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**DETERMINANTS OF CONSUMER IMPULSE BUYING
BEHAVIOR IN FACEBOOK COMMERCE**

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Master's Thesis

Asst. Prof. Dr. Tanyeri USLU

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ABSTRACT

DETERMINANTS OF CONSUMER IMPULSE BUYING BEHAVIOR IN FACEBOOK COMMERCE

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The projected revenue for electronic commerce on Facebook was 27.6 billion in 2016 as stated by Market Business News, 2015. Despite these figures, not many studies have been done specifically pertaining to Facebook commerce whilst scrutinizing materialism and its relationship with impulse buying using credit cards. In addition, self-esteem and its impact on impulse buying and credit card use, gender and its effect on impulse buying using credit cards and the impact of using credit cards on impulse purchase behavior. Structural equation modelling was used to develop hypotheses about the factors that influence impulse buying. The research made use of the flow theory to test such prepositions were self-esteem and materialism stood as independent variables, the usage of credit cards took a mediating role while gender played a moderating role and impulse buying was represented as a dependent variable. A survey was done collecting data from 325 university students using a questionnaire created on Survey Monkey and distributed through the author's various social

platforms, namely WhatsApp, Instagram, Twitter and Facebook. The questionnaire comprised of five socio demographics, the self-esteem scale by Rosenberg, the scale of materialism by Richins and Dawson, the mis usage of credit cards: a scale by Roberts and Jones. Lastly, the Verplanken and Herabadi impulse buying tendency scale. The results showed that self-esteem insignificantly affects neither credit card usage nor impulse buying. Secondly, that materialism has no significant impact on credit card use and impulse buying. Thirdly, credit card use significantly affects impulse buying but is neither a significant mediator in the association between self-esteem and impulse purchase behavior nor materialism and impulse purchase behavior. Lastly, addressing gender as being an insignificant moderator to neither the relationship between materialism and impulse buying nor the association between self-esteem and impulse buying. The implications of the study proved significant by adding on to theory and instigating the need for further research whilst allowing managers to use these results to form better marketing strategies through exploitation of such character traits as materialism and self-esteem leading to better business revenue and profits.

Keywords: F-commerce, Impulse Buying, Credit Card Use, Materialism, Self-Esteem, Gender, Flow Theory.

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ABBREVIATIONS

F-COMMERCE : Facebook Commerce

SMART PLS : Smart Partial Least Squares

SEM : Structural Equation Model(ing)

CR : Construct Reliability

AVE : Average Variance Extracted

HTMT : Heterotrait-Monotrait Ratio

IBB : Impulse Buying Behavior

SE : Self-esteem

CC : Credit Card Use

M : Materialism

LIST OF SYMBOLS

α : Cronbach's alpha



1. INTRODUCTION

The fast- growing population on social networking sites has provided consumers and sellers with a new emerging electronic commerce called Facebook commerce (F-commerce). Statistics have shown that consumers are moving away from buying products in store because of the convenience associated with online shopping. E- retailers have been looking into ways to improve their online stores in order to maximize on this new type of commerce. Of interest is the aspect of impulse purchasing, and how understanding and utilizing it may be beneficial for business owners. 40% of internet purchases, according to Verhagen and Van Dolen (2011), are the consequence of impulse purchases. To date, the ease of using credit cards and the appearance of not using money have had an effect on online shopping. Credit cards have been found to be a facilitator for impulse purchasing behavior in addition to increasing consumers' propensity to buy. This study investigated impulse buying using credit cards in Facebook commerce to give insight into e-retailers with the aim of maximizing their revenue.

The concentration of the investigation is on Facebook commerce and not e-commerce at large because a huge amount of research has been done on e-commerce and the researcher would like to venture into the new emerging f-commerce. Pertaining to this study, the researcher would like to investigate Facebook commerce and marketing strategies that may encourage impulse purchase behavior. Facebook commerce differs from e-commerce in marketing because e-commerce places emphasis on providing product catalogues, one click purchasing and advanced searches to maximize shopping efficiency unlike Facebook commerce that places emphasis on direct social activities for instance collaboration, sharing and networking (Huang & Benyoucef, 2013).

The study made use of the tenants of the flow theory to explain how in Facebook and activity on it may bring about positive feelings and encourage consumers to purchase impulsively using credit cards. Flow theory insinuates the notion that when an individual is highly involved in any sort of undertaking especially when they are enjoying it, they often lose track

of time because they put all their focus on the task at hand, it is highly likely that a positive outcome will occur and, in this study, the outcome is impulsive buying.

Although a number of empirical research have been done on the impulsive purchase behavior of consumers using social platforms, the literature still shows a deficiency on such a relationship between impulse buying and credit card usage within the scope of Facebook commerce. Impulse buying has been known to have a correlation with some factors till date. Empirical studies exist on the impact personality attributes on impulse buying using Facebook (Leong, Jaafar, & Sulaiman, 2017), fashion orientation on impulse buying (Park & Davis Burns, 2005) and the effect of credit cards on impulse buying (Wang & Xiao, 2009).

The study concentrated on three other variables namely self-esteem, materialism and gender that appeared to have a relationship with both impulse buying tendency and credit card use. The study investigated gender as a moderating variable as previous studies had found results of gender differences with impulsive buying mainly the types of items that they purchase; women tend to buy luxury items whereas men tend to buy functional items (Chiger, 2001). The study also looked at materialism as an explanatory variable; earlier research has shown that those who score highly on materialism are far more prone to make impulsive purchases. Lastly, the research looked at self-esteem as an independent variable. There are mixed results on whether is it high self-esteem or low self-esteem that affects impulse buying and this study aimed to further explore this relationship and proceeded to analyze the results.

1.1 RESEARCH QUESTION

The intention of the research is to answer the succeeding questions:

- a. What role does self-esteem play in impulsive buying and credit card use on Facebook?
- b. How does materialism impact impulsive buying and the usage of credit cards in Facebook commerce?
- c. How do impulsive purchases and the relationships among materialism and impulsive buying, as well as the relationship between self-esteem and impulsive buying, change while using a credit card?

- d. What role does gender play in the relationships between materialism and impulsive buying on Facebook, as well as the relationships between self-esteem and impulsive buying?

1.2 PURPOSE OF THE STUDY

The goal of the study was to apply the flow theory to examine how various links between self-esteem, materialism, and gender-related character traits affect impulse buying and credit card use in Facebook commerce. Flow theory suggests that an individual is in a state of operation where there is a positive environment which brings about positive emotions and this heightens the individual's investment and increases likelihood of a positive outcome. Basing on Flow theory, the study formulated hypotheses regarding the effects of personality trait variables on impulse purchase behavior using credit cards in Facebook commerce. The study assessed how self-esteem materialism; gender affect impulse purchase behavior using credit cards in Facebook commerce.

1.3 SIGNIFICANCE OF THE STUDY

This research explored impulse purchase behavior and credit card use in Facebook commerce to combine psychology, marketing, and information technology to enable managers to utilize Facebook commerce as a lucrative sale tool. The study provided managers with information about personality traits that they can manipulate in their marketing strategies to increase sales revenue and ultimately, profits.

2. THEORETICAL FRAMEWORK

2.1 FLOW THEORY

The internet has tremendously affected how consumers shop. This thesis focuses on a peculiar aspect of Business-to-Consumer Electronic Commerce: online consumer conduct. It highlights the flow experience in selling of merchandise in online environments. The flow theory is a cognitive activity process frequently depicted as captivating and solely rewarding (Csikszentmihalyi, 1975). Individuals in flow tend to act with maximum levels of concentration, involvement, and immense sense of control. The individual is so preoccupied by an activity such that essentially, nothing else matters including any consequential costs of their actions. This study tries to relate flow's involvement in consumer behavior pertaining to online shopping and any antecedents and consequences of such an ideal shopping experience. This is important to note because as a medium, the internet is a well-defined channel of distribution (Hoffman & Novak, 1996; Schlosser, 2003). In e-commerce, there is mediation of shopping by the reciprocally active internet as shoppers act in a dual capacity of both internet users and consumers (Koufaris, 2002) thus, studying its impact on consumer behavior is essential.

Flow theory has been utilized to explain e-commerce consumer shopping experiences and in particular social networking forums (Novak et al., 2002; Koufaris, 2002). Csikszentmihalyi (1975) describes flow as an essential element of happiness. He notes that it is an unusual dynamic state: the all-encompassing sensation that people experience when acting fully (Csikszentmihalyi, 1975) and emphasizes how it is a well-organized, negentropic mental state (Csikszentmihalyi, 1988). In such a state, conveyance of actions is seamless, showing inner distinctive logic. The word “negentropic” alludes to the lack of chaos and state of harmony. The individual encounters an effortless transition and wholesome dominance over their actions in the absence of any diversions. Chen et al (1999) suggest that Flow is gripping and amusing such that individuals desire repetition of such experiences that result in flow. It is apparent that individuals reach this “optimal experience” through different circumstances including online activities. Several studies have investigated the flow experience along with its antecedent factors in internet use (Ghani, 1995; Nel et al., 1999; Skadberg and Kimmel, 2004) but not much research has been done solely focusing on online shopping settings.

Flow theory asserts that consumers take pleasure in browsing through striking content and submerge their all in the social media partaking. Davis et al. (1989) notes that the ease in navigation on the web increases the enjoyment a user attains from it. The way in which products are displayed (product category), and the brand association with status and popularity (celebrity endorsed brands) may play to the consumer's materialism as they browse through the site increasing the time, they spend on it and probability of impulse purchase behavior. The pleasure they derive from interaction on social media often means they lose track of time; their attention is retained, and the time spent with constant acquaintance with stimuli is increased. In summary, amid flow, (1) action and consciousness are integrated; (2) concentration levels are at their peak such that no room is left for the attention of anything else; (3) self-consciousness dissipates and (4) sense of time is contorted. Consequently, after intrinsically processing the stimuli, clients may have a strong urge and perform impulse buying behavior.

Flow theory therefore states that the more the Facebook user enjoys browsing through the social network, the more likely they are to get engaged in and achieve enjoyment from it. The engagement will sequentially increase the probability of users' impulse purchase. Clients are spirited on social networking sites, and this may bring them a positive attitude. When these clients are met with situational stimuli, it is highly probable that they will respond emotionally by impulse purchase behavior. According to a study by Moon and Kim (2001) on extension of the "technology acceptance model" against the Global Internet, the higher level of enjoyment of users on the internet, the higher the likelihood of online purchasing.

This study therefore used flow theory as an explanation for the expected impulse purchase behavior using credit cards to be anticipated in the research.

2.2 IMPULSE BUYING IN ELECTRONIC COMMERCE

Technological advancements and the enormous growth of e-commerce has prompted for online impulsive behavior to become a prevalent phenomenon in today's world. Internet shopping has eased the inhibitions of traditional shopping such as limited operation hours, unfavorable locations, and overbearing sales assistants. E-webstores are available 24/7 and provide a wide range of products paired with a hastened check out and buying process, allowing consumers a reduced amount of time pondering on choices. Thus, it can be concluded that online retailers have designed conditions favorable enough to trigger consumers to purchase quickly and without planning (Eroglu et al., 2001). An investigative questionnaire was conducted by Madhavaram and Laverie (2004) on impulsive buying on the world wide web and it reported that 22% of the respondents had indicated to have purchased impulsively when purchasing online. The respondent's majority also confirmed that they had similarly partaken in an impulse purchase in a retail context. The research results also confirmed that similarly to shopping in physical retail stores, online impulse buying is subject to stimuli that advance over and above the product. Thus, web based impulsive buying is not far from standardized impulse buying (Madhavaram & Laverie, 2004). Regardless, there are still some major differences that stand out. For instance, because customers cannot personally verify things before buying them, the level of risk associated with internet shopping is substantially higher. Thus, the notions of uncertainty and perceived risk are way more dominant in online purchasing than those of conventional retailing. Consumers may also be unwilling to purchase online because of the security of card payments as well as the worry of shipping and return aspects.

Online impulse buying has recently come to the attention of several philosophers. According to a commonly used definition of digital impulsive buying by Madhavaram & Laverie (2004), online impulsive purchase results from a buyer's quick response to external cues, which are often intrinsically charged and that such an occurrence indicates a change in the consumer's intent to purchase a particular good before and after exposure to stimuli.

Impulse buying in electronic commerce involves two main streams of exploration. Firstly, investigations that focused on assessment of antecedents that were identified to trigger buying in standard retailing environments are applicable in online settings. A substantial

amount of literature notably by Dawson & Kim (2010) and Xu & Huang (2014) has deliberated on marketer-controlled stimuli for instance bonus packs, price discounts and promotions in online impulse purchase behavior. Secondly, research that examined how website components affected users' propensity for impulsive purchases. Different research papers have examined the connection between spontaneous buying intent and the effectiveness of e-commerce websites (e.g., Shen & Khalifa, 2012; Dawson & Kim, 2010).

2.3 FACEBOOK COMMERCE

Facebook commerce, described as a subtype of social commerce can generally be defined as a type of electronic trade that is conducted on the Facebook social media platform. There are several definitions available for Facebook commerce. Chen et al., (2014) defined Facebook commerce as business activity through Facebook facilitation in establishing social interactions and appealing to consumer contributions for facilitation of online business deals. Shin (2013) gave a similar definition stating Facebook commerce as a subdivision of social commerce which makes use of a social network namely Facebook which embodies socialization and user contributions to champion web-based auctioning and acquiring of products and services. Technopedia (2017) defines Facebook commerce as a facilitation of e-commerce by Facebook such that transactions may occur on Facebook pages or through using Facebook Open Graph, a protocol allowing external party websites integration with Facebook website. On the other hand, Market Business News (2017) referred to Facebook commerce as a label in the e-business arena that pays attention to the development, design of storefront sites and content established inside Facebook, that is, trading of goods and services within Facebook.com. Garter (2017) gave his own definition stating Facebook commerce as the ability of retail undertakings administered within Facebook through applied Facebook APIs that allow retailers to present goods, information and deals and the capacity to fulfil transactions to users within Facebook. Furthermore, according to some experts, Facebook commerce is a form of social commerce that makes use of the social network to help create and carry out transactions that create an electronic sales channel (Menon et al., 2016). Until now, the literature focusing solely on Facebook commerce remains scarce, but its huge market potential is worth studying. Nonetheless, the researcher used social enterprise as the basis for f-commerce.

Zhang and Benyoucef, (2016) researched on behavior of consumers in s-commerce and based off their review, it was noted that the majority of researches on s-commerce have concentrated on information disclosure (e.g. Sharma & Crossler, 2014), purchasing behavior (Napompech, 2014), brand assessment (Li & Li, 2014), consumer attitude, brand engagement (Hollebeek et al., 2014), marketer and user content generation (Goh et al., 2013), engagement intention (e.g. De Vries & Carlson, 2014), purchasing decisions (Goodrich & Mooij, 2014) and intent to utilize (e.g. Kumar et al., 2015). All these existing social commerce studies are derived from the outcome measures proposed by Liang & Turban (2011) in their research framework. Despite this, there has not been much research on actual purchase targeting the context of Facebook commerce precisely.

As mentioned before, the simplest way to define Facebook commerce would be vending of goods and services inside Facebook (Valles & Petrova, 2012). A more explicit definition and for the purposes of this study was given by the f-commerce FAQ (2012, p. 1) states that Facebook commerce, an outgrowth of e-commerce, is the utilization of Facebook as a platform to perform and execute commercial transactions, possibly internally on the site or outside via the Facebook Open Graph. In layman terms, Facebook commerce describes the integration of a social networking podium, that is Facebook with electronic commerce. It is still a relatively new market trend tapping into huge market potential by using Facebook. It is worth the acknowledgment of the six pillars of social trading namely contextualization, reputation, customer service, visibility, proximity, and recommendation that have aided in the success of social trading. Social networking platforms namely Facebook, Twitter, Friendster and LinkedIn all began with Sixdegrees.com in the year 1997. Not long passed until all received high levels of popularity attracting millions of users.

Facebook was developed by American Harvard University scholars Mark Zuckerberg, Dustin Moskovitz, Chris Hughes and Eduardo Saverin in 2004. Estimating over 2.89 billion active users as of 2021, the most popular social networking site is Facebook. The usage of Facebook began in 2004 and essentially paved way for the birthing of Facebook commerce. Brands made their way to Facebook in November 2007 after the introduction of accounts. The first ever Facebook commerce transaction inside Facebook took place through purchase of a gift via a store, “1-800-flowers.com” in July 2009 as exclaimed by f-commerce FAQ,

2012. In August 2010, other companies hopped on board such as Delta that then launched its Ticket Window allowing booking of Facebook flights by users. As of date, many other brands are making use of storefront apps allowing consumers direct access to buy goods from their Facebook accounts.

Since the launch of Facebook commerce, the world's biggest brands have been using Facebook as tool for marketing, CRM (customer relationship management), distribution networking and branding. Companies using Facebook commerce as a feasible sales stage include the world's top 3 companies: Starbucks, Disney and Coca-Cola. In addition, several acclaimed brands such as Nike, Unilever, Old spice, Apple, Volkswagen, Walmart, Levi's, Heinz, Best Buy, Gap and Amazon.com also use it as an effective distribution channel. In greater detail, with this marketing tool, the above brands are achieving their individual goals by practicing customer engagement through aspects such as brand recognition development, survey conducting, contest organizations, discount and couponing, establishment of loyalty systems and offering an extraordinary point of purchase. Additionally, developing companies now can participate in e-commerce through the Facebook market thanks to the initiative of enterprise such as "Vendor Shop Social and Payment," (Top 50 Facebook Stores 2011). This has allowed several refurbishments to take place as basic pages of brands have transformed into digital shopping centers (Solis, 2012). Subsequently, Facebook commerce being a pioneering dais has attracted not only attention as a marvel, but it managed to generate over \$2 billion through investments for the first quarter of 2011 (Chaney, 2012).

In addition, on Facebook, active monthly users amounted to 2.07 billion as at the third quarter of 2017. According to Chen & Shen (2015), the projected revenue of social networking sites was \$30 billion in 2015 and \$80 billion in 2020. In 2020, Facebook surpassed this projection and generated \$85.9 billion dollars in revenue and had an operating profit of \$32.6 billion (Statista, 2019). Given the abovementioned statistics, there is an inclination that Facebook commerce will continue to become a lucrative tool for companies in terms of both marketing and revenue generation.

Facebook provides an instant and portable store for consumers, which increases the likelihood of impulse purchase. Around 40% of online purchases are because of impulse

buying (Verhagen & Van Dolen, 2001). According to Atilgan-Inan et al. (2011), Facebook was classified as the second most visited site after the Google search engine therefore, it is a suitable way to contact a diversity of people in swift time. The primary reason most Facebook users actively use their accounts is for social interaction, and because of this, there is always a large number of active users at a given time. Advertisements that pop up at these times serve as stimuli for sudden purchase.

As stated by Beatty and Ferrell, 1998, impulse buying often occurs without prior planning or a prior need for a specific item. Facebook commerce is also appealing to consumers because of its convenient nature. From the comfort of home, work, or school either from a personal computer, laptop, tablet or mobile phone, a consumer is able to purchase items with only a few taps that would be delivered to their doorstep speedily. Facebook users tend to be on Facebook approximately 28 minutes a day on average.

Facebook commerce like all other E-commerce brings a dimension of availability that makes it appealing to consumers; they can purchase at anytime from anywhere. Additionally, 90% of consumers make purchases based off recommendations thus consumers get to easily engage with not only each other through aspects such as product ratings but with their favorite brands through easy access to product lists. Moreover, with marketing aspects such as “fan-first” allowing exclusive access to newly released products before anyone else through Facebook sales only and promotional rewards such as special coupons, increases the possibility of the impulse urge to be treated immediately.

Using the flow chart of the flow theory, a person will be engaged in Facebook and finding enjoyment in fulfilling, status value (materialism) along with alleviating low self-esteem and in this process, triggers a higher chance of impulse buying behavior using credit cards.

2.4 SELF-ESTEEM

The way a person views their overall self-worth is called self-esteem. An individual with high self-esteem views themselves as equal or above a self-determined gauge of worth and one with low self-esteem will consider themselves below this gauge. Impulsive buying has

frequently been linked to high levels of self-esteem, and vice versa. There is a consensus of researchers that have discovered a connection between self-esteem and impulsive purchasing who agree with this (Arndt, Solomon, Kasser, et al., 2004). Highlighted by both the sociometer theory (Leary, 1990) and social exclusion theory (Leary, 1995), individuals yearn to be approved of by their companions aiming to feel a sense of inclusion and certainty. Lack of such approval leads to difficulties like despair, anxiety, loneliness, and low self-esteem. According to Mohan et al. (2013), people with high self-esteem exhibited high levels of impulse buying. However, Youn and Faber (2000) observed the reverse results, concluding that people with low self-esteem engage in impulsive buying behavior to counteract their negative emotions.

The idea of escaping is frequently used to explain the connection between low self-esteem and impulsive purchasing behavior. Impulsive buyers with low self-esteem, often briefly slip away from negative affect and thoughts when they imagine themselves being successful and being viewed by society as wealthy as they participate in a specific behavior (Jacobs, 1986). Sneath (2009) contended that impulse buying can be prompted by negative affect in an individual whilst endeavoring to improve their mood. Verplanken and Herabadi (2001) identified alike results in their study as impulse buying was related to individuals that wanted a temporary escape from their feelings of negative affect and low self-esteem.

According to Higgins (1987), a sufferer with poor self-esteem feels inadequate which often induces emotional stress and leaves the individual emotionally vulnerable. This vulnerability often leaves individuals with lack of self-control and in turn exhibit impulse purchase behavior (Gifford, 2002). From a different perspective, research by Stewart et al. (2017) demonstrates that social isolation in the Cyberball paradigm is linked to poorer implicit and self-reported self-esteem. Negative social criticism can influence a person's self-esteem (Yang et al., 2016).

Previous research has also highlighted that a person's interpersonal ties and self-esteem are closely related (Baumeister et al., 2003) including a direct effect on self-esteem with student-to-student relationships (Wang et al., 2017). Therefore, the direct impact of social exclusion can be speculated on a student's self-esteem, heightening their self-distrust and apprehension

which in turn will lead such individuals to pay more attention in going the extra mile for their acceptance by society. With an aim to dissolve the pessimistic emotions triggered by low self-esteem, university students may recompense for their lack of camaraderie by trying to attain self-worth through impulsive buying (Bandyopadhyay, 2016).

In addition, Dittmar et al. (2000) noted that purchasing items has developed into achieving and communicating a sense of self-identification. Thus, those university students who society has excluded may impulsively purchase with an aim of accomplishing self-expression and any form of social ties by means of shopping (Bayley & Nancarrow, 1998). This was further emphasized by Zadeh and Jalaly (2014) who found via their research that there is a conflict between impulse buying and self-esteem.

In addition, according to a study by Koufaris (2002), people with poor self-esteem are quite altruistic. The question then becomes how personality can lead to credit card misuse if poor self-esteem causes either a large incentive to buy or to impulsive buying? (Faber & O'Guinn, 1992). The clarification by Wang, LV, and Jiang (2011) made the answer more cogent. They stated that when consumers yearn to pursue prestige, but their incomes are insufficient to meet this demand, they resort to using credit cards to purchase these superior or luxurious products. Such a problem is unlikely to occur among persons whose self-esteem is high because their confidence levels tend to also be high and thus, they are less likely to be affected emotionally.

This is contrary to those with low self-esteem as they continuously experience high levels of anxiety, negative emotions, and distress (Yelsma P & Yelsma J, 1998). However, empirical research has not demonstrated a substantial relationship between credit card debt and self-esteem (Pinto, Mansfield & Parente, 2004). Regardless, a much clearer picture is painted by a broadened definition of debt that encompasses all forms of borrowing. According to Norvilitis et al. (2006) self-esteem and debt build up have a negative link, albeit it hasn't been proven that low self-esteem might make people more likely to take on debt or that debts diminish self-esteem levels. The following theories are presented as a result of the thoughts and conclusions presented above:

- H₁: Self-esteem significantly and negatively affects credit card use in Facebook commerce.
- H₂: Self-esteem significantly and negatively affects impulse buying in Facebook commerce.

2.5 INSTRUMENTAL MATERIALISM AND IMPULSE BUYING

An individual's obsession with material goods is known as materialism. The urge to obtain more of them, and the attachment to material objects as yearned for to accomplish a longed-for state. Materialistic beings prioritize acquiring worldly objects as their personal goal that influences their lifestyles (Richins & Dawson, 1992). Materialism is a money attitude that is directly linked to status and can be exhibited through a diversity of consumption linked behaviors. Schiffman and Kanuk (2007) expressed that materialism centralizes an individual's identity measure of success, based off their acquisition of possessions. When addressing the extremities of materialism, individuals under this category treat worldly objects as pre-eminent satisfaction and the greatest delight of life (Belk, 1984).

Furthermore, having access to credit cards could be deleterious to materialistic individuals as having set unrealistic goals in their lives, are predicted to experience greater dissatisfaction (Sirgy, 1998). Credit cards in turn generate a means of them reaching these set goals except this means does not have any supporting natural resources so thus, is spurious. In agreement with Sirgy, Dittmar et al. (2007) noted that materialistic individuals tend to experience less satisfaction and are anticipated to become compulsive buyers. Thus, the need to procure social standing through the acquisition of material possessions can lead to an inclination triggering an individual to splurge which in turn may result in credit card exploitation (Richins, 2011; Fitzmaurice, 2008).

According to Richins and Rudmin (1994), materialism is related to a person's personality, social behavior, job attitudes, and money management. Sequentially, an individual's money and credit attitude is connected to economic well-being, their spending habits and debt tolerance (Lea, 1995). At the height of materialism, according to Belk (1975), a person's possessions occupy a significant portion of their life and provide them the greatest sense of fulfilment. Materialism can therefore be grouped into different categories but for the purposes of this research, instrumental materialism is most applicable. This is seen as a relatively harmless form of materialism and Csikszentmihaly (2005) defined it as state in

which an individual acknowledges and idolizes objects as the imperative means for finding and enhancing personal values and as a basis for solidifying interpersonal relationships.

University students frequently exhibit overt self-consciousness and try to present an image that is appropriate for their peers. Heaney et al. (2005) supported the notion when they reported a notable correlation between status consumption and materialism betwixt college goers. Therefore, public self-consciousness often acts as a pre-cursor to materialism (Xu, 2008). This notion was supported by Elliot (1994) who found that, one of the crucial purposes of impulse buying is to grow the buyer's capacity to equal their individual discernments of socially preferable or recommended appearance.

Instrumental materialism has been found to be a precursor of impulse buying using credit cards. Credit cards provide individuals who have high materialistic values with an ideal means for instant gratification. Credit cards have brought with them convenience in both comfort shopping and shopping without tangible money-making impulse buying immediately gratifying. Foscht (2010) asserts that the immediate access to funds permits individuals who place importance on prestige and status to have a readily accessible product to accomplish their desires. Pinto (2000) supports that credit cards for the materialistic mean that purchasing does not have to be depended on actual savings or income but based on potential income.

The relationship among instrumental materialism, impulse buying, and credit card use has been illustrated by a number of studies. Results from a study by Lai (2010) showed that participants who were more likely to be motivated by prestige attitudes in their purchases—for example, buying a Mercedes because it is of a better class—were more susceptible to making impulsive purchases. Roberts and Martinez (1997) found similar results in both the United States and Mexico as high impulsive buying tendency was positively correlated to purchasing of goods that were in relation to status. Roberts and Jones (2001) found out that, materialism was significantly correlated with impulse buying and those individuals had a high probability of scoring high as well for credit card use. Impulsive purchasing and materialistic attitudes were discovered to be significant predictors of credit card use by Norvilitis (2006).

The researcher in this study proposed that consumers that exhibit greater levels of instrumental materialism will in turn have greater levels impulse purchase behavior and subsequently make use of their credit cards more frequently than those who display lower levels of instrumental materialism.

H₃: The association between credit card use and materialism possesses a direct effect in Facebook commerce.

H₄: The association between materialism and impulse buying in Facebook commerce possesses an indirect effect.

2.6 CREDIT CARD USE AND IMPULSE BUYING

Impulse purchasing means the hasty and obstinate urge to purchase something straight away (Rook, 1987). The use of credit cards ensures that this urge is gratified. Pinto et al. (2000) shed some light on how credit cards are important possessions with the potential to fuel a global obsession with possession. Feinberg (1986) insisted that the mere existence and actuality of credit cards motivates an increase in expenditure and the easy accessibility of money has a favorable relationship to impulsive purchasing (Beatty & Ferrell, 1998). Hunt et al. (1990) endeavored in the replication of these findings but to no avail thus further research is required on the relationship between using a credit card and making impulsive purchases.

Previous studies have demonstrated that the method of payment influences the supposed pain of payment. As reported by Prelac and Lowenstein's mental accounting model, consumers perceived cash payments differently as opposed to other methods of payment for instance, bank cards. By way of explanation, when consumers use cash to pay for purchases, they experience greater pain of payment even though the sum of money to be paid is identical (Prelac & Lowenstein, 1998). Existent research points out the fact that credit cards being a minimally graphic payment method, feel otherwise from cash payments. When consumers are facing a purchase but have limited funds available, they generally have two options: either to postpone the purchase and save money or to turn to credit and make an immediate purchase of the product. Credit cards which are effortlessly obtainable to most individuals

increase the purchasing power of consumers, essentially driving them to overspend and consequently, encouraging impulsive expenditure.

Furthermore, when emotionally unstable, impulsive purchasers are more inclined to pay for their purchases with credit cards due to aspects such as low self-esteem and thus, pursue expensively priced luxury goods in an attempt to restore their self-worth (Petit & Sivanathan, 2011). In such a state, credit cards become a quick fix in satisfying impulsive buying yearnings of achieving their materialistic goals without any consideration of purchase decision consequences (Pradhan et al., 2018). Consumers who are highly impulsive are bound to lean on credit cards as the cards provide a way for immediate gratification by expenditure. Those who view money as a cause of standing have higher probability of misusing their credit cards (Tokunaga, 1993).

On the contrary, consumers with high self-control tend to partake in purchase planning taking into consideration any of their budget constraints. According to a study by Feinberg (1986), college students who use credit cards had more extravagant spending patterns. Roberts and Jones (2011) reinforced this by adding that among American college students' attitudes toward money are directly linked to impulsive shopping behavior and credit card use for those who have a reputation of overspending caused by the need for social status and satisfying grounds of peer pressure. Furthermore, Karbasivar & Yarahmadi (2011) stipulated the direct influence between the use of credit cards and shopping impulsively particularly when buying clothing.

Studies have also shown that a large percentage of university students acquire and overuse credit cards often leading them into debt. Pirog and Roberts discovered in their 2007 study on the impact college students using credit cards that, materialistic students' spending patterns were directly impacted by using credit cards, and they also tended to spend more than those who made use of, for instance, cash as a method of payment (Soman & Gourville, 2001). In a 2003 study by Watson, he too found that less materialistic people who choose instalment financing have lower credit card account balances than people who are highly motivated by money. Similarly, according to Hayhoe et al. (2005) university pupils favor buying using credit than other means of payment or their income.

In addition, whether their sources of income include part time work, allowances from parents or sponsorships also contributes to their credit card utilization. They discovered that students whose income is high, often buy entertainment, fuel, and clothing apparel with their credit cards. Lyon (2004) reported that students who possess financial aid that is need based are vulnerable to credit card debt whilst those who rely on parental income do not fall under this category as they need to answer to their parents so behave maturely and respectfully (Wang & Xiao, 2009). This has resorted in university students often carrying a significant amount of credit card debt throughout their university years. Students often acquire a second or third credit card to clear the initial debt or take on more part time jobs (Miller, 2000).

In a society where the type of consumption is related to a persons' identity and status and where credit cards have brought a way to spend future wages, it is inevitable that impulse buying tendencies would also increase. Furthermore, thanks to technology improvements, creditors can now easily grant revolving credit (Durkin, 2000). According to Somon (2001), purchase intention is increased with credit card users because the user does not realize the financial consequences immediately because the user's fortune is not depleted immediately.

The literature shows a correlation between credit card use and impulse buying tendency. Feinberg (1986) perceived that cards act as a spending incentive stimulus to consumers with impulse buying tendencies. Gel and Belk (1996) emphasized this by observing that pertaining to credit card and their usage, consumers are enabled to cover for unforeseen expenses, which ultimately encourages impulsive purchasing (Roberts & Jones, 2001). Impulsive people have a higher likelihood to make improper credit card purchases and accumulate greater debt than sensible spenders. Credit cards not only speed up the process of purchasing because no cash is involved, but also create the illusion that no money has been spent. Most retailers save the user information and therefore all future purchases can be made with one click. Credit cards are a quick and simple tool for impulsive shoppers to temporarily ignore the implications of their spending habits (Wang & Xiao, 2009). The following theory is put out in light of the discussion above:

H₅: The use of credit cards has a direct effect on impulsive purchasing on Facebook.

H₆: In Facebook commerce, the relationship between self-esteem and impulse buying is significantly indirectly impacted by credit card use.

H₇: In Facebook commerce, the association between materialism and impulse buying is significantly mediated by the utilization of credit cards.

2.7 GENDER AND IMPULSE BUYING

Gender is defined as the social contrast betwixt sexes, their respective roles, and the way they formulate the society (Kang'ethe & Willet, 2009). The study aims to explore gender differences on impulse purchase behavior using credit cards in F-commerce. Studies have shown various gender differences in terms of information processing and valorization of material possessions pertaining to purchase behavior. Research points out that women purchase more impulsively than males. Others assert the contrary (Jalees, 2009; Virvillaite et al., 2009; Priyanka & Rooble, 2012; Cobb & Hoyer, 1986; Mai et al., 2003). A study was conducted by Mai et al. (2003) in line with building enough evidence on these impulse differences between males and females but were unsuccessful. Thus, the issue is of importance pertaining to the need for further research.

Women are more prone than males to exhibit impulsive buying tendencies (Chiger, 2002). According to Coley and Burgess's 2003 study, women had more purchasing power than men. Due to their propensity for being more emotional than men, women are more likely than men to make impulsive purchases. Verbadi and Herabadi (2001), Buendicho (2003), Guitierrez (2004) and Gilboa (2009) all portrayed gender to have different effects on impulse buying. The frequent opinion holds that men are not fond of shopping thus are inactive in this field. Furthermore, it is a challenge in getting them to practice patience for women as they are shopping. Contrary to men, women possess a pronounced rapport for shopping and prefer to take their time roaming the stores, swinging from aisle to aisle, interacting with store attendants, comparing prices, trying on items and eventually purchasing (Gasiorowska, 2003). Mburu (2010) supported this stating how despite men having minimal interaction with ordinary shopping, they are still experts at getting durable goods such as cars, computer systems and instruments.

Meanwhile, women dwell in momentary things such as hair, make up or dinner choice options. For females, shopping carries psychological and emotional connotations that barely exist for men. Xuanxiaoking and Hung (2012) analyzed how women's buying behavior was influenced by aspects like atmosphere, promotion, salespersons attitude, advertising, and exhibition of a goods. Women tend to purchase goods that portray their individualism and are emblematic to their emotions and appearance (Dittmar, 2000) thus possess greater impulse purchases tendencies (Dittmar & Meek, 2000; Verplaken & Herabadi, 2001; Gasiorowska, 2003). For men contrastingly, tendencies of impulse buying are of instrumental character. They usually shed light on their requirements and satisfy it swiftly with minimal engagement. Thus, impulse buying for men tends to be a faster decision paired with rapid accessible usage of items purchased. In addition, male impulse is closely connected to money attitudes (Mattila & Wirtz, 2008).

The literature has shown gender differences in the reason for impulse buying. As mentioned prior, men are not fanatics of shopping like women thus reducing their likelihood of impulsive buying decision-making (Mburu, 2010). Dittmar et al. (1996) in their study assessed that, gender as a socio- demographic factor, has an effect on impulse purchase behavior. Men often purchase impulsively on functional items and relaxation items which are associated with their individuality and activity. Women on the other hand, purchased items that were symbolic of luxury items as well as items that were self-expressive which were associated with status (Youn & Faber, 2000). In terms of materialism therefore, women were expected to score higher in this study.

A plethora of studies have found women to be more susceptible to impulse buying. Women tend to attach fantasies and emotions to their behavior, and this is present in their impulse purchasing. They use the product to satisfy both fantasies and emotions. Wade (2000) noted that women more than men purchase impulsively because their consumption is hedonic in nature. Additionally, research has revealed that people utilize spending to counteract negative emotions, particularly anxiety and low self-esteem. The impulsive nature of women may be explained by these factors as supported by Feingold (1994), whose study attributed the impulsivity to women's higher chance of suffering from anxiety and low self-esteem.

The researcher would therefore like to explore the gender differences of impulse buying in this research, taking into account the suggested gender differences of materialism and self-esteem from the literature including the disparity between men and women's propensity for impulsive purchases.

H₈: The association between materialism and impulse buying in Facebook commerce is significantly moderated by gender.

H₉: In Facebook commerce, the relationship between low self-esteem and impulsive purchases is greatly tempered by gender.

2.8 CONCEPTUAL MODEL

Figure 2.1 displays the conceptual framework for the current inquiry. The model, which evaluates the link between independent, mediating, and dependent variables, is built on the created propositions from the earlier parts. The model depicts the elements that according to the literature, are thought to influence credit card use and impulsive buying behavior. The items of the factor loadings were not displayed because although they were included in the model, as indicated by a + sign in the model. Materialism and self-esteem are independent variables that were chosen because previous research suggests a connection between them. The model was manually drawn, and direct impacts are represented by solid lines while indirect effects are shown by broken lines. To describe the correlations that have emerged from the research and helped shape the hypotheses, the model is built using the results of the literature review. Thus, the research aims to scrutinize this notion using the moderating variable of gender and a mediating role of the usage of credit cards because prior research has also seen differences between self-esteem and materialism variables and gender and credit card use. When paying close attention to the Flow theory, it is found that the concept is compatible with both self-esteem and materialism. For instance, when an individual is scrolling through social media, they can encounter what other people are buying and get exposure to how they are living their life. This is either going to trigger the loss of self-esteem if one cannot afford the items they are seeing or result in an increase of self-esteem if the individual is able to afford these things in question. In addition, this is how credit card comes into mediating play as credit cards allow the opportunity to get an item immediately and bear the consequences of payment later.

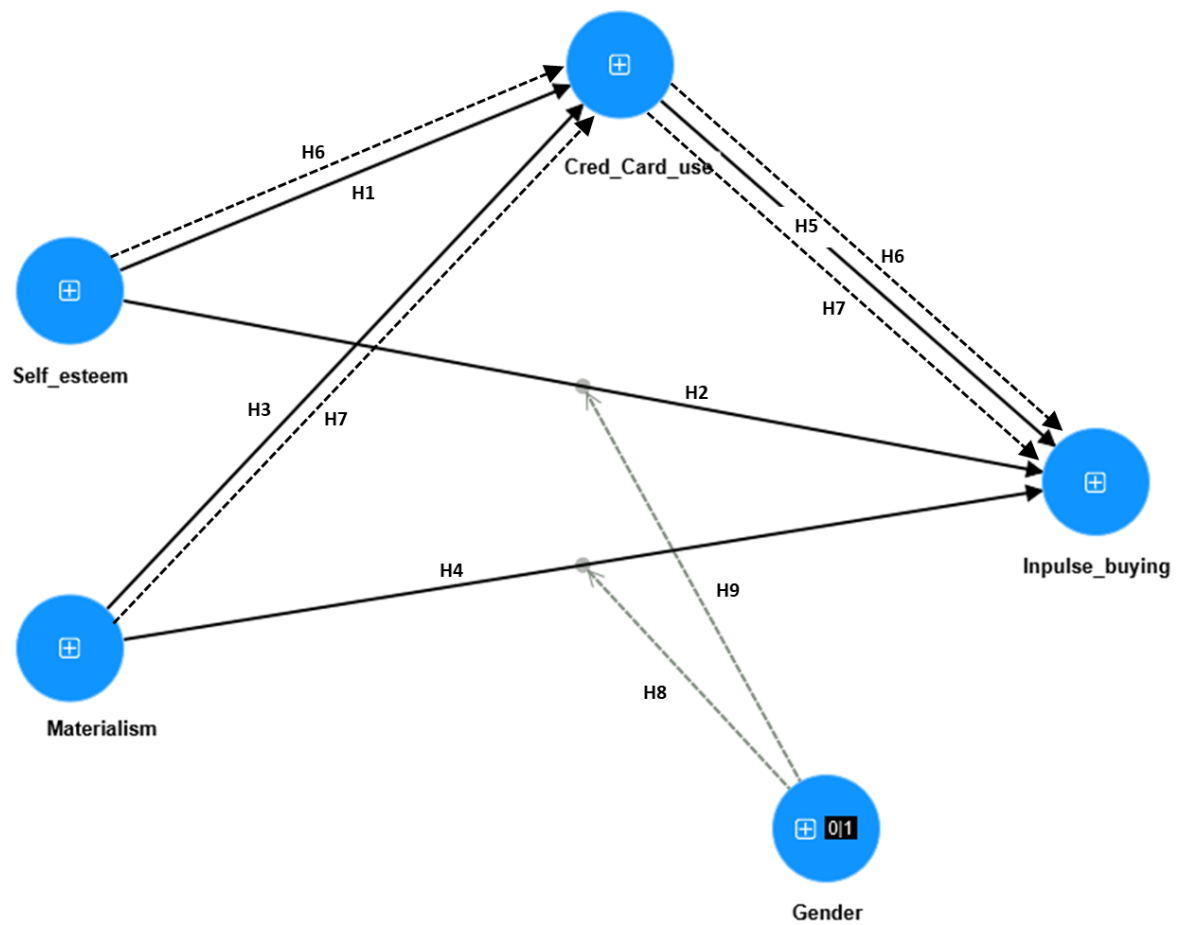


Figure 2.1: Conceptual Model

The study shows gender implemented using the dummy technique of recoding it from 1 and 2 to 0 and 1 as the results are the same as sub-setting different gender categories. It is a binary variable and the researcher’s aim was to test the above model using t test and chi square analysis along with the Pearson’s correlation. Furthermore, all observable and latent variables modelled into the given hypotheses were to be further analyzed using structural equation modelling as it was the most suitable technique that allowed further effects of a variable to be investigated in a relationship between two other variables as opposed to the standard one variable against another.

3. RESEARCH METHODOLOGY

The study's goal was to collect data using numbers, which would then be further evaluated using graphs and statistics, hence the most suited research approach was quantitative research. The following overall research question was developed to address this issue: RQ *What are the determinants of consumer impulse buying behavior in Facebook Commerce?* This thesis is both descriptive and explanatory in character because it tries to describe the relationship between impulsive purchase as a dependent variable and the mediating variable of credit card use among specific independent variables (self-esteem and materialism) and a moderating variable (gender).

3.1 SAMPLE SELECTION AND SAMPLE SIZE

This thesis employed probability sampling because it is the most effective method for reaching out to people in the target age group and conclusions were brought out from a sample taken from the population targeted to answer the thesis's research question. A sample of 325 students were used in total. This thesis employed random sampling due to the way in which data was collected that is, spreading the questionnaire on social media platforms allowing anyone who is connected to the researcher and other individuals associated with those close to the researcher, the opportunity to answer. The university students were used because they were ideal in testing credit card use, along with self-esteem, materialism and fashion orientation. According to Prince (1993) college students related money closely with status and esteem.

The decision to use students aged between 18 to 44 for this study was largely influenced by a prior study on Turkish electronic commerce (Ozekenci et al., 2019). According to the findings, nearly all the increase in online sales has been driven by adults between the ages of 25 and 44, while people between the ages of 55 and 64 have demonstrated to make more purchases on mobile phones and tablets. The researcher made a decision to include those aged between 18 and 24 because they entailed individuals who grew up with the rapid technology of private computers, cell phones and the Internet, covering both parts of the so-called *Generation Z and Y*. It was therefore fascinating to see if they, too, have impulsive purchase inclinations (McCrindle, 2003).

A study on selecting the optimum sample size by Israel (1992) and a study on survey response rate levels by Baruch and Holtom (2008) were used as guidelines in choosing an appropriate sample size. In 167 studies published between 2000 and 2005, 167 survey response rates were evaluated by Baruch and Holtom (2008), who discovered that the average individual number of responses was 52.7%. The researcher recommends a 50% average response rate at individual level as a result. The formula below, which considers the independent variables, can also be used to find the appropriate sample size: $N \geq 50 + 8 * m$, where m is the total number of independent variables. For instance, 130 examples are needed for ten independent variables. More examples are required if the dependent variable is not regularly distributed (Pallant, 2010; Tabachnik & Fidell, 2007).

The response rate cannot be computed since it is difficult to keep a precise tally of everyone who was invited to participate in the survey. As a result, Pallant's (2010) algorithm was used to determine the suitable sample size. 66 replies are required because this study relies on two independent variables ($50 + 8 * 2 = 66$). 325 people filled out the questionnaire, which was more than the satisfactory number.

3.2 DATA COLLECTION

Through Survey Monkey, a questionnaire with four personality characteristic scales and five demographic questions was developed and distributed via the researcher's social media accounts on Instagram, Facebook, Twitter, and WhatsApp. The questionnaire had a cover sheet with the study's objectives and a request for informed consent from the students before answering the questionnaire and emphasizing on their anonymity.

The alternatives for data collection included sending an online survey by e-mail or manually distributing the questionnaire in the different universities. Because of the corona virus pandemic, many of the selected universities were studying online therefore schools were close to being empty and this proved difficult in data collection. Moreover, the universities' geographical locations were extremely spaced out making it strenuous to physically distribute questionnaires. Lastly, a language barrier exists between the researcher and any Turkish respondents also triggering inconvenience of physical contact. An online survey was therefore a more appropriate choice and because most students private email addresses are

unavailable to the public, as previously mentioned, social media platforms for instance WhatsApp, Facebook, Twitter and Instagram were used to distribute the questionnaire. This, however, did not allow the full target audience to be reached as the majority of university respondents who responded are between 18 and 34. The majority of the responders were Zimbabwean students studying abroad in various locations, which removed territorial restrictions and permitted a global perspective. The questionnaire was promoted every day on the above-mentioned platforms and the data was collected within seven days.

3.3 QUESTIONNAIRE FORM AND DESIGN

A socio-demographic questionnaire was employed to attain socio-demographic attributes of participants. These traits included nationality, age, gender, educational attainment, and academic specializations. The open-ended question about nationality and academic major were picked, whereas the others were closed questions with response alternatives. In addition, the questionnaire was administered using Survey Monkey that offered the respondents option of changing the language and answering the questionnaire in their native language.

The questionnaire had five primary sections. There was a total of 5 demographic questions, 17 questions that made up the Richards and Dawson Materialism scale, 7 questions that encompassed the Roberts and Jones Credit Card Misuse scale, 9 questions on the tendencies of impulse buying; a scale by Verplanken and Herabadi and lastly, 10 questions that made up the Rosenberg self-esteem scale. As previously noted, Survey Monkey was used to collect and retrieve the questionnaire data.

Although Hair et al. (2007) recommends placing demographic questions towards the conclusion of a questionnaire to avoid any sensitivity that may lead to participation being affected, they came first in this questionnaire due to their relaxed nature before essentially introducing each of the scales. The characteristics included nationality, age, gender, level of education and field of study. Notably, the most sensitive question that could affect participation was financial background or capacity which was left out for this reason.

3.4 MEASUREMENT SCALES

Four scales made up the questionnaire. Each focusing on a different aspect of materialism, credit card misuse, self- esteem and impulse buying tendency as shown below:

3.4.1 Richins and Dawson Materialism Scale

The questionnaire then addressed materialism by modifying Richins and Dawson's Material Value Scale (1992). The 18 elements on the scale reflected the importance of how people see material things. The scale comprised of three subscales; firstly, with statements tackling “success” for instance, a statement that asked the respondent whether they admired individuals who owned expensive items like cars and clothes. The second subscale covered “centrality” with statements that addressed notions such as the responded aiming to keep their life simplistic when pertaining to possessions. The last subscale covered “happiness” with statements that addressed the responder to answer for instance, whether they had all the things they needed to enjoy their life. Participants rated the statement on a five-point Likert scale with five different possibilities based on whether they agreed or disagreed with it. The average criteria correlation across 12 sets of data in Richins' (2004) study on the scale's validity utilizing 15 data sets was 0.22 suggesting good validity.

3.4.2 Roberts and Jones Credit Card Misuse Scale

The Roberts and Jones (2001) credit card misuse scale was then applied. The measure is designed to evaluate participants' credit card responsiveness. The assumption of the scale is that the participants regard credit cards as paying with intangible unreal money. Credit card availability is positively correlated to over-consumption as stated by Palan et al. (2011). The scale comprised of statements that required the responder for instance, to show based on a Likert scale with five possible responses, whether they are more impulsive when purchasing with a credit card rather than other forms of payment. Reliability of the scale by Omar et al. (2014) showed Cronbach alpha of 0.81 which indicates good reliability.

3.4.3 Verplanken and Herabadi Impulse Buying Tendency Scale

The fourth scale was adapted from Verplanken and Herabadi impulse buying tendency scale (2001). A 20item scale measured the tendency of participants to buy items on impulse. Ten

items on the scale measured cognitive aspects such as the respondent consciously making pre-informed decisions before making a purchase and the other ten items measured affect with statements such as those that address the respondent's excitement when facing something they would like to purchase. However, the summarized version of the scale consisting of only 9 questions was used. Additionally, the items were evaluated using a 5-point Likert scale with five possible answers. A test on reliability by Peck et al. (2006) on the scale revealed Cronbach alpha of 0.74 indicates that the measure is reliable.

3.4.4 Rosenberg Self-esteem Scale

The final section of the questionnaire was modified from a Rosenberg self-esteem scale (1965). The scale consisted of 10 measures that assess self-worth across all human populations. The other five measures measured good effect about self-esteem, while five measured negative effects. The responses to the questions were on a point Likert scale, and there were five alternative answers. According to Sherr et al. (2017), the scale's test-retest reliability ranges from 0.82 to 0.85, and its internal consistency is between 0.7 and 0.88. The criterion's validity score is 0.55. As a result, the experiment was a trustworthy indicator.

3.5 PILOT STUDY

Before the survey was made available to the public, a pilot study was conducted. The intention was to determine whether the questionnaire was straightforward to interpret and whether there was anything that may be misconstrued or problematic to answer (Hair et al., 2007). The pilot study included fifty-nine participants in the target age group who critically assessed the questionnaire. The pilot study size was calculated through a formula presented in an article by Vietchtbauer et al. (2015) showing how to calculate the sample size with a certain level of confidence using a formula necessary to detect potential problems within a specific probability. Having estimated 5% as the probability; given one of the chosen demographic questions as well as general interpretation of the entire questionnaire, it was estimated that 59 participants were required if the issue would most likely be found with 95% confidence. The pilot study resulted in minor formulation adjustments such as the removal of the financial background or capacity demographic question.

4. DATA ANALYSIS AND FINDINGS

The purpose of this chapter is to respond to the research question. Results of a descriptive nature have been included to help paint a more comprehensive picture for the reader. IBM SPSS (version 22) and Excel were used to test data collected, and usage instructions were taken from the SPSS Survival Manual by Pallant (2010). IBM SPSS was used to determine the demographic makeup of the respondents, which included their nationality, age, sex, level of education, and other information. The supplied hypotheses were put to the test using a structural equation model. To further enhance the reader's comprehension, the chapter analyzes and describes using figures and tables.

The qualitative data of the results are provided and evaluated in this thesis, and statistical analysis is done to test the proposed hypotheses. IBM SPSS, a statistical tool for social sciences, was used to analyze the data (version 22). The entire sample's demographic statistics were examined using the t-tests for categorical variables and the chi square for continuous variables. The study used structural equation modelling (SEM) to evaluate established hypotheses about the significance of the correlations between the variables. Additional model testing was carried out using structural equation modelling and the partial least squares tool SmartPLS3. Due to the latent character of some of the variables, as mentioned prior, structural equation modelling was determined to be the most appropriate strategy for this investigation. In addition, given the small sample size, using SEM was also appropriate.

4.1 DEMOGRAPHIC FINDINGS

Table 4.1: Demographic Findings

Demographic Composition of Respondents			
		Freq	Percent
Nationality	Zimbabwean	232	71%
	Tanzanian	7	2%
	South African	11	3%
	British	11	3%
	Nigerian	37	11%
	Malawian	7	2%
	Swazi	8	2%
	German	6	2%
	Palestinian	6	2%
Age	Under 18	2	1%
	18-24	114	35%
	25-34	196	60%
	35-44	13	4%
	Over 44	0	0%
Gender	Male	100	31%
	Female	220	68%
	Prefer not to say	5	2%
Education	Postgraduate	164	50%
	Tertiary	144	44%
	Doctoral	15	5%
	Secondary	2	1%
Major	Accounting and Finance	23	7%
	Law	52	16%
	Business Administration	40	12%
	Banking and Finance	44	14%
	Medicine	30	9%
	Psychology	46	14%
	Marketing	21	6%
	Engineering	33	10%
	Information Technology	36	11%
N= 325			

Table 4.1 displays the nationality of respondents. Examining the table, 71% of respondents were Zimbabweans, 11% were Nigerians and 18% of respondents were spread over South

Africa, Britain, Tanzania, Malawi, Swaziland, Germany, and Palestine. Going by most of respondents, most of the participants to the study were from Zimbabwe.

Looking at the age distribution, 60% of respondents were between the ages of 25-34 years, 35% were between the ages of 18-24 years, 4% of respondents fell between the ages of 35-44 and 1% of respondents were under 18 years old. Going by many of respondents we can deduce that the majority rule was between 25-34 years of age.

Examining the gender of respondents, 68% of the respondents were females while 31% of the respondents were male. 2% of respondents did not wish to clarify their sex. Most of the participants to the study were females.

Examining the variable of education, 50% of respondents were postgraduates, 44% were tertiary, 5% were Doctoral and 1% were secondary. From the majority of the respondents, we can conclude that most of the participants to the study were of postgraduate and tertiary level of education.

By looking at their majors in academics, the results showed that 16% of respondents majored in law, 14% majored in banking and finance and another 14% in psychology, 12% majored in business administration, 11% majored in information technology, 10% majored in engineering, 9% in medicine, 7% majored in accounting and finance and 6% in marketing.

4.2 CONSTRUCT VALIDITY, CORRELATION AND RELIABILITY ANALYSIS RESULTS

With the aim of assessing validity and reliability of the research instruments and data used for the study, several validity and reliability tests were carried out. The tests are shown below:

- i. **Factor Loading:** shows how well an item represents the underlying construct. Normally, factor loading over .708 is recommended (Hair et al, 2019). Factor loading, the measurement model shall include the Reliability (Cronbach's Alpha and Composite Reliability)
- ii. **Convergent Validity:** It is accomplished when the components of a given measure concur that they accurately reflect the underlying idea. The mean of the linear

combination of each indicator linked to a construct is used to compute the average variation extracted (AVE). Statistics dictates that the average variance extracted (AVE) must be more than 0.50 to demonstrate the convergent validity (Hair et al., 2019).

- iii. **Discriminant Validity:** It is established to ascertain the distinctiveness of constructs in the investigation. It shows that the constructs of the study each have their own distinctive identities and are not unduly tied to one another. It is utilized using the Heterotrait-Monotrait (HTMT) ratio, as it has been shown to be the most robust measure of discriminant validity amongst all methods proposed in the literature (Hair et al., 2019).

Factor analysis is a method for determining which possible causes are the most significant by expressing the values of observed data as functions of those causes. A 5-point Likert scale was used to rate the statements that were the subject of factor analysis. The statements in the questionnaire were questions that represent the four factors. A questionnaire containing 44 statements was used in the study to measure the variables prepared using a 5-point Likert scale. Table 4.2 shows factor analysis results:

Table 4.2: Factor Analysis Results

Variables	Factors	Factor loads	Factor loads Tist.	Factor weights	Factor weights Tist.	Variance width factor
Self-esteem	SE1	0.652	20.453	0.347	11.435	1.223
	SE2	0.757	17.445	0.334	17.334	1.093
	SE3	0.571	34.223	0.442	13.554	1.778
	SE4	0.613	18.775	0.237	12.689	2.009
	SE5	0.772	15.886	0.321	15.339	2.112
	SE6	0.872	34.567	0.235	16.002	1.622
	SE7	0.467	34.883	0.222	14.333	1.388
	SE8	0.786	17.334	0.402	11.223	1.887
	SE9	0.784	20.113	0.332	15.664	1.449
	SE10	0.583	19.009	0.337	13.087	2.009
Materialism	M1	0.547	17.884	0.457	12.556	1.875
	M2	0.891	27.778	0.290	14.330	1.554
	M3	0.734	34.886	0.238	16.443	1.665
	M4	0.783	12.344	0.300	9.445	2.005
	M5	0.861	34.885	0.428	10.994	2.665
	M6	0.651	19.88	0.283	9.886	2.221
	M7	0.642	56.443	0.203	19.554	1.443
	M8	0.804	56.882	0.406	11.223	1.990
	M9	0.884	19.554	0.433	17.445	2.449
	M10	0.774	18.996	0.344	16.309	1.990
	M11	0.663	29.005	0.435	17.765	1.336
	M12	0.861	45.883	0.388	15.009	1.885
	M13	0.982	19.665	0.288	10.768	1.224

Table 4.2: Factor Analysis Results "Table continued"

	M14	0.651	23.665	0.377	11.465	1.445
	M15	0.845	33.812	0.443	15.338	1.554
	M16	0.798	17.998	0.335	14.114	2.334
	M17	0.783	34.556	0.441	19.223	2.665
	M18	0.675	65.998	0.422	17.543	1.443
Credit card use	CC1	0.522	44.761	0.365	11.848	2.583
	CC2	0.785	22.343	0.334	15.665	2.112
	CC3	0.758	45.633	0.551	16.088	1.088
	CC4	0.654	23.554	0.332	13.543	2.309
	CC5	0.987	47.331	0.415	16.445	2.109
	CC6	0.583	31.556	0.423	12.445	1.445
	CC7	0.652	29.884	0.226	16.332	2.009
Impulse buying.	IB1	0.858	45.861	0.336	11.333	2.545
	IB2	0.837	19.001	0.442	9.764	1.998
	IB3	0.766	23.545	0.234	10.002	1.763
	IB4	0.897	29.223	0.402	12.565	1.329
	IB5	0.788	27.887	0.223	15.776	1.994
	IB6	0.774	21.432	0.223	16.343	1.008
	IB7	0.802	19.073	0.334	16.454	1.783
	IB8	0.567	38.441	0.452	19.066	1.334
	IB9	0.543	19.994	0.271	9.667	2.223

In essence, factor loading is the correlation between the factor and the variable. Factor loading displays the variance on that specific factor that is explained by the variable. According to the SEM technique, a factor loading of 0.7 or above indicates that the factor extracts enough variance from the variable (Ali et al., 2018). If variance is smaller than 0.7, it should not be considered. Because of this, 14 statements were removed from the scale as a consequence of factor analysis since they failed to demonstrate proper factor loading with scores below 0.7.

The figure below shows the outer model including all the variables that were not eliminated in factor analysis:

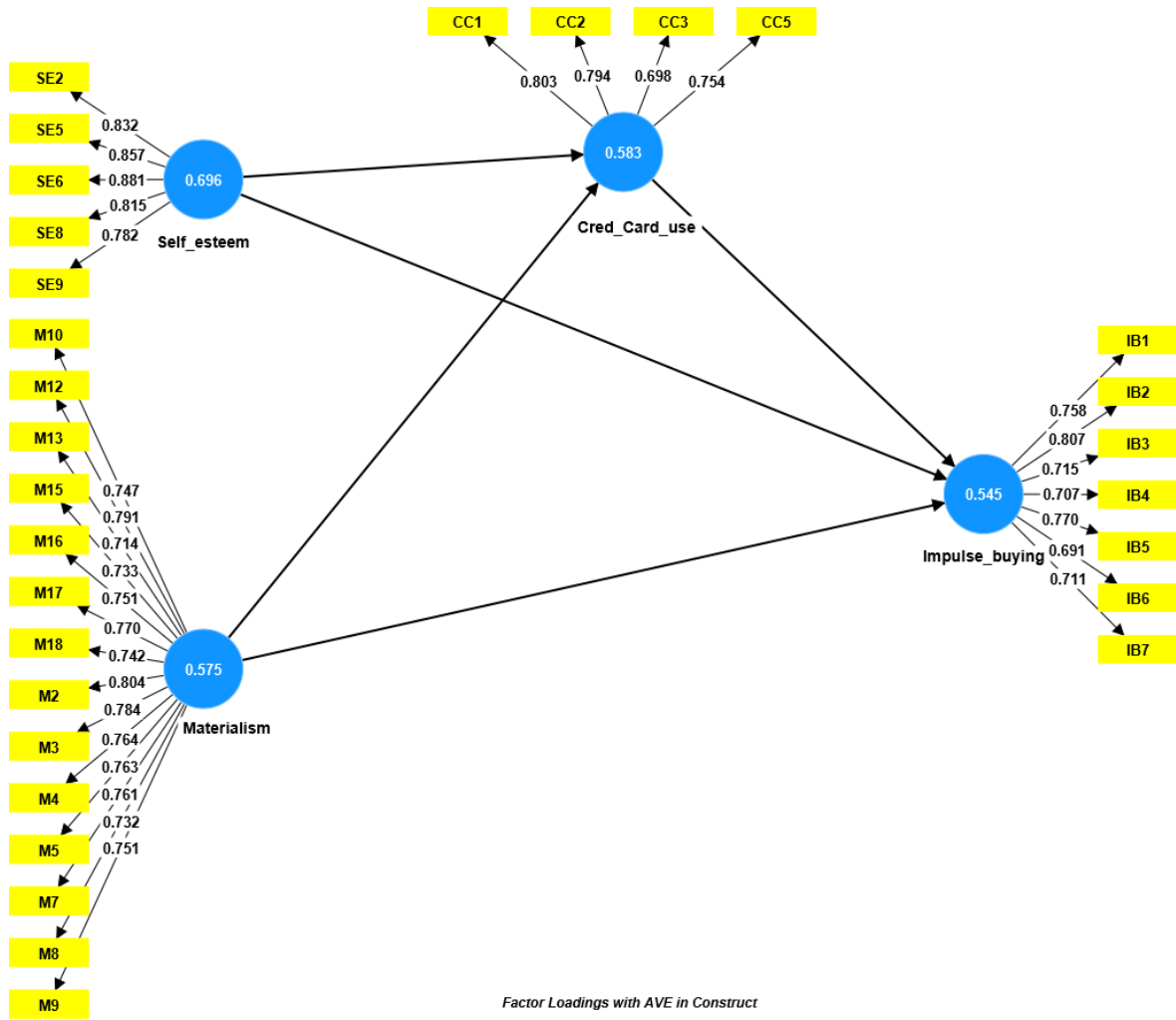


Figure 4.1: Outer Model

Figure 4.1 depicts the study's outer model. Factor loadings are shown in the outer model, and the extracted average variance (AVE) is shown in the construct.

Table 4.3: Construct Validity and Reliability Value of Scales

Latent Construct	Indicator	Indicator loading	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Self-esteem	SE2	0.832	0.891	0.897	0.919	0.696
	SE5	0.857				
	SE6	0.881				
	SE8	0.815				
	SE9	0.782				
Materialism	M10	0.747	0.944	0.957	0.95	0.575
	M12	0.791				
	M13	0.714				
	M15	0.791				

Table 4.3: Construct Validity and Reliability Value of Scales " Table continued"

	M15	0.733				
	M16	0.751				
	M17	0.77				
	M18	0.742				
	M2	0.804				
	M3	0.784				
	M4	0.764				
	M5	0.763				
	M7	0.761				
	M8	0.732				
	M9	0.751				
Credit card use	CC1	0.803	0.761	0.765	0.848	0.583
	CC2	0.794				
	CC3	0.698				
	CC5	0.754				
Impulse buying.	IB1	0.758	0.861	0.866	0.893	0.545
	IB2	0.807				
	IB3	0.715				
	IB4	0.707				
	IB5	0.77				
	IB6	0.691				
	IB7	0.711				

Table 3 displays several indicators for construct reliability and validity. The validity and reliability of the reflective latent variable are first determined by assessing the dependability of the indicator. The indicators outside loadings are assessed to determine how reliable the indication is. An indicator is regarded as reliable if its loading is at least 0.708 (Hair et al., 2019). Indicators can also be removed from the model if they load more heavily on other latent variables than on the latent variable to which they primarily belong. According to Hair et al. (2019), even though a sign has a loading of 0.7, it should only be removed if doing so generally enhances the model. However, if the other validity and reliability measures are good, the indicator should otherwise be left in the model.

Five items (SE1, SE3, SE4, SE7, and SE10) out of ten were eliminated to evaluate the dependability of latent constructs of self-worth. The maintained elements (SE2, SE5, SE6, SE8 and SE9) had a Cronbach Alpha of 0.891 and a composite dependability of 0.919, all of

which are higher than 0.7 stopping point suggested by Hair et al., 2019. Self-esteem AVE was 0.696, exceeding the 0.5 cut off specified by Chin (2010).

Four of the 18 items (M6, M14, M11, and M1) were taken out of the equation to assess materialism latent construct's authenticity and dependability. Fourteen items were retained for the latent construct because they met the validity and reliability requirements (M9, M8, M7, M5, M4, M3, M2, M18, M17, M16, M15, M13, M12, and M10). These items had a reliability coefficient of 0.95 and a Cronbach's alpha of 0.944, above the 0.7 requirement set by Hair et al. (2019). The AVE for materialism was 0.575, exceeding the 0.5 cut off set by Fornell & Lacker (1981) and Chin (2010).

Two of the six items (CC4 and CC6) were taken out of the analysis to examine the reliability and validity of the construct of credit card use. As a result of their validity and reliability, four items for the latent construct were retained (CC1, CC2, CC3, CC5). The combined dependability of these components was 0.848 and their Cronbach's alpha was 0.761, both of which were greater than the 0.7 minimal criterion recommended by Hair et al. (2019). The use of a credit card resulted in an AVE of 0.583, which is higher than the 0.5 cut off set by Chin (2010) and Fornell & Lacker (1981).

To investigate the reliability and validity of the latent concept of impulse buying, two of the questionnaire items (IB8 and IB9) were eliminated. Because of the validity and reliability requirements, attributes for the latent concept were retained (IB1, IB2, IB3, IB4, IB5, IB6 and IB7). These items exceeded the minimum requirement of 0.7 established by Hair et al. (2019) with combined dependability of 0.893 and Cronbach's alpha of 0.861. Chin (2010) and Fornell & Lacker's (1981) 0.545 criteria was exceeded by the AVE for impulse purchases.

Table 4.4: Heterotrait- Monotrait Ratio (HTMT) values

	Self-esteem	Materialism	Credit card use
Materialism	0.336		
Credit card use	0.281	0.222	
Impulse buying.	0.493	0.217	0.394

To demonstrate discriminant validity, the HTMT ratio for conceptually dissimilar constructs must be less than 0.85, and for conceptually similar structures, it must be less than 0.9 (Hair et al., 2019). Since all the HTMT ratios are lower than 0.85, it is inferred that discriminant validity was established for all latent components.

Table 4.5: Fornell-Larcker Criterion

	Self-esteem	Materialism	Credit card use	Impulse buying
Self-esteem	0.834			
Materialism	-0.315	0.758		
Credit card use	-0.238	0.215	0.763	
Impulse buying.	-0.441	0.225	0.337	0.738

The discriminant validity is evaluated in Table 4.5 using the Fornell-Larcker criterion. To show discriminant validity, the square root of the AVE for a variable must be larger than the association of the latent construct to any other latent construct (Fornell & Lacker, 1981; Hair et al., 2019). The table shows that all variables' discriminant validity satisfied the Fornell-Larcker criterion.

Table 4.6: Discriminant Validity Following the Cross-Loading Criterion

	Self-esteem	Materialism	Credit card use	Impulse buying
SE2	0.832	-0.303	-0.204	-0.418
SE5	0.857	-0.274	-0.18	-0.359
SE6	0.881	-0.227	-0.25	-0.389
SE8	0.815	-0.268	-0.159	-0.33
SE9	0.782	-0.242	-0.188	-0.333
M10	-0.226	0.747	0.219	0.248
M12	-0.257	0.791	0.185	0.158
M13	-0.191	0.714	0.031	0.054
M15	-0.247	0.733	0.104	0.134
M16	-0.215	0.751	0.157	0.128
M17	-0.189	0.77	0.186	0.19
M18	-0.206	0.742	0.109	0.1
M2	-0.278	0.804	0.215	0.248
M3	-0.272	0.784	0.183	0.18

Table 4.6: Discriminant Validity Following the Cross-Loading Criterion "Table continued"

M4	-0.298	0.764	0.156	0.191
M5	-0.213	0.763	0.162	0.124
M7	-0.256	0.761	0.166	0.182
M8	-0.236	0.732	0.079	0.115
M9	-0.194	0.751	0.075	0.085
CC1	-0.19	0.173	0.803	0.28
CC2	-0.238	0.194	0.794	0.224
CC3	-0.146	0.162	0.698	0.3
CC5	-0.139	0.112	0.754	0.213
IB1	-0.359	0.205	0.319	0.758
IB2	-0.345	0.144	0.225	0.807
IB3	-0.246	0.105	0.167	0.715
IB4	-0.314	0.112	0.162	0.707
IB5	-0.321	0.187	0.203	0.77
IB6	-0.348	0.16	0.35	0.691
IB7	-0.31	0.218	0.244	0.711

An item's loading on its primary latent construct must be higher than its loading on all other latent variables for discriminant validity to be evaluated in accordance with the cross-loading criterion by Hair et al. (2019) and Fornell & Lacker (1981). No items had cross-loads that were greater than the respective loads on their parent latent constructs. Therefore, as demonstrated in Table 6, the cross-loading condition was met.

4.3 HYPOTHESIS TESTING USING STRUCTURAL EQUATION MODEL

For testing the hypotheses, a 5000-bootstrap test was run using the SmartPLS4 bootstrap algorithm to determine 95% confidence interval and p-values for the path coefficients. The findings of the bootstrap are shown in the tables that follow:

Table 4.7: Assessment of Direct Effects

Hypothesis	Relationships	Coefficients	Std Err	T Stat	P-values	F2	L95% Bca CI	U95% Bca CI	Decision
H ₁	Self-esteem -> Credit card use	-0.189	0.073	2.596	0.009	0.035	-0.314	-0.026	Supported

Table 4.7: Assessment of Direct Effects"Table continued"

H ₂	Self-esteem -> Impulse buying	-0.336	0.074	4.513	0.000	0.083	-0.479	-0.189	Supported
H ₃	Materialism -> Credit card use	0.155	0.051	3.047	0.002	0.024	0.039	0.242	Supported
H ₄	Materialism -> Impulse buying	0.37	0.082	0.456	0.648	0.001	-0.134	0.192	Not supported
H ₅	Credit card use -> Impulse buying	0.201	0.061	3.282	0.001	0.046	0.076	0.314	Supported

H₁: Self-esteem does not have a significant effect on credit card use.

The use of credit cards is considerably and adversely affected by self-esteem with a 99% confidence interval ($\beta = -0.189, t = 2.596, p < 0.01$). Credit card utilization falls by 0.189 for every 1 standard deviation improvement in self-esteem. If assumed that self-esteem significantly affects credit card use below the 5% significance level, a risk of less than 0.1% based on the significance of the 2.596 t statistic is assumed. Additionally, the effect size for self-esteem is 0.035, indicating that it has a little effect on the use of credit cards (Hair et al., 2019). Therefore, the author continued to support the alternative and disprove the null hypothesis as a result. Less than 0.1% below the level of significant of 0.05, the null hypothesis could be rejected with a probability of less than 0.1%. Self-esteem provides a significant amount of information to explain variations in credit card use. According to Norvilitis et al. (2006), self-esteem and debt build up have a negative link, albeit it hasn't been proven that low self-esteem might make people more likely to take on debt or that debts diminish self-esteem levels.

H₂: Self-esteem does not have a significant effect on impulse buying.

Impulsive buying is statistically significantly and negatively impacted by self-esteem ($= -0.336, t = 4.513, p < 0.01$), with a 99% confidence interval. Impulsive buying lowers by 33.6% for every 1 standard deviation improvement in self-esteem. Taking on the assumption that self-esteem significantly influences impulse purchase below the 5%

significance level, hence the t statistic of 4.513 suggested that the risk is less than 0.1%. Additionally, the effect size for self-esteem is 0.083, suggesting that self-esteem has just a minor influence on impulse purchase (Hair et al., 2019). Since the alternative is more likely, the null hypothesis was rejected. When the null hypothesis is true, it will be refuted less than 0.1% of the time, or at a significance level below 0.05. Self-esteem adds a lot of information to the explanation of different impulse purchase patterns (Faber & O'Guinn, 1992). These results are in agreement with Wang, LV, and Jiang (2011) who concluded that when consumers yearn to pursue prestige, but their incomes are insufficient to meet this demand, they resort to using credit cards to purchase these superior or luxurious products. Such a problem is unlikely to occur among persons whose self-esteem is high because their confidence levels tend to also be high and thus, they are less likely to be affected emotionally.

H₃: Materialism does not have a significant effect on credit card use.

Credit card use is positively and significantly influenced by materialism. ($\beta=0.155$, $p=0.640$). Per each 1 standard deviation rise in materialism, credit card use increases by 15.5%. If it is assumed that materialism has a significant impact on credit card use, which is below the level of significance of 5%, a risk of more than 0.02% will be taken based on the significance of the t statistic of 3.047. Additionally, materialism's correlation value was 0.024, which indicated that it has a negligible impact on how frequently people utilize credit cards. As a result, the researcher continued to refute the null hypothesis and supported the alternative. The probability of a null hypothesis being rejected while it is true is less than 0.1%, or at a level of significance below than 0.05. Materialism provides a comprehensive explanation for the usage of credit cards. According to Forcht (2010), instrumental materialism is a precursor of impulse buying using credit cards. Credit cards provide individuals who have high materialistic values with an ideal means for instant gratification. Credit cards have brought with them convenience in both comfort shopping and shopping without tangible money-making impulse buying immediately gratifying. These findings were conclusive with the results of this study.

H₄: Materialism does not have a significant effect on impulse buying.

Materialism has a small but favorable influence on impulse purchases. ($\beta=0.37$, $p=0.648$). Impulse purchase rises by 37% for every 1 standard deviation increase in materialism. Considering that materialism likely has a higher effect on impulse purchase than the level of relevance of 5%, it means accepting a risk of 64.8% based on the significance of the t statistic of 0.456. Additionally, the effect size associated with materialism is 0.001, indicating that it has no impact on impulse purchases (Hair et al., 2019). Consequently, the null hypothesis was discounted. When the null hypothesis is true, there is a 64% chance of rejecting it, which is greater than the level of significance of 0.05. In terms of explaining unplanned purchases, materialism offers very little insight. These results agreed with Roberts and Jones (2001) who found out that, materialism was significantly correlated with impulse buying and those individuals had a high probability of scoring high for credit card use.

H₅: Credit card use does not have a significant effect on impulse buying.

Credit card use significantly and positively affects impulsive buying, with a 99% confidence interval ($\beta=0.201$, $t=3.282$, $p=0.01$). For every 1 standard deviation increase in credit card usage, irrational spending increases by 20.1%. The risk is assessed to be less than 0.1% based on the validity of the t-statistic of 3.282, assuming the use of a credit card significantly affects impulsive purchases just below significance level of 5%. Additionally, using a credit card has an effect size of 0.046, indicating that it has little impact on impulsive purchases (Hair et al., 2019). As a result, the null hypothesis was refuted, and the alternative was endorsed. Less than 0.1% underneath the significance level of 0.05, the null hypothesis can be rejected with a probability of less than 0.1%. Credit card usage provides a plethora of information that can be utilized to explain various impulse purchasing behaviors. These results are conclusive with Roberts and Jones (2001) who stated that impulsive people have a higher likelihood to make improper credit card purchases and accumulate greater debt than sensible spenders. Credit cards not only speed up the process of purchasing because no cash is involved, but also it creates the illusion that no money has been spent. Most retailers save the user information and therefore, all future purchases can be made with one click. Also, these results were supported by Wang & Xiao (2009) who stated that credit cards are a quick and simple tool for impulsive shoppers to temporarily ignore the implications of their spending habits.

Table 4.8: Evaluation of Mediation Effect

Hypothesis	Relationships	Direct Effect	Indirect Effect	Total Effect	Mediation type	Decision
H ₆	Self-esteem -> Credit card use -> Impulse buying	-.336	-.038	-.374	Indirect effect	Supported
H ₇	Materialism -> Credit card use -> Impulse buying	.037	.031	.068	Indirect effect	Not Supported

H₆: Credit card use is not a significant mediator of the relationship between self-esteem and impulse buying.

Self-esteem and impulsive purchasing have a strong direct correlation ($p=0.01$, -0.336). The indirect impact of self-esteem on impulsive buying was still present after accounting for the mediating variable of credit card use in the analysis ($\beta=-0.038$, $p0.05$). The study concluded that self-overall esteem's impact on impulsive purchasing remained significant ($\beta=-0.374$, $p0.01$) even with the mediator present. As a result, the null hypothesis was rejected since there is a considerable indirect influence and a strong overall effect, both of which are necessary for a mediation to take place (Credit card use is not a significant mediator to the relationship between self-esteem and impulse buying). Despite being correct, the null hypothesis will be ruled out less than 1% of the time. Using credit cards has a significant impact on how impulsive spending and self-esteem are related. Wang and Jiang (2011) in their study stated that when consumers yearn to pursue prestige, but their incomes are insufficient to meet this demand, they resort to using credit cards to purchase these superior or luxurious products. Such a problem is unlikely to occur among persons whose self-esteem is high because their confidence levels tend to also be high and thus, they are less likely to be affected emotionally.

H₇: The use of credit cards does not significantly mediate the link between materialism and impulsive purchases.

Impulsive buying and materialism do not have a statistically significant relationship ($p=0.037$, 0.01). The indirect effect of materialism on impulse purchase was significant ($=0.031$, $p0.05$) when the mediator variable credit card use was included in the analysis. Looking at the overall influence of materialism on impulse shopping, the research came to a

conclusion that it was not significant ($=0.068$, $p>0.05$) when used as a mediator credit card use. The study derived the inference that credit card use only indirectly affects the association between materialism and impulse buying because there is only a sizable indirect effect. It does not in any manner substantively mediate this link. The relationship between materialism and impulsive credit card use for purchases cannot be adequately explained. Similarly, to these conclusions, studies have shown that a large percentage of university students acquire and overuse credit cards often leading them into debt. Pirog and Roberts discovered in their 2007 study on the impact of college students using credit cards that materialistic students' spending patterns were directly impacted by using a credit card and they also exhibited more spending habits than those who made use of for instance cash as a method of payment (Soman & Gourville, 2001). In a 2003 study by Watson, he also found that less materialistic people who choose instalment financing have lower credit card account balances than people who are highly motivated by money. Similarly, according to Hayhoe et al. (2005) university pupils favor buying using credit than other means of payment and their income.

Table 4.9: Assessment of Moderated Effects

Hypot thesis	Relations hips	Coeff	Std Err	T Stat	P- values	F2	L95% Bca CI	U95% Bca CI	Decision
H8	Gender x Materialis m -> Impulse buying	- 0.015	0.104	0.142	0.887	0	-0.221	0.188	Not supported
H9	Gender x Self- esteem -> Impulse buying	- 0.054	0.107	0.501	0.616	0.00 1	-0.27	0.153	Not supported

H₈: Gender has a negligible influence on the association between materialism and compulsive shopping.

The association between materialism and impulsive buying was unaffected by gender. The research may conclude that the association between materialism and impulsive purchasing

is stronger for men than it is for women given a negative moderating term. Men and women, however, do not significantly differ in how materialism affects impulsive purchasing. If it is assumed that gender significantly moderates the association between materialism and impulse buying larger than the 5% significance level, the assumption was made of a risk of 88.7% based on the significance of the t-statistic of 0.142. Additionally, the moderating term's effect size is 0.001, indicating that gender was not a significant moderator of the association between materialism and impulse purchase (Hair et al., 2019). The study upheld the alternative and did not disprove the null hypothesis as a result. When the null hypothesis is true, there is a larger than 0.05 threshold of significance likelihood of rejecting it, at 88.7%. According to Chiger (2002), women are more prone than males to exhibit impulsive buying behavior. Similarly, Coley and Burges (2003) on their study concluded that women had more purchasing power than men. Due to their propensity for being more emotional than men, women are more likely than men to make impulsive purchases. Verbadi and Herabadi (2001), Buendicho (2003), Guitterrez (2004) and Gilboa (2009) all portrayed gender to have different effects on impulse buying. The frequent opinion holds that men are not fond of shopping thus are inactive in this field.

H₉: The relationship between self-esteem and impulsive purchases is not significantly moderated by gender.

The link between low self-esteem and impulsive spending was unaffected by gender. Given a negative moderating term of -0.054, it can be concluded that the relationship between self-esteem as well as impulsive purchase is stronger in men than in women. Self-esteem impacts on impulsive buying are felt differently by men and women, but not significantly. The risk of 61.6% can be assumed based on the significance of the t statistic of 0.501 if it is assumed that gender significantly moderates the relationship between self-esteem and impulse buying higher than that of the level of significance of 5%. The moderating term's effect size is also 0.001, demonstrating that sex is not a significant moderator of the association between traits associated with self-esteem and impulse buying (Hair et al., 2019). As a result, the study supported the alternative and did not refute the null hypothesis. When the null hypothesis is true, there is a 61.6% chance that it will be rejected—this is more than the significance level of 0.05. These results are inconclusive with Wade (2000) who noted that women more than men purchase impulsively because their consumption is hedonic in nature. Additionally,

research has revealed that people utilize spending to counteract negative emotions, particularly anxiety and low self-esteem. The impulsive nature of women may be explained by these factors as supported by Feingold (1994) whose study attributed the impulsivity to women's higher chance of suffering from anxiety and low self-esteem.



5. CONCLUSION AND DISCUSSION

The goal of this chapter was to gather the study results once information from primary and secondary sources has been analyzed. The study's summary and the study's theoretical and practical implications for marketers are included in this chapter.

The study focused on self-esteem and materialism as independent variables and included gender as a moderating variable to examine the relationship between the dependent variable of impulse buying and the mediating variable of credit card use in Facebook Commerce. Through random sampling, the study collected the necessary data from university students. The hypothesis that “Self-esteem does not have a significant effect on credit card use was tested”. The study found out that the use of credit cards is considerably and adversely affected by self-esteem with a 99% confidence interval ($\beta = -0.189, t = 2.596, p < 0.01$) and that the effect size for self-esteem is 0.035, indicating that it has a little effect on the use of credit cards. This means that self-esteem provides a significant amount of information to explain variations in credit card use. According to Norvilitis et al. (2006), self-esteem and debt build up have a negative link, albeit it hasn't been proven that low self-esteem might make people more likely to take on debt or that debts diminish self-esteem levels.

The study also showed that impulsive buying is statistically significantly and negatively impacted by self-esteem ($=-0.336, t=4.513, p<0.01$), with a 99% confidence interval. Hence the study concluded that self-esteem adds a lot of information to the explanation of different impulse purchase patterns. These results agree with Wang, LV, and Jiang (2011) who concluded that when consumers yearn to pursue prestige but if their incomes are insufficient to meet this demand, they resort to using credit cards to purchase these superior or luxurious products. Such a problem is unlikely to occur among persons whose self-esteem is high because their confidence levels tend to also be high and thus, they are less likely to be affected emotionally.

Conclusions were drawn that credit card use is positively and significantly influenced by materialism ($=0.155, p=0.640$). Per each 1 standard deviation rise in materialism, credit card use increases by 15.5%. The study hence concluded that materialism provides a comprehensive explanation for the usage of credit cards. According to Forcht (2010),

instrumental materialism is a precursor of impulse buying using credit cards. Credit cards provide individuals who have high materialistic values with an ideal means for instant gratification. Credit cards have brought with them convenience in both comfort shopping and shopping without tangible money-making impulse buying immediately gratifying. These findings were conclusive with the results of this study.

Materialism has a small but favorable influence on impulse purchases ($\beta=0.37$, $p=0.648$). Impulse purchase rises by 37% for every 1 standard deviation increase in materialism. In terms of explaining unplanned purchases, materialism offers very little insight. These results agreed with Roberts and Jones (2001) who found out that, materialism was significantly correlated with impulse buying and those individuals had a high probability of scoring high for credit card use.

It was also concluded that credit card use significantly and positively affects impulsive buying, with a 99% confidence interval ($\beta=0.201$, $t=3.282$, $p<0.01$). Credit card usage provides a plethora of information that can be utilized to explain various impulse purchasing behaviors. These results are conclusive with Roberts and Jones (2001) who stated that impulsive individuals have a higher likelihood to make improper credit card purchases and accumulate greater debt than sensible spenders. Credit cards not only speed up the process of purchasing because no cash is involved, but also it creates the illusion that no money has been spent. Most retailers save the user information and therefore, all future purchases can be made with one click.

Self-esteem and impulsive purchasing showed a strong direct correlation ($p=0.01$, -0.336). The indirect impact of self-esteem on impulsive buying was still present after accounting for the mediating variable of credit card use in the analysis ($\beta=-0.038$, $p<0.05$). The study concluded that self-overall esteem's impact on impulsive purchasing remained significant ($\beta=-0.374$, $p<0.01$) even with the mediator present. Consumers yearn to pursue prestige, but their incomes are insufficient to meet this demand, they resort to using credit cards to purchase these superior or luxurious products. Such a problem is unlikely to occur among persons whose self-esteem is high because their confidence levels tend to also be high and thus, they are less likely to be affected emotionally.

Impulsive buying and materialism do not have a statistically significant relationship ($p=0.037, 0.01$). The study derived the inference that credit card use only indirectly affects the association between materialism and impulse shopping because there is only a sizable indirect effect. It does not in any manner substantively mediate this link. The relationship between materialism and impulsive credit card use for purchases cannot be adequately explained. Similarly, to these conclusions, studies have shown that a large percentage of university students acquire and overuse credit cards often leading them into debt.

The association between materialism and impulsive buying was unaffected by gender. The study concluded that the association between materialism and impulsive purchasing is stronger for men than it is for women given a negative moderating term. Women are more prone than males to exhibit impulsive buying tendencies. Similarly, Coley and Burges (2003) on their study concluded that women had more purchasing power than men. Due to their propensity for being more emotional than men, women are more likely than men to make impulsive purchases. Verbadi and Herabadi (2001), Buendicho (2003), Guitierrez (2004) and Gilboa (2009) all portrayed gender to have different effects on impulse buying. The frequent opinion holds that men are not fond of shopping thus, are inactive in this field.

The link between low self-esteem and impulsive spending is unaffected by gender. Given a negative moderating term of -0.054 , it is concluded that the relationship between self-esteem as well as impulsive purchase is stronger in men than in women. Self-esteem impact on impulsive buying is felt differently by men and women, but not significantly. These results are in conclusive with Wade (2000) who noted that women more than men purchase impulsively because their consumption is hedonic in nature. Additionally, research has revealed that people utilize spending to counteract negative emotions, particularly anxiety and low self-esteem. The impulsive nature of women may be explained by these factors as supported by Feingold (1994), whose study attributed the impulsivity to women's higher chance of suffering from anxiety and low self-esteem.

5.1. THEORETICAL IMPLICATIONS

The study has a contribution to Flow theory. The study cumulatively adds to Flow theory by adding to its initial cognitive psychology perspective elements of marketing and consumer behavior (impulse buying and credit card use) and additionally, aspects of information technology (Facebook commerce).

5.2. PRACTICAL IMPLICATIONS

With the accepted hypotheses, the marketing industry may consider customized marketing strategies targeting low-self esteemed individuals to encourage impulsive purchase behavior. Therefore, the study has implications on e-marketers' segmentation and target populations. Secondly, the notion of marketing strategies focusing on associating their product/ brands with high social status, luxury and exclusivity is introduced. This will lead to higher pricing resulting in higher revenue for relevant businesses. Thirdly, Facebook commerce managers, advertisers and marketers may vary their product to cater to altruism associations by incorporation of corporate social responsibility programs such as, 1% of the profits go to victims of natural disasters.

In addition, being that consumers have easy access to credit and credit increases the probability of over-spending and impulse buying, managers should consider having in store credit facilities. Marketers can use these findings to improve their knowledge on impulse buying and capitalize on this to increase sales in such a way that triggers an increase in profits as well. Lastly, although gender hypotheses were rejected, marketing managers can still develop individualized marketing campaigns for men and women based on their inclinations for impulse buying which could still yield a positive outcome in terms of business revenue.

6. FUTURE RESEARCH RECOMMENDATIONS

The study was done on university students but the research having been conducted online has direct geographical limitations therefore future studies should be done in specific regions for better targeted results. In addition, a larger sample size would also be recommended for more generalizable results. Lastly, being as Facebook commerce is relatively new, longitudinal studies would be recommended to see the trends in impulse buying, credit card use, business, and revenue.



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APPENDIX

QUESTIONNAIRE

It is the intent of this research to investigate the relationship between impulse buying and credit card use in Facebook commerce. The study will assess how materialism, gender and self-esteem affect impulse purchase behavior using credit cards in Facebook commerce using the following appropriate scales.

Bryman and Bell (2017) state that consent claims, information requirements, use requirements, and confidentiality requirements are all ethical issues that should be considered when doing research. These four criteria have been covered in this study to guarantee that respondents were treated honorably and in accordance with ethical standards.

Since everyone who responds does it voluntarily, consent has been claimed. Second, the information criteria are satisfied because the respondents were made aware of the purpose of the study in advance. Additionally, the information received is confidential and won't be used in any other situations or for any other purposes, so the usage of needs is taken into consideration. Finally, the absence of a requirement for participants to provide personal information, such as a phone number, satisfies the confidentiality criteria. And finally, all comments are anonymous.

Demographic questions

1 What is your nationality? _____

2 What is your age?

- ☐ Under 18
- ☐ 18-24
- ☐ 25-34
- ☐ 35-44
- ☐ Over 44

3 What is your gender?

- Male
- Female
- Prefer not to say
- Other

4 What is your level of education?

- Primary
- Secondary
- Tertiary
- Postgraduate

5 What is your major? _____

Richards and Dawson Materialism scale

1. "I admire people who own expensive homes, cars, and clothes."
2. "Some of the most important achievements in life include acquiring material possessions."
3. "I don't place much emphasis on the amount of material objects people own as a sign of success."
4. "The things I own say a lot about how well I'm doing in life."
5. "I like to own things that impress people."
6. "I don't pay much attention to the material objects other people own." (R)
7. "I usually buy only the things I need." (R)
8. "I try to keep my life simple, as far as possessions are concerned." (R)
9. "The things I own aren't all that important to me." (R)
10. "I enjoy spending money on things that aren't practical."
11. "Buying things gives me a lot of pleasure."
12. "I like a lot of luxury in my life."
13. "I put less emphasis on material things than most people I know." (R)
14. "I have all the things I really need to enjoy life." (R)

15. "My life would be better if I owned certain things I don't have."
16. "I wouldn't be any happier if I owned nicer things." (R)
17. "I'd be happier if I could afford to buy more things."
18. "It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like."

Scoring: 1 "Strongly disagree", 2 "Disagree", 3 "Neither agree nor disagree", 4 "Agree", 5 "Strongly agree".

Roberts and Jones Credit Card Misuse scale

Please indicate if you have done each of the following things by placing an X on the appropriate line.

1. "I have any money left at the end of the pay period I just have to spend it."
2. "Felt others would be horrified if they knew of my spending habits."
3. "Bought things even though I couldn't afford them."
4. "Wrote a check when I knew, I didn't have enough money in the bank to cover it."
5. "Bought myself something in order to make myself feel better."
6. "Felt anxious or nervous on days I didn't go shopping."
7. "Only the minimum payments on my credit cards."

Scoring: Strongly Disagree, Disagree, Neither agree nor disagree, Agree, Strongly Agree".

Verplanken and Herabadi Impulse buying tendency scale

1. "I often buy things spontaneously"
2. "Just do it" describes the way I buy things"
3. "I often buy things without thinking"
4. "I see it. I buy it" defines me"
5. "Buy now. think about it later" describes me"
6. "Sometimes I feel like buying things on the spur-of- the moment."

7. "I buy things according to how I feel at the moment"
8. "I carefully plan most of my purchases."
9. "Sometimes I am a bit reckless about what I buy."

Scoring: "Strongly Disagree, Disagree, Neither agree nor disagree, Agree, Strongly Agree". Give "Strongly disagree" 1 point, "Disagree" 2 points, "Neither agree nor disagree" 3 points, "Agree" 4 points and "Strongly agree" 5 points. Sum scores for all nine items. Keep scores on a continuous scale. Higher scores indicate higher impulse buying tendency."

Rosenberg self-esteem scale

1. "On the whole, I am satisfied with myself."
2. "At times I think I am no good at all."
3. "I feel that I have a number of good qualities."
4. "I am able to do things as well as most other people."
5. "I feel I do not have much to be proud of."
6. "I certainly feel useless at times."
7. "I feel that I'm a person of worth, at least on an equal plane with others."
8. "I wish I could have more respect for myself."
9. "All in all, I am inclined to feel that I am a failure."
10. "I take a positive attitude toward myself. "

Scoring: "Strongly Disagree, Disagree, Neither agree nor disagree, Agree, Strongly Agree". Items 2, 5, 6, 8, 9 are reverse scored. Give "Strongly Disagree" 1 point, "Disagree" 2 points, "Agree" 3 points, and "Strongly Agree" 4 points. Sum scores for all ten items. Keep scores on a continuous scale. Higher scores indicate higher self-esteem.