

POST COVID 19 CASHLESS SOCIETIES: MERCHANTS ACCEPTANCE OF PLASTIC CARDS PAYMENTS IN MAURITIUS

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ABSTRACT

The paper aims to provide broad insights towards the acceptance of plastic card payments from merchants in Mauritius. A quantitative research approach has been adopted for the paper whereby the perceptions of merchants have been tapped by adopting quantitative research techniques, by conducting a survey with 200 merchants across the 9 districts of the island of Mauritius.

As far as the perception of merchants is concerned for plastic card acceptance, only 37% of merchants accept plastic card payments and they have highlighted such factors as 'to increase frequency sales (21.7%)', 'to increase competitiveness (20.8%)' and 'lower risks of theft and counterfeit (19.8%)' as the main reasons for adopting innovative payment solutions.

This original research has made a valuable contribution to the body of literature as there is a lack of empirical and holistic studies towards innovative payment solutions in Mauritius. Therefore, the research has enough concrete and empirical findings that would serve as a roadmap for banking executives, credit card companies, policy makers of banking industry and merchants to better promote and sustain the adoption of plastic cards by devising appealing marketing strategies in Post Covid19. The research will also provide merchants with insightful ideas to promote the adoption of plastic cards among customers as merchants are in direct touch with customers in the retail outlets of Mauritius.

This research is innovative since it has adopted a quantitative research approach to deepen insights into the factors impacting on the acceptance of plastic cards among merchants in Mauritius. This paper provides a holistic perspective in understanding the emerging phenomenon of innovative payment solutions by integrating the views of merchants unlike other studies which have concentrated on plastic card adoption only from a customers' point of view. This research is one of the pioneer studies that has addressed the benefits and challenges of plastic card payments as there are several changes happening in the payments landscape, following the pandemic crisis around the world.

Keywords: Innovative Payment Solutions, Cashless Society, Merchants' Acceptance, Barriers Mauritius.

Paper Type: Research Paper

INTRODUCTION

The credit card industry is made up of two business segments: the issuance of credit cards to consumers and the acquisition of merchants into the credit card payment scheme. Accepting credit card payments is an important business decision that involves cost, benefits and risk considerations. This paper discusses the merchants' personal and business characteristics and the perceptions of merchants towards the credit card payment system, both

of which contribute significantly to merchants' acceptance of credit card payments in the context of an island economy such as Mauritius.

While cash remains a popular method of payment, especially for small-value transactions, the use of cash has been declining because of the increased use of alternative payment methods, such as credit cards. Nevertheless, cash is almost universally accepted, and credit cards are not, especially among small and medium sized businesses. It is therefore important to study whether increased credit card acceptance will further increase card use and reduce cash use.

This present research provides key insights on innovative payments solutions by tapping the views of merchants. Cash has always been a popular method of payment for customers to pay for goods and services from merchants at the point of sale, particularly, for small value transactions. However, several studies have depicted that the use of plastic cards has been accelerating and that the use of cash to conduct payments have been decreasing (Govil, 2015; Sorrel, 2016; Jones, 2017, Fung et al., 2018). In fact, different factors have been identified behind this shift from cash to cashless payments.

Arango et al. (2015) have depicted that credit cards rewards and merchant's acceptance of plastic cards have a contribution in the shift from cash to plastic cards. Moreover, the plastic card market together with financial institutions are offering customers with a wide range of plastic card products with various features, benefits, annual fees, lower interest rates and rewards programs that are boosting the adoption of plastic cards among customers (Fung et al., 2018). This paper offers an innovative perspective of understanding plastic card adoption by uncovering the extensive literature review on plastic cards comprising the broad factors impacting on the acceptance of plastic cards, and the hindrance factors for non-acceptance of plastic cards since existing research on the adoption of plastic cards is limited only for developed countries and from a customer's perspective. Likewise, no study has explored plastic card adoption from merchants' perspective in Mauritius. Thus, this research project is innovative in the sense that it has provided deep insights into the factors impacting on the acceptance of plastic cards from in Mauritius. The research will also present a new landmark to improve the views and understanding of merchants' attitudes about the factors influencing on the adoption of plastic cards in Mauritius.

The main objective of the paper is to explore the perception of merchants on the phenomenon of plastic cards in Mauritius. There is a pressing need to understand the adoption of plastic cards among merchants for a developing country such as Mauritius as no academic research has studied the phenomenon of plastic card adoption from merchants' perspectives. The paper will provide merchants with enough concrete evidence on the perceptions of customers towards the significant factors impacting on the adoption of plastic cards since the merchants are in direct touch with customers in the retail outlets.

AN OVERVIEW OF THE CASHLESS TRANSACTIONS AND USE OF PLASTIC CARD PAYMENT IN MAURITIUS

Over the years, the introduction of new forms of payment including credit cards, debit cards, online payments and recently mobile payments indicates that the Mauritian economy is gradually moving to a cashless society. These new modes of payment are being widely accepted by many local firms across industries (including banks, telecommunication companies, online brand stores and public services) as well as among the local citizens. According to Global Economy. Com website (2019), 73.8% of the people aged 15+ had a debit card in 2017 compared to 50.94% in 2011. Furthermore, the number of people aged 15+ having a credit card registered a 10% increase during the same period. One of the factors driving the adoption the modern forms of payment by firms is the high level of smartphone

penetration in Mauritius. According to Statistics Mauritius (2018), 53% of Mauritians aged 12 years and above own a smartphone compared to 39 % in 2016. Moreover, attitudes and perceptions of local citizens towards contactless payments have positively changed over the years. According to the MCB annual report (2019), the number of “*Juice by MCB*” users has surpassed that of internet banking to reach around 263,000 active mobile users. This represents almost 25% among the total 1,062,100 MCB customers. Furthermore, out of its 956,000 mobile users, “*My.T money*” mobile app subscribers continues to thrive since its inception in 2019 (the number of signed up customers and merchants stood at 200,000 and 1000 merchants respectively in 2019). In addition, a 43% increase in the number of mobile transactions and the value of mobile transactions amounting to Rs 1,323 million in 2019 (Bank of Mauritius, 2019) further confirms the trend towards the adoption of cashless transaction in Mauritius. According to official statistics from the Bank of Mauritius (2019), the total number of cards in circulation as at June 2019 was 1,824,724, among which there were 297,330 credit cards and 1,340,551 debit cards. With regards to internet banking facilities, the Bank of Mauritius (2019) reports a rise of 12.8% in the number of transactions from 346,952 during the period June 2018 to 391,463 to June 2019. A notable increase in the volume and value of cashless transactions has been registered in Mauritius during the COVID-19 (sanitary curfew) period when only contactless transactions (both payments and delivery) were allowed. This widespread use of cashless transactions during the sanitary curfew has proved to be an eye opener for local businesses to consider these innovative modes of payment. However, since digital payments depend on the merchants’ continuance intention to adopt cashless payment system, this paper explores the perception of merchants on the phenomenon of plastic cards in Mauritius.

THEORETICAL BACKGROUND

Merchants’ Acceptance and Adoption of Plastic Cards

Merchants and banks will expect some growth by debit card payments as compared to cash payments by 2019 (DeNederlandsche Bank, 2015). Nevertheless, several studies have demonstrated that merchants are reluctant to accept plastic card payments (Levitin, 2008; Chakravorti, 2000). According to the World Economic Forum (2016), developing economies have a greater percentage of paper-based payment transactions. Micro-retailers such as self-employed firms and small stores have the tendency to stay away from electronic transactions because of the high costs, lack of awareness and other challenges. However, Plastic cards (debit and credit) offer merchants a wide variety of benefits that paper money (cash and cheque) do not (Chakravorti, 2000). According to the World Economic Forum (2016), a study was conducted in India to analyse merchants’ payment behavior. Results have indicated that 89% of merchants who accept debit card confirmed that they would recommend other merchants to accept electronic payments. They have also highlighted several benefits of acceptance such as safety, quicker transaction speed, ease of use and save time in finding change. Similarly, Bolt & Chakravorti (2008) have highlighted that lately, some merchants have started accepting card payments for safety and convenience purposes. It is important to note that merchants are benefiting from easier accounting and cash management with plastic payments. For instance, since 1st June 2009, American Airlines started to accept only card payments for inflight procurements on all its domestic routes (Chakravorti et al., 2010).

Perceived Risks and Hindrances of Plastic Cards to Merchants

Fees associated with the adoption of plastic cards

Customers are being more and more implored to use new payment methods. Normally, the products that are marketed to be *'free on usage'* with appealing rewards are actually not free but represent a multi-billion industry. According to the Bank of Mauritius, the total value of payments made at point of sale (POS) in Mauritius consisted approximately Rs 146 billion in 2015. There was also an estimated amount of Rs 3.6 billion that was shared as *'fees'* among payment system operators. Rochet & Wright (2009) have depicted in their study that although plastic card payments are gaining popularity and achieving great heights, merchants often complain that the fees they have to pay in order to accept credit cards payments are out of proportion. Payment of fees at different levels are indeed viewed as a really complicated structure that regrettably very often acts as a pain to merchants who have to settle the bill for electronic payments as well as for customers who are trapped through ambiguous contracts and associated hidden costs. Additionally, the habit to use cash, complexity of card payment and fees associated with the adoption of payment cards pose significant barriers for merchants in adopting plastic cards.

Merchant Discount Rate (MDR) or Merchant Service Commission (MSC)

The merchant discount rate is the rate charged to a merchant for payment processing through debit and credit card transactions. According to the Competition Commission of Mauritius, the MSC comprises of three main components, that is, the Issuer Interchange Fee, network costs allocated to Visa and MasterCard, and the acquirer's own costs and mark up. In their study, Arango & Taylor (2008) have highlighted that acquirers offer merchants specific rates depending on their monthly sales volumes and risk calculation. Therefore, the higher the credit card sales the lower the rates (to encourage economies of scale). While higher risk, as viewed by acquirers, is associated with higher rates.

In Mauritius, the merchant discount rate has risen significantly in the recent years and actually ranges from just under 2% to over 3% of the total transaction amount. According to Bank of Mauritius, about 35% of the merchant discount is paid to the acquirer, 10% - 15% is paid to the credit card company while the largest portion – 50% - 60% goes to the issuer as interchange, a fee paid by the merchants to compensate the credit card issuers (usually banks) for assuming the costs and risks associated with credit cards. Therefore, the Competition Commission of Mauritius (2016) has highlighted in their study that a large number of merchants do not accept cards at point of sales. According to CCM's merchant survey, only 48% of merchants in Mauritius accept payment cards. This figure of 2015 (48%) was more or less the same as the total number of merchants accepting cards in 2012, despite an increase in number of point of sales terminals has been registered.

However, in another study, the Bank of Canada has conducted a national survey of merchants in 2006. This survey has analyzed merchants' accepted modes of payment for point of sales transactions, how merchants view payment methods, the share of each payment method by annual sales and the cost associated with accepting payment cards. Results have revealed that 89% of the merchants who answered to the survey accept cash, debit and credit card payments simultaneously. Despite the high acceptance rate by merchants, merchants have the tendency to view each means of payment differently.

"While 53 per cent of respondents prefer debit cards the most (followed by cash at 39 per cent), only 5 per cent say they prefer credit cards the most" (Arango & Taylor, 2008 pp.2).

Merchants are not willing to accept payment by cards as the merchant fees are relatively high, controlled by high sub-component costs (issuer fees, acquirer fees and proprietary or network fees). A study by Chakravorti & Emmons (2001), has shed light on the fact that the choice to accept credit cards seems to reduce merchant revenues by one to three percent – the value of discount merchants faces while converting credit card receipts into bank funds. Merchant fees have a more significant impact on smaller merchants who have lower volumes of payments. Credit cards are less likely to be accepted at restaurants, general merchandise and personal service stores but are fully accepted at petrol pumps, in the furniture, trade and apparel service (Arango & Taylor, 2008). Therefore, CCM (2016, pp.10) has proposed that

“Lower merchant fees could increase the level of card acceptance by merchants in Mauritius, which is currently relatively low at 48%, further enhancing the scope for growth in the acquiring market”.

Issuer Interchange Fee (IIF)

Issuer Interchange Fee (IIF) refers to the fee paid by an acquirer (the merchants' banks) to an issuer (the cardholders' banks) for each point of sales transaction paid by a payment card issued by the latter (Rochet & Tirole, 2000). They have further elaborated that,

“In a payment card transaction, the consumer's bank, called the issuer and the merchant's bank, the acquirer, must cooperate in order to enable the transaction” (pp.1).

The Issuer Interchange Fee is usually allocated as a percentage of the transaction value. Interchange fees increase marginal cost for acquirers and decrease the marginal cost of issuers by the same amount. According to the European Commission Report (2015) profit-maximization firms respond to cost changes by adapting prices, hence interchange fees increase fees on one side of the market (merchant side) and decreases fees on the other side of the market (cardholder side).

The level of interchange fees affects merchants' decision to accept or reject plastic cards. In some countries, the issuer interchange fees have seen sharp movements while in other countries they have remained moderately steady (Weiner & Wright, 2005). According to European Commission Report (2015) merchants are forced to accept plastic cards even if they are far more expensive than other means of payments for several reasons. Nowadays, consumers carry cards instead of cash with them. Therefore, they fear that if they don't accept payment by cards their customers would switch to other merchants. It has also been argued that the level of interchange fees motivates merchants to discourage the use of plastic cards especially for lower value transactions.

Wright (2003) has highlighted in his research that several policymakers such as the European Commission and the Australian Central Bank have disputed that card associations, that is, Visa and MasterCard have set a too high interchange fee. This is acting as a hindrance towards merchants' acceptance of plastic cards as they have to pay a lot for accepting card payments. Similarly, the IIF applicable in Mauritius have been respectively set by Visa and MasterCard for their individual card network. Rochet & Tirole (2000) have disputed that a merchant's total benefits and its decision of whether to accept a payment card does not only depend on technological benefits such as protection as theft, fraud control and rapid transactions but also *“on the product of its increase in demand due to system membership and its retail markup.”* Therefore, Baxter (1983) has overstated merchants' resistance to an increase in both merchant discount and interchange fee.

Borestam & Schmiedel (2011) have analysed the interchange fees of different countries (Belgium, France, Estonia, Portugal, Italy, and Spain) and found that the

interchange fees have been declining over time. In Portugal, the interchange fee in 2010 was 0.57%, this was considered as the second lowest level over the previous nine years. This was mainly due to increased competition with international payment card schemes. In Germany, the interchange fee has remained almost constant since its introduction. In the United Kingdom, the interchange fee for credit card purchase have decreased while the interchange fee for debit card purchase have increased. In Slovenia, the interchange fee has remained constant at the same level for 15 years, except for one scheme in 2007 that increased the interchange fees by 16.7%.

High Cost Associated with Point of Sales Terminal

According to a study by Dalberg (2016), entitled ‘Small merchants, Big opportunity’ results have revealed that more than 180 million micro and small merchants function across the developing world. Although independently these businesses are small, their influence within the global economy is quite significant. These micro and small merchants transact over \$6.5 trillion every year and interact with more than \$4.5 million customers on a daily basis. The study also explained “*Because these merchants typically have thin margins, low-income customers and small transaction values, and operate in cash-based ecosystems, little has been done to integrate them into the cashless economy*”. They have also stressed out the fact that the hardware used in most of the digital payment systems is quite expensive to buy and maintain. They have to pay rent or else purchase the terminal which is quite expensive for them. Similarly, Chakravorti (2000) has depicted that merchants are unwillingly to adopt electronic payments due to the large transition costs involved in obtaining the necessary hardware and training of staffs.

In another study by the Bank of Canada’s survey (2006) results have depicted that merchants pay about \$45 to \$53 a month for their payment processing and banking services, this may also include terminal leasing. The survey also highlighted that although the questionnaire did not consist of questions on communication costs, 56 per cent of respondents revealed that they use dial-up lines and 30 per cent use high-speed lines and most of the respondents use only one connection. Similarly, Dalberg (2016) has highlighted that cashless acceptance is presently not the right time for micro and small merchants. This is so because, utmost micro and small merchants in developing countries operate within a cash-based ecosystem and hence making their income tied electronically is not a good idea. In order to get a payment terminal, these micro and small merchants need to go through lengthy and complex application procedures. According to one banking study in Philippines, these terminals cost around \$150 to above \$700 depending on their capabilities, with the need for software upgrades costing around \$300 per year.

According to the Boston Consulting Group (2016), in India the merchant acceptance for cards has by and large been stagnant for the past few years. India is considered as one of the most underpenetrated with world, with approximately one million point of sales terminals accepting card payments at around 700,000 to 800,000 merchant outlets. The most significant reason for this low penetration is the high cost of ‘*terminalizing*’ merchants. On top of that, once they have the terminal in their possession, they often face much difficulty in processing transactions as they are frequent inconsistent electricity and faulty connection. Lastly, as stated above, merchants pay numerous fees to accept payment cards. Therefore, due to the fact of their thin margins and very few of their customers pay by cards, these small merchants do not perceive cashless acceptance as critical to their success (World Bank Group and World Economic Forum, 2016).

Time Consuming, Complex and Potential for Error for Processing Card's Transactions

Merchants working in busy environment like markets and buses found processing cards transactions quite time consuming and complex as lots steps are involved. In the Dalberg report (2016, pp.11), they have cited the experience of an electronic shop owner: *"My customers tried to use his card, but it didn't work- he got impatient and left. I don't want this headache"*. In Columbia, merchants are required to enter their transaction value and tax amount separately whereas for debit card, customers are required to enter their PIN and also sign for most transactions. In the same study, they have cited another example of a restaurant owner in Indonesia facing frequent problem of employees entering the wrong amount. This cause the business to either overcharge or undercharge its customers. In Bogota, a tailor shop owner admitted that processing digital payments is actually too complicated for her employees. Therefore, it is important to note that *"the potential for error poses a significant barrier to merchant adoption of digital payment systems"* (pp.11).

Benefits of Plastic Cards to Merchants

Increase in sales by adopting plastic cards

Several studies (Chakravorti, 2000; Arango & Taylor, 2008; Levitin, 2008; Dalberg, 2016) have shown that the biggest benefits that plastic payments provide merchants with is that, consumers considerably spend more when purchasing with plastic than with paper. The consumer price elasticity depends largely on the method of payment. In comparison to paper, plastic augments consumers' willingness to pay for their products and services and to make additional unplanned purchases. Nowadays, many restaurants and coffee shops are accepting payment cards because of their rapid transaction speed as well as to increase their sales (Chakravorti, 2010). Also, merchants that accept cards sell more in contrast to identical merchants and earn higher profits.

Similarly, a study by Dalberg (2016) has depicted that customers are willing to pay significantly more for the same product when paying with cards versus cash. Therefore, in order to benefit from greater consumer spending, merchants are ready to pay any price it. Although cash is perceived as cheaper on average for merchants, the overall benefits of cash acceptance is nothing compared to the increased spending that goes with debit and credit card usage. According to CCM's merchant survey (2016), merchants accept card payments for two most common reasons; *'risk of losing sales'* and *'increase frequency sales'*. However, merchants do not want to distinguish between cash and credit prices but instead they want to distinguish between rewards and non-rewards cards and also between debit and credit cards so as to boost the use of payments systems with the lower net costs. They have already started doing so by introducing the no shipping fee.

Wright (2001) has highlighted that contrast to cash, plastic cards provide customers with instant access to cash or funds which ensure that customers will have the facility to make immediate purchase decisions. He has also identified two types of purchases: Impulse purchases and Normal purchases. Plastic cards provide customers with unlimited budgets which then lead to impulse purchases. However, this is not the same with cash payment, as customer already have a limited amount of cash in their pocket to tend to make normal purchases.

Attract Customers Who Like Card Payments

Chakravoti & To (2007, cited Wright 2010) have provided a model to illustrate why merchants accept credit cards, grounded on the ability of credit cards to extend their illiquid

customers' consumption ahead in time and assure sales today versus uncertain sales tomorrow. Merchants will also accept payment by cards for tactical reasons such as to attract those customers who like to pay by cards from competitors who do not accept card payments (Rochet & Tirole, 2000; Wright, 2001; Wright, 2003; Weiner & Wright, 2005; Borestam & Schmiedel, 2011). According to the Capgemini report (2011), by accepting the most popular payment cards, merchants are able to increase sales as well as attract potential customers. In a similar vein, merchants may be obliged to accept cards out of fear that if they don't accept cards, their customers will go to other merchants.

According to the CCM's report (2016) merchants' willingness to accept cards depends largely on their competitive aspects to offer customers with the best service. However, Wright (2001) found that the interchange fee is much higher when merchants compete against other merchants to attract customers paying by cards. He has also highlighted that consumers do not select which industry to buy from based on whether merchants in that particular industry accept card payments or not but customers tend to purchase from the industry they are accustomed and matched to. Nevertheless, Chakravorti (2000) has contradicted that customers prefer to frequent merchants that accept plastic cards.

Sustained Adoption of Plastic Cards

Plastic card is viewed as an important payment tool for customers all over the world and according to several studies (Garcia, 1980; Feinberg, 1986; Hayhoe et al., 2000; Bernthal et al., 2005; Pudaruth et al., 2013), it will continue to be so in the future, particularly in the world of shopping. Numerous studies have depicted that there exists a significantly positive relationship between plastic card adoption and customer's future usage intention (Durkin & Prince, 2000; Chien & DeVaney, 2001; Joo & Grable, 2004; Pudaruth et al., 2013). In a similar vein, a study by Zafar et al., (2010) has highlighted that with time, the eligibility criteria to obtain a credit card have been increasingly relaxed and thus making the number of plastic cardholders reached to an amount of three million by the turn of the last century and will definitely continue to climb the ladder in the future. However, Patil (2014) has concluded in her study that the future growth of plastic cards would depend largely upon the banks' willingness and capacity to meet and satisfy the challenges involved with plastic card adoption. On the other hand, banks should make use of the opportunities available profitably to satisfy customers as customers' interest is of supreme importance.

RESEARCH METHODOLOGY

A structured questionnaire consisting of several sections was developed whereby the questionnaire items were constructed and adapted from existing intensive literature review and the list of sources has been included in the list of references. In this study, the opinions of merchants towards acceptance of plastic cards payments were assessed on five-point Likert scale (1: Strongly Disagree, 5: Strongly Agree) and nominal scale (1: Yes, 2: No). Statistical techniques were used to process the data with statistical programme SPSS 24.0.

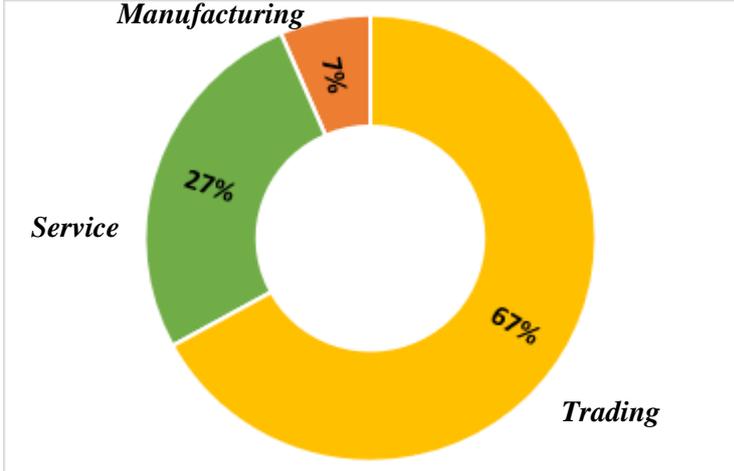
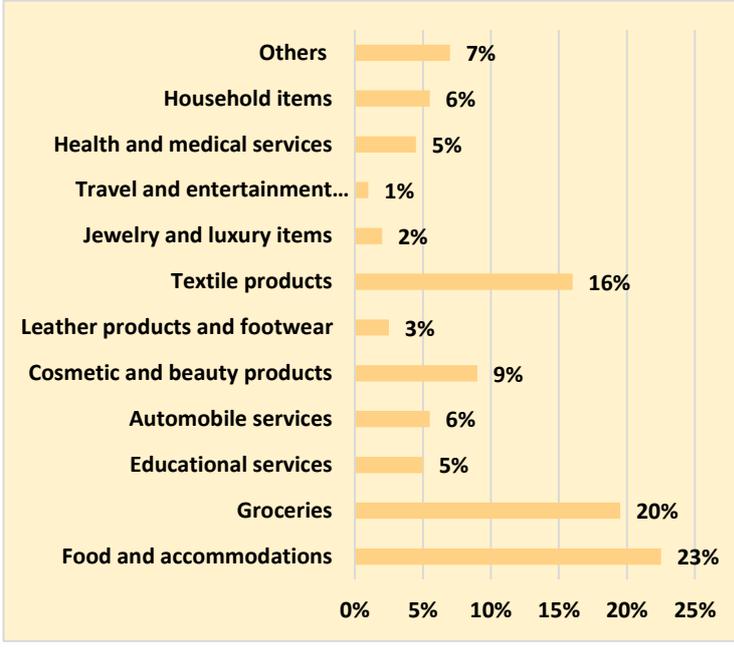
Sampling Plan

The targeted population consisted of merchants across the 9 districts of Mauritius to capture their perception on the acceptance of plastic card payments. The sample size amounted to 200 retail and non-retail merchants through the convenience sampling technique. Face to face interviews by trained fieldworkers were carried with the merchants in the nine districts across Mauritius for achieving a greater geographical representativeness.

Internal Consistency of the Questionnaire

The Cronbach’s Alpha overall value for the entire merchant questionnaire was 0.988 and such a high figure infer that the questionnaire was a very good indicator of what the researcher wanted to investigate in Table 1. According to Hair et al. (2005), a coefficient of less than 0.6 indicates marginal to low internal consistency and a value of 0.60 or more indicates satisfactory internal consistency reliability (Churchill, 1979).

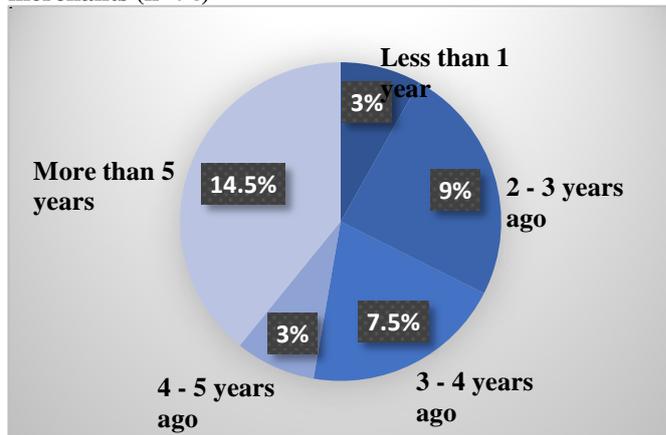
Table 1 DEMOGRAPHIC PROFILE AND DETAIL OF BUSINESS OF MERCHANTS	
<p>Gender</p> <p><i>Female, 47%</i></p> <p><i>Male, 53 %</i></p> <p>Legend: ■ Males ■ Females</p>	<p><i>In terms of gender classification, 53 % of merchants were males and 47 % of merchants were females.</i></p>
<p>Age Group</p> <p>Y-axis: 0.0% to 40.0%</p> <p>X-axis: Between 18 and 24, Between 25 and 34, Between 35 and 44, Between 45 and 54, 55 and above</p>	<p><i>Moreover, in terms of age classification, the merchants of the survey study were in the age group of Between 18 and 24 (6.5%); Between 25 and 34 (18.5%); Between 35 and 44 (34%); Between 45 and 54 (28.5%) and 55 and above (12.5%).</i></p>
<p>District Classification</p> <p>Y-axis: Riviere du rempart, Black river, Savanne, Grand port, Flacq, Moka, Pamplemousses, Port Louis, Plaine Wilhems</p> <p>X-axis: 1.5%, 5.5%, 2.5%, 21.0%, 6.5%, 9.0%, 8.0%, 5.5%, 40.5%</p>	<p><i>Concerning district classification, the majority of respondents were from Plaines Wilhems (40.5%), followed by Grand Port (21%), Pamplemousses (8%), Flacq (6.5%), Moka (9%), Port Louis (5.5%), Black River (5.5%), Savanne (2.5%) and Riviere du Rempart (1.5%)</i></p>

<p>Nature of Business</p>  <p>A donut chart titled "Nature of Business" showing the distribution of merchants by business type. The largest segment is Trading at 67% (yellow), followed by Service at 27% (green), and Manufacturing at 7% (orange).</p> <table border="1"> <thead> <tr> <th>Nature of Business</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Trading</td> <td>67%</td> </tr> <tr> <td>Service</td> <td>27%</td> </tr> <tr> <td>Manufacturing</td> <td>7%</td> </tr> </tbody> </table>	Nature of Business	Percentage	Trading	67%	Service	27%	Manufacturing	7%	<p><i>According to nature of business, 67% of merchants are in the Trading business, 27% are in the Service business and 7% are in the Manufacturing business.</i></p>																		
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Merchants' Acceptance of Plastic Cards in Table 2.

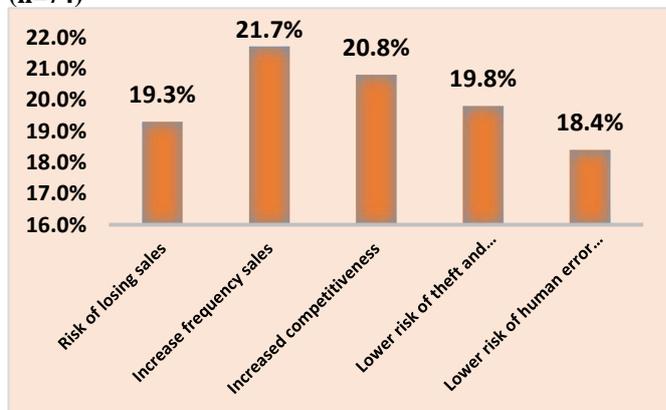
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FREQUENCIES ANALYSIS FOR MERCHANTS' ACCEPTANCE OF PLASTIC CARDS																	
<p>Banking institutions for merchants (n=74)</p> <table border="1"> <caption>Banking institutions for merchants (n=74)</caption> <thead> <tr> <th>Banking Institution</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>More than 2 banks</td> <td>2%</td> </tr> <tr> <td>More than 1 bank</td> <td>12%</td> </tr> <tr> <td>SBM</td> <td>29%</td> </tr> <tr> <td>Mcb</td> <td>49%</td> </tr> <tr> <td>MauBank</td> <td>3%</td> </tr> <tr> <td>Barclays</td> <td>5%</td> </tr> <tr> <td>Bank One</td> <td>1%</td> </tr> </tbody> </table>	Banking Institution	Percentage	More than 2 banks	2%	More than 1 bank	12%	SBM	29%	Mcb	49%	MauBank	3%	Barclays	5%	Bank One	1%	<p><i>Regarding the banks which merchants deal with, we can have observed that the Mauritius Commercial Bank is the leading bank in Mauritius (49%), followed by the State Bank of Mauritius (29%), Barclays (5%), MauBank (3%) and Bank One (1%). 12% of merchants deal with more than 1 bank while only 2% of merchants deal with more than 2 banks.</i></p>
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<p>Acceptance of card payment by merchants (n=200)</p> <table border="1"> <caption>Acceptance of card payment by merchants (n=200)</caption> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>37%</td> </tr> <tr> <td>No</td> <td>63%</td> </tr> </tbody> </table>	Response	Percentage	Yes	37%	No	63%	<p><i>In terms of merchants' acceptance of plastic cards in Mauritius, majority of merchants (63%) do not accept plastic card payment while only 37% that is 74 merchants out of 200 merchants accept plastic card payment. Among the 37% merchants who accept card, 26.5% are in the trading business, 7.5% in the service and 3% in the manufacturing business.</i></p>										
Response	Percentage																
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<p>Types of cards accepted by merchants (n=74)</p> <table border="1"> <caption>Types of cards accepted by merchants (n=74)</caption> <thead> <tr> <th>Card Type</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Debit cards</td> <td>45.6%</td> </tr> <tr> <td>Credit cards</td> <td>39.5%</td> </tr> <tr> <td>Prepaid cards</td> <td>15.0%</td> </tr> </tbody> </table>	Card Type	Percentage	Debit cards	45.6%	Credit cards	39.5%	Prepaid cards	15.0%	<p><i>45.6 % of merchants accept debit cards, 39.5 % accept credit cards and 15% accept prepaid Card.</i></p>								
Card Type	Percentage																
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Number of years of acceptance of plastic cards by merchants (n=74)



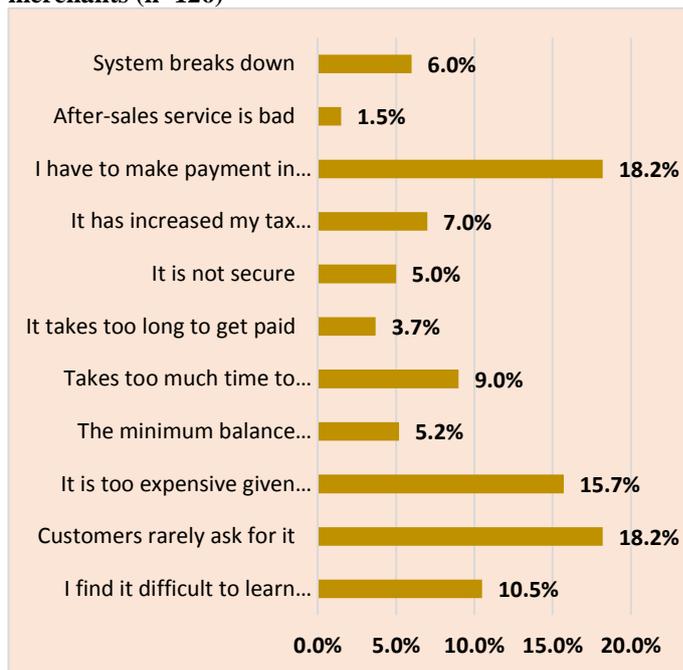
Majority of merchants (14.5%) have been accepting plastic cards for more than 5 years, followed by 9% for more 2-3 years ago, 7.5% for 3-4 years ago and 3% respectively for less than 1 year and 4-5 years ago. We can observe that card acceptance among merchants have started a long time back.

Reasons for adopting plastic card payments by merchants (n=74)



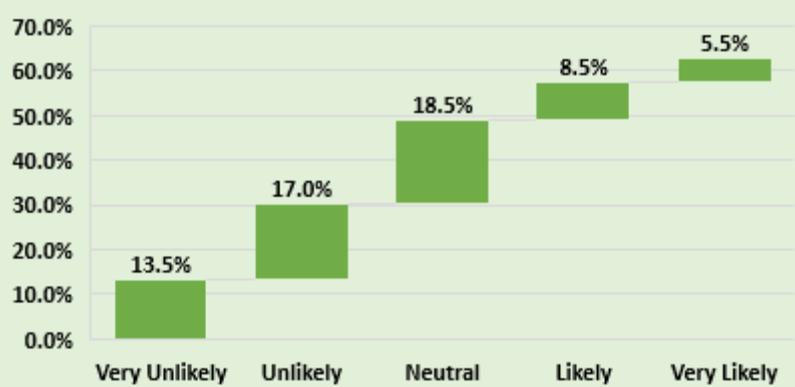
Most merchants (21.7%) have highlighted "increased frequency sales" as the main reason for accepting plastic card payments. Followed by increased competitiveness (20.8%), lower risk of theft and counterfeit (19.8%), risk of losing sales (19.3%) and lower risk of human error during exchange (18.4%).

Reasons for non- adoption of plastic cards among merchants (n=126)



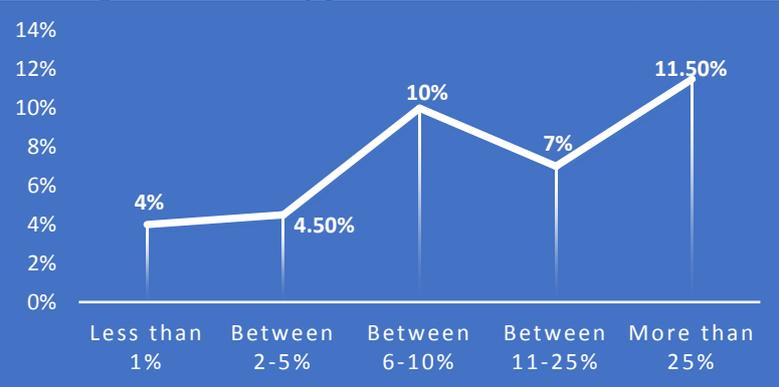
18.2% of merchants have indicated that they must make payment in cash so prefer receiving cash and customers rarely ask for it as the main reason why they do not accept plastic cards as a payment instrument. 15.7% of merchants have reported that plastic card payment is too expensive given their margins, followed by they find it difficult to learn and understand how to use it (10.5%), it takes too much time to operate (9%), it has increased my tax burden (7%), system breaks down (6%), the minimum balance required on my current account is too high (5.2%), it is not secure (5%) & it takes too long to get paid (3.7%).

Likelihood for merchants to accept plastic cards in the future (n=126)



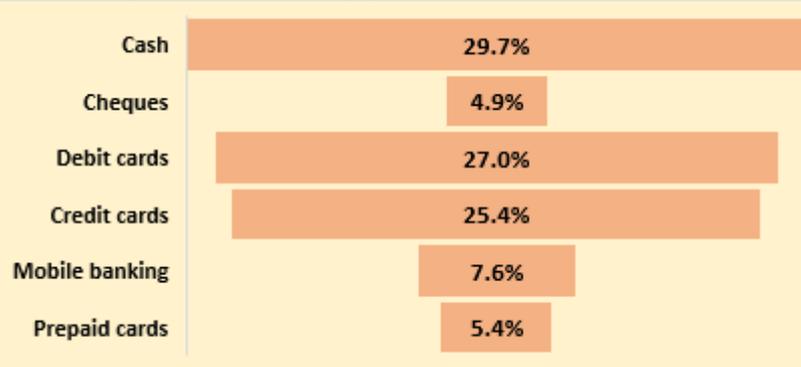
17% and 13.5% of merchants have clearly stated that they are very unlikely and unlikely to accept plastic card payment in the future. At the same time 8.5% are likely to accept plastic card payments. Only a small percentage (5.5% out of 63%) are very likely to adopt plastic cards in the future.

Percentage of sales occur by plastic card for merchants (n=74)



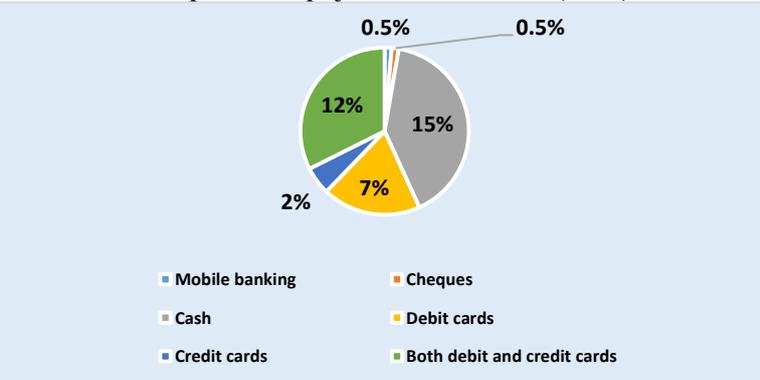
11.5% of merchants have highlighted that more than 25% of their sales occur through plastic cards, followed by 10% for sales between 6-10%, 7% for sales between 11-25%, 4.5% sales between 2-5% and 4% for sales of less than 1%

Merchants preferred mode of payments (n=74)



29.7% of merchants prefer their clients to pay by cash, 27% by Debit cards, 25.4% by Credit cards, 7.6% by Mobile banking, 5.4% by prepaid cards and 4.9% by cheques

Merchants most preferred payment instruments (n=74)



Merchants most preferred payment instruments is cash (15%), followed by plastic cards (12%), Debit cards (7%), Credit cards (2%) and 0.5% for Mobile banking and cheques respectively.

MERCHANT’S PERCEPTION ON CUSTOMER’S MODE OF PAYMENT

Mode of Payment Most Frequently Used by Customers

Empirical estimates have demonstrated that 43.8% of merchants depicted that “cash” is the most frequently used payment instruments that customers use to conduct their payments, followed by 28.8% for debit cards, 19.6% for credit cards, 4.6% for mobile banking and lastly 3.3% for prepaid cards. Empirical results have shown that cash is still a dominant payment instrument among the Mauritian population in Figure 1.

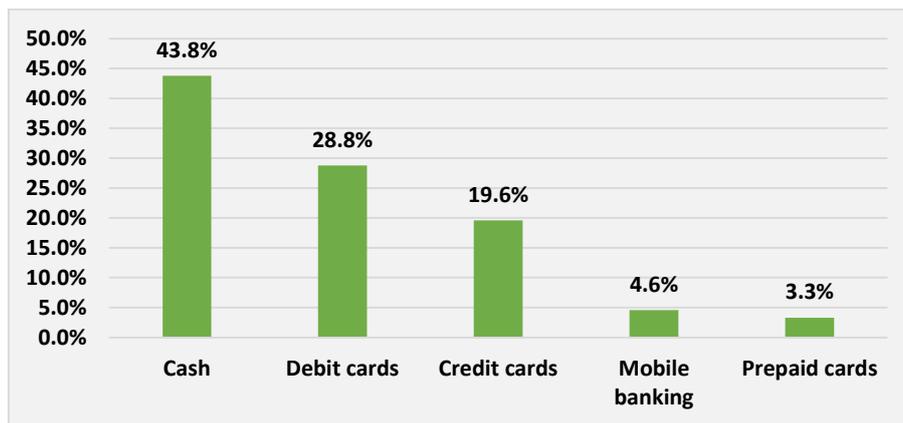


FIGURE 1
MODE OF PAYMENT MOST FREQUENTLY USED BY CUSTOMERS (N=74)

Percentage of Customer Paying by Plastic Cards

11% of merchants in Mauritius have admitted that between 11-25% of their customers pay by plastic cards, 9.5% and 7.5% of merchants believed that between 6-10% and between 2-5% of their clients use plastic card to pay for purchases. Moreover, only 3% of merchants have admitted that less than 1% of their customers pay by plastic cards in Figure 2.

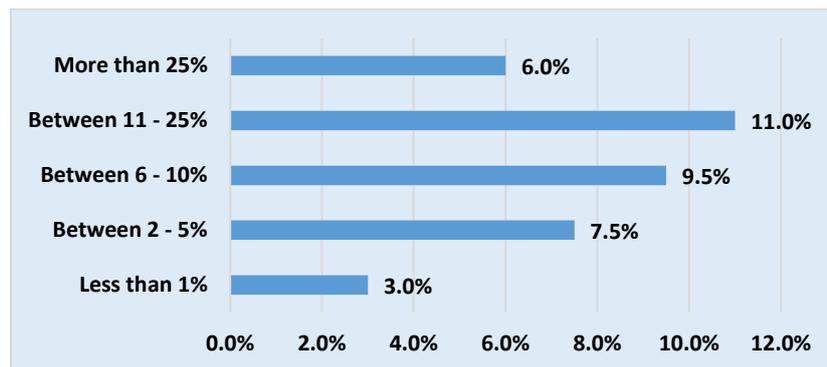


FIGURE 2
PERCENTAGE OF CUSTOMER PAYING BY PLASTIC CARDS (N=74)

Increased in Customers Spending by Plastic Cards

18% of merchants have witnessed a high increased in customers spending by plastic cards whilst 14% of merchants think that customers spending by plastic cards is same as compared to several years ago. 3% of merchants think that customers spending by plastic cards is low in Mauritius while 2% think that there has been a very high increased in customers spending by plastic cards in today’s time Figure 3.

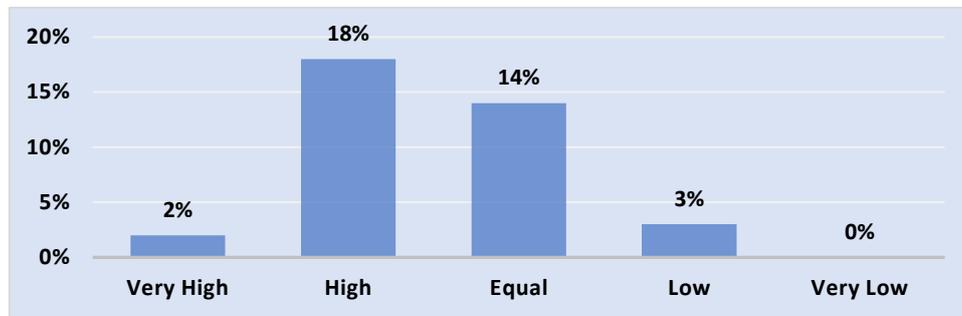


FIGURE 3
INCREASED IN CUSTOMERS SPENDING BY PLASTIC CARDS (N=74)

Future Expectation of Growth of Plastic Cards in the Business Sector

32.4% and 24.3% of merchants respectively expect that 20 – 40% and 41 – 60% of their growth in business will occur through plastic cards in the future. 17.6 % of merchants respectively believe that below 20% and 61 - 80% of their growth in business will occur through plastic cards while only 8.1% think that 81 – 100% of their growth in business will occur through plastic cards in the next few years Figure 4.

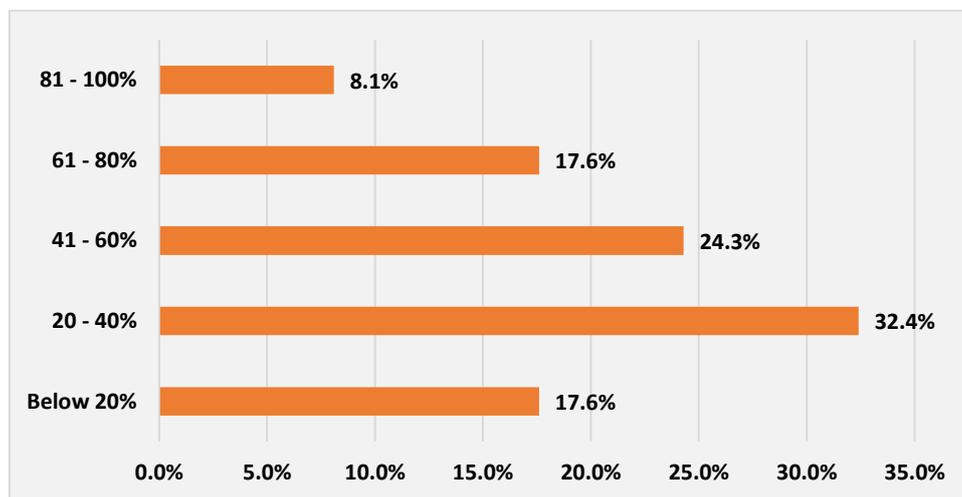


FIGURE 4
IN THE NEXT YEARS, WHAT PERCENTAGE OF GROWTH IN BUSINESS DO YOU EXPECT THROUGH PLASTIC CARDS? (N=74)

PERCEIVED RISKS AND HINDRANCES OF ACCEPTING PLASTIC CARDS

Victim of Plastic Card Fraud and Type of Fraud Encountered

Findings have indicated that only three (3) merchants out of the 71 merchants have been victim of plastic card fraud since trading through plastic cards. The three merchants have further elaborated that they have come across people giving wrong or fake card, unpaid cards and also unauthorized people having access to the pin code of someone else card. However, 35.5% of merchants admitted that they have not experienced any card fraud till now. These problems have indeed created a hindrance among a few merchants as Levitin (2008) has identified in literature that merchants do not want to encourage or promote the use of plastic cards although plastic cards are considered as the cheapest method of payment in Table 3 & 4.

	Frequency	Percent
Not applicable	126	63.0
Yes	3	1.5
No	71	35.5
Total	200	100.0

		Give a brief description of type of fraud encountered				Total
			People give the wrong card or a fake one	The cardholder was not the owner of the card but had the pin code	Unpaid cards	
Have you been victim of card fraud since trading through plastic cards?	Not applicable	126	0	0	0	126
	Yes	0	1	1	1	3
	No	71	0	0	0	71
Total		197	1	1	1	200

Merchant Service Commission and Issuer Interchange Fee

Findings have revealed that out of the 37% of merchants who accept plastic cards as a mean of payment, 22.5% of merchants have no clue about what consist of Merchant Service Commission and Issuer Interchange Fee even though they accept card payment from clients. However, 14.5% of merchants are aware of Merchant Service Commission and Issuer Interchange Fee and 12.5% of them have been able to give a brief description of the fees. Most merchants have defined the fees as a commission that banks charged for every transaction done by cards.

Concerning MSC, 0.5% of merchants said that MSC rate in Mauritius is 0.03%, 2% merchants (1% MSC), 1.5% of merchants (2% MSC), 0.5% of merchants (2.5% MSC), 6% of merchants (3% MSC), 0.5% of merchants (1-3% MSC) and 0.5% (2-3% MSC). Concerning IIF, 0.5% of merchants said that IIF rate in Mauritius is 0%, 9% of merchants (1% IIF), 0.5% of merchants (2% IIF) and 2% of merchants (3% IIF) in Table 5 & 6.

	Frequency	Percent
Not applicable	126	63.0
Yes	29	14.5
No	45	22.5
Total	200	100.0

Percentage of Respondents (%)	Merchant Service Commission	Percentage of Respondents (%)	Issuer Interchange Fee
0.5	0.0275%	0.5	0%
2	1%	9	1%
1.5	2%	0.5	2%
0.5	2.5%	2	3%
2.5	2.75%		
6	3%		
1	1-3%		

Transaction Size for Acceptance of Plastic Cards

Out of 37% of merchants who accept card payment, 25.5% do not have any transaction size under which they do not accept card payments while 11.5% of merchants have depicted that they have a transaction size under which they don't accept card payment. 0.5 % of merchants have a limit of Rs 50, followed by 0.5% of merchants have a limit of less than Rs 100, 8% of merchants have a limit of Rs100, 0.5 % of merchants have a limit of Rs 150, 1.5 % of merchants have a limit of Rs 200 while 0.5 % of merchants have a limit of Rs 1000 in Table 7 & Table 8.

	Frequency	Percent
Not applicable	126	63.0
Yes	23	11.5
No	51	25.5
Total	200	100.0

Percentage of Respondents (%)	Transaction Size
0.5	Rs 50
0.5	Less than Rs 100
8	Rs 100
0.5	Rs 150
1.5	Rs 200
0.5	Rs 1000

DISCUSSIONS AND MANAGERIAL IMPLICATIONS

Over the years, plastic card payment emerged as the much preferred mode for making Business to Business (B2B) and Business to Consumer (B2C) payments in Mauritius. The overwhelming increase of plastic money usage among the local citizens and firms has been driven by several factors such as the rapid internationalisation of businesses including Small

and Medium Enterprises (SMEs), heavy dependency on imported raw materials, fast growth in e-commerce and the increase in the number of platforms encouraging cashless options of buying among others. Moreover, contactless payment in the midst and post COVID-19 pandemic era is expected to rise as the perceived hygienic security is higher than it is for normal POS payments. Since, digitalisation of payment depends a lot of the merchants' intention in adopting cashless, this study explored the perception of merchants on the phenomenon of plastic cards in Mauritius. This knowledge is pertinent to all stakeholders of the digital payment industry in readjusting to the new normal through the organisation of payments facilities in the post crisis world. Moreover, the formulation and implementation of customer-focused and efficient will make the payment industry more resilient to the global COVID-19 pandemic.

This research has several managerial implications for professionals and executives in the plastic card services, digital executives, senior business analyst, and financial institutions in plastic card department, customers and merchants. The present research has shed light on some interesting findings that are very important for policy makers, banking institutions, customers, merchants and other stakeholders in the plastic card network, to increase their plastic card services among customers and merchants in an emerging economy such as Mauritius.

The paper will provide banking executives and professionals from the plastic card section of banking institutions with deep insights on how to better sustain the adoption of plastic cards by providing further training to merchants on the factors that customers take into consideration while adopting plastic card services. Banking professionals and executives in the plastic card department should ensure regular courtesy visit in several retail outlets across Mauritius, whereby merchants and retailers are empowered about the benefits of plastic card payment. Moreover, banks should maintain good relationship with merchants by visiting merchants regularly to ensure POS is working smoothly. In addition, courtesy visit of plastic card executives from the different banking institutions will enable to cultivate the relationship with retail merchants.

The research will also educate merchants about the benefits of accepting plastic card services from their clients and how they can enhance the adoption of plastic cards by providing their customers with regular gifts and rewards. Merchants should also ensure that they have enough knowledge on different factors such as 'Merchant service commission' and 'Issuer interchange fee'. In addition, by attending regular training sessions and seminars conducted by the banking and financial institutions will enable merchants to conduct transaction using point of sales terminals more effectively. Moreover, merchants should avoid the arbitrary fixing of minimum and maximum amount of purchases if they want to enlarge their plastic card services network.

Empirical findings have revealed that out of the 37% of merchants who accept plastic card payment, 11.5% of merchants have depicted that they have a transaction size under which they don't accept payment by plastic cards. Therefore, it is recommended that, for merchants to gain customer loyalty, customer retention and customer satisfaction, they should avoid the arbitrary fixing of minimum and maximum amount of purchases and levy of commission or charges. The merchants should also follow the card acceptance rules and policies as proposed by their banks and card agencies. Merchants should always disclose the refund and return policy to their clients before making a purchase by plastic cards. Merchants should never refuse to accept plastic card payment from their customers, especially during discount periods.

Merchants should do the due diligence when accepting plastic card payment from their customers as empirical findings have revealed that customers find it risky to give their personal information when using plastic cards, followed by plastic cards involved high

potential for privacy loss of personal information. Merchants are recommended to take all the necessary precaution to protect cardholders' sensitive data and personal information and keep complete privacy to avoid card frauds and charge back problems. Moreover, empirical findings have also revealed that customers are afraid that their personal payment information may be inappropriately used by the plastic card issuer. Thus, merchants should also build a secure network and make sure that the stored information are not misused by their staffs. Merchants can also develop a system for safely eliminating customer data from their network.

Empirical findings have revealed that customers have quite an unfavorable view on the incentives provided by merchants upon payment with plastic cards. As Mwendu et al. (2017) have highlighted that the main reason for customers to adopt credit cards are because of credit card incentives. Therefore, merchants are recommended to provide their customers with regular gifts, discounts and vouchers upon payment with their plastic cards if they want to maintain good long-term customer relationships with their clients. Merchants can add some kind of rewards for purchasing with plastic cards and this reward will surely encourage buying behavior and promotes loyalty towards the adoption of plastic cards services. Black Friday is gaining great importance around the world; hence merchants can offer their customers with an additional discount if they are using their plastic cards to conduct their payment during the Black Friday period.

Merchants as well as their employees are recommended to follow proper training before starting conducting transactions with the point of sale terminals as the merchant's survey has highlighted that merchants find it difficult to cancel the purchases after processing a card payment. Merchants and employees can take part in modular training which is short and flexible segments of training instead of a whole day session. Merchants should always participate in educational campaigns organized by the financial and banking institutions in order to deepen their understanding on plastic card services and point of sales payments. The training programmes and education campaigns would help the merchants to process their customers' transactions swiftly and without conducting any error. This will also improve customer experience at point of sale and lead to higher confidence among employees.

Merchants should ensure that the training sessions on point of sales payment systems highlight the following aspects:

1. General information: about how to turn on and turn off the point of sale terminal, how the employee should login and also how to navigate with the point of sale system.
2. Payment: how to enter the payment amount, how to select different accounts such as saving account, checking account
3. Other topics: how to process refunds, administer coupons/ loyalty programs

Merchants are the only ones who are always in direct contact with cardholders on a day to day basis. Hence, by portraying merchants as the ambassadors of plastic cards, merchants should be able to sensitize their clients that the possession of large amount of cash involves great risks as thefts and crimes have increased significantly during the last few years. Being an ambassador of plastic cards, merchants should communicate and explain to their customers as the rapidity, safety, security and conveniences associated with the adoption of plastic cards.

Moreover, as findings have revealed that 22.9% of respondents do not adopt plastic cards, merchants should therefore persuade the non-cardholders to adopt plastic cards to conduct all their transactions. Merchants as ambassadors of plastic card services, should create and raise awareness among both cardholders and non-cardholders to sustain the adoption of plastic cards. As empirical findings have revealed that cash is the mode of payment most frequently used by customers (43.8%), therefore, merchants should encourage their customers to pay by plastic cards instead of cash.

Empirical findings have depicted that 18% of merchants believed that there has been a high increased in customer spending by plastic cards. Moreover, 12% of merchants expect 20-40% of their sales to occur through plastic cards in the future. Hence, if merchants want to increase the number of customers paying by plastic cards and at the same time increase their sales, merchants should build and maintain trustworthy relationship with their customers. Majority of merchants (11%) have depicted that between 11-25% of their customers pay by plastic cards. Therefore, merchants should establish a pleasant relationship with these customers if they want to maintain long term relationship and attain loyal customers. Empirical estimates have also highlighted that plastic cards are associated with IT savvy and affluent people, hence, merchants should treat these customers as unique and special since they are the ones who use their plastic cards the most to conduct payment transactions. Moreover, merchants create a modern day personal retail relationship with their regular customers who pay by plastic cards if they want to sustain the rapid growth of plastic cards in Mauritius.

All the merchants accepting plastic card payment should organize monthly or yearly seminars where they can meet under one platform to discuss about the problems merchants are facing, strategies they can use to motivate merchants who are non-adopters of plastic cards to adopt and accept plastic card payment in the future and the future prospect of plastic cards in post pandemic situation. Moreover, the committee should appoint one leader who would be responsible for regular visit in the different retail outlets to ensure that the merchants are not facing any problems. Empirical findings have revealed that only 7% of merchants in the manufacturing business adopt plastic cards. Hence, there should be greater emphasis on merchants owing manufacturing business and encourage them to adopt plastic card as it is safe, rapid and more convenient. Moreover, merchants who do not accept plastic card payments should also be invited during these seminars and conferences so that they will gain knowledge and understanding about the benefits associated with acceptance of plastic cards and the opportunities related with plastic card payments in post Covid 19 among the smart customers of a cashless society such as Mauritius.

CONCLUSION, LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

This paper has aimed to provide insights on plastic card acceptance by tapping the views of merchants. This paper will help policy makers, customer, merchants, banking professionals and executives in the plastic card section and financial and banking institutions devise their strategies to sustain the adoption of plastic cards in Mauritius, which is striving towards a cashless society following COVID-19 pandemic. Based upon the recommendations which have been made, the study has highlighted the need to have a serious re-look on the broad factors impacting upon the acceptance of plastic cards among merchants in Mauritius. This research provides a guideline as to where banks position themselves with respect to plastic card payments practices for merchant segments in Mauritius. The limitations of the present research are clearly defined to pave the way forward for a future research agenda.

The study has been limited to explore merchant views towards the acceptance of plastic cards from a quantitative perspective. This paper has not tapped insights from other banking and financial institutions, stakeholders and plastic card issuing companies such as CIM Finance, Rogers Capital. This present research has not tapped various factors such as service quality and customer satisfaction towards plastic card adoption, reputation of financial and banking institutions, feelings and customer's habit towards plastic cards, delinquency and bankruptcy involved with the adoption of plastic cards, the green environmental benefits associated with plastic cards, attitudes of employees, bank -

customers and bank - merchants relationship, banking staffs' attitudes towards cardholders. The findings of this research therefore suggest multiple interesting possibilities for future academic research in countries striving towards being cashless in the turbulent crisis of Covid19 . Constant research should be conducted to unveil new trends and opportunities that arise over a period of time following global pandemic crisis. Future research can replicate on the successful adoption of plastic cards where banks can educate the merchants and the population of Mauritius about some of the benefits and challenges involved in the adopting plastic cards and making Mauritius a cashless society in the pandemic crisis. Banks as financial partner in various economies activities with various stakeholders can really achieve great heights in educating and motivating customers and merchants to act and think green, thus, several specific research can be carried out with different stakeholders to gain a holistic understanding of plastic cards acceptance and its adoption among customers in Post Covid19. It is important to note that payment industry has faced numerous challenges in this turbulent situation and there will be greater challenges in the payment landscape in the near future that merchants and different stakeholders will have to address. This pioneer study will this pave the way forward for future research in plastic card payments, mobile payments and the concept of e-wallet in Post Covid19.

REFERENCES

- Arango, C., & Taylor, V. (2008). Merchant acceptance, costs and perceptions of retail payments: A Canadian survey. *Bank of Canada Discussion paper*. Available from: <https://www.bankofcanada.ca/wp-content/uploads/2010/01/dp08-12.pdf>
- Arango, C., Huyuh, K.P., & Sabetti, L. (2015). Consumer Payment Choice: Merchant Card Acceptance Versus Pricing Incentives. *Journal of Banking and Finance*, 55(C), 130-141. Available from: <https://www.sciencedirect.com/science/article/pii/S0378426615000321>
- Baxter, W.F. (1983). Bank Interchange of Transactional Paper: Legal Perspectives, *Journal of Law and Economics*, 26, 541-588. Available from: <https://www.jstor.org/stable/725037>
- Berenthal, M.J., Crockett, D., & Rose, R.L. (2005). Credit cards as a lifestyle facilitator. *Journal of Consumer Research*, 32(1), 130-145. Available from: https://scholarcommons.sc.edu/cgi/viewcontent.cgi?article=1000&context=sem_facpub
- Bolt, W., & Chakravorti, S. (2008). Consumer Choice and Merchant Acceptance of Payment Media. *DNB Working Paper*. Available from: https://www.dnb.nl/binaries/Working%20paper%20197_tcm46-210268.pdf
- Borestam, A., & Schmiedel, H. (2011). Interchange fees in card payments. *ECB Occasional Paper*, 131. Available from: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1927925.
- Capgemini, (2011). Challenges and opportunities for merchant acquirers. Available from: https://www.capgemini.com/wpcontent/uploads/2017/07/Challenges___Opportunities_for_Merchant_Acquirers.pdf
- Chakravorti, S. (2000). Why has stored valued not caught on? *Federal Reserve Bank of Chicago*. Available from: <https://www.chicagofed.org/~media/publications/risk...papers/sr-2000-6-pdf.pdf>
- Chakravorti, S., & Bolt, W. (2010). Digitalization of retail payments. *DNB working paper*, 270. Available from: https://www.dnb.nl/binaries/Working%20paper%20270_tcm46-243674.pdf
- Chakravorti, S., & Emmons, W.R. (2001). Who Pays for Credit Cards? Available on: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.196.9089&rep=rep1&type=pdf>
- Chien, Y.W., & Devaney, S.A. (2001). The effects of credit attitude and socioeconomic factors on credit card and installment debt. *The Journal of Consumer Affairs*, 35(1). Available from: <http://ntur.lib.ntu.edu.tw/bitstream/246246/83637/1/3.pdf>
- Churchill, J.G.A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, 16(1), 64-73. Available from: http://statmath.wu.ac.at/people/dittrich/mlbw/trochim_pdfs/zus%E4tzliches%20Material%20Thomas/Churchill1979_JMR.pdf
- Competition Commission of Mauritius. (2016). Investigations into payment cards. Available from: <http://www.ccm.mu/English/Documents/Investigations/INV020-Final-Report-Non-conf.pdf>
- Dalberg (2016). Small merchants. Big opportunity: The forgotten path to financial inclusion. *Study commissioned by VISA*. Available from: <https://www.dalberg.com/system/files/2017-07/Small-merchants-big-opportunity.pdf>

- DeNederlandsBank (2015). Cash usage continues downtrend. Available from: <https://www.dnb.nl/en/news/news-and-archive/dnbulletin-2015/dnb333311.jsp>
- Digital Payments 2020. (2016). The making of a \$500 billion ecosystem in India. *The Boston Consulting Group and Google*. Available from: http://image-src.bcg.com/BCG_COM/BCG-Google%20Digital%20Payments%202020%20July%202016_tcm21-39245.pdf
- Durkin, T.A. (2000). Credit cards: Use and consumer attitudes, 1970-2000. *Federal reserve bulletin*. Available from: <https://www.federalreserve.gov/pubs/bulletin/2000/0900lead.pdf>
- Feinberg, R.A. (1986). Credit Cards as Spending Facilitating Stimuli: A Conditioning Interpretation. *Journal of Consumer Research*, 13. Available from: https://www.uni-muenster.de/imperia/md/content/psyifp/aeechterhoff/wintersemester201112/vorlesungskommperskonflikt/feinberg_credcards_jouconres1986.pdf
- Fung, B., Huynh, K.P., Nield, K., & Welte, A., (2018). Merchant acceptance of cash and credit cards at the point of sale. *Bank of Canada*. Available from: <https://www.bankofcanada.ca/wp-content/uploads/2018/01/san2018-1.pdf>
- Gillian, Garcia., (1980). Credit cards: An interdisciplinary survey. *Journal of Consumer Research*, 6(4), 327-337. Available from: <https://academic.oup.com/jcr/article/abstract/6/4/327/1790906?redirectedFrom=PDF>
- Govil, S. (2015). Perspectives on accelerating global payment acceptance. Available from: <https://usa.visa.com/dam/VCOM/download/visa-everywhere/global-impact/perspectives-on-accelerating-global-payment-acceptance.pdf>
- Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., & Tatham, R.L. (2005). *Multivariate data analysis* (6th Ed.). Upper Saddle River, New Jersey: Prentice Hall. Available from: <https://www.amazon.com/Multivariate-Analysis-Black-Anderson-Joseph/dp/B009NGDE96>
- Hayhoe, C.R., Leach, L.J., Turner, P.R., & Bruin, M.J. (2000). Differences in spending habits and credit use of college students. *Journal of Consumer Affairs*, 34(1), 113-133. Available from: https://www.researchgate.net/publication/227624607_Differences_in_Spending_Habits_and_Credit_Use_of_College_Students
- Jones, R. (2017). Cash no longer king as contactless payments soar in UK stores. Available from: <https://www.theguardian.com/money/2017/jul/12/cash-contactless-payments-uk-stores-cards-british-retail-consortium>
- Joo, S.H., & Grable, J. (2004). An exploratory framework of the determinants of financial satisfaction. *Journal of Family and Economic Issues*, 25(1). Available from: https://www.researchgate.net/publication/225916762_An_Exploratory_Framework_of_the_Determinants_of_Financial_Satisfaction
- Levitin, A.J. (2008). Priceless? The competitive costs of credit card merchant restraints. *Georgetown university law center*. Available from: https://scholarship.law.georgetown.edu/cgi/viewcontent.cgi?referer=https://www.google.mu/&httpsredir=1&article=1023&context=fwps_papers
- Mwende, J., Wachira, M., & Amata, E. (2017). Effects of credit cards incentives on consumer borrowing in Kenya: A case of commercial banks in Kenya. *International Journal of Academic Research in Economics and Management Sciences*, 6(2). Available from: http://hrmars.com/hrmars_papers/Effects_of_Credit_Card_Incentives_on_Consumer_Borrowing_In_Kenya_A_Case_of_Commercial_Banks_in_Kenya.pdf
- Patil, S. (2014). Impact of plastic money on banking trends in India. *International Journal of Management Research and Business Strategy*, 3(1). Available from: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.740.8520&rep=rep1&type=pdf>
- Pudaruth, S., Juwaheer, T.D., Madoo, V. (2013). Mapping the hidden constructs towards the adoption of plastic cards in Mauritius, *Journal of Advanced Research*. Available from: http://www.journalijar.com/uploads/2013-06-26_163448_809.pdf
- Rochet, J.C., & Tirole, J. (2000). Cooperation among competitors: The economics of payment card associations. Available from: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.419.5574&rep=rep1&type=pdf>
- Rochet, J.C., & Wright, J. (2009). Credit card interchange fees. *Working paper series*, 1138. Available from: <https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1138.pdf?851dc85b7d95e3f09493235a6726bfac>
- Sorrel, C. (2016). What happens when we become a cashless society? Available from: <https://www.fastcompany.com/3056736/what-happens-when-we-become-a-cashless-society>
- Survey on merchants' costs of processing cash and card payments (2015). *European commission*. Available from: http://ec.europa.eu/competition/sectors/financial_services/dgcomp_final_report_en.pdf

- Weiner, S.E., & Wright, J. (2005). Interchange fees in various countries: Developments and Determinants. *Federal Reserve Bank of Kansas city*. Available from: <https://www.newyorkfed.org/medialibrary/media/research/conference/2005/antitrust/WeinerWright.pdf>
- World bank group. (2016). Innovation in electronic payment adoption: The case of small retailers. Available from: http://www3.weforum.org/docs/Innovative_Solutions_Accelerate_Adoption_Electronic_Payments_Merchants_report_2016.pdf
- Wright, J. (2001). The determinants of optimal interchange fees in payment systems. *Economics working papers*. Available from: <https://pdfs.semanticscholar.org/af5c/54eeb074f8a0f3b3a2efcc3e713c06e9d6d7.pdf>
- Wright, J. (2003). Pricing in debit and credit card schemes. *Economics letters*. Available from: http://www.academia.edu/3095965/Pricing_in_debit_and_credit_card_schemes
- Wright, J. (2010). Why do merchants accept payment cards? *National University of Singapore*. Available from: http://profile.nus.edu.sg/fass/ecs/jkw/RNE_revised_paper.pdf
- Zafar, A., Ismail, I., Sohail, M.S., & Tabche, I. (2010). Malaysian consumers' credit card usage behavior. *Asian Pacific Journal of Marketing and Logistics*, 22(4). Available from: https://www.researchgate.net/publication/239781482_Malaysian_consumers'_credit_card_usage_behavior