA test was conducted to test whether the regression model is significant. The values in Table 5 indicate that this model is significant ($\rho < 0.05$), and that it predicts Online Shopping Cart Abandonment accurately. Table 6 shows the statistical significance of the factors influencing Online Shopping Cart Abandonment, and which individual variable makes the strongest unique contribution. Hedonic Purposes has the highest Beta value ($\beta = 0.297$), followed by Organisation & Research ($\beta = 0.264$), and Perceived Transaction Inconvenience ($\beta = 0.027$). Both Hedonic Purposes and Organisation & Research are significant ($\rho < 0.05$), but Perceived Transaction Inconvenience is not significant ($\rho > 0.05$).

Table 4: Model Summary

Model	R	R^2	Adjusted R^2	Standard Error of the Estimate
1	0.450[a]	0.202	0.192	0.98528

Source: Author

Note: Predictors: (Constant) Organisation & Research, Hedonic Purposes, Perceived Transaction Inconvenience; a. Dependant Variable: Online Shopping Cart Abandonment

Table 5: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	59.493	3	19.831	20.428	0.000[b]
Residual	234.929	242	0.971		
Total	294.422	242			

Note: a. Dependant Variable: Online Shopping Cart Abandonment. b.Predictors: (Constant) Organisation & Research, Hedonic Purposes, Perceived Transaction Inconvenience

Table 6: Coefficients

Model	Standardised Coefficients Beta-value (β-value)	t-value	ρ-value
Constant		8.538	0.000
Hedonic Purposes	0.297	4.969	0.000
Perceived Transaction Inconvenience	0.027	0.466	0.642
Organisation & Research	0.264	4.432	0.000

Note: Dependant Variable: Online Shopping Cart Abandonment

Based on the ρ-values in Table 6, it can be concluded that:

H_1, stating that there is a positive relationship between hedonic purposes of using online shopping carts and online shopping cart abandonment, is accepted ($\rho < 0.05$).

H_2, stating that there is a positive relationship between perceived transaction inconvenience and online shopping cart abandonment, is rejected ($\rho > 0.05$).

H_3, stating that there is a positive relationship between using an online shopping cart for research & organisation purposes and online shopping cart abandonment, is accepted ($\rho < 0.05$).

5. Discussion and Conclusion

5.1. Theoretical Contribution

In the current digital age, it is becoming increasingly important to adapt to an ever-evolving technological world. Given the current landscape in which the world is greatly affected by the COVID-19 pandemic - most of the world currently being under lockdown or having recently come out of lockdown - an increasing number of people are opting to buy online rather than at traditional brick-and-mortar stores (Gavaza, 2020). According to Grimmelt, Hattingh and Ramlaken (2020) 40% of South African consumers intended to increase online shopping post-COVID. Furthermore, taking note of the predicted substantial amount of revenue in eCommerce market in South Africa (Statista, 2023). It is imperative for managers to understand what influences online shopping cart abandonment in order to successfully implement measures to prevent loss of sales and increase revenue. This study contributes to the existing body of literature surrounding online shopping cart abandonment by specifically considering the phenomenon in a South African context. This study investigated whether the respective factors of organisation & research, hedonic purposes, and perceived transaction inconvenience have an influence on online shopping cart abandonment. In line with previous research, the study found that organisation & research and hedonic purposes had a positive relationship with online shopping cart abandonment (Erdil, 2018, p.150; Kukar-Kinney and Close, 2009, pp.245; Nair 2016, p.17; Xu and Huang, 2015, pp.1625). Contrary to research by Rajamma et al. (2009, p.191), Harrison-Walker (2002, pp.19) and Nair (2016, p.17), it was found that perceived transaction inconvenience did not have a positive relationship with online shopping cart abandonment.

The positive relationship of hedonic purposes with online shopping cart abandonment is of critical importance for managers to take into consideration, especially when designing or improving a website and the online customer experience. A more interactive and entertaining website may lead to entertainment-based consumerist attitudes and will not necessarily lead to increased sales (Kukar-Kinney and Close, 2009, pp.249). A possible solution to mitigate this may be to limit distracting content on the web page that may cause consumers to navigate to another part of the site. When considering the positive relationship between organisation & research purposes and online shopping cart abandonment, there are many reasons why consumers may use their online shopping cart to organise and research the items they place in their basket. Checkout totals and the possibility of free shipping may influence some consumers, whilst others might use the cart as a 'wish list' to keep track of items going on sale, or use the cart to compare items to other online retailers or traditional brick-and-mortar stores (Kukar-Kinney and Close, 2009, pp.249). An example of how to mitigate this is to have a call to action upon placing the items in the cart that will encourage the consumer to make the purchase, such as free shipping or a discount code.

Opposed to that of previous researchers (Harrison-Walker, 2002, p.19; Nair, 2016, pp.17; Rajamma *et al.*, 2009, pp.191), there is no significant positive relationship between perceived transaction inconvenience and online shopping cart abandonment. This outcome may, however, be linked to the age of the respondents. Research has shown that younger individuals prefer online transactions and have a better understanding of technology (Nawaz, 2019, p.250). This information may help managers rule out one more factor they need to take in consideration when optimising their website experience. For example, if a manager has to make a decision on whether to sacrifice transaction simplicity for a free shipping pop-up upon consumer registration, they can assume that the decrease in transaction simplicity will not lead to the abandonment of the transaction. It is crucial to mitigate the effects the investigated constructs might have on shopping cart abandonment by considering the abovementioned recommendations when making managerial decisions. In the following section, some limitations of this study are highlighted and recommendations for future research is made. The function of the Discussion is to interpret your results in light of what was already know about the subject of the investigation, and to explain our new understanding of the problem after taking your results into consideration. After presenting the results, you should evaluate and interpret their implications for your research context, their contribution to the existing literature and in relation to your proposed hypotheses. You should also emphasize any practical consequences of the results. Please present any limitations of your research, in order to offer guidance and propose new directions of research.

5.2. Limitations of study / Future directions of research

There are four main limitations of importance in this study, and future recommendations have been suggested alongside the discussion of each point. Firstly, this study used a non-probability sampling method, which means that the degree to which this sample is representative of the population cannot be measured (Clow

and James, 2014, pp.437; Silver et al., 2013, pp.159). Future research should aim to use probability sampling in order to collect more general data. Secondly, the research was conducted in the context of a South African online shopping landscape and therefore cannot be used to make assumptions about other cultures and locations. In addition, the population involved in the study does not equally represent all genders, cultures, and age groups in South Africa, as a large portion of the respondents were between the ages of 19−28, female, and white. Future research can be conducted with focus on a specific demographic group or can be broadened to include all South Africans. Thirdly, since this study produces results contrary to that indicated by previous research when investigating perceived transaction inconvenience and online shopping cart abandonment, future works can focus specifically on this relationship to ensure this is indeed an accurate conclusion that can be made in a South African context. Since these results are not generalisable, replicating this study may add to the reliability of the findings.

Lastly, only three constructs were investigated in this study to determine whether they have an influence on online shopping cart abandonment, but there are other factors that also exist in extant literature. These include security risks, perceived cost, perceived online behavioural tracking, and payment intention. Future research can ascertain whether these additional factors also contribute to online shopping cart abandonment in the South African context. If these limitations are taken into consideration and the recommendations are implemented, it may help businesses to successfully mitigate online shopping cart abandonment. In the digital age, it is imperative that this continues to be an area of focus for marketers and managers alike, in order to derive the best possible understanding on consumer buying behaviour.

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