

**“USE OF CREDIT CARD AND ITS EFFECT ON SPENDING
BEHAVIOUR OF THE EMPLOYEES IN PUNE CITY”**

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CERTIFICATE

Certified that the work incorporated in the thesis titled “*Use of Credit Card and Its Effect on Spending Behaviour of the Employees in Pune City*” submitted by *Mrs Shilly John* for the degree of “*Doctor of Philosophy*” in *Economics* under the faculty of *Mental, Moral and Social Sciences (Humanities)* was carried out under my supervision and guidance. Such materials as has been obtained from other sources have been duly acknowledged in the thesis.

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DECLARATION

I hereby declare that the thesis titled “**Use of Credit Card and its Effect on Spending Behaviour of the Employees in Pune City**” submitted by me for the degree of Doctor of Philosophy is the record of work carried out by me during the period from 27th July 2014 to 23rd August 2018 under the guidance of Prof. (Mrs) Madhu M. Satam and has not formed the basis for the award of any degree, diploma, associate-ship or fellowship, title in this or any other University or other Institution of higher learning.

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ABBREVIATIONS

APR	Annual Percentage Rate
ARDE	Armament Research and Development Establishment
CIBIL	Credit Information Bureau (India) Limited
CVC	Card Verification Code
CVV	Card Verification Value
DA	Dearness Allowance
DRDO	Defence Research and Development Organisation
EMV	EuroPay, MasterCard & Visa
HRA	House Rent Allowance
IITM	Indian Institute of Tropical Meteorology
IMD	India Meteorological Department
IISER	Indian Institutes of Science Education and Research
LUCC	Laghu Udyami Credit Card
MNC	Multinational Corporations
NEFT	National Electronic Fund Transfer
NPCI	National Payments Corporation of India
NCL	National Chemical Laboratory
PF	Provident Fund
PIN	Personal Identification Number
POS	Point of Sale
RTGS	Real Time Gross Settlement
SPU-KCC	Special Project Unit – Kissan Credit Card
SCC	Swarojgar Credit Card

CHAPTER 1

INTRODUCTION

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INTRODUCTION

The globalization and liberalization policies of the government in India and advancement in technology have assisted various sectors of the economy. The financial sector, the key to growth and development of a country has become more convenient and faster for any kind of financial transaction to take place, whether for an individual, firm or for a nation. With changing scenario, the economy has opened itself to new modes of transactions and payments. The information and technological progress has assisted the pace of growth of financial sector. Electronic payment system has enabled the consumers to have more number of transactions more conveniently. Though currency or cash, is the most accepted medium of payment in all modern societies as it is the legal tender, it is now found that due to convenience of use (no need to carry cash), card based payment system is on the rise. The card based payments or use of plastic money includes both credit card and debit card. Among the two cards, credit card that allows the consumers to buy now and pay later, has become an indispensable payment and credit instrument. A credit card works as a payment instrument and even as a source of credit.

Opening up of new avenues of production and employment in the country has resulted in new products and services entering the market, availability of variety of goods and services for consumption, price changes, growing incomes with increase in disposable income, changing behaviour pattern of consumers. This with the availability of credit have changed the spending behaviour of the consumers. Credit card an unsecured loan and a revolving line of credit issued by a financial institution to its customer has become ubiquitous in present day society. It has become a part of consumer culture. Easy availability of credit cards has given increased opportunities to consumers for credit purchases.

1.1 ABOUT THE RESEARCH WORK

A change in consumption pattern of consumers from different income groups employed in both government and private sector and the self-employed across India is seen in recent years. The changing spending pattern is due to increasing availability of disposable income plus the easy availability of credit facilities offered by financial sector. The credit card issued and other forms of loans help maintain consumers'

lifestyles. There is a growing change in spending behaviour of the consumers that can affect their savings adversely.

Credit card use by different sections of the people depending on their socio-economic characteristics and its effect on the personal finance i.e. their spending and savings is the study done in this thesis. Considering the heterogeneity of occupations in Pune city, for the purpose of this research study, the individuals are categorized according to their nature of employment i.e. salaried class that includes both the government (includes semi-government) and private sector employees, and the self-employed. Individuals working in private firms are the private sector employees. Self-employed includes businessmen, doctors, lawyers, consultants, chartered accountants, agents/brokers etc.

Traditionally the government jobs were considered secured with the additional benefits like DA, TA, HRA, PF and the retirement benefits. Due to the parity in salary scale in various government organizations the pattern of spending and saving behaviour is expected to be more or less similar. However, with the availability of credit cards there exists a possibility of increased spending. This possibility exists for those working in private firms as well, even if they may not get additional benefits as the government employees. But to maintain a particular life-style, credit card is used as it provides additional purchasing power. In case of self-employed, whose income is not fixed, use of credit card would definitely be a financial support both for meeting the family needs as well the business needs. Hence this research is about the study of use of credit card by various types of employees in Pune city and how it affects their spending and saving behavior.

1.1.1 Scope of the Study

The scope includes credit card usage pattern of different groups of employees in Pune city. This research work is a descriptive study about the socio-economic characteristics of the employed and the self-employed cardholders in Pune city. The employed includes both government (including semi-government employees) and private sector employees. The self-employed includes businessmen, the doctors, lawyers, consultants, chartered accountants and agents/brokers. It is a comparative study of spending and savings behaviour pattern of credit cardholders working in government and private

organizations and the self-employed. It also is a comparative study of credit card users and non-users with respect to their income, spending and savings.

This study answers the questions like whether the age, gender, education, marital status, income and the organization where the cardholder is employed affects the spending behavior. For what purpose, what duration, and what frequency the credit card is used? What is the average amount of transaction per month? Whether the cardholders use the revolving line of credit facility i.e. whether they carry forward their payment to the next month and thereby have to pay interest? What is the amount of interest they pay? Are they into debt trap due to not paying the credit card dues? This study also finds out the difference between the spending and savings pattern of the cardholders and the non-cardholders in Pune city.

1.1.2 Need of the Study

The credit cards works on a “charge first, pay later” system. It provides the consumer with two distinct functions – a means of payment and a source of credit. Credit card is considered as the modern form of money and is used as a means of payment. For the consumers it is also a source of unsecured loans with a revolving credit facility. This means increase in liquidity and purchasing power of the consumers. With availability of increased purchasing power, there is a tendency to increase consumption expenditure but that might affect the savings adversely. There is an increasing problem of credit card debt in the West. This may very soon be the case in India as well. Thus this study of use of credit card by the employed people in Pune city will help to know the effect of credit card use and its impact on their spending behaviour.

1.1.3 Statement of the Problem

Credit card use by the individuals employed in different sectors has affected their personal finance adversely. With availability of variety of goods and services in domestic as well as global market and due to convenient payment method, there is a change in the spending behavior of the individuals across different income groups during the past two decades. There is a trend of individuals buying goods and services using credit card and falling into the debt trap. This may also affect the savings adversely.

1.1.4 Objectives of the Study

- 1) To study socio-economic profile of credit card users and non-users.
- 2) To find out the impact of credit card use on spending and saving behaviour of the cardholders and compare it with the non-cardholders' spending and saving behaviour.
- 3) To understand the repayment behavior of the cardholders.
- 4) To analyze the credit card debt situation in the city.
- 5) To find the impact of demonetization on the use of credit card.

1.1.5 Importance of the Study

- Studying the socio-economic characteristics of the credit card holders, it becomes clear as to which are the factors affecting the use of credit card by the different groups of working population in the city.
- It reveals the various facts regarding the spending behaviour of the cardholders and its effects on the personal finance. The study will help the cardholders to know how the use of credit card is one of the factors that increases expenditure and thereby decrease savings.
- As the respondents were asked various aspects related to credit card like add-on cards, reward points, the card network, CIBIL score, cyber-crime using the card etc., it helps to improve the awareness of the people.
- The importance of re-payment within the monthly billing cycle is revealed through the study. The practice of roll-over or minimum payment would lead to a serious problem of debt trap.
- This research work can facilitate the banks and the government to formulate policies to provide financial literacy regarding credit card use.

1.1.6 Research Methodology

It is a quantitative and descriptive research method. Information and data is collected from both primary and secondary sources. A structured questionnaire¹, is used to collect primary data from employees working in various government/semi-government organizations like National Chemical Laboratory (NCL), Indian Institute of Tropical Meteorology (IITM), Savitribai Phule Pune University, IUCCA and colleges in Pune city. Primary data is also collected from people working in private firms and the self-employed in Pune city.

1.1.6.1 Sampling Plan

Random sampling method is used to collect data from credit card users and non-credit card users to find out who all are using credit cards and their usage patterns and how many are not using and the reason for not using it. This approach was selected as respondents were easily accessible and available within the city.

About 700 questionnaires were distributed to individuals in Pune City. But only about 673 questionnaires were returned. From these 673, the actual sample is 668 as the rest of the questionnaires were either incomplete or the data given were not reliable.

1.1.6.2 Data Collection

Both primary and secondary data is used for this research work. Primary data is collected using a structured questionnaire with multiple choice and some dichotomous questions i.e. options having 'yes' or 'no'.

1.1.6.3 Pre-test (Pilot Survey)

A pre-test questionnaire was administered on around 20 sample respondents from different categories. This led to some changes in the questionnaire like in question for source of income, in case of the self-employed, for business group, profit was added later-on. Few more questions were added later on.

After demonetization two more questions related to demonetization was added.

¹ Questionnaire can be referred to in Appendix I and the explanation of the questionnaire is given in Chapter 3

1.1.6.4 Data Processing and Analysis

Computerized data processing is done using MS Excel. Further data processing is done by making use of simple and complex tabulations. Bar graphs and pie charts are used wherever required. For statistical analysis, various statistical functions of MS Excel is used like mean and Chi-square test to test the hypotheses.

1.2 CREDIT CARD USE IN VARIOUS COUNTRIES

The Diners Club first issued the credit cards in 1950, which work on a “charge first, pay later” system. Credit card provides two distinct functions for consumers – a means of payment and a source of credit. Thus the credit card is considered as the modern form of money and consumers are no more dependent on their income for making purchases. Since its introduction, consumers across the world are using it due to the convenience it provides of no need to carry cash. The credit card use have both advantages and disadvantages. One of the advantages is that one does not have to carry a lot of cash around. Then the ability to make purchases irrespective of availability of cash in hand, no need to write cheques, creates a record of the purchases and making a consolidated payment also make their use advantageous. The credit card enhances liquidity, as it works as the means of deferred payment. The availability of credit limit increases the number and volume of transactions and the payment is made at a later date. There are disadvantages like higher cost because of interest and other charges, overspending and getting into a debt-trap and a decline in the savings.

The use of credit card has seen a growing trend across the world. During 2011, credit card transaction volumes grew by 12.3% globally². In the US number of people using credit card increased from 171.91million in spring 2008 to 192.43 million in spring 2015³. The number of credit cards issued were 334million in the US with 2.6 credit card per person, and the payments through these cards reached 33.8 billion in 2015 with a value of \$3.16 trillion, up by 6.9 billion since 2012. Credit card payments grew at an annual rate of 8.0 percent by number and 7.4 percent by value from 2012 to 2015⁴. In UK, three in four adults, or 38 million people, does online shopping and spends an

² World Payments Report, 2013, pg.10

³ The Statistics Portal, www.statista.com/statistics/228373/users-of-credit-cards-usa/

⁴ The Federal Reserve Payments Study 2016, www.federalreserve.gov/newsevents/press/other/2016-payments-study-20161222.pdf

average of £2,008 as at end of 2011⁵. The total credit cards spending in UK in March 2017 increased to £16.7 billion from £15billions in March 2016, through 310 billion purchases in 2017 from 272 billion in 2016⁶. In Canada and Mexico, the number of credit cards issued were 76.3 million and 28.5million respectively. South Korea had 92.3 million credit cards in circulation and with 3.5 cards per person in 2015⁷. Russia had 30.1million credit cards issued in January 2017⁸. In Brazil, the use of credit cards was up by 16.3% in 2011⁹. The credit card was introduced in China in 2000 but has seen a rapid increase in its use over the years. There were 331 million credit cards issued in China in 2012 as per official statistics of People's Bank of China and increased to 391 million credit cards in 2013¹⁰. According to Hong Kong Monetary Authority (HKMA) quarterly statistics, the total number of credit cards in circulation was 19.5 million and the total number of credit card transactions was 160.3 million for Q3/2017¹¹. In Pakistan, the number of credit cards reached 1.40 million at year end FY 2014-15¹².

In India, credit cards were introduced in the early eighties. The credit card industry is a rapidly growing industry. In the financial year 2003-04, credit card industry had a growth rate of around 37% as against the 25% in the previous year (Venture Infotek, 2004). Plastic money is so much in vogue in Indian metropolises that the nature of Indian urban economy has started resembling the U.S. economy (Thakur, 2006). Over the years this industry has seen gradual growth with some decline in 2008-09. According to Frost & Sullivan report, 2014, India is the 13th largest non-cash payment market globally. India had 29.1million credit cards in February 2017.¹³ During 2015-16, 786 million transactions valued at around ₹2.4 trillion were carried out through

⁵ The UK Cards Association, Annual Report 2013, pg.17

⁶ www.theukcardsassociation.org.uk/facts_figures/index.asp

⁷ Financial Conduct Authority, Credit Card Market Study Interim Report: Annex 11 – International Comparisons November 2015, www.fca.org.uk/publication/market-studies/ms14-6-2-ccms-annex-11.pdf

⁸ www.cbr.ru/eng/statistics/print.aspx?file=p_sys/sheet013.htm&pid=psrf&sid=ITM_15718

⁹ World Payments Report, 2013, pg.6

¹⁰ Financial Conduct Authority, Credit Card Market Study Interim Report: Annex 11 – International Comparisons November 2015, www.fca.org.uk/publication/market-studies/ms14-6-2-ccms-annex-11.pdf

¹¹ <http://www.hkma.gov.hk/eng/key-information/press-releases/2017/20171222-4.shtml>

¹² www.propakistani.pk/2015/09/07/statistical-look-at-payment-system-and-retail-banking-of-pakistan-for-2014-15

¹³ www.medianama.com/2017/04/

credit cards in India¹⁴ and this increased to 1085 million transaction valued at around ₹3.2 trillion in 2016-17¹⁵.

In an era of easy access to credit facility, the credit card in particular, it becomes important to understand the consequences of purchases with unsecured consumer debt. Credit card has both positive and negative consequences. During the last two decades, the credit card usage has become both social and economic concern for credit card using economies. Availability of easy liquidity to maintain one's standard of living also results in increased financial risk due to unsecured debt. The usage pattern of credit cards shows that some consumers use it wisely but some are not able to use the credit card prudently and fall in debt trap. This may also lead to decline in savings rate. According to Laibson, the credit card facilitates instant gratification and the immediate (impulsive) responses to consumption by providing liquidity on the spot and it might have been a factor in the decline of the U.S. savings rate that has occurred since the mid-1980s (Barenstein, 2004). In USA, more than 1.35 million people had filed for bankruptcy in 2010 (Ladka 2011; Manning 2000). By the end of 2011, with the unfolding of America's economic crisis, the average household credit card debt reached \$16,420 (Federal Reserve G.19 March, 2012)¹⁶. In recent decades, America has been transformed from a nation of savers to a nation of borrowers with personal savings declining from 10 percent in the 1980s to less than 1 percent in the 2000s (Carruthers and Ariovich 2010)¹⁷.

In UK, the total credit card debt in January 2017 was £66.7bn. It means per household this was £2,470 – for a credit card bearing the average interest and it would take 25 years and 10 months to repay if only the minimum repayment was done each month¹⁸. In China it's found that the Chinese credit card market is still in its infancy as the traditional consumption value “save first and spend later” continues. As a McKinsey's survey report, most Chinese people use credit cards as a convenient way to make purchases (or accumulate points toward a small gift), not as a credit facility (Atsmon et

¹⁴ RBI, Annual Report 2015-16, www.rbi.org.in/SCRIPTS/AnnualReportPublications.aspx?Id=1182

¹⁵ RBI Bulletin, May 2017, pg. 79

¹⁶ Mansfield P.M. et.al, Consumers and credit cards: A review of the empirical literature, *Journal of Management and Marketing Research*

¹⁷ Randy Hodson et.al., Credit Card Blues: The Middle Class and the Hidden Costs of Easy Credit, *The Sociological Quarterly*, Vol. 55, (2) 2014

¹⁸ The Money Charity, Money Statistics, March 2017, www.themoneycharity.org.uk

al., 2011). There are only about 14% revolving credit card users in Chinese credit card market (Cui, 2009). Fewer revolvers are one of the characteristics of Chinese infancy credit card market¹⁹. In Malaysia, according to the Director General of Department of insolvency Malaysia, in March 2009, 23.3 billion credit card balances remained unsettled²⁰.

Credit card outstanding amount being on the rise across the globe is not a good sign in case of personal finances of the consumers. Increasing consumer debt, credit card debt in particular has a drastic effect on the consumers' finance due to the high interest rate that is charged on the revolving line of credit which is due to unsecured nature of credit. Many card holders have to file for bankruptcy as per their own country's law. This kind of situation is emerging in India as well. In India, the number of credit cards outstanding were 29.84million in 2016-17²¹. Household debt, measured as per credit card outstanding has been rising in the country. The outstanding per credit card stood at Rs 8,668 as of February 2016, a rise of 15.5% year-on-year²².

Various factors determine the credit card usage pattern that can affect the personal finance of an individual. A prudent use of the card with timely repayment in full, allows the cardholder to use free money, whereas using the credit card for both purchases as well as cash withdrawal and making use of the revolving credit i.e. making minimum payment and rolling over the balance to the next billing cycle leads to credit card debt. The use of credit card by different consumers depend on determinants like type of economic systems i.e. capitalist, communist or mixed, religious and traditional beliefs, and socio-economic variables. As discussed earlier, countries in the west like USA, UK, European countries with capitalist outlook the credit card market is a mature one whereas, the middle-east countries or countries like China, Malaysia, Vietnam the credit card market is infancy may be because of their economic system or their traditional and religious beliefs. For Muslim countries credit purchases are against their religious beliefs and hence low use of credit cards. They have to follow strict Islamic

¹⁹ Changzheng He et al., The key factors of outstanding credit balances among revolvers: a case study of a bank in China *Procedia Computer Science* 91, 2016 pp. 341 – 350

²⁰ Syed Shah Alam et al., What Influence Credit Card Debts in Young Consumers in Malaysia, *Journal of Public Administration, Finance and Law*, Issue 6, 2014 pp. 106 - 116

²¹ RBI Bulletin, May 2017, pg. 79

²² Govindraj Ethiraj, www.indiaspend.com/cover-story/9-reasons-indias-rising-credit-card-debt-should-worry-you-66363

Laws known as *Shariah*. As per *Shariah* Muslims are forbidden to carry out any financial transactions or business with money-lending that charges interest, known as *riba*; invokes *gharar*, or uncertainty, mainly in the form of variable interest rates; or uses funds for *maysir*, or gambling. In case of South-Asian countries, in spite of rapid economic growth, they still prefer cash payment over the non-cash payment modes especially credit cards. According to tradition or custom savings should come first before spending for these Asian countries.

Various studies across countries show that socio-economic factors affect the credit card use. Members of the lower classes tend to use their credit cards for instalment-financing to a greater extent than upper classes²³. Studies have been carried out to know the effect of credit card use based on the demographic characteristic of the cardholder. Age, gender, family size, income education, monthly transaction etc. are the factors that determined the usage of credit card. Plummer in 1971 conducted a study of consumers' use of credit cards based on number, usage, income, education, age, and occupation. About psychological impairment, number, balance, beliefs/attitude of consumers were carried out in 2008 by Spinella, Yang, and Lester. In 2010, Rutherford and Fox did their study on number, balance and repayment behaviour of cardholders. In many of the western countries credit cards are issued to the college students as well. This has resulted in many youngsters going bankrupt even before starting a career of their own. According to Sallie Mae's "Majoring in Money" report 2016, 56% of undergraduate students owned a credit card in 2016. The Card Act of 2009 has resulted in reduced lending to younger borrowers in US.

India, one of the emerging economies of the world, is seeing a vast change happening mainly in the secondary and tertiary sectors of the economy. The traditional methods of production and distribution is giving way to the modern methods. The consumers need not limit themselves to physical market and cash transactions. E-commerce and m-commerce are increasing. Non-cash transaction is on the rise. In India 60% of non-cash transaction is paper based i.e. using cheques, drafts etc. and the rest includes electronic payment i.e. RTGS, NEFT, electronic clearing system and the card based payments. People are comfortable using the plastic cards instead of cash due

²³ H. Lee Mathews and John W. Slocum, Jr., Social Class and Commercial Bank Credit Card Usage, *Journal of Marketing*, Vol. 33 (January, 1969), pp. 71-78.

convenience. Recently due demonetization on 8th November 2016, card based payments have increased.

India following a mixed economic system, with a vast difference in the nature of occupation i.e. government, semi-government and private sector (permanent or temporary), self-employed, traders, and a difference in income group, there can be much effect of credit card on the personal finances of the households. A credit limit is decided according to the income of the consumer in case of the credit cards. This results in increase in the spending behaviour of the consumers. People working in different sectors will have different spending and consumption pattern. Those working in government sector may have comparatively less income to that of private sector. But they have job security and various other financial benefits which make their life secure even after retirement. This is not so with those working in private organizations. This might affect the consumption pattern of these various consumers who fall in different income groups. India having more number of population in the working age group, there is increasing demand for jobs. With growing number of MNCs in the country it is found that there is a scope of changing jobs for better jobs and of course a better salary. This has also resulted in temporary unemployment along with the other kinds of unemployment in India. Then there are people who are self-employed like the doctors, chartered accountants, lawyers, consultants, businessmen etc. These different types of working population of India with changes in income and there by disposable income can maintain their lifestyles with the use of credit cards and loans available. There is a growing change in spending behaviour of the consumers that can affect their savings adversely.

1.3 PROFILE OF PUNE CITY

Pune known as ‘the Oxford of the East’, also the cultural capital of Maharashtra State is now one of the fastest growing industrial hubs of the state. The city of Pune was once called Punyapur as it is situated at the confluence of the Mutha and Mula rivers because such places were considered holy. Pune city expanded since 20th century, and many industries were established. The first one was Kirloskar Oil Engines Ltd. in 1946. The Pune Municipal Corporation was established in 1950. Since 1960s many industrial estates are set up in Pune metropolitan (Pimpri, Chinchwad, Dehu road, Kirkhee). This has led to Pune becoming an industrial hub. Pune now have both traditional as well as

new industries, like the automobile, engineering, machine tools etc. and also the IT industry, different service industries as well. Pune is booming with real estate industry. The city has various defence establishments like the Indian Air Force, Army Southern Command and other defence organizations like DRDO, ARDE. Apart from these there are various government organizations NCL, IITM, IMD etc.

The city of Pune is no more mere a 'Pensioner's Paradise' but is vibrant with different types of employability for the people, hence the influx of population towards the city. Job seekers and students are equally attracted towards the city from different parts of the country. Population of Pune is continuously growing, the reason being migrating population from across the country due to software industries and for education. There are students from different parts of the world studying in Pune as the city has some of the best educational and research institutions like Savitribai Phule Pune University, IISER Pune, Symbiosis International, Fergusson college, Agriculture college, and research institute like NCL, IITM, Agarkar Research Institute, defence institutions like ARDE, DRDO. With information technology (IT) sector booming in the city, there is tremendous job opportunities and hence people from all parts of the world has made Pune one of the cosmopolitan cities of India.

Geographical Location : Pune city is located on the western side of the Deccan Plateau at 18° 31' north latitude and 73° 51' east longitude, about 160kms south-east of Mumbai surrounded by hill on the east and south. It lies on confluence of two rivers, the Mula and Mutha. Pavana and Indrayani are other two rivers that flow through the north eastern outskirts of the Pune urban area.

Pune district is one of the 35 districts of Maharashtra state. According to 2011 Census Pune district is the Second highest district in terms of population size in the State and one of the urbanized districts with 61% of its population in urban areas.

- Percentage of male working population is 70.87% and 29.12% is the female working population of Pune.
- Among the total population of Pune district the self-employed is 39.6% and Salaried is 60.4% and in Pune city this figure is 28% and 72% respectively as per 2011 census.
- Per capita income of Pune city is Rs.88,341/-

Table 1.1: POPULATION AS PER 2011 CENSUS – PUNE DISTRICT, PUNE METROPOLITAN & PUNE CITY

	Pune District	Pune Metropolitan*	Pune City**
Total Population (in crores)	94,29,408	50,57,709	31,24,458
Male Population (in crores)	49,24,105	26,56,240	16,03,675
Female Population (in crores)	45,05,303	24,01,469	15,20,783
Sex Ratio (Number of Females/1000 Males)	915	904	948
Average Literacy	86.15%	89.56%	89.56%

Source: District Handbook Census 2011²⁴

*Pune Metropolitan includes Dehu, Dehu road, Pimpri, Chinchwad and Khirkee.

**Pune city is the Pune Municipal Corporation (PMC) area.

With changing occupational structure of the city, increasing incomes and the changing transaction and payment methods (online transactions and payments), the personal finance of the people in Pune is towards change. Using plastic money, especially credit cards has made the payment very convenient but affects the spending and saving behaviour. It is seen that there is a lifestyle change among the different groups of working population.

Keeping in mind the profile of Pune city, this research work is to understand the use of credit card by the employees in the city, how and for what purpose they use it and their card bill payment behaviour. This will tell if the use of credit card increases the spending and adversely affect savings.

1.4 CHAPTER OUTLINE

The thesis is divided into five chapters.

Chapter I is the **Introduction** chapter explaining about the research work its objective, scope, importance, and research methodology of the study and the chapter outline. This chapter consists of four sections:

- 1.1 About the research work
- 1.2 Credit Card Use in Various Countries.
- 1.3 Profile of Pune City
- 1.4 Chapter Outline

²⁴ Available at <https://www.census2011.w.in/census/district/359-pune-html>

Chapter II is the **Literature Review**. This chapter is divided into three sections:

2.1 Historical Background and Conceptual Framework of Credit Card Payment

System- This has sub-sections explaining origin and history of credit cards and various terminologies related to credit card use, the working of the credit card, credit card industry in India and the advantages and disadvantages of credit card use.

2.2 Parameters Affecting Credit Card Use – It is regarding various studies done by scholars across the world on parameters that affect the use of credit card like demographic characters age, gender, family size, income group, and students' and senior citizens credit card use. It has a subsection on credit card debt.

2.3 Demonetization in India – This section is about the demonetization in India and its possible effects of increased use of plastic money.

Chapter III is the **Research Methodology** - This chapter is about the research design of the thesis. The chapter is divided into following sections:

3.1 Research Strategy

3.2 Hypothesis

3.3 Research design

3.4 Data Processing & analysis

3.5 Limitation of the Study

Chapter IV is **Data Analysis and Findings**. This chapter is divided into three sections:

4.1 Secondary Data Analysis

4.1.1 Global Credit Card Use – This section is about the credit card usage pattern in some of the countries in the West who have been using credit card as a payment instrument for many decades like the USA, U.K., etc.

4.1.2 Credit Card Use in India – The credit card use in India as per the Reserve Bank of India reports is analyzed in this section.

4.2 Primary Data Analysis

4.2.1 Socio-economic Profile of the Respondents- This section is the analysis and findings of socio-economic profiles of the cardholders and non-cardholders in the study. This shows the cardholding among the respondents i.e. the number of credit card users and non-users and also the number of credit cards and add-on cards owned and various socio-economic parameters like age, gender, marital status, family size and type, earning members of the respondents. Economic data of the respondents like their type of occupation, monthly income, source of income, savings/investments and monthly expenditure is analyzed. It shows the comparison between credit card users and non-users with respect to socio-economic characteristics.

4.2.2 Credit Card Usage Pattern - The second section describes the credit card usage pattern. It is about the analysis of credit cardholders' card usage among different types of employees in the City. It includes how many credit cards, period of use, frequency of use, type of cards, credit limit, percentage of credit limit used, reward points, purpose of credit card use, cash-withdrawal, monthly credit card transactions, effect of demonetization, repayment practice, awareness about CIBIL score, cyber-crime, effect on expenditure and savings, and personal opinion about credit card use.

4.3 Hypothesis Testing – Various hypotheses of the study is tested using Chi-square test in MS Excel. Alpha level of .05 is taken for all statistical tests.

4.4 Descriptive Statistics – The sample population, mean, standard deviation and standard error of mean are described.

Chapter V is Discussion & Summary– This chapter is divided into three sections:

5.1 Discussion & Summary

5.2 Conclusions

5.3 Suggestions

Bibliography

Appendix I – Questionnaire

Appendix II – Pune Map

CHAPTER 2

LITERATURE REVIEW

2.1	Historical Background and Conceptual Framework of Credit Card Payment System.....	18
2.2	Parameters Affecting Credit Card Use.....	37
2.3	Demonetization in India.....	47

LITERATURE REVIEW

Use of credit cards depends of various parameters like the demographic characteristics, economic variables, attitudes and consumer behaviour. Many studies have been done across the world regarding consumer credit card usage and its various parameters. This chapter is divided into three sections. The first section is about the conceptual framework of credit card as a payment instrument - its origin and evolution, credit card terminologies and the process of credit card transactions involving various stakeholders, credit card industry in India and effects of credit card use. The second section is all about the studies done in different countries related to the different parameters affecting the credit card use and the studies related to credit card debt. The third section is about demonetization in India, which has made use of plastic money as the need of the hour.

2.1 HISTORICAL BACKGROUND AND CONCEPTUAL FRAMEWORK OF CREDIT CARD PAYMENT SYSTEM

Empirical economists include various financial assets in money and therefore emphasize bank money. Cheques, demand drafts, credit cards etc. are means to make payments when bank money is used for transactions. Exchange occurs when credit card is accepted. The credit limit allowed by the bank determines the ability to enter into exchange. In this case, the medium of exchange is the credit allowed by the bank rather than the money the purchaser might eventually hand over (Keith et al., 2003).

According to the empirical view the measures of money will change as financial innovations take place in the economy as in case of banking practices like internet banking and banking products like credit and debit cards. The velocity of money changes when the financial system changes, like the frequency with which income is received; expenditure patterns and the timings of payments; and the extent to which credit is used (Keith et al., 2003). The use of credit card allows exchange to occur but payment to be postponed. Though credit card is not money proper it is used as a means of payment.

2.1.1 History And Evolution of Credit Cards

In 1888, Edward Bellamy in his book “Looking Backward”, talked about a society without any commodity money or cash. Citizens were given equal amounts of credit

every year by the government, which can be used at public stores for purchasing commodities or the person can spend in any manner. The credit amount was indicated on a little card. According to Weatherford Jack, if the credit got exhausted, they could get a limited advance on the credits that would be issued the following year (Lee Suping et al., 2002). This kind of a society never took shape but Bellamy's concept of credit card, in current society has become one of the main mode of payment.

The development of the first credit card was the result of an embarrassing situation Frank McNamara had to face, when he forgot to bring his wallet and his wife had to pay at a restaurant. This incident made him determined to make a system of payment that requires only a card to pay for all the purchases.

Diners Club issued the first modern credit card in 1950, developed by two Americans: Frank McNamara and Ralph Schneider. In the beginning, cardboards were used to make the cards. It was in 1961, that Diners Club introduced the plastic cards made of PVC (Polyvinyl Chloride), which makes it possible to emboss the user's particulars. In 1958, the American Express was set up.

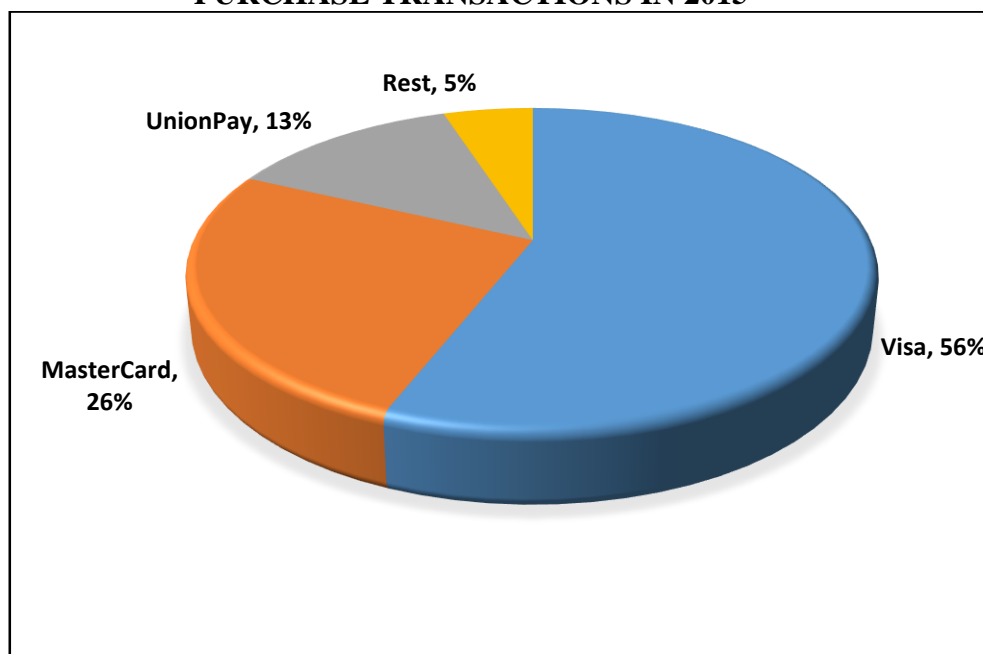
There are four major credit card network organizations that help payment system that is recognized worldwide. The VISA and MasterCard International deal with the bankcards. The American Express and Diners Club deal with the T & E cards, i.e. Travel & Entertainment cards. The bankcards are credit cards issued by the financial institutions providing credit limits to the cardholders so that the cardholder can buy now and pay later and the T & E cards are used mostly while traveling. VISA had 16800 financial institutions issuing over 3.1 billion cards worldwide as on 30th September 2016. Its annual transaction volume was estimated to be more than US \$ 8.2 trillion in 2016²⁵. In the US, number of credit cards in circulation was 363 million in Q3 of 2016 and the purchase volume was \$1.6 trillion in the year 2016 (Visa operational performance data 2017). The MasterCard issued in US were 201 million in Q1 of 2017 and the purchase volume was \$693 billion in 2016 (MasterCard supplementary operational performance data). In US, as per the American Express 2016 annual report, it had issued 47.5 million credit cards and the purchase volume was \$700 billion in 2016. The Discover annual report 2016 states that it had purchase volume of about

²⁵ Visa Report 2017

\$190billion in 2015 in the US. Today, Visa connects consumers, businesses, banks and governments in more than 200 countries and territories. It helps them to use digital currency instead of cash and checks. The transaction volume of Visa is approximately three times more than MasterCard and 14 times more than American Express.

Visa had been the world leader in card payment network till 2000. It can be said that the duopolistic global market situation of Visa and MasterCard changed with other card payment network entering into the market. In 2002, China(UnionPay) and gradually in the other countries like Japan(JCB), Singapore(NETS), Russia(Mir-World), Brazil(ELO) and India(RuPay) introduced their own domestic payment network, since then Visa customer base has been reducing compared to the earlier years.

Figure 2.1: CARD PAYMENT NETWORK - MARKET SHARE OF PURCHASE TRANSACTIONS IN 2015



Source: Nilson Report 2016

Figure 2.1 shows that Visa had the largest share with 56% followed by MasterCard with 26% and UnionPay had the third largest share in the card payment market. The rest includes JCB, Amex, Discover etc. The National Payments Corporation of India (NPCI) launched 'RuPay', the Indian domestic card payment network in 2012. This enabled Indian banks and financial institutions to participate in electronic payments. The term 'RuPay' is made from two words - Rupee and Payment. Till June 2017 there

were only RuPay debit cards and recently NPCI issued credit card as well²⁶. Union Bank of India in association with NPCI has launched two variants of RuPay Credit Card viz. RuPay Platinum and RuPay Select Credit Card. Union Bank of India is the first Bank to launch these products in June 2017.²⁷

2.1.2 Technical Terms and Types of Credit Cards

2.1.2.1 Technical Terms

There are various terms related to credit card, used by the card issuing banks or companies and other terminologies used in the credit card transactions. These are described briefly in this section²⁸.

Account Number: A unique sequence of numbers assigned to a cardholder account that identifies the issuer and type of financial transaction card.

Acquirer: A licensed member of MasterCard and/or VISA (or its agent) which maintains merchant relationships, receives all bankcard transactions from the merchant, and initiates that data into an interchange system.

Acquiring Bank: The bank that does business with merchants enabling them to accept credit cards. A merchant has an account with this bank and each day deposits the value of the day's credit card sales. Acquirers buy (acquire) the merchant's sales slips and credit the tickets' value to the merchant's account.

Annual Fee: Some credit card issuing companies charge a fee for each year to continue the membership of the card. This fee depends on the type of the card, like standard, gold or executive, and vary between Rs. 400/- to Rs. 2000/-. For example, annual fee for Standard Chartered Classic card is Rs.800/- and for SBI VISA card is Rs.750/-. The banks usually charge full annual fee in the first year and then a lower amount is charged yearly as renewal fees.

Annual Percentage Rate (APR): The APR is the annual interest rate that the credit card issuing companies charge on the cardholder's monthly purchases. The APR, which is broken down into periodic instalment is the amount of interest the cardholders pay each billing period. It means if the cardholder has an APR of 24% then s/he has to pay a monthly interest of 2%.

²⁶ In this Ph.D. research work I did not include Rupay credit card as I had already been collecting data from the respondents from May 2016 and completed data collection work by June 2017.

²⁷ http://www.unionbankofindia.co.in/Rupay_Credit_Card.aspx

²⁸ Payment glossary, www.firstdata.com

Credit Limit: The credit limit is the maximum amount of money a cardholder is allowed to borrow from the credit card issuing companies. This depends on the income of the cardholder. Accordingly different types of cards are issued like standard, gold, platinum, titanium, international etc. as per the card network and the issuing bank.

Cash Advances: These are cash loans from the card issuing companies. A cardholder can withdraw up to 40% of the credit limit, subject to a maximum of Rs.12000 per day. The cash advance transaction fee varies from 2.5% - 4% for credit cards issued by different issuing companies. For example SBI charges 2.5% or Rs.300/-, whichever is higher at domestic ATMs and 3% or Rs.300/- whichever is higher at international ATMs. ICICI bank charges 2.5% on the advance amount, subject to a minimum of Rs.300. This fee is charged from the date of transaction.

Balance Transfer: This facility attracts new customers as it allows cardholders to transfer the balance on one credit card to another. This is done to take advantage of a lower APR (Annual Percentage Rate or the annual interest rate). Instead of paying an APR of 36%, the outstanding balance can be transferred to a credit card which charges less APR. The balance transfer charges varies from 1 – 3% from one card issuing company to another.

Baggage Cover: Provides the safety of insurance in the event of losing one's baggage while travelling. This is useful for frequent travellers. This cover is a normal feature of Gold cards and international credit cards. It is generally not available for other types of credit cards.

Bankcard: A financial transaction card (credit, debit, etc.) issued by a financial institution.

Batch: The accumulation of captured (sale) transactions waiting to be settled. Multiple batches may be settled throughout the day.

Capture Date: The date on which a transaction is processed by an acquirer.

Card Issuer:

- The financial institution or retailer that authorizes the issuance of a card to a consumer and is liable for the use of the card. The issuer retains full authority over the use of the card by the person to whom the card is issued.
- Any bank or organization that issues, or causes to be issued, bankcards to those who apply for them.
- Any organization that uses or issues a personal identification number (PIN).

Card Verification Code (CVC): A unique value calculated from the data encoded on the magnetic stripe of a MasterCard card, validating card information during the authorization process.

Card Verification Value (CVV): A unique value calculated from the data encoded on the magnetic stripe of a VISA card, validating card information during the authorization process.

Cardholder: The person to whom a financial transaction card is issued or an additional person authorized to use the card.

Cash Advance: An amount advanced by a bank teller (or ATM) to a bankcard holder against the cardholder's line of credit. **Cash Back:** An optional feature of a Purchase whereby all or part of the Purchase is returned as cash to the Cardholder.

Credit Card Insurance/Credit Protection/Credit Life Insurance: This is also known as "payment protection plan". This insurance covers the cardholder's balance if there is death; disability or s/he becomes involuntarily unemployed. Some credit cards have free personal accident cover. For example, SBI offers Free Personal Accident Cover of Rs. 6 lakhs for air accidents and Rs. 2 lakhs for other accidents. This is valid only if the fee is paid or card used within 45 days of issuance or renewal. Some credit card insurance cover is expensive. The cost of insurance is automatically deducted from the cardholder's account if s/he agrees to coverage.

Credit Shield: In case of the death of the cardholder, the payment of the card bill falls on his/her spouse or parents. Credit shield provides for a waiver of payment of outstanding amount on the card up to a certain limit. This can be around Rs.25000.

EMV: EMV, or EuroPay, MasterCard and Visa, is a microchip-based technology designed to reduce fraud at the point-of-sale. Banks are beginning to issue payment cards with these embedded chips, which also support contactless payments.

Grace period or interest free period: A grace period is the period during which the cardholder makes the purchases and makes the payment without any interest. It is the interest free period. The credit card issuers give grace periods of 45 – 55 days. The ICICI bank gives an interest free period of 50 days on Silver/Blue card and 52 days on Gold card. The SBI gives a free credit period of 50 days. The grace period applies only when the outstanding amount is paid in full, on or before the payment due date. It also does not apply to the cash advances. It means when there is a cash withdrawal, transaction fee and interest are charged on that amount.

Joining Fee: It is a one-time payment, which is charged when the card is issued for the first time to a customer. This fee may vary between Rs.200/- to Rs.25,000/-²⁹ from bank to bank.

Joint Credit: Credit limit issued to a couple based on the assets, incomes and credit reports of both the parties. It usually gives a higher credit limit but both are responsible for repaying the debt.

Merchant: A retailer, or any other person, firm, or corporation that, according to a Merchant Agreement, agrees to accept credit cards, debit cards, or both, when properly presented.

Merchant Acquirer: A member that has entered into an agreement with a merchant to accept deposits generated by bankcard transactions; also called the acquirer or acquiring bank.

Minimum Amount Due: Most credit card companies allow payment of a certain percentage of the total outstanding and the balance can be carried over to the next billing cycle along with the APR. For example SBI, ICICI bank and HDFC bank has the facility of paying the minimum amount due of 5% of the total amount due. Interest will be charged if total amount due is not paid by payment due date even if the minimum amount due has been paid. Making only minimum amount due every month would result in the repayment stretching over the years with consequent interest payment on the outstanding balance.

Personal Identification Number (PIN): A unique number to every card, and is a combination of numbers. The PIN is like a key, which also allows cash withdrawals from ATMs. This number is important and should be stored confidentially and carefully.

Point of Sale (POS): The location of a merchant where the customer makes a purchase.

Point-of-Sale System: An electronic system that accepts financial data at or near a retail selling location and transmits that data to a computer or authorization network for reporting activity, authorization and transaction logging.

²⁹ For ICICI bank Sapphiro Visa Card

Revolving Line Of Credit: It is an agreement to lend a specific amount to a borrower and to allow that amount to be borrowed again, once it is repaid. Most credit cards offer revolving credit.

Reward Points: The concept of reward points is introduced to encourage frequent use of credit cards. For example, Citibank and SBI gives one reward point to the cardholder for every Rs.100 worth of purchases made. For Standard Chartered cardholders, every Rs.125 worth of purchases made through the card gets one reward point. These points are redeemed for gifts, gift vouchers, select product purchases and even for paying the annual fees.

Supplementary or Add-on Card Fee: This is the fee payable per additional card that a member may request for his close family member like spouse, father, mother, brother or sister. This additional card comes with the fee varying between Rs.125/- to Rs.1000/- depending on the type of card. In this add-on card the credit limit remains the same but gets divided between the main card and the additional cards. The credit statement will show a comprehensive bill, which includes the purchases of all the cards.

Teaser Rate: It is often called the introductory rate, which is below market interest rate and is offered to entice customers to switch credit cards.

2.1.2.2. Types of Credit Cards

There are different types of credit cards based on various services offered and credit limit. Various types of cards have various functions and features.

Standard Card: It is the most basic card offered by the issuers. **Classic Card:** It is the brand name for the standard card issued by VISA USA.

Gold/Executive Card: Gold/Executive cardholders get a higher line of credit than a standard card. It depends on the income of the cardholder. The issuer also provides extra perks or incentives.

Platinum Card: A credit card with a higher limit and additional perks than a Gold/Executive card.

Titanium Card: A credit card with even a higher limit than a Platinum card.

Co-branded Card: This type of card is sponsored by two parties. One is a retailer like departmental store or airline and the other is a bank through any card network like VISA, MasterCard etc. Cardholders get discount at the store or reward points when they

buy from the sponsor. In India SBI issues SimplyCLICK SBI card, Yatra SBI credit card, IRCTC SBI Platinum credit card etc. HDFC issues Snapdeal Credit card.

Secured Card: A credit card which the cardholder secures with a savings deposit, to ensure the payment of the outstanding balance if the cardholder defaults on payments. The credit limit is equivalent to or slightly higher than, the amount of the deposit.

Smart Card: It is also called a chip card as they contain a computer chip in a plastic card. A typical credit card's magnetic stripe can hold only a few dozen characters but the smart cards available now have 16K memory. It performs various functions like accessing data stored in the chip. With a pre-set credit limit, these cards can be used as cash cards or as credit cards. This can also be used as ID cards with stored-in passwords.

Charge Card: It works like a credit card and one doesn't have to be an account holder. When the bill arrives, one has to pay in full, no out-standings are allowed. In other words, revolving credit facility is not available. American Express and Diners club issue this type of card.

Cash Card: This is like a prepaid phone card, which contains a set amount of value which is read by a special cash card reader. Retailers use the reader to debit the card in instalments until the value becomes zero. These cards are like liquid cash. They have no built in security, and if lost or stolen, can be used by anyone.

Travel Card: It is used for limited purpose of travel, and works like a debit card. Bob card Global, American Express, Citibank Dollar Card and Hong Kong Bank Thomas Cook International Cards etc. are some of the travel cards.

All the above-mentioned types of cards are found in most of the countries. There are some special kinds of cards issued in India by the RBI in co-operation with the Government of India for providing credit to specific priority sectors in the economy, like agriculture, small-scale sector etc. India being a developing country, people's demand is different than that in developed countries and is also of various kinds depending on the type of jobs they do. Accordingly, we also find the following types of cards in India: -

Laghu Udyami Credit Cards (LUCC): The credit limit of this card is up to Rs. 10 lakhs. This helps the small and medium entrepreneurs, traders and self-employed to get bank credit easily (The Economic Times 2004). It is valid for three years subject to satisfactory operation of the account as per the annual review.

Kissan Credit Card (KCC) Scheme: This scheme was started by the government of India in 1998-99 in consultation with RBI and NABARD. Providing timely and adequate credit to the agriculture sector has been always a challenge for banks in India. KCC is an important step towards providing credit to the farmers. Following are the features of the KCC Scheme: -

- 1) Type of revolving cash credit facility with unlimited withdrawals and repayments.
- 2) To meet the cultivation expenses and contingency expenses of the farmers.
- 3) The credit limit is based on the operational land holding, cropping pattern and scale of finance fixed by the District Level Technical Committee (DLTC) and State Level Technical Committee (SLTC). If the committee does not fix the limit, then the bank can fix the appropriate scale of finance.
- 4) Each withdrawal is to be paid within 12 months.
- 5) The card is valid for three years, subject to annual renewals.
- 6) The credit limit can be increased depending on the performance and needs of the cardholder.
- 7) Rescheduling is possible depending on the situation. For example, if due to some natural calamity, crops fail and the farmer is not able to repay his loan, then he can get an extension of up to four years.
- 8) A credit cum passbook is issued.
- 9) Cash withdrawals are possible through slips, accompanied by the card and passbook.
- 10) All branches engaged in agricultural credit can issue the KCC.

The number of KCC issued up to 30th November 2005 is 5.55 crores (Economic Survey 2005-06). In March 2015 the cumulative KCCs issued were 14.6 crores. The cooperative banks share was 34.7%, RRBs issued 16.29% and commercial banks issued 49.1% of the total KCC issued³⁰.

³⁰ Gyanendra Mani, "A study on Implementation of KCC Scheme", Occasional Paper-64, NABARD, Mumbai 2016, retrieved from https://www.nabard.org/auth/writereaddata/tender/3103171130OP-64_Study%20on%20Implementation%20of%20KCC%20Scheme_wb.pdf

The popularity of KCC scheme reflects the timely availability of credit, with fewer documents required and minimum of transaction cost. In January 2013, NABARD set up Special Project Unit- Kissan Credit Card (SPU-KCC) for encouraging cooperative banks and Regional Rural Banks across the country to issue Rupay KCCs. The ultimate goal is to develop cash-less eco system by enabling the farming community to avail all new banking facilities at par with urban area of the country.

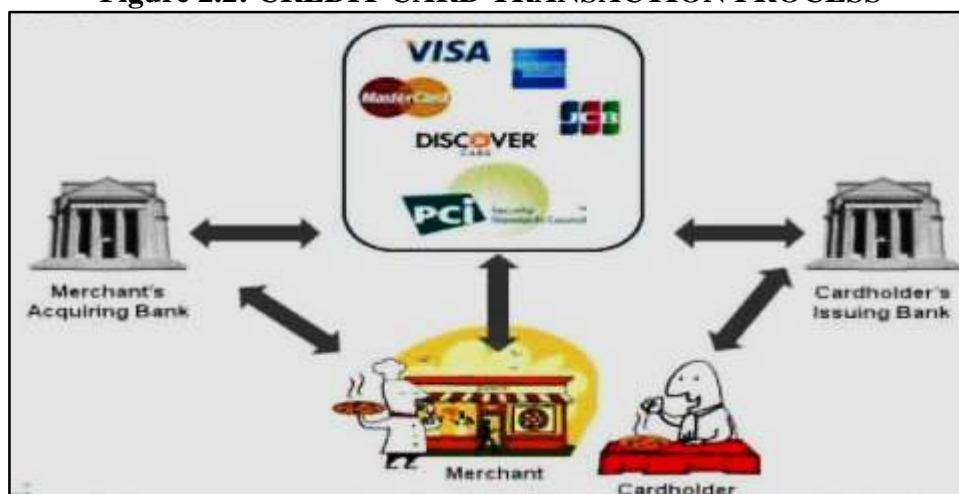
Swarojgar Credit Card (SCC) Scheme: According to a RBI circular, all the banks including the RRBs have to introduce the SCC scheme for the self-employed like the fishermen and rickshaw owners and other micro-entrepreneurs in a cost effective and hassle-free manner. The model of the scheme was prepared by NABARD. SCC is normally valid for 5 years subject to satisfactory operation of the account and renewed on a yearly basis through simple review process. The operations in the account should be regular. Vijaya Bank gives loans up to Rs.30,000 under SCC scheme to the self-employed.

Artisan Credit Card Scheme: It gives credit up to Rs.2 lakhs to the artisans to suit their requirements. Preference is given to artisans registered with the Development Commissioner (Handicrafts). Collateral or third party guarantee is not required.

DIVA: The Standard Chartered Bank issues it for the women, which allows free health check-ups and customer discounts. The cardholders are eligible for free annual health check-ups at any of the 18 Apollo Hospitals and Health Clinics in seven cities across India. It can also be used at Manipal Hospital, Bangalore and Nanavati Hospital, Mumbai. DIVA cardholders are also eligible for some discount at some beauty salons across India.

2.1.3. Credit Card Transaction Process³¹

Figure 2.2: CREDIT CARD TRANSACTION PROCESS



Source: Domestic Payment Card Network, Capgemini Analysis 2011

- Cardholder buys goods from the merchant and pays using his credit card.
- The merchant/shopkeeper submits the purchase details to its Merchant Acquiring Bank (acquirer).
- The acquirer then sends the purchase details to the cardholder's bank through the cards payment network (at this stage the merchant receives the "payment guarantee" and the cardholder receives his goods).
- The cardholder's Issuing Bank then pays the acquirer the transaction amount less the interchange fee (a default fee set by the network provider or a customized fee negotiated directly between the two financial institutions).
- The acquirer then pays the transaction amount less a "merchant discount" to the merchant (the merchant discount may include interchange fee, cost of transaction processing, cost of service, acquirer's profit margin, and any other cost).

2.1.4. Credit Card Industry in India

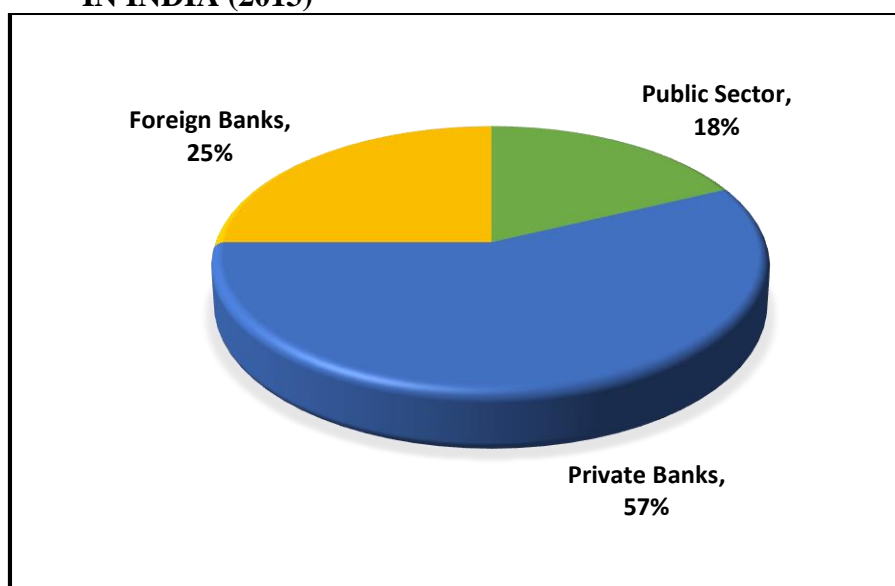
In India, VISA International introduced credit cards in 1981. The country's first Gold Card was also issued by VISA in 1986. After taking special permission from the RBI, Andhra Bank, through VISA Program issued the first international credit card to a few customers in 1987. According to the credit card division of HDFC Bank, the credit card industry in India was worth Rs. 3000 crores in 2003. VISA International Study done in

³¹ Domestic Payment Card Network, Capgemini Analysis 2011.

January 2005 shows that the number of credit cards has increased from 3 million to 14 million between 2000 and 2004, (Business World 2005). According to the survey of Venture Infotek the annual growth rate of credit card industry in India was estimated to be 37%. Compared to other card using countries Indian Credit Card market is the least penetrated market globally³². With about 24 million credit cards issued, in the country in January 2017, it means less than 2% of country's population is using credit card.

The figure 2.3 shows the market share of three types of banks in Indian banking system³³.

Figure 2.3: SECTOR-WISE BANKS SHARE IN CREDIT CARD INDUSTRY IN INDIA (2013)



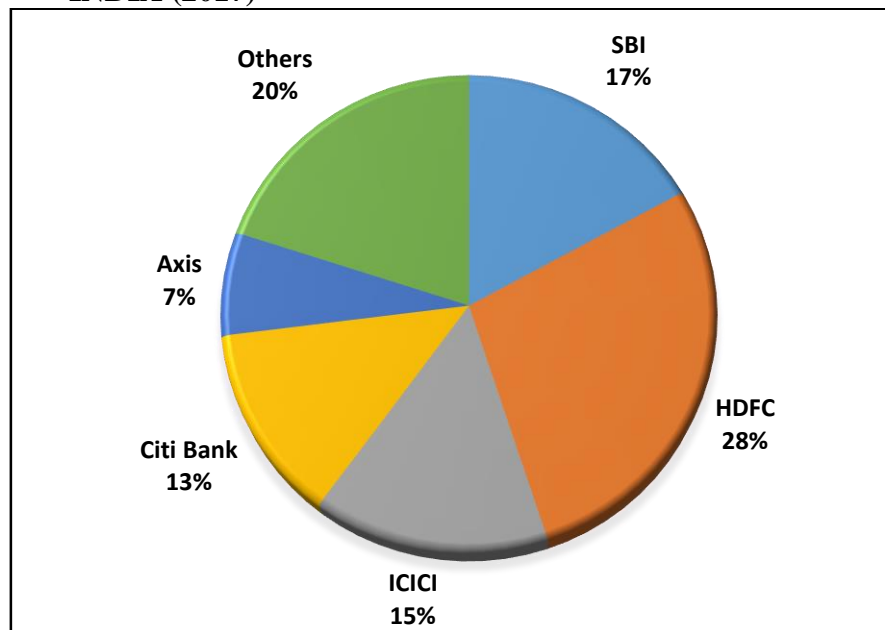
Source: Compiled from RBI bulletins

Private sector banks has 57% share in the Indian credit card market followed by the foreign banks and the public sector banks share is the lowest with 18%.

³² Sutherland Global Services, www.sutherlandinsights.com/indian-credit-card-market-overview

³³ <http://www.deal4loans.com/loans/credit-card>

Figure 2.4: MARKET SHARE OF BANKS IN CREDIT CARD INDUSTRY IN INDIA (2017)



Source: Compiled from RBI bulletins

The figure 2.4 shows that the largest share is of HDFC bank in Credit Card market in India followed by SBI with 17% and ICICI bank with 15%. The private sector banks has a major share.

Increase in pay scale as per global standards, nuclear and double income families increases the spending power and increasing demand for consumer goods are factors which will further provide impetus to the growth of credit card industry. With growth of entrepreneurial and self-employed population in India, opportunities of wealth creation improves as people's incomes increase. This also adds to the growth of credit card industry.

2.1.5. Effects of Credit Card Use

2.1.5.1 Advantages:

For the cardholders:

- The main advantage of using credit card is the convenience it provides for transaction purpose. It allows purchasing goods and services without carrying liquid cash. This means it provides safety for the user. It functions as a “buy now and pay later” system.
- Credit card has an advantage over other means of payment like bank cheques mainly because of the following three reasons. Firstly, for using a cheque one

should have enough balance in the account. Secondly, one has to always carry the chequebook and after each purchase write the cheque details and sign. Thirdly, use of cheques involves the cost of clearing the cheques.

- Credit card use increases the pool of liquidity due the availability of free credit for a period of 40 – 50 days and facility of withdrawing cash of about 40 – 50% of the credit limit. When transaction takes place using credit card, it gives the cardholder an interest free credit period for a limited number of days. This enhances the liquidity position of the users. Similarly, cash withdrawals increase the liquidity for the cardholders as it is over and above the income they earn.
- Credit card consolidates bills into one single payment, which is again a convenient way of making payment. Credit card use keeps a record of purchases made.
- Expansion of Internet has resulted in growth of e-commerce. Transactions are done through the internet by credit cards. This does not require physical exchange of money but only the credit card number is required.
- Additional services are offered by the credit card issuers, which other forms of money do not offer. Cardholders get benefits like discounts at shops, restaurants and airline or railway tickets. Most of the credit cards also offer various insurance cover like personal accident cover, baggage cover etc.

For the issuers:

When the cardholders roll-over the balance or withdraw cash, it becomes advantageous for banks as they earn profits due to the interest paid on the amount. As the interest on the rolled over balance is usually high (2.45% to 2.95% per month) and the interest on the cash withdrawals is about 2.5 to 3% and a transaction charge of about 3% of the transaction amount is also charged, the issuing banks make a huge profit. In the U.S., credit card companies' profit nearly tripled during 1995–99 from \$7.3 billion to \$20 billion.³⁴

2.1.5.2. Disadvantages

³⁴ “The Credit Card Trap: How to Spot It, How to Avoid It”, www.pirg.org/consmer/banks

- Cost of goods purchased through credit cards is bound to be more than purchases made by giving liquid cash. This is because credit card pricing includes various other elements like annual fees, APR, fees for cash advances, late payment charges, commission to some of the merchant establishments etc. In the U.S., the fee income of the credit card companies' total income increased from \$8.3 billion to \$21.4 billion during 1995-99.
- Use of credit cards leads to increasing consumerism and overspending. Credit cards allow one to spend even when the incomes are low. It enables consumers to buy without having the necessary resources at that particular point of time. Instruments of debt encourage consumerism. People appear to spend more with credit cards. Based on the assumption that because credit card stimuli are so closely associated with spending, they may activate a sequence of behaviours that increases the motivation to spend, the amount spent, and the probability of spending, and decreases the decision time to spend³⁵.
- Increasing use of credit card and its rising cost increases personal debt and reduces savings of people. Earlier thrift was considered a virtue and debt was avoided but now we find debt is viewed as status symbol (Ritzer George, 1995). Credit card has become a measure of how much we can own (Lee Suping, 2002). In the U.S., this credit grew from \$2 million in 1968 to \$626 billion in June 2000 (Durkin, 2000). In 2000, the average credit card debt for an American who carries a balance reached \$5610.³⁶ According to the Federal Reserve Board, from 1996 to 2000, the revolving debt incurred due to credit card use accounted for about 20% of the total household debt. To control debt, consumers file for bankruptcy. According to a report by FRB in 1999, personal savings slowly dropped from \$210 billion in 1993 to –35 billion (debt) in early 1999 and over one million bankruptcies were filed in 1996. According to the Nilson Report credit card debt in U.S. was \$1 trillion at year-end 2016. In case of India as per recent RBI data, credit card outstanding amounted to Rs.42,100 crores at the end of May 2016 as against Rs.27,000 crores during the 2008 crisis period. The situation is all the more grim because the annual interest on credit card

³⁵ Richard A. Feinberg, (1986), "Credit Cards as Spending Facilitating Stimuli: A Conditioning Interpretation", *Journal of Consumer Research*, Vol. 13, December 1986, pp. 348-356

³⁶ "The Credit card Trap : How to Spot It, How to Avoid It", retrieved from <http://www.pirg.org>

outstanding ranges between 36 and 48 per cent³⁷. This adversely would affect the savings.

- A new wave of crimes through hacking and fraud can be found due to credit cards. There has been increasing cases of credit cards being stolen or duplicated or the signatures being forged.
- Credit card companies have a lot of computerized personal information, which is required for approving transactions. This leads to loss of privacy of the users. Personal information like the user's PIN number, income and other details are available to the companies, which becomes easy for the hackers to obtain. The workers at call centres can access all information about a consumer. The State Bank of India Cards and Payment Services Pvt. Limited has reported five instances of fraud totalling Rs.9.36 lakh and Andhra Bank one incident involving Rs.19.50 lakh during the calendar year 2004 and till the end of November 2005 (The Week, 2006).
- The number of students using credit cards is already very high in the west. College student market has been a wild success for the credit card companies.³⁸ These companies attract students by offering free gifts and some also offer money to campus groups based on the number of application that are filled out. These marketing practices encourage the students to apply for credit cards. The State PIRGS' National Credit Card Survey, 2000 states that 50% of student cardholders pay the balance in full, 36% sometimes and 14% never. Various studies have shown that the young adults lack the knowledge required for successfully managing their money. A 2000 survey by Nellie Mae, the student loan agency, found that three out of five college students carry at least one credit card. The average balance of undergraduate credit card users was \$2748.³⁹ According to a survey by another student loan provider Sallie Mae still, students do manage to rack up credit card debt. The average balance among college students in 2013 was \$499 and the median was \$136⁴⁰. Before starting a career, these young adults are already into debt trap with little or no income to repay.

2.1.5.3. Impact On The Economy

³⁷ Sunil Dhawan, (2016), "Credit card dues at an all-time high! Think before you swipe again", retrieved from <http://www.economictimes.com>, Jul 28, 2016.

³⁸ "The Credit Card Trap: How to Spot It, How to Avoid IT", retrieved from <http://www.pirg.org>

³⁹ "Credit Card Usage Continues Among College Students." retrieved from <http://www.nelliemae.com>

⁴⁰ "How America Pays for College", retrieved from <http://www.salliemae.newshq.businesswire.com>

Consumption: In Keynesian analysis, the major determinant of consumption is the level of disposable income with the households. A schedule of propensity to consume shows the proportion of the aggregate income that will be spent on consumption at various levels of incomes. With credit card use consumption is not dependent on income alone but on credit, which the cardholder is able to get from the issuing bank or financial institutions. The credit limit, which a cardholder gets depend on his annual income. The number of transactions or the consumption expenditure increases by more or less the amount equal to the credit limit given by the bank. If the individual's income increases further he/she can avail of higher credit limit, which means further increase in the purchasing capacity. Thus, we can say that consumption depends on income and the credit limit. If cr is the credit limit then, $C = f(y, cr)$.

Various studies have shown that consumption is affected by borrowings depending on the income. A model is created which summarizes the behaviour in an economy, where the lenders restrict the consumer's debt to a maximum of 30% of their permanent income (Carroll, 2001). This shifts the consumption function to the left by about 0.3 percentage points. When consumers are allowed to borrow (with credit cards), the whole consumption function shifts to the left.

Credit limit given by the banks depends on income, which shows the credit worthiness of the individual. According the study done by Slanghellini in 2003, when credit limit is increased for people aged between 45-54 with low level of income and who are homeowners and have one or two children, the probability of being active i.e. using credit cards with rollover increases from 0.34 to 0.55 percentage points. When the credit limit is increased because of the credit worthiness of the individual, transactions through the credit cards increase.

Increase in production and efficiency

Credit cards help the economy to operate at a higher and faster level than before, by increasing spending even when disposable income of people is less. This gives rise to business boom especially to merchants or traders in the beginning and later on to manufacturers. Due to internet and mobile phones, transactions have increased further.

This shows increased efficiency of the economy regarding the transactions carried out. Tourists also help in affecting buoyancy in the economy because while travelling they make various purchases as they can use credit cards, though no cash is paid (Weaver, 2005). According to Weaver production related activities in both tourism and credit card industries have become rationalized, systematized and coordinated. To satisfy the increasing demands of people, the producers have to increase the production. Thus, we can say that credit cards indirectly help to increase production in the economy.

Credit creation and increase in banks' profitability

Credit cards have become a great avenue for banks to lend to individuals though it is an unsecured loan. This resulted in the banks gaining by the annual fees, interest charged, service charges etc. The interest rate charged is important for those consumers who use credit card as an instrument for borrowing. Credit cards account for a substantial and growing share of consumer installment debt (Canner et al., 1992). This means banks are able to create more credit as use of credit cards increases. It does affect the credit creation in the economy.

Money Demand and Credit Card

There is an indirect relation between credit card ownership and money demand especially transaction deposits. According to Mandell (1972), the 1970 Survey of Consumer Finances (SCF) shows that families with credit cards had smaller demand deposit balances than those without credit cards. White (1976) found that credit cards significantly reduced household demand deposits. For every 10% increase in the probability of owning a card, checking balances are reduced by 9% and money fund balances by 11% (Duca et al. 1995). It is also possible that credit card ownership is directly related to transaction on demand deposits. This is because as credit cards substitute currency and cheques, there will be lesser withdrawals from demand deposits.

Economic Growth and Credit Card Penetration

As economic growth takes place in an economy, the use of credit card increases. With growth, disposable income increases and thereby credit card usage increases as well. Credit card penetration is positively correlated with economic growth. Developed

countries generally have more credit card use. The US had a credit card penetration of 2.53 cards per capita in 2005 whereas India had only 0.02 cards per capita⁴¹.

2.2 PARAMETERS AFFECTING CREDIT CARD USE

The credit card usage depends on various factors that are studied by various economists. Age, gender, family, size of family, earning members, education, occupation, income, attitude towards spending and saving, etc. are parameters that affect credit card use.

2.2.1 Demographic Characteristics

There are various literatures available in this area of study since the late 1960s.

Mathews and Slocum (1969)⁴², Slocum and Mathews (1970)⁴³, and Plummer (1971)⁴⁴ has analysed the consumer behaviour with respect to demographics, education, occupation, economic variables, card usage, attitudes/beliefs, repayment, etc. Relationships between an individual's social class and his consumption behaviour in using a commercial bank credit card are studied. They observed that cardholders with low income and socio-economic status used credit cards frequently for revolving credit than respondents who are rich and have high status. It was seen that there was an increase in card ownership from the early 1970s (17%) to the 1990s (over 80%), with a recent trend toward declining numbers in the 2000s.

Awh Waters (1974)⁴⁵ & Blackwell, Hawes and Talarzyk (1975)⁴⁶ studied consumer's attitude towards credit cards. The number of cards and credit card usage was studied. **Hirschman and Goldstucker (1978)⁴⁷**. The factors like social class, income and education were included.

⁴¹ Scott Schmith, (2008), "Credit Card Market: Economic Benefits and Industry Trends", Manufacturing and Services Competitiveness Report, US Department of Commerce, International Trade Administration, March 2008.

⁴² Mathews, L.H. & Slocum, Jr. J.W. (1969), Social Class and Commercial Bank Credit Card Usage, *Journal of Marketing*, 33(January), pp. 71-78.

⁴³ Slocum, J.W. & Mathews, L.H. (1970), Social Class and Indicators of Consumer Credit Behaviour, *Journal of Marketing*, 34(April), pp. 69-74.

⁴⁴ Plummer, J.T. (1971), Lifestyle Patterns and Commercial Bank Credit Card Usage, *Journal of Marketing*, 35(April), pp. 35-41.

⁴⁵ Awh, R.H. & Waters, D. (1974), A Discriminant Analysis of Economic, Demographic and Attitudinal Characteristics of Bank Charge-Card Holders – A Case Study. *The Journal of Finance*, 29(June), pp. 973-980.

⁴⁶ Blackwell, R.D., Hawes, D.K. & Talarzyk, W.W. (1975), Americans' Use of Credit Cards: A Nation-wide Study of Female and Male Attitudes. *Bulletin of Business Research*, 50(2), pp.5-8.

⁴⁷ Hirschman, E.C. & Goldstucker, J.L. (1978), Bank Credit Card Usage in Department Stores: An Empirical Investigation. *Journal of Retailing*, 54(summer), pp. 3-12.

Bowers and Crosby (1980)⁴⁸ did a study regarding the consumers' balance, repayment behaviour and income.

R. A. Feinberg (1986)⁴⁹ studied the credit card usage pattern. **Faber and O'Guinn (1988)⁵⁰**, **Handelsman and Munson (1989)⁵¹**, **D'Astous (1990)⁵²** have studied cardholders' behaviour with respect to compulsivity, ethnicity, usage. Four aspects of credit card usage and switching ethnicities were investigated: propensity to switch over from credit card to cash payment at various levels of monetary incentive, the effect of product price on propensity to switch, the frequency of credit card usage, and the preferred method of payment of credit card balances (part or full payment). Significant differences between the three ethnic groups studied (Anglo-American, Chinese-American and Hispanic-American) are found in these usage behaviours.

Age of cardholder is one of the determinant of credit card usage.

Choi and DeVaney (1995)⁵³ analysed the parameters like age, gender, occupation to find out the difference in the use of retail cards and bank cards in the USA. Older females who headed the household and who are in a blue collar occupation, use only retail cards. While the male heads of the households used bank cards only.

Danes & Hira (1990)⁵⁴ did a work on repayment behaviour, credit card knowledge, age, income and education.

Drentea (2000)⁵⁵ did a study on 1000 consumers on parameters like anxiety, balance, age, income and education. The study show that anxiety increases with the ratio of

⁴⁸ Bowers, J.S. & Crosby, K.R. (1980), Changes in the Credit Repayment Performance of Low Income consumers: An Exploratory study, *The Journal of Consumer Affairs*, 14(summer), pp.96-108.

⁴⁹ Feinberg, R.A. (1986), Credit Cards as Spending Facilitating Stimuli: A Conditioning Interpretation. *Journal of Consumer Research*, 13(December), pp. 348-56.

⁵⁰ Faber, R.J. & O'Guinn, T.C. (1988), Compulsive Consumption and Credit Abuse. *Journal of Consumer Policy*, 11, pp. 97-109.

⁵¹ Handelsman, M. & Munson, M.J. (1989), Switching Behaviours from Credit Card to Cash Payment among Ethnically Diverse Retail Customers. *International Journal of Retailing*, 4(1), pp. 31-44.

⁵² D'Astous, A. (1990), An Inquiry into the Compulsive Side of "Normal" Consumers. *Journal of Consumer Policy*, 13(1), pp. 15-31.

⁵³ Choi, H.N. & DeVaney, S. (1995), Differences in the Use of Bank and Retail Credit Cards in the USA, *Journal of Consumer Studies & Home Economics*, 19(4), pp.381-392

⁵⁴ Danes, S. M., & Hira, T. K. (1990). Knowledge, attitudes, and practices in the use of credit cards, *Home Economics Research Journal*, 18, pp. 223-235.

⁵⁵ Drentea P. (2000), "Age, Debt and Anxiety", *Journal of Health and Social Behaviour*, 41(December), pp. 437-450.

credit card debt to income, and with being in default; but credit card debt accounts for little of the age-anxiety association.

Sujit Chakravorti & Ted To (2001) analyses the costs and benefits of credit cards to consumers, merchants and issuer. There are around 30 to 40% of convenience users who pay their balances in full every month and the rest are card revolvers⁵⁶.

According to **Lee & Kwon (2002)**, consumers' usage of store cards varies according to function and is related to a number of variables, including the use of bank cards, credit history, and attitude towards credit; income, education, and ethnicity⁵⁷.

Spinella, Lester and Yang (2005)⁵⁸, **Yilmazer and DeVaney (2005)**⁵⁹, **Rutherford and DeVaney (2009)**⁶⁰ have worked on determinants like number, repayment, age, income, gender and beliefs. Credit card ownership was associated with age, sex, income, attitudes toward credit cards and money, and scores on a verbal measure of prefrontal cortical dysfunction, supporting a neuro-economic approach to economic decision-making.

Jiang Saihong (2007) examines various socio-economic variables and expectations in determining credit card use. It studies the card ownership, credit card borrowing and credit card debt⁶¹.

Wang & Xiao (2009) studied about number of cards used and it was reported that on an average people used 2 cards (the range was 1 to 18 cards). The study found that

⁵⁶ Sujit Chakravarti & Ted To (2001), "A Theory of Credit Cards", (mimeo), Federal Reserve Bank of Chicago, retrieved from www.philadelphiafed.org

⁵⁷ Lee J. & Kwon K. (2002), "Consumers' Use of Credit Cards: Store Credit Cards Usage as an Alternative Payment & Financing Medium", *The Journal of Consumer Affairs*, Vol. 36(2) Winter 2002, pp.239-262, retrieved from <https://onlinelibrary.wiley.com>

⁵⁸ Spinella M., Lester D. & Yang B. (2005), "Predicting Credit Card Behaviour: A Study in Neuroeconomics", *Perceptual and Motor Skills*, 100, pp. 777-778.

⁵⁹ Yilmazer T. & DeVaney S.A. (2005), "Household Debt over the Life Cycle", *Financial Services Review*, 14(winter), pp. 285-304.

⁶⁰ Rutherford L.G. & DeVaney S.A. (2009), "Utilizing the Theory of Planned Behaviour to Understand Convenience use of Credit Cards", *Financial Counselling and Planning*, 20(2), pp. 48-63.

⁶¹ Jiang Saihong, 2007, "An Investigation of Credit Card Holding, Borrowing and Payoff", Ph.D. thesis, The Ohio State University, 2007, ProQuest, AAT3260172

college students' buying patterns and social networks leads to credit card indebtedness⁶².

Dewri L. V (2016) finds that there is a significant relationship between income and use of credit limit; different age groups' usage pattern of credit card and repayment attitudes differ; profession and usage behaviour of credit card has a relationship⁶³.

Following are some of the studies analysing the students' usage of credit card.

Evans and Schmalensee (2000)⁶⁴; Manning (2000)⁶⁵ are of the view that Students overspend to finance their studies or lifestyle and they are increasingly defaulting on their credit cards. Manning's view is that debt leads not only to financial ruin but also to moral and social degradation, no one simply owes money--instead, everyone is "burdened," "oppressed" or "overwhelmed" by debt.

Norvilitis, Szablicki, & Wilson (2003) has done research work on credit card usage. Students reported an average credit-card debt of \$ 1,518, with over 75% of students holding at least one credit card. Students with credit cards from on-campus marketing drive had higher debt-to-income ratios than did those with credit cards from other sources⁶⁶.

Cunningham, 2004 study found that most of the students were very responsible with their credit cards, but there was a group of women in social science faculty who were having significant credit problems⁶⁷; **Mansfield & Pinto, (2007)** study reports that

57Wang J.J. & Xiao J.J. (2009), "Buying behavior, social support and credit card indebtedness of college students", retrieved from International IJC 33(1):2 - 10 · September 2008 DOI: 10.1111/j.1470-6431.2008.00719.x

⁶³ Dewri L. V., Islam M. R. & N. K. Saha (2016), "Behavioral Analysis of Credit Card Users in a Developing Country: A Case of Bangladesh", International Journal of Business and Management; Vol. 11, No. 4; 2016, retrieved from <http://www.ccsenet.org/journal/index.php/ijbm/article/view/56956/0>

⁶⁴ David Sparks Evans & Richard Schmalensee (2005), *Paying with Plastic: The Digital Revolution in Buying and Borrowing*, MIT Press, Cambridge, London.

⁶⁵ Manning D. Robert (2000), "Credit Card Nation", Basic Books a member of Perseus book group, 2000

⁶⁶ Norvilitis, Szablicki, & Wilson (2003), "Factors Influencing Levels of Credit-Card Debt in College Students", *Journal of Applied social Psychology*, retrieved from <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1559-1816.2003.tb01932.x>

⁶⁷ Cunningham J. (2004), "College Student Credit Card Usage and the Need for On-campus Financial Counselling and Planning Services", *Undergraduate Research Journal for the Human Sciences*, retrieved from <http://www.kon.org/urc/cunningham.html>

more students got cards through direct mail than other sources⁶⁸. **Hayhoe, Leach, Allen, and Edwards (2005)** reported that the majority of their sample got credit cards from parents⁶⁹.

Robb & Sharpe (2009). With technological advancement and expansion of the internet, the students become an appealing demographic group for credit card companies and financial institutions for a variety of reasons. The spread in card network resulted in individuals' consumption pattern to change. Scholars not only from economics and marketing but also psychology entered in credit card research⁷⁰.

McCall and Eckrich (2006) did a study on credit card use by college students based on gender and repayment⁷¹.

Palan et al. (2011) Misuse of credit cards by college students and irresponsible spending causes credit card debt. They have studied self-esteem, power-prestige, and risk-taking along-with compulsive buying behaviour of students⁷².

V. Sotiropoulos & A. D'Astous, (2013) says that personality variables were generally unrelated to level of debt, although they were related to attitudes toward money. The propensity of young individuals to overspend on their credit cards is examined as a function of attitude, self-efficacy, and social norms⁷³.

K. Siddiqui & M. Anjum (2013) Socio-economic background variables had no effect on the use of the credit card. According to the study, many of the respondents regarded themselves as utilitarian consumers. Although the credit card is usually regarded as elite

⁶⁸ Mansfield P.M. & Pinto M.B. (2007), "Marketing Credit Cards to College Students: Will Legislation protect them from Excessive Debt?" *The Marketing Management Journal*, 17(1), pp. 112-122.

⁶⁹ Hayhoe C.R., Leach L., Allen M.W., & Edwards R. (2005), "Credit Cards held by College Students", *Financial Counseling and Planning*, 16(1), pp. 1-10.

⁷⁰ Robb C.A. & Sharpe D.L. (2009), "Effect of Personal Financial Knowledge on College Students' Credit Card Behaviour", *Financial Counseling and Planning*, 20(1), pp. 25-43.

⁷¹ McCall M. and Eckrich D. (2006), "Gender and Credit Attitudes as Predictors of Credit Usage and Debt Repayment", *Psychological Reports*, 98, pp. 892-894.

⁷² Palan K.M., Marrow C., Trapp A. & Blackburn V. (2011), "Compulsive Buying Behavior in College Students: The Mediating Role of Credit Card Misuse", *Journal of Marketing Theory and Practice*, 19(1), pp. /81-96, retrieved from <https://dx.doi.org/10.2753/MTP1069-66790105>

⁷³ Veneta Sotiropoulos and Alain d'Astous (2013), "Attitudinal, Self-Efficacy, and Social Norms Determinants of Young Consumers' Propensity to Overspend on Credit Cards", *Journal of Consumer Policy*, vol. 36, issue 2, pp. 179-196.

lifestyle of some people, it is not an isolated category, while a significant segment having parsimonious behaviour⁷⁴.

The senior citizen market for credit card:

Mathur & Moschis (1994) are of the view that with increasing life expectancy, individuals' working age is on the rise. After retirement they prefer to continue working and remain productive⁷⁵.

Dellutri C. (2010) Increased health care costs, gambling, lower interest rates on investment, loss of jobs before planned retirement, and low retirement income are some of the reasons for using credit card by the senior citizens⁷⁶.

2.2.2 Income Groups

India's 'new middle class' as an agency of consumption shows changes in shopping habits due to online shopping and credit card payments.

Chang Beryl Y (2006) Increase in revolving credit increases the overall consumption of the lower two income groups and reduces the savings rate across all groups in US⁷⁷. The middle class that is more cosmopolitan in outlook and life style, global in aspirations, risk taking in jobs, and demanding for leisure activities are also watchful of traditional values.

Nita Mathur (2010) Consumption pattern has become an important indicator of social status. Consumer goods have become a crucial basis for redefining status distinctions in Indian middle class society⁷⁸.

C Meyer, N Birdsall (2012) Conspicuous consumption is on the rise. National Council of Applied Economic Research's (NCAER's) current definition identifies the middle

⁷⁴ Kamran Siddiqui & Mahwish Anjum 2013, "Perceptions towards Credit Card Usage: Factor Analytic Finding from Pakistan", *International Journal of Economics Business and Management Studies*, Vol. 2, No.3 September 2013.

⁷⁵ Mathur A. & Moschis G.P. (1994), "Use of Credit Cards by Older Americans", *The Journal of Services Marketing*, 8(1), pp. 27-36.

⁷⁶ Dellutri C. (2010), Credit Card Horrors for Senior Citizens, retrieved from <http://www.bankruptcylawnetwork.com/2010/12/29/credit-card-horrors-for-senior-citizens>

⁷⁷ Chang Beryl Y., "Access to consumer credit: Impact on low vs. high-income groups", Ph.D. Dissertation, Fordham University, 2006

⁷⁸ Nita Mathur (2010), "Shopping Malls, Credit Cards and Global Brands: *Consumer Culture and Lifestyle of India's New Middle Class*", retrieved from <https://doi.org/10.1177/026272801003000301>

class as comprising of two sub-groups: “seekers” with annual household income between Rs.200,000 and Rs.500,000, and “strivers” with annual household income between Rs.500,000 and Rs.1 million at 2001/2002 prices. Assuming an average household size of 5 people and converting into constant 2005 purchasing power parity (PPP) dollar, these numbers would be about \$8 to \$20 per capita per day for seekers, and \$20 to \$40 per capita per day for strivers⁷⁹.

Randy Hodson et al (2014) Cardholders in the middle income group suffer the greatest disruptions to mental health from carrying debt⁸⁰.

According to a survey conducted by TransUnion CIBIL, credit card use is on the rise among urban Indian consumers and found that 19% of urban consumers are likely to apply for a credit card in the future⁸¹.

A T Barker & A Sekerkaya (1993) Credit card usage appears to have attracted the better educated, middle-aged and married members of the upper-middle class⁸².

2.2.3. Credit Card Debt

Credit cards are also a major driver of consumer indebtedness. There are several studies regarding credit card debt.

Peter S. Yoo (1998) using 1995 Survey of Consumer Finances studied the growth of credit card debt. Between 1991 and 1997, consumer revolving credit outstanding more than doubled - from \$247 billion to \$514 billion⁸³.

Carow and Staten (1999) found consumers are more likely to use cash when they have less education, lower incomes, are middle-aged, and own fewer credit cards⁸⁴.

⁷⁹ C Meyer, N Birdsall, “New Estimates of Indian Middle Class”, Technical note, Center for Global Development, Nov. 2012

⁸⁰ Randy Hodson et al. “Credit Card Blues- The Middle Class and the Hidden Costs of Easy Credit”, *The Sociological Quarterly* 55 (2014) pp. 315–340

⁸¹ M Allirajan, “Credit card use on the rise among Indian consumers, survey finds”, *Times of India*, 26th Sept. 2017

⁸² A T Barker & A Sekerkaya (1993), “Globalization Of Credit Card Usage: The Case Of A Developing Economy”, *Yönetim, Yıl:4, Sayı:14, Ocak 1993*, pp. 39-44

⁸³ Peter S. Yoo (1998), “Still charging: the growth of credit card debt between 1992 and 1995” *Review*, 1998, issue Jan, pp. 19-27.

⁸⁴ Kenneth A. Carow and Michael E. Staten (1999), “Debit, credit, or cash: survey evidence on gasoline purchases”, *Journal of Economics and Business*, 1999, vol. 51, issue 5, pp. 409-421

The decade of 1990 to 2000 shows a more than three-fold increase in credit card debt (Federal Reserve Board, 2003). At year-end 1998, the Federal Reserve reported that U.S. consumers held approximately \$500 billion in credit card debt with average debt per household risen to over \$6,000.⁸⁵

Thomas A. Durkin (2000) analysed the data on credit card outstanding from 1970-2000⁸⁶. He found that the use of general-purpose credit cards with a revolving feature, as well as balances outstanding, have increased over the past three decades. The credit cards are becoming a substitute for the installment-purchase plans offered by retail stores. The substantial increase in consumer debt might cause serious financial problems for households and might encourage widespread over-indebtedness among households.

David L, et al. (2001) Consumers save aggressively for retirement, mainly in illiquid form, and borrow frequently in the credit card market⁸⁷.

Hamilton and Khan (2002) studied the card holder's behaviour with respect to cash advances, minimum payment due, interest paid, that will lead to card holder becoming a card revolver. **Tracey King and Ellynne Bannon (2002)** Student loan borrowers were likely to carry credit card debt, with 48% of borrowers carrying an average credit card balance of \$3,176⁸⁸.

E. Baek, and G. Hong (2004) Life-cycle stages, willingness and ability to borrow, prudence, and the need to borrow were significant factors affecting installment debt and credit card debt⁸⁹.

Chang Beryl Y (2006) studied the effect of credit card use on savings, investment and consumption pattern across different income groups. Revolving credit decreases the

⁸⁵ David Laibson, Andrea Repetto, Jeremy Tobacman, A Debt Puzzle, Working Paper 7879, National Bureau of Economic Research, Cambridge, September, 2000. www.nber.org/papers/w7879

⁸⁶ Thomas A. Durkin (2000), "Credit Cards: Use and Consumer Attitudes, 1970-2000", *Federal Reserve Bulletin*, September, pp. 623-634.

⁸⁷ David Laibson, Andrea Repetto, Jeremy Tobacman (2001), "A Debt Puzzle"

⁸⁸ Tracey King and Ellynne Bannon, "The Burden of Borrowing", the State PIRGs Higher Education Project, March 2002

⁸⁹ E. Baek, and G. Hong, "Effects of Family Life-Cycle Stages on Consumer Debts", *Journal of Family and Economic Issues*, Vol. 25(3), Fall 2004

savings rate of majority of the income groups. Credit card debt affects the lower income groups adversely in case of consumption and homeownership⁹⁰.

Jiang, Saihong (2007) in the Ph.D. thesis has analysed the critical issues in credit card market one about the lifecycle borrowing and payoff profiles of credit card revolvers and secondly the cardholders' choices regarding holding, borrowing and payment on credit cards. As per the study younger Americans borrow heavily and repay at lower rates on credit cards than older ones. If this is not controlled, it would built-up substantial amount of credit card debt later⁹¹.

Thums, Newman and Xiao (2008) have studied anxiety, worry, number, balance, age are analysed in the study. There are differences in the determinants of being a revolver and the amount of the outstanding balance⁹².

According to Monthly Statistical Bulletin 2008, Monetary Authority of Singapore, in Singapore 13.3% of credit card payment is a roll-over payment⁹³.

Yun-Huan Lee & Ya-Li Huang (2011) Retail spending in Taiwan increased by nearly 20% resulting in debt problems⁹⁴.

Ahmad R. & Omar N.A. (2013) Consumers buying excessive and unnecessary products and those which are unaffordable for them makes them card revolvers and fall in credit card debt. For them using cash over credit card usage in paying for purchases is better to manage the credit card debt⁹⁵.

Omar N.A. et al (2013) Budget constraints, impulsive buying and materialism have a statistically significant influence on compulsive buying using credit cards and misuse

⁹⁰ Chang Beryl Y (2006), "Access to consumer credit: Impact on Low vs. High-income groups", Ph.D. Dissertation, Fordham University, retrieved from <http://proquest.umi.com>

⁹¹ Jiang Saihong (2007), "An Investigation of Credit Card holding, borrowing and payoff", Ph.D. Thesis, The Ohio State University.

⁹² Thums S.L., Newman B.M. & Xiao J.J. (2008), "Credit Card Debt Reduction and Developmental Stages of the Lifespan", *Journal of Personal Finance*, 6(2/3), pp. 86-107.

⁹³ Yap Chee Meng, "Card payments in Asia Pacific: The state of the nations", KPMG 2009, pg.16

⁹⁴ Yun-Huan Lee and Ya-Li Huang (2011), "Do you have credit cards? The expansion of the credit card market in Taiwan", *Applied Economics Letters*, vol. 18, retrieve from <http://www.informaworld.com>, pp. 1639-1644

⁹⁵ R Ahmad & N Omar (2013), "Credit Card Debt Management: A Profile study of Young professionals", *Asia-Pacific Management Accounting Journal*, Vol. 8 Issue 1

of credit card is influenced negatively by self-esteem and positively by compulsive buying⁹⁶.

Scott L. Fulford and Scott Schuh (2015) Credit card debt increased at nearly 400 percent early in the life cycle (20 to 30 years of age) and it is only after age 50 that average credit card debt starts to decline in US⁹⁷.

Changzheng Hea et al. (2016) Age, housing condition, industry, and average cash advance amount per time, etc. are significant related to the outstanding credit card balance⁹⁸.

As of the end of the second quarter of 2015, there were some \$703 billion in credit card loans outstanding in US⁹⁹. Total U.S. outstanding revolving debt, which is chiefly made up of credit card balances, was \$953.3 billion as of May 2016¹⁰⁰.

A new study on consumer behaviour in UAE found that the majority (70 per cent) of credit cardholders now ensure they pay off any outstanding balance in full every month to avoid going into the red and racking up interest charges¹⁰¹. In 2013, 42% of residents were making only the minimum payment each month, and the average household borrowing stood at \$95,000 (Dh348,000).

⁹⁶ Omar N.A., Rahim R.A., Che Wel C. A., Alam S.S. (2013), "Compulsive buying and credit card misuse among credit card holders: The roles of self-esteem, materialism, impulsive buying and budget constraint", retrieved from https://www.researchgate.net/publication/265905990_Compulsive_buying_and_credit_card_misuse_among_credit_card_holders_The_roles_of_self-esteem_materialism_impulsive_buying_and_budget_constraint

⁹⁷ Scott L. Fulford and Scott Schuh, "Consumer Revolving Credit and Debt over the Life Cycle and Business Cycle", Working papers, Federal Reserve Bank of Boston, October 2015.

⁹⁸ Changzheng Hea, Bing Zhua, Mingzhu Zhanga, Xiaoli Heb, "The key factors of outstanding credit balances among revolvers: a case study of a bank in China", *Procedia Computer Science*, 91, 2016, pp. 341 – 350

⁹⁹ New York Federal Reserve Bank, Quarterly Report on Household Debt and Credit (Aug. 2015), retrieved from https://www.newyorkfed.org/medialibrary/interactives/householdcredit/data/pdf/HHDC_2015Q2.pdf.

¹⁰⁰ Jamie G. and Tamara E. H.(2017), "Credit Card Debt Statistics", retrieved from <https://www.creditcards.com/credit-card-news/credit-card-debt-statistics-1276.php>

¹⁰¹ Cleofe Maceda, (2017), "UAE residents now avoid this big credit card mistake", *Gulf News – Money*, 5th October 2017. Retrieved from <https://gulfnews.com/business/money/uae-residents-now-avoid-this-big-credit-card-mistake-says-study-1.2100849>

2.3 DEMONETIZATION IN INDIA

With the aim of controlling black money, fake currency circulation and terror financing, government of India took the bold step of demonetization of Rs.1,000/- and Rs.500/- on 8th November 2016. The term ‘demonetization’ is also known as ‘note ban’ or ‘notebandi’ in common usage. Demonetization of 2016 was not the first one in India’s history. In 1946, and then in 1978 there was demonetization of high denomination currency of Rs.500/-, Rs.1,000/- Rs.5,000/- and Rs.10,000/-.

But the scale of demonetization was a bigger one in 2016. Various scholars have different views regarding the effect of demonetization on the economy. India is considered traditionally as a cash intensive economy. This means currency squeeze due to demonetisation will have adverse impact on economic activity especially the common man’s transaction needs get affected.

Banerjee Subashis (2016) In India nearly 68% of transactions are done using cash. Demonetization would result in reducing liquidity and hence the purchasing power. This would decrease the transaction, badly affecting the retail sector¹⁰².

Chakravorti Bhaskar (2016) Demonetization is necessary to get a cash-intensive society to change onto modern systems of digital payments. If the country’s payments are digitalized, there would be great benefits. Mainly for the country’s central bank i.e. RBI as the cost of handling cash would drastically reduce. But it would equally affect the ordinary common man with no bank accounts adversely who had to stand in long line to get cash. The Pradhan Mantri Jan Dhan Yojana (PMJDY) has been taken up to remove this obstacle. According to Google - **Boston Consulting Group**, study, Indian digital payments industry will grow to \$500 billion by 2020, contributing to 15% of GDP¹⁰³.

Unnikrishnan Dinesh (2017) Prime Minister Narendra Modi, in the program *Mann ki Baat*, changed his narrative of curbing corruption, black money and terror financing to

¹⁰² Banerjee Subashis (2016) <https://thewire.in/business/no-off-switch-will-allow-india-magically-migrate-cashless-economy>

¹⁰³ Available at <https://www.bcg.com/en-in/d/press/25July2016-digital-payments-2020-making-500-billion-ecosystem-in-india-39417>

becoming cash-less society by going in for demonetization. To start with there would be less cash economy that would transit to cash-less economy.

According to **Thomas Hugh (2013)**, local circumstances dictate both the path of the journey and the destination towards becoming cashless. Even though there is a traditional path, it is seen that government policies and technological innovations can change the way economy progress towards going cashless¹⁰⁴.

According to a study by Visa, the cost of cash places a huge burden on the Indian economy equivalent to 1.7% of GDP. This is due large volumes of cash flow in the economy. In 2015 in India the number of digital transactions per head was only 10, compared to 163 in Brazil, 420 in South Korea, and 429 in Sweden¹⁰⁵.

Reddy C.R. (2017) Announcement of demonetization invalidated Rs.14.18 trillion of currency i.e. 86% of the Rs.16.41 trillion of currency in circulation. The cash shortage prompted the government to accelerate digitalization of payments. The cash to GDP ratio is high in India. It was 12.25% in 2015¹⁰⁶. This means withdrawal of 86% of the currency in circulation will have a great effect. Use of digital means of payment is encouraged henceforth. Plastic money that is the pre-paid, debit and credit cards became the need of the hour.

After demonetization use of card payment increased. The volume of credit card increased from 615.1million in 2014-15 to 785.7 million in 2015-16 and value of transaction was ₹1.8 trillion increased to ₹2.4 trillion during the same period¹⁰⁷. These figures increased to 1085 million transaction valued at around ₹3.2 trillion in 2016-

¹⁰⁴ Hugh Thomas, (2013), “Measuring Progress toward a cashless society”, available at <https://www.mastercardadvisors.com/content/dam/advisors/en-us/documents/MasterCardAdvisors-CashlessSociety.pdf>

¹⁰⁵ Available at <https://www.visa.co.in/about-visa/newsroom/press-releases/accelerating-growth-of-digital-payments-to-save-indian-economy-inr-70000-crores-usd-10point4-billion-over-next-five-years-visa-study.html>

¹⁰⁶ BIS, ‘Statistics on Payment, Clearing and Settlement Systems, retrieved from <https://www.bis.org/cpmi/publ/d155.htm>

¹⁰⁷ RBI, Annual Report 2015-16, retrieved from www.rbi.org.in/SCRIPTS/AnnualReportPublications.aspx?Id=1182

17¹⁰⁸. There was nearly 39% increase in the outstanding balance of credit cards in India during 2016-17¹⁰⁹.

Due to withdrawal of legal tender in large amount and the scarcity of new currency created a situation in the economy in which using cards became a necessity especially for all those who would feel comfortable using the plastic money. Every individual the salaried, the self-employed; all the sectors of the economy got affected due demonetization. The new modes of transactions and payments needed to be used. Hence it was seen a surge in the use of electronic payments.

Various studies on credit card use is done by in different parts of the world. Some countries have been in the credit card market since many decades or since its introduction. Studies show that use of credit card is affected by the socio-economic background of the card holder. Monthly credit card transaction depends on factors like income and credit limit, the impulsive buying behaviour, attitude towards credit and many others like wider market, online market etc.

¹⁰⁸ RBI Bulletin, May 2017, pg. 79

¹⁰⁹ “Credit card usage up, outstanding payments zoom 39% a year after Demonetization”, Business Today, Online, 7th December 2017.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Research Strategy.....	51
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RESEARCH METHODOLOGY

This chapter is about the research design of the thesis. Research strategy, hypothesis, method, process, sampling plan, data collection method and research limitations are outlined.

3.1 RESEARCH STRATEGY

Various studies on credit card usage has been done across the world. The demographic, economic, psychological characteristics of the cardholders are studied. This research work is to know who all are using the credit card and whether it affects the spending and saving behaviour of the cardholders. This work is a comparative study of credit card usage pattern of people working in different sectors in the city of Pune. To know the difference, if any, in credit card use by the employees working in government including semi-government and private organizations, and those who are self-employed.

3.2 HYPOTHESES

H1: The socio-economic parameters of the cardholders like age, gender, educational qualification, marital status, family size, earning members, monthly income affects the credit card use.

H2: The number of cardholders differ among the different groups of cardholders i.e. among government employees, private employees and the self-employed.

H3: There is difference in the monthly income, expenditure and nature of savings/investment between the cardholders and non-cardholders among the government, private and self- employed.

H4: The use of credit card affects monthly expenditure and savings of the cardholders.

H5: Demonetization in India has increased the monthly credit card transaction across all groups of cardholders.

3.3 RESEARCH DESIGN

3.3.1 Method

To achieve the objectives of the thesis, quantitative and descriptive research method is used. Information and data is collected from both primary and secondary sources. Questionnaire¹¹⁰, was used to collect primary data from employees working in various government/semi-government organizations like National Chemical Laboratory (NCL), Indian Institute of Tropical Meteorology (IITM), Savitribai Phule Pune University, IUCCA and colleges in Pune city. Primary data was also collected from people working in private firms and the self-employed in Pune city.

3.3.2 Sampling Plan

Random sampling method is used with close ended questionnaires which were provided to credit card users and non-credit card users to find out who all are using credit cards and their usage patterns and how many are not using and the reason for not using it. This approach was selected as respondents were easily accessible and available within the city.

Pune city population was 5.04million and the working population was 3.75 million according to 2011 census. At 95% confidence level, the sample size could be 400 according to Solvin's formula ($n = N/1 + Ne^2$). To analyze the data as per the objectives of the study, information from heterogeneous group of employees i.e. from government, private and the self-employed was required and hence around 700 questionnaires were distributed to individuals in Pune City. But only about 673 questionnaires were returned. From these 673, the actual sample is 668 as the rest of the questionnaires were either incomplete or the data given were not reliable.

To get the government and semi-government respondents' data some questionnaires were distributed in the respective organizations and some were collected personally. Private sector employees and self-employed people's data was randomly collected from various places in Pune like Pashan, Baner, Ganeshkhind Road, Aundh, Khadkhi, Sangvi, Deccan Gymkhana, F.C. Road, Viman Nagar, Kharadi, Vadgaonsheri, Yerwada, Hadpsar, Pune camp, Laxmi road Warje etc. Some respondents completed

¹¹⁰ Questionnaire can be referred to in Appendix 'B'.

the questionnaire immediately and returned it, but from some of the respondents questionnaires were collected after few days on their request. The data collection was done during the period of May 2016 to June 2017.

3.3.3 Data collection method

Both primary and secondary data is used for this research work.

Primary data is collected using a structured questionnaire with multiple choice and some dichotomous questions i.e. options having ‘yes’ or ‘no’. Only two questions, regarding monthly credit card transaction amount and the cardholders’ personal opinion about using credit card are open ended. The questionnaire is unbiased and specific in nature. It is divided into three sections.

The first section is regarding the respondent’s **personal information**. In this section personal information is asked by providing multiple choice from which they had to select one by putting a tick mark. These included the following:

1. Name and contact number – this was needed to get back to respondent in case any verification is required. But as people hesitate to reveal their personal details name and contact was optional. Hence, many respondents did fill the questionnaire completely but did not give their name and contact number.

2. Age – age group is divided into five categories: less than 30 years, 30 to 40 years, 40 to 50 years, 50 to 60 years and more than 60 years. With it is possible to know that in which age group people are using credit card, is the younger middle aged or is even the senior citizens after retirement also using the credit card.

3. Gender – In city like Pune where the number of males and females are almost similar as per 2011 census, it is important to find out whether both males and females are using credit card in similar manner.

4. Educational qualification – To know whether education affects the use of credit card this question on educational qualification is asked. The respondents had to select one among the following: Non-metric; SSC; HSC; Graduate – whether professional i.e. engineering, law, medicine etc. or non-professional i.e. arts, science, and commerce; Post-graduate - whether professional or non-professional.

5. Marital status - Is the single, or married who use credit card the question on marital status was asked, the respondents had to select one from: unmarried, married or divorce/separated.

6. If unmarried or divorce/separated, they had to answer if they **stay alone or with their family**. As it makes a difference in the monthly expenditure.

7. Type of family - whether they have nuclear family or joint family as this affects the expenditure and accordingly the use of credit cards.

8. Family size or number of family members – The size of the family is important as it is one of the factor that affects income and expenditure. Use of credit card may be advantageous for a bigger family at times of emergency. Hence the respondents had to select from the option of whether they had 2 member family, 3 to 4 members or 5 or more members in their family.

9. Number of earning members – To know whether single income or double income or more than 2 earning member families use credit card, the question on number of earning members in the family is asked.

Second section is to get the economic information of the respondent. This has questions related to the following:

1. **Occupation** – to know whether the salaried or the self-employed use credit card, the question on occupation is asked in which the respondent had to select from employed or self-employed.
2. If employed, **Type of employment** is asked i.e. Government or private. And the nature of employment i.e. permanent or temporary. This is to find out that whether both permanent and temporary employees are using credit card.
3. If **self-employed** then its type: business, medical practitioner, lawyer, consultants, chartered accountants and agents/brokers to know among the self-employed who mostly uses credit card and who are not using it.
4. **Monthly income** – It is asked to know the income group of the respondents that is categorized into five groups: monthly income less than Rs.10,000/-, income in the range of Rs.10,000/- to Rs.20,000/-, income between Rs.20,000/- to Rs.50,000/-, income in the range of Rs.50,000/- to Rs.1,00,000/- and monthly income more than Rs.1,00,000/-.

5. **Source of income** – Respondents could select more than one option for the source of income. This includes salary, profit, professional charges, commission, rent and others (a note is provided mentioning sources like interest/dividend, royalty, scholarship, fellowship, grant, pension etc.).
6. **Savings/investment** – Nature of savings and investments is asked to know whether savings is affected due to use of credit card. The various options given are: GPF/CPF/NPS¹¹¹, Bank Deposits/Bonds which earn some interest income to the depositors, Shares/Mutual Funds if held would give some returns though risk is involved, Real Estate and Gold/Silver.
7. **Those having investments in real estate** had to specify from the options: Self occupied house, House given on rent, house not occupied and plot of land.
8. **Monthly expenditure as the percentage of the monthly income (including EMIs)** is asked know if the cardholders expenditure is more than the non-cardholders’.

Third section has questions regarding credit card usage pattern. Only the credit cardholders had to complete this section. Those who are not credit cardholders had to only answer whether they ever used credit card or not, and if not the reasons for not using or dis-continuing. This section of the questionnaire has the questions to get information to know the actual number of credit cardholders and their usage pattern. This section includes following questions:

1. **Do you own a credit card:** It is a dichotomous question i.e. ‘yes’ or ‘no’.
If the answer is ‘no’ they had to further answer whether ‘never owned’ or ‘owned but discontinued’. This is asked to find out the number of cardholders who discontinued the use of credit card.
2. **If never owned a credit card:** the reasons for not having a credit card is asked. The respondents could select any number of the following options: never approached by anyone; not interested, consciously decided not to own credit card; and not affordable.

¹¹¹ General Provident Fund/Contributory Provident Fund/ National Pension Scheme

3. **If discontinued:** the reasons for discontinuing is asked. Respondents could select any number of options from the following: not useful, cannot afford, increase spending reduce savings and bad experience.

Those respondents using credit card had to answer further questions:

4. **How many credit cards do you own:** the options are 1 card, 2 to 3 cards, 4 to 5 cards and more than 5 cards? Those mentioning more than 5 cards have to specify the number of cards they are using.
5. **Do you have add-on cards:** a dichotomous question, whether 'yes' or 'no'.
6. **Duration of credit card use - how long you have been using the credit card:** the options given are: less than 1 year; two years; two to five years and more than 5 years.

In case using since less than a year, whether they started using before demonetization or after demonetization was asked. This question was added after demonetization in India on 8th November 2016, to know the effect of demonetization on payment methods especially the use of credit cards.

7. **Type of card:** Cardholders are to answer about the type of credit card they use i.e. silver, gold/executive, platinum, titanium, co-branded or international. This would tell about the credit limit they can get and accordingly their spending through credit cards.
8. **Credit card payment network:** Cardholders have to tell the card payment network of the cards they use: VISA, MasterCard, American Express and Discover. This question was asked to which card payment network is used more.
9. **Credit Limit of the credit card:** Cardholders had to select from the options: less than Rs.50,000/-; Rs.50,000 to Rs.1,00,000/-; Rs.1,00,000/- to Rs.5,00,000/- and more than Rs.5,00,000/-. Credit limit that depends on the income of the cardholders would tell that how much they can spend using their credit card. This question is also a cross check for the type of card that they use.
10. **Frequency of credit card use: How frequently the credit card is used in a month-** cardholders have to select from the options: occasionally; 1-2 times; 3-5 times; 6-10 times; 11-15 times; and more than 15 times. This is asked to know the relation between frequency of card use and the monthly credit card transaction.

11. **What percent of credit limit do you use:** the options given are – less than 10%; 10 to 25%; 25 to 50%; 50 to 75%; 75 to 100% and 100%? This is asked to know how much of the credit limit the cardholders use which would affect their monthly expenditure, monthly credit card transaction, their payment and hence savings.
12. **Reward points:** awareness about reward points is asked – a dichotomous question. Those who are aware of reward points they had to answer whether they accumulate reward points. This questions is asked to know if by accumulating reward points their monthly transaction is more than those who do not accumulate reward points.
13. **Credit card is used for:** whether for personal/family needs and/or also for business need.
14. **Purpose of credit card use:** The cardholders have to put a tick mark against the various purposes for which they used the credit card. The various types are: grocery, textile, restaurants/hotels, petrol/diesel, garage, medical facilities/chemists, phone bill, white goods/domestic appliances, gift shops/general stores, online shopping, railway/airline bookings, travel, jewellery, educational purpose, EMI, cash withdrawal.
15. **If credit card is used for cash withdrawal, how often you withdraw cash:** Using credit card for withdrawing cash is expensive as it is at an interest rate excluding the interest on the normal card transaction. Hence the cardholders answer by selecting any of the following options: frequently (at least once in a month); not-frequently (2 to 4 times in a year); and rarely (once in a year or less).
16. **Cash withdrawal as percentage of credit card transaction:** Those withdrawing cash using credit card has to answer about how much percent of their total monthly card transaction is the cash withdrawal. The options given are: less than 10%; 10 to 25%; 25 to 50%; and more than 50%. If the percentage of cash withdrawal is more it means they have to repay more as an interest is charged on the total monthly bill amount even if it is repaid within the monthly billing cycle i.e. within the free period.
17. **Monthly credit card transaction:** An open ended question regarding the average monthly card transaction is asked, in which the cardholder has to write down his average monthly credit card transactions including cash withdrawal.

The monthly card transaction is analyzed with monthly income and monthly expenditure of the cardholders. The relationship between duration and frequency of credit card use and monthly card transaction is analyzed.

18. To know the effect of demonetization, it was asked **whether their monthly card transaction increased after demonetization or not**. If it affected, **by how much it increased**, and the options given are: 25%, 50%, 75% and 100%.
19. **Monthly credit card bill payment:** The cardholders have to answer from the following options: In full; Part payment; and Roll-over (only minimum balance is paid). This is useful to find out about the credit card debt among the cardholders and analyze the relationship between income and credit card payment, gender and card payment, educational qualification and card payment, family size and card payment, monthly card transaction and payment of cardholders in different occupational group.
20. **In case full payment is not done, then those cardholders have to answer the following:**
 - a) Average interest paid per month: the options given are – less than Rs.1,000/- ; Rs.1,000/- to Rs.2,000/-; Rs.2,000/- to Rs.3,000/-; more than Rs.3,000/-
 - b) Within what period the payment is done: options given are – 2 to 3 months; 6 months to 1 year; one year and more

By knowing the average interest amount and the period of payment, it will be able to analyze the problem of credit card debt.

(Three questions 21, 22 & 23 are asked only for the temporarily employed)

21. Those who are temporarily employed, whether they were out of job any time since they started using credit card. It is a dichotomous question.
22. If the answer is ‘yes’, were they still using the credit card. A dichotomous question.
23. If they were using the credit card when they were not employed, how was the credit card bill payment done: options are – In full; Part payment; and Roll-over (only minimum balance is paid).

These questions are asked to the temporarily employed to find out whether they were still continuing to use credit card and how they were making their bill payment.

24. **CIBIL score:** Awareness about CIBIL score is asked. It is a dichotomous question. CIBIL score is important if anyone has to take a loan or a credit card.
25. **Advantages of credit card use:** Cardholders can select more than one option – Convenience (no need to carry cash); ‘Buy now pay later’ facility; Emergency use; Status symbol; any other.
26. **Disadvantages of using credit card:** Card users can select more than one option – Not accepted everywhere; Increases the cost of the product/service; Impulsive buying; Person may fall in debt trap.
27. **Awareness of cyber-crime through cards:** A dichotomous question.
If they are aware of cyber-crime, did they have any bad experience of cyber-crime: again a dichotomous question? This is to find out about the awareness about the cyber-crime due to the use of credit cards and if people had any experience.
28. **Credit card users’ opinion about the use of credit card increasing the expenses and adversely affecting their savings is asked** – a dichotomous question. If the answer to the question is ‘yes’, then they had to give answer about approximate percentage of their income they could have saved if credit card was not used: options given are – 10 to 20%; 20to 30%; 30 to 40%; 40 to 50%; more than 50%.
This is important to know if the use of credit card is increasing the spending and adversely affecting the savings.
29. A dichotomous question on need for **financial literacy regarding credit card use** is asked so that people realize the importance of proper use of credit card with all its advantages and disadvantages.
30. The last one is open ended question on **any comments** the cardholders would like to write about their experience of using credit card.

Secondary data is collected from books, journals, Ph.D. thesis, magazines, newspapers etc. from the Research Centre Library and Gokhale Institute of Politics and Economics’ Library, Jayakar Library, SPPU. Internet articles were also used for the study.

3.3.4 Pre-test (Pilot Survey)

A pre-test questionnaire was administered on around 20 sample respondents from different categories. This led to some changes in the questionnaire like in question for

source of income, in case of the self-employed, for business group, profit was added later-on.

3.4 DATA PROCESSING AND ANALYSIS

Computerized data processing including descriptive statistics is done using MS Excel. Further data processing was done by making use of simple and complex tabulations. Bar graphs and pie charts are used wherever required. For statistical analysis, various statistical functions of MS Excel is used and chi square test to test the hypotheses. **An alpha level of .05 is taken for all statistical tests.**

3.5 LIMITATIONS OF THE STUDY

The study was carried out under several constraints and limitations as follows:

- 1) This is a descriptive study and hence its limitations.
- 2) The study is primarily based on primary data collected by convenience random sampling, a non-probability sampling. Hence the limitations of the sampling method.
- 3) There are data inadequacies, as in some questions there were no responses given and in some cases the respondents have ticked on one of the multiple choices without giving proper thought, therefore it increased the possibility of error and bias.

CHAPTER 4

DATA ANALYSIS AND FINDINGS

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DATA ANALYSIS AND FINDINGS

This chapter is the analysis of secondary data and the statistical analysis of the primary data collected from 668 working population of Pune city. The respondents were selected using random sampling method. This chapter is divided into four sections:

First section is data analysis of the secondary data. It is divided into two sub-sections, first is for credit card use in the world and the second is for credit card use in India.

Second section is the findings of the primary data which is divided into two sub-section one on socio-economic profile of credit card users and non-users based on the first two sections of the questionnaire used for collecting data. It describes the comparison of card-holders and non-holders with respect to age, gender, education, family details, occupation, monthly income, savings/investments and monthly expenditure. The comparative result of socio-economic profile of credit card users from different groups i.e. government employees, private employees and the self-employed is also described. Second sub-section based on the third section of the questionnaire, is the findings about credit card usage pattern that includes number of credit cards, period, frequency and purpose of card use, credit card network, effect of demonetization, monthly card transactions, cash withdrawal using credit card, payment practices of the cardholders, monthly interest paid, CIBIL credit score, opinion about advantage and disadvantage of using credit card and effect on the credit cardholders' savings.

Third section is hypothesis testing. An alpha level of .05 is taken for all statistical tests.

Fourth section is the descriptive statistics.

4.1 SECONDARY DATA ANALYSIS

4.1.1 The Global Credit Card Use

In the west, credit card was introduced in the 50s whereas in India, the use of credit cards have made inroads in the urban economy only three decades ago. In the developed western countries like the U.S., the U.K., Germany, France etc. there is extensive use of credit card. Table 4.1 shows how the use of credit card is spread across the world. The data on global credit card use is based on various Visa International reports.

Table 4.1: CREDIT CARD PAYMENT TRANSACTION

	1st Quarter Ended 30th June from 2010 to 2015					(in Millions)	
	2010	2011	2012	2013	2014	2015	Mean
Asia Pacific	2586	2744	2988	3337	3832	4362	3308
Canada	423	477	513	566	623	657	543
CEMEA	395	530	745	1045	1398	1783	983
LAC	1524	1830	2066	2304	2405	2591	2120
US	9523	10415	10036	11207	12221	13314	11119
Mean	2890.2	3199.2	3269.6	3691.8	4095.8	22707	

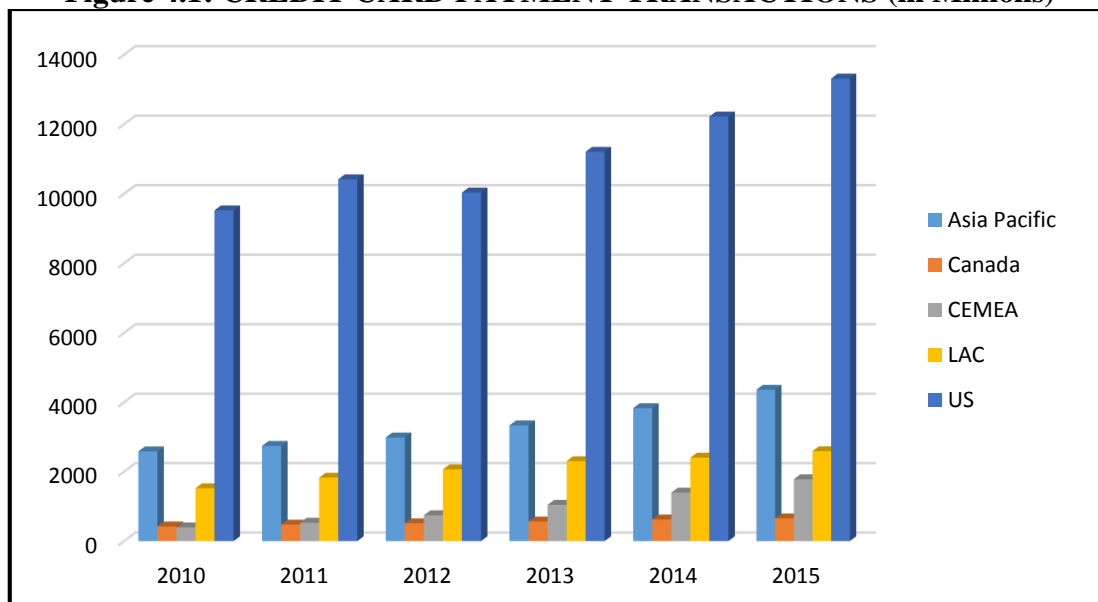
Source: Visa International Report, 2016

*Asia-Pacific – Australia, India, China etc.

**Central Europe Middle East Eastern Europe Africa - Croatia United Arab Emirates Russia Egypt Czech Republic Saudi Arabia Ukraine South Africa Hungary Lebanon Kazakhstan Poland Jordan Romania Kuwait Serbia Slovakia

***LAC – Latin American Countries like Brazil, Peru, Venezuela etc.

Table 4.1 reveals the fact that the average credit card payment transaction is highest in the USA and the least is in Canada. On the second position is the Asia Pacific. There is continuous increase in credit card payment transactions over the five year period from 2010 to 2015. Figure 4.1 is the graphical representation of the data in table 4.1.

Figure 4.1: CREDIT CARD PAYMENT TRANSACTIONS (in Millions)

Source: Based on various Visa international report (refer table 4.1)

Table 4.2: TOTAL VOLUME OF CREDIT CARD TRANSACTIONS

	1st Quarter Ended 30th June from 2010 to 2015					(in \$ Billions)	
	2010	2011	2012	2013	2014	2015	Mean
Asia Pacific	308	377	412	456	487	509	425
Canada	55	60	62	65	64	61	61
CEMEA	155	204	232	264	277	238	228
LAC	185	245	246	270	266	237	242
US	566	624	618	683	748	809	675
Mean	253.8	302	314	347.6	368.4	370.8	

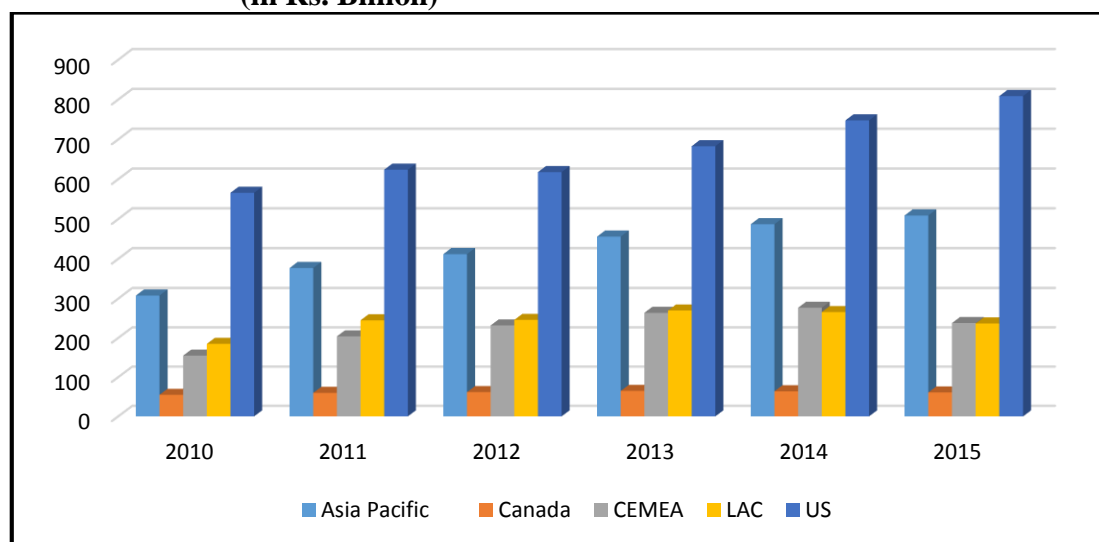
Source: Visa International Report, 2016

*Asia-Pacific – Australia, India, China etc.

**Central Europe Middle East Eastern Europe Africa - Croatia United Arab Emirates Russia Egypt Czech Republic Saudi Arabia Ukraine South Africa Hungary Lebanon Kazakhstan Poland Jordan Romania Kuwait Serbia Slovakia

***LAC – Latin American Countries like Brazil, Peru, Venezuela etc.

Table 4.2 shows that during the five year period, from 2010 to 2015 total volume of credit card transaction has increased. As the payment transaction is the highest in USA, the transaction volume is also highest in the USA. Figure 4.2 is the graphical representation of the table.

Figure 4.2: TOTAL VOLUME OF CREDIT CARD TRANSACTIONS (in Rs. Billion)

Source: Refer table 4.2

The trend across the world shows that most of the countries whether the developed or the developing economies, the use of credit card is on the rise. Only in Canada the volume of credit card transaction has not increased as compared to the other countries.

4.1.2 Credit Card Use in India

There were around 28 million credit cards issued, in India in 2017. It means less than 2% of country's population is using credit card. The table shows the trend in credit card industry in India over the last twelve years.

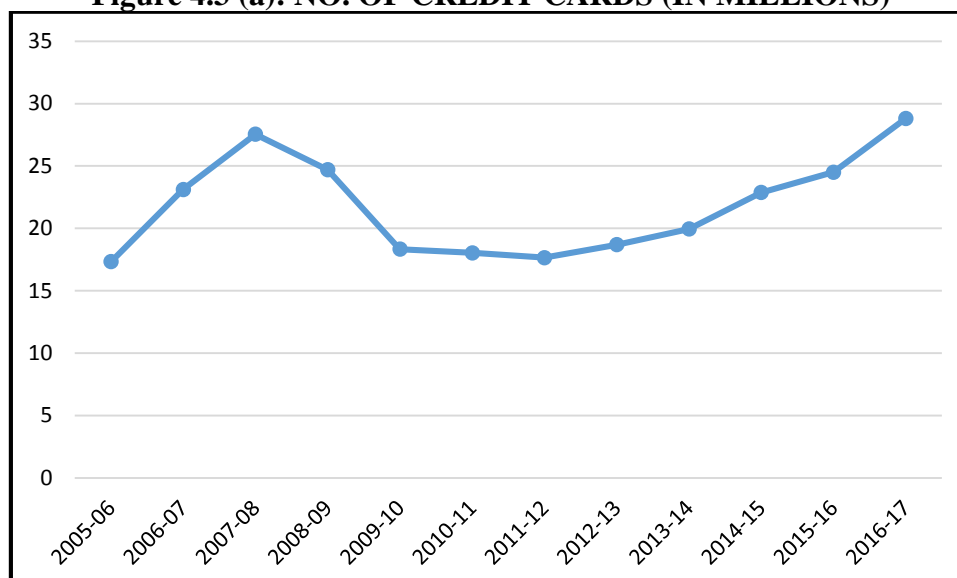
Table 4.3: Credit Card Data for 12 year period in India (2005-06 to 2016-17)

Year	No. of Credit Cards (in millions)	Volume of Transaction (in millions)	Value of Transaction (in Rs. Billion)
2005-06	17.33	156.1	338.9
2006-07	23.12	169.5	413.6
2007-08	27.55	228.2	579.6
2008-09	24.70	259.6	653.6
2009-10	18.33	234.2	618.2
2010-11	18.04	265.1	755.2
2011-12	17.65	320.0	966.1
2012-13	18.70	396.6	1229.5
2013-14	19.95	509.1	1539.9
2014-15	22.88	619.41	1922.63
2015-16	24.50	791.67	2437.02
2016-17	28.80	1093.51	3312.21
2017-18	-	1412.97	4626.33

Source: Compiled from various RBI bulletins and Reports

- **Number of Credit Cards:** The table 4.3 shows that the number of credit cards issued in India in the last 12 years has grown by 39.82% with some decline in the cards issued from 2009-10 to 2011-12 and then again there is an increase in credit cards issued. In the last one year there is an increase of number of credit cards by around 14%. This is shown in the figure 4.3 (a).
- **Volume of Credit Card Transaction:** The data in table 4.3 reveals that the volume of credit card transaction in the last 12 years has increased by 85.72% in spite of some decline in number of credit cards in some of the years.

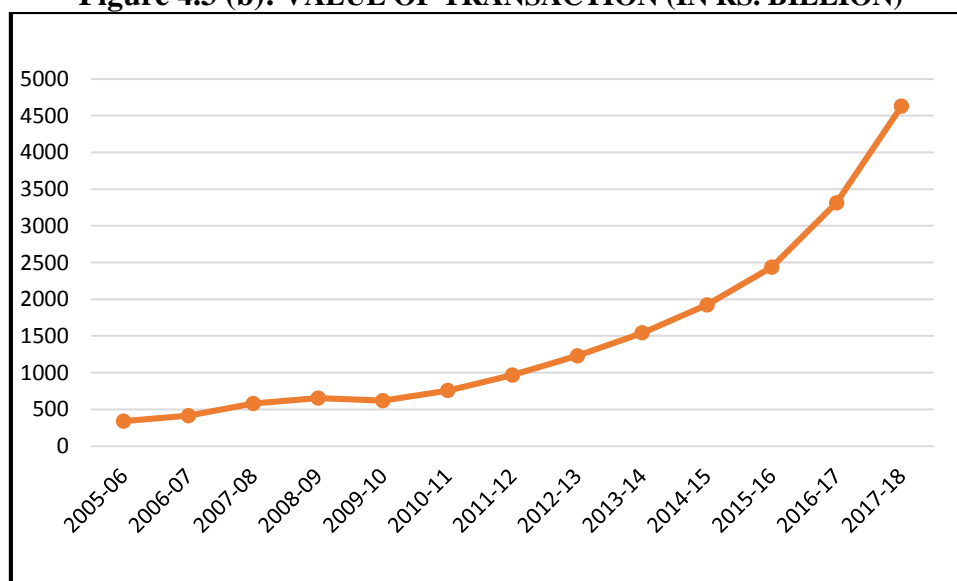
Figure 4.3 (a): NO. OF CREDIT CARDS (IN MILLIONS)



Source: Various RBI Bulletin (refer table 4.3)

- **Value of Credit Card Transaction:** The value of transaction shows an increase of 92.67% since 2005-06 to 2017-18 (See figure 4.3 (b)).

Figure 4.3 (b): VALUE OF TRANSACTION (IN RS. BILLION)



Source: Various RBI Bulletin (refer table 4.3)

Credit card transactions are done either through ATMs or POS (Point of Sale). Over the years it is found that the volume of transactions has been increasing both through the ATMs and POS (table 4.4(a)).

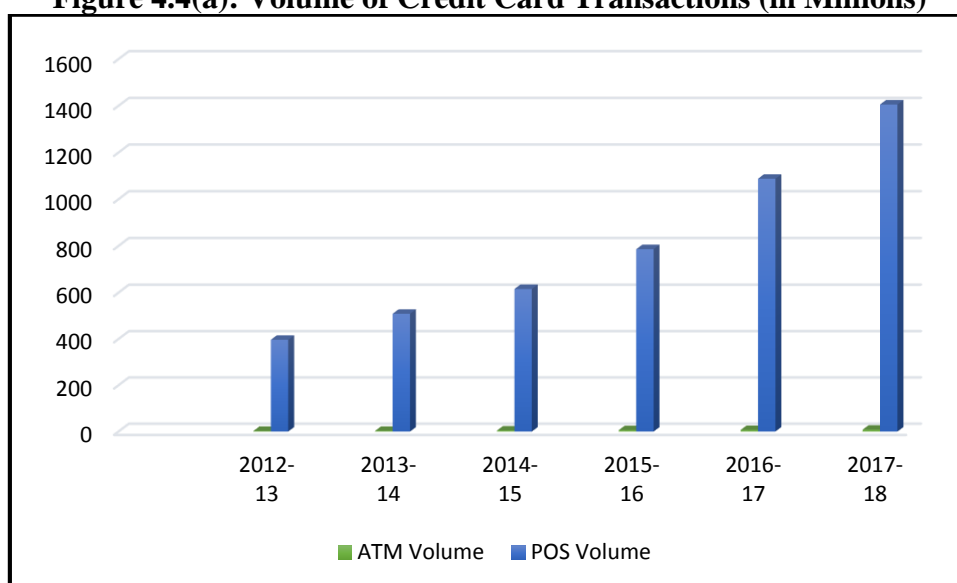
**Table 4.4(a): VOLUME OF CREDIT CARD TRANSACTIONS
AT ATM AND POS (in Million)**

Year	ATM	POS
2012-13	2.52	396.61
2013-14	2.96	509.08
2014-15	4.29	615.12
2015-16	6	785.67
2016-17	6.37	1087.31
2017-18	7.81	1405.16

Source: Various RBI Bulletin

There is 67.73% increase in credit card transaction volume at ATMs from 2012-13 to 2017-18. During the same period there is 71.77% increase in credit card transaction volume at POS (figure 4.4 (a)).

Figure 4.4(a): Volume of Credit Card Transactions (in Millions)



Source: Refer table 4.4(a)

Table 4.4(b) shows the changes in the value of credit card transactions at ATMs and POS from 2012-13 to 2017-18. With increasing use of credit cards the value of credit card transactions has on the rise.

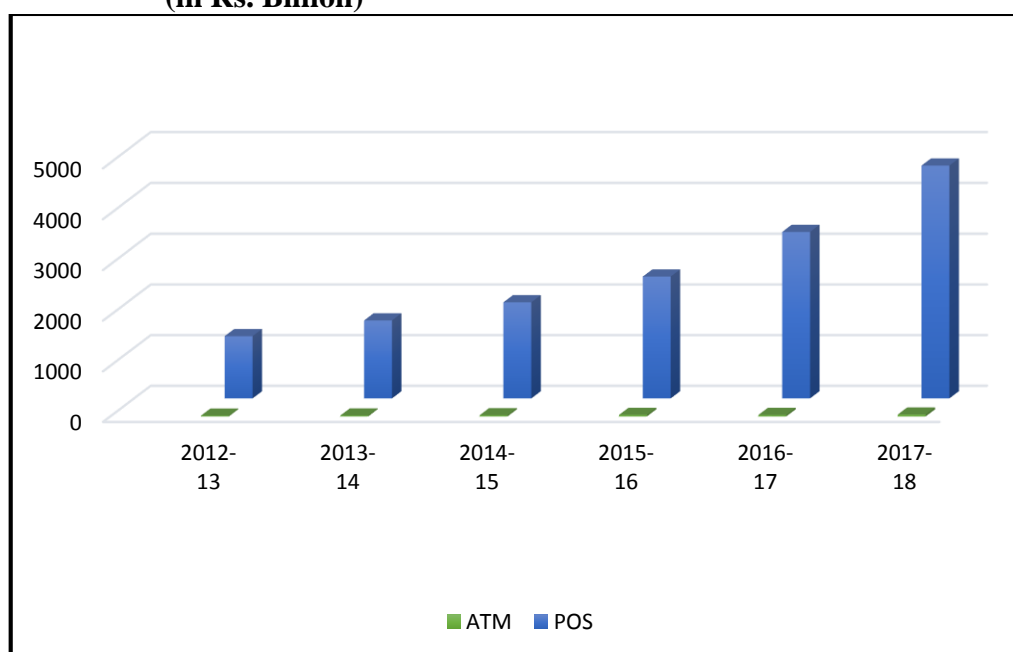
**Table 4.4(b): VALUE OF CREDIT CARD TRANSACTIONS
AT ATMs and POS (in Rs. Billion)**

Year	ATM	POS
2012-13	14.42	1229.51
2013-14	16.87	1539.85
2014-15	23.47	1899.16
2015-16	30.41	2406.62
2016-17	28.39	3283.82
2017-18	36.68	4589.65

Source: Various RBI Bulletin

There is an increase of 60.68% of ATM transaction value from 2012-13 to 2017-18 and in the same period the POS transaction value increased by 73.21%. It can be seen from the table 4.5 that in the year 2016-17 though ATM transaction declined from the previous year, the POS transaction value still increased. Figure 4.4(b) is the graphical representation of table 4.4(b).

**Figure 4.4(b): VALUE OF CREDIT CARD TRANSACTION AT ATMs and POS
(in Rs. Billion)**



Source: Refer table 4.4(b)

After demonetization in 2016, the use of credit card has increased and so is the transaction volume and value both at ATMs and at POS. Use of cards became more convenient for making payments.

4.2 PRIMARY DATA ANALYSIS

(Data from Respondents in Pune City)

4.2.1 Socio-Economic Profile of Respondents

4.2.1.1 Number of credit card users and non-users

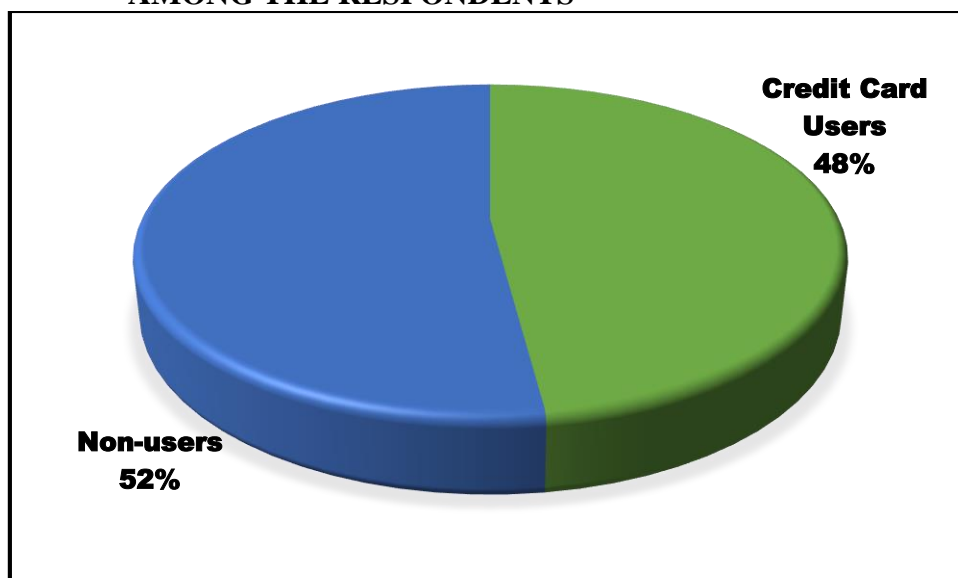
Out of the total sample population of 668, 320(48%) are credit card users and the rest 348(52%) are not using credit cards (Table 4.5). The pie chart in figure 4.5 shows the percentage of card users and those not using credit card.

Table 4.5: FREQUENCY/PERCENTAGE OF CREDIT CARD USERS AND NON-USERS AMONG THE RESPONDENTS

Respondents	Frequency	Percent
Credit Card Users	320	48
Non-users	348	52
Total	668	100

Source: Primary Data

Figure 4.5: PERCENTAGE OF CREDIT CARD USERS AND NON-USERS AMONG THE RESPONDENTS



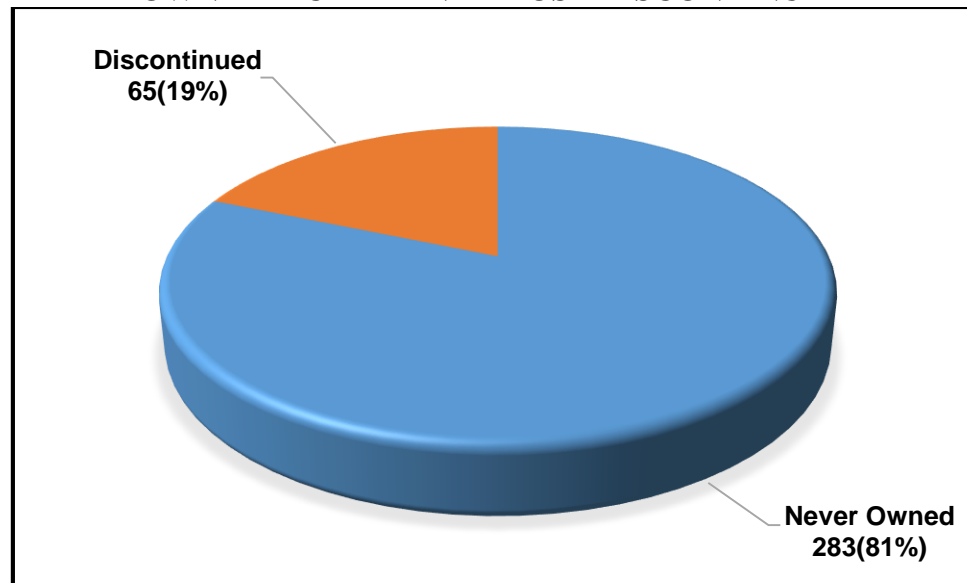
Source: Primary data (refer table 4.5)

4.2.1.2 Number of respondents never owned credit card and those discontinued using the card

Among those not using credit card, about 283 (81%) respondents never owned a credit card and 65 (19%) respondents had owned a credit card but discontinued using it. Figure

4.6 shows the percentage of respondents who never used a credit card and those who discontinued.

Figure 4.6: PERCENTAGE OF RESPONDENTS WHO NEVER OWNED A CARD AND THOSE DISCONTINUED



Source: Primary data

4.2.1.2.1 Reasons for never using credit card and discontinuing the credit card use

Reasons for the 283 respondents who are never owned a credit card and the 65 who owned credit card but discontinued it are given in table 4.6. The respondents could choose more than one reason given.

Table 4.6: FREQUENCY SHOWING REASONS FOR NEVER OWNING AND DISCONTINUING THE USE OF CREDIT CARD

Credit Card Never Owned			Owned but Discontinued			
Never approached by anyone	Not interested	Not affordable	Not useful	Increase spending	Reduce savings	Bad experience
52	217	17	20	30	13	20

Source: Primary Data

The table 4.6 shows that about 76% of those who never owned a credit card are not interested in using a credit card i.e. they have consciously decided not to use a credit card and 6% finds it not affordable. But 18% said they were never approached by anyone.

Among those who discontinued using the credit card, about 30 respondents felt that it increased their spending and 13 of them said it reduced savings. 20 respondents did not find the card useful. But 20 respondents had bad experience of using the card. Bad

experience included, as per the respondents, the bill not received in time, harassment by the recovery agents, high interest, falling in debt trap and the card issuers not ready to listen to their grievances.

4.2.1.3 Age

4.2.1.3.1 Age-wise Frequency Distribution of Respondents

The age group of credit card users is important as this will show whether they have just begun their career or are they in the middle age group or are they towards retirement. Table 4.7 shows the age group of respondents.

Table 4.7: FREQUENCY OF RESPONDENTS' AGE GROUP

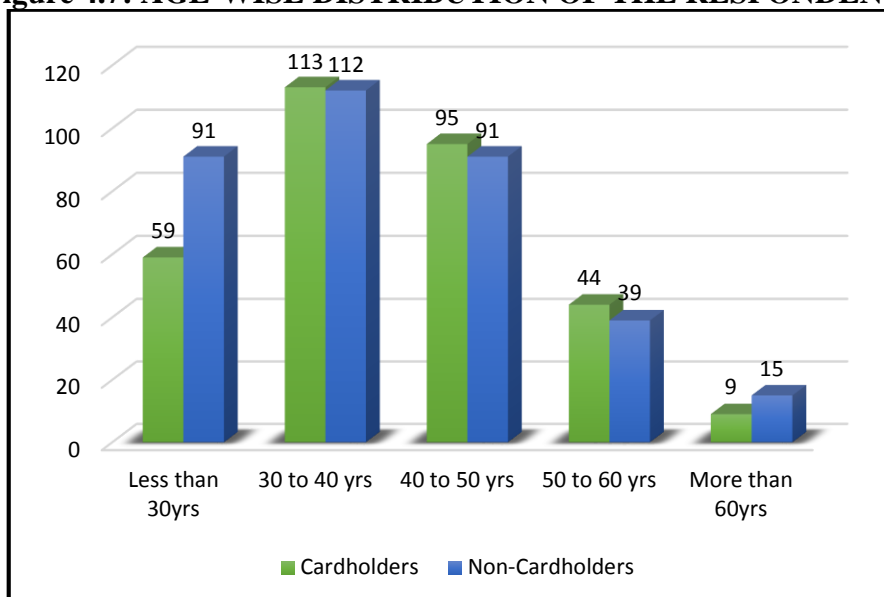
Age Group	Cardholders	Non-Cardholders	Total
Less than 30yrs	59 (39)	91 (61)	150
30 to 40 yrs.	113 (50)	112 (50)	225
40 to 50 yrs.	95 (51)	91 (49)	186
50 to 60 yrs.	44 (53)	39 (47)	83
More than 60yrs	9 (38)	15 (62)	24
Total	320	348	668

Source: Primary Data

Note: Figures in the brackets show the percentage of row total.

From the data in table 4.7 it can be concluded that out of 320 card users, the highest number of respondents (225) i.e. 34% and the cardholders (113) is in the age group of 30 - 40 years. In the age group less than 30 years and the group of more than 60 years, the credit card users are less compared to the non-card users. But in the rest of the three age groups that is 30 to 40 years, 40 to 50 years and 50 to 60 years, the credit card users are more than the non-users.

Figure 4.7: AGE-WISE DISTRIBUTION OF THE RESPONDENTS

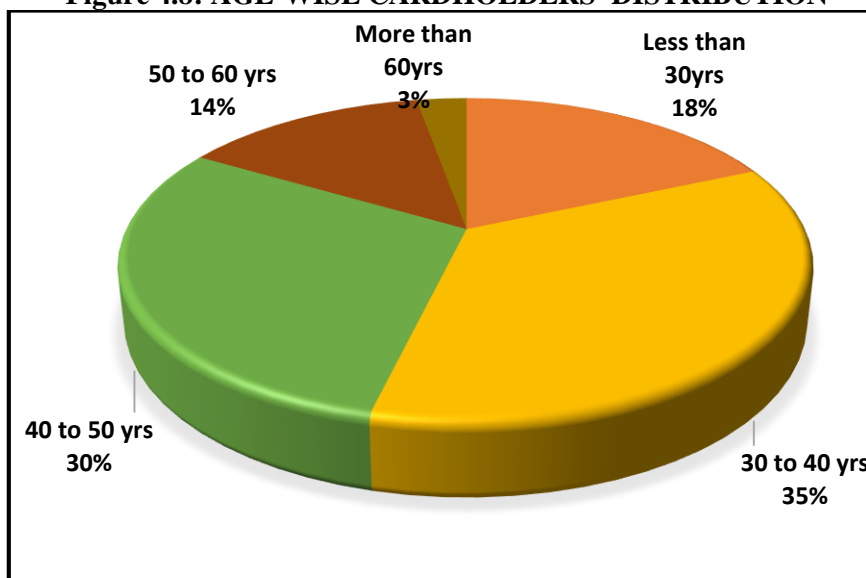


Source: Primary Data (refer table 4.7)

4.2.1.3.2 Age-wise distribution of credit card holders

About 35% of the card users are in the age group of 30 to 40 years. Figure 4.8 below shows the age-wise distribution of credit card holders. The number of card users has declined with age.

Figure 4.8: AGE-WISE CARDHOLDERS' DISTRIBUTION



Source: Primary Data (refer table 4.7)

The number of card users is 59 (18%) for the age group less than 30 years and it is found that the number of card users has declined after the age group of 30 to 40 years. It is in this age group that 35% of the card users belong. The age distribution of the card users can be seen from the figure 4.8. The mean age of credit cardholder is 39.7 years.

The hypothesis that the respondents' age affects the use of credit card is tested positively. The Chi square test *p value* 4.1835E-22 is less than .05 is significant, and hence the null hypothesis that there is equal proportion of card users in different age group is rejected. Thus it is concluded that age does affect the use of credit card.

4.2.1.4 Gender

4.2.1.4.1 Respondents' Gender-wise frequency distribution

According to the data in table 4.8, 458 (69%) are male respondents and 210 (31%) are females. Among the males, 245 (53%) respondents are cardholders and 213 (47%) respondents are not cardholders. Among the females, 75 (36%) respondents are cardholders and the remaining (64%) respondents do not use credit card. Figure 4.9 shows the gender classification of credit card users and non-users.

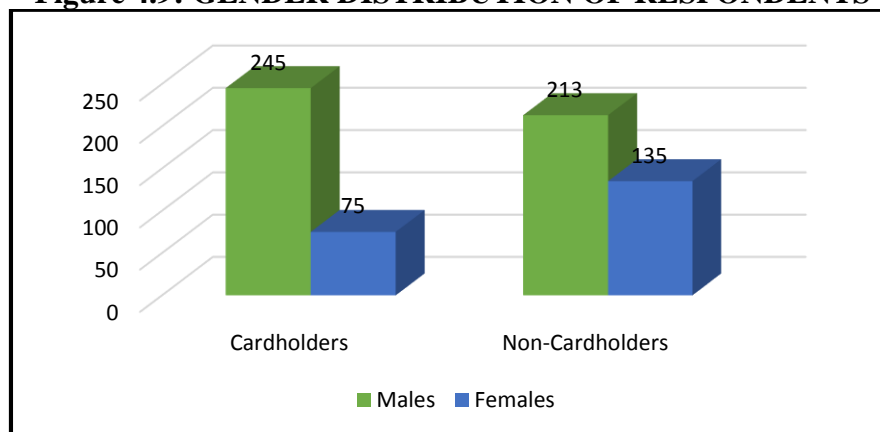
Table 4.8: GENDER-WISE FREQUENCY DISTRIBUTION OF RESPONDENTS

Gender	Cardholders	Non-Cardholders	Total
Males	245 (53)	213 (47)	458
Females	75 (36)	135 (64)	210
Total	320	348	668

Source: Primary Data

Note: Figures in the brackets show the percentage of row total.

Figure 4.9: GENDER DISTRIBUTION OF RESPONDENTS

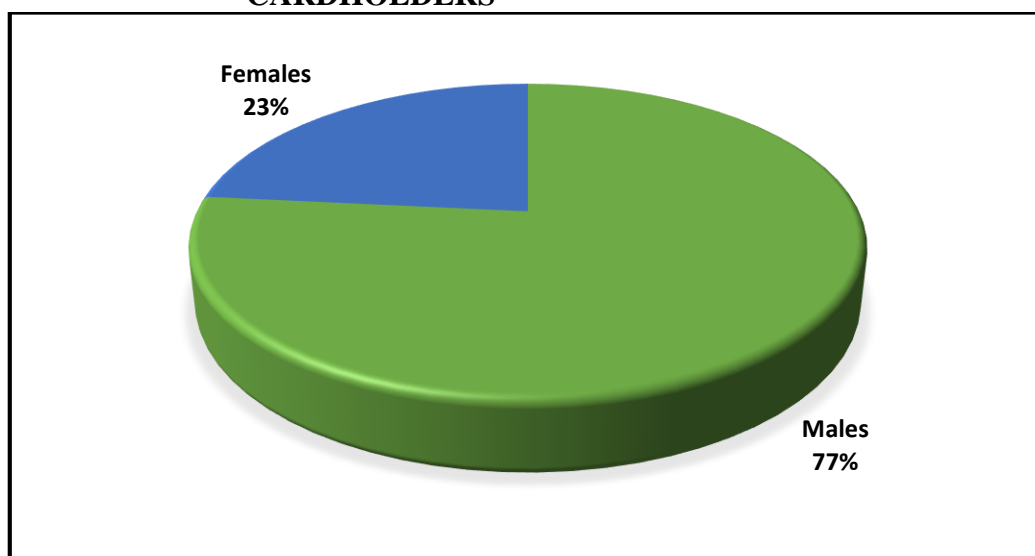


Source: Primary Data (refer table 4.8)

4.2.1.4.2 Gender-wise frequency distribution of Credit card holders

Gender disparity in credit card use is seen as the data (Figure 4.10) reveals that, the percentage of male cardholders (77%) is more than the female cardholders (23%).

Figure 4.10: GENDER-WISE FREQUENCY DISTRIBUTION OF CARDHOLDERS



Source: Primary Data (refer table 4.8)

The null hypothesis that gender does not affect the use of credit card is rejected, as $p = 2.03364\text{E-}21$ i.e. less than .05 is significant. The hypothesis that gender affects the use of credit card holds true.

4.2.1.5 Educational Qualifications

4.2.1.5.1 Frequency distribution of respondents as per educational qualifications

From the data given in table 4.9 it is inferred that 32% of the respondents are having a Professional Post Graduate degree. In this group 126(59%) are credit card users and the remaining 87(41%) do not use credit card. This is followed by Professional Graduate degree holders with about 73(49%) being card users and 75(51%) not using credit card. The data also reveals that with higher education i.e. PG and Doctorates, the number of credit card users are more than the non-users. But people who are not graduates, mostly do not use credit card. Those who are non-metric, 6 respondents, all do not use credit card. Among the SSCs, only 7(30%) use credit card and the rest 16(70%) do not use credit card. Those who are HSC complete, only 10(22%) are cardholders and the rest 35(78%) are non-cardholders. The figure 4.11 shows the frequency distribution of respondents as per the educational qualification.

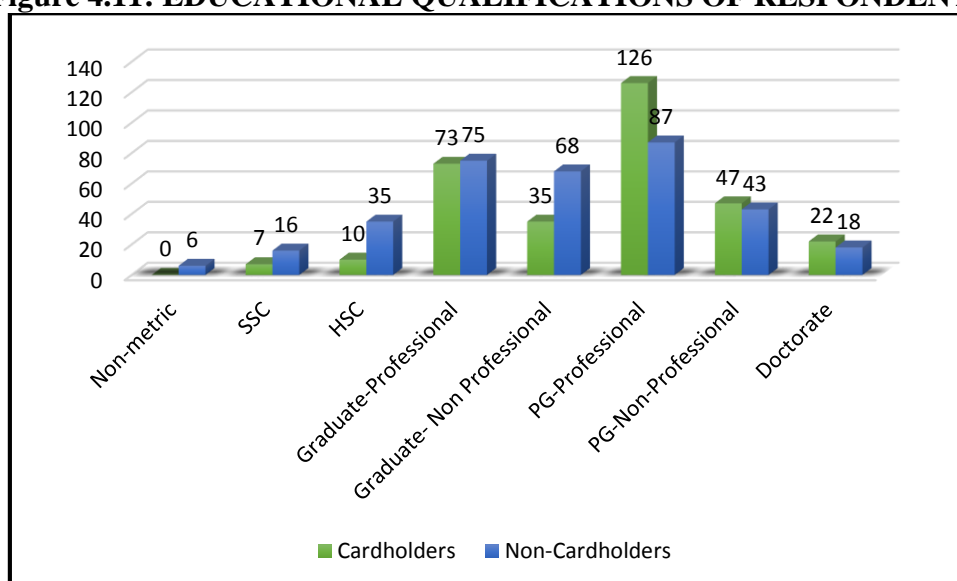
Table No 4.9: FREQUENCY DISTRIBUTION OF RESPONDENTS AS PER EDUCATIONAL QUALIFICATIONS

	Cardholders	Non-Cardholders	Total
Non-metric	0(0)	6(100)	6
SSC	7(30)	16(70)	23
HSC	10(22)	35(78)	45
Graduate-Professional	73(49)	75(51)	148
Graduate- Non Professional	35(34)	68(66)	103
PG-Professional	126(59)	87(41)	213
PG-Non-Professional	47(52)	43(48)	90
Doctorate	22(55)	18(45)	40
Total	320	348	668

Source: Primary Data

Note: Figures in the brackets show the percentage of row total.

Figure 4.11: EDUCATIONAL QUALIFICATIONS OF RESPONDENTS

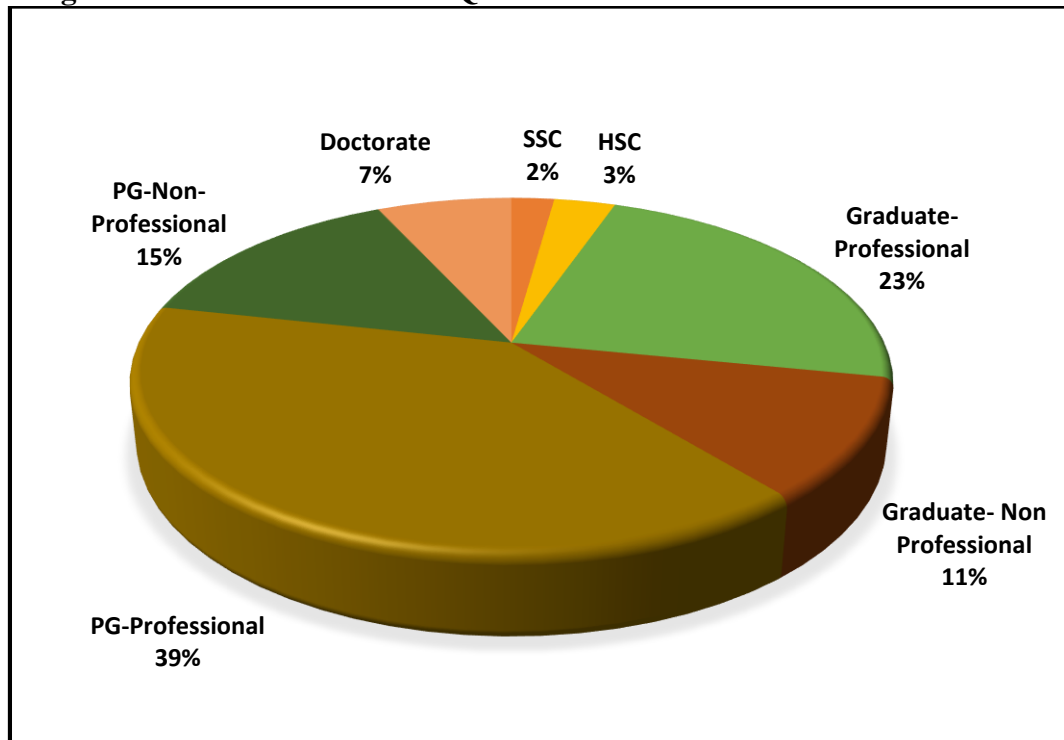


Source: Primary Data (refer table 4.9)

4.2.1.5.2 Educational Qualifications of Credit Card users

Among the credit card users, 39% are having a Professional Post Graduate degree, followed by Professional Graduate degree holders 23%. From the figure 4.12 it is inferred that credit card users are mainly professional degree holders.

Figure 4.12: EDUCATIONAL QUALIFICATIONS OF CARDHOLDERS



Source: Primary Data (refer table 4.9)

The hypothesis that educational qualifications affect the use of credit card is accepted as the p value $1.9104E-47$ less than $.05$ is significant.

4.2.1.6 Marital Status

4.2.1.6.1 Frequency distribution of respondents based on Marital Status

Marital status of the respondents shows whether more number of married respondents are using credit cards or unmarried/single respondents. The data show that, about 533 (80%) of the respondents are married and 133 (20%) are unmarried, and 2 respondents were divorced/separated (Table 4.10). Half of the married are credit card users and the other half is not using credit card. Among the unmarried or single, only 51 (38%) are cardholders and the rest 82 (62%) are non-users. Among the respondents who are divorced or separated, one is using credit card and the other is not. Figure 4.13 shows the marital status of the respondents for both the credit card users and the non-users. Thus we find that, the percentage of married cardholders is more than the unmarried/single cardholders.

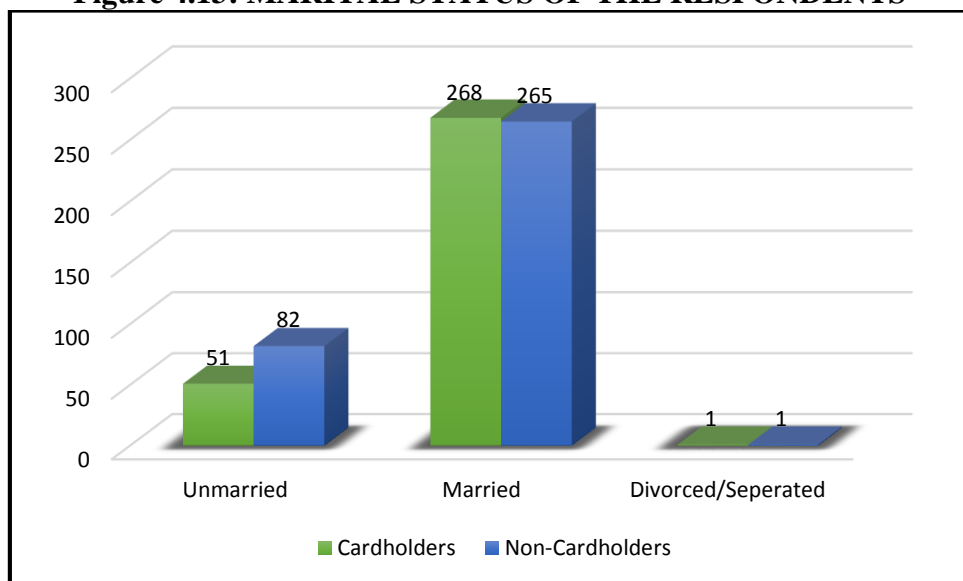
Table 4.10: MARITAL STATUS OF THE RESPONDENTS

	Cardholders	Non-Cardholders	Total
Unmarried	51(38)	82(62)	133
Married	268(50)	265(50)	533
Divorced/Separated	1(50)	1(50)	2
Total	320	348	668

Source: Primary Data

Note: Figures in the brackets show the percentage of row total.

Figure 4.13: MARITAL STATUS OF THE RESPONDENTS

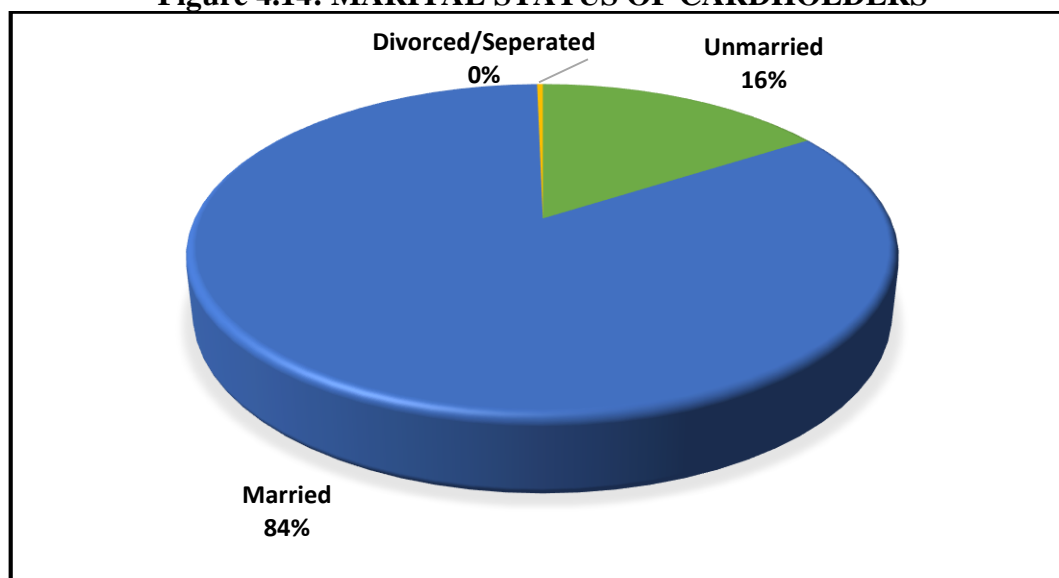


Source: Primary Data (refer table 4.10)

4.2.1.6.2 Marital Status of the Cardholders

Among the total credit card users, 84% are married and 16% are unmarried. Only 1 respondent who is a divorcee reported using the card (Figure 4.14).

Figure 4.14: MARITAL STATUS OF CARDHOLDERS



Source: Primary Data (refer table 4.10)

With the Chi-square test p value = 0.047847371, less than .05 is significant, it is concluded that marital status affects the credit card use.

4.2.1.6.3 Unmarried / divorced /seperated Respondents – Their staying with family

Among the respondents who were either unmarried or divorced/seperated, 33(25%) were staying alone and 98(75%) were staying with family. The credit card users (39) and non-users (61) percentage distribution is the same for those staying alone and those staying with family (table 4.11).

Table 4.11: FREQUENCY DISTRIBUTION OF SINGLE RESPONDENTS STAYING ALONE OR WITH FAMILY

	Cardholder	Non-Cardholder	Total
Staying alone	13(39)	20(61)	33
Staying with family	38(39)	60(61)	98
No Response	2(0.01)		2
Total	53	80	133

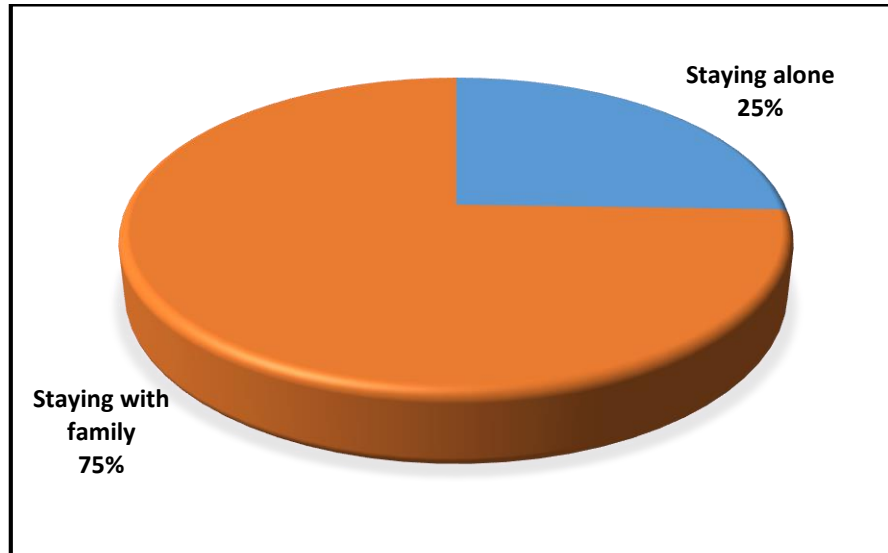
Source: Primary Data

Note: Figures in the brackets show the percentage of row total.

Out of the 133 unmarried, divorced/seperated respondents, 40% (53) are credit card users and the remaining 60% (80) are non-users.

The figure 4.15 shows frequency distribution of those cardholders who are either staying alone or with family. The data shows that only 25% of them are staying alone and the rest 75% are staying with family.

Figure 4.15: PERCENTAGE OF UNMARRIED, DIVORCED/SEPARATED CARDHOLDERS' STAY WITH FAMILY



Source: Primary Data (refer table 4.11)

4.2.1.7 Family Type (Nature of family)

4.2.1.7.1 Frequency Distribution of Respondents' family type

Data in the table 4.12 shows that in the city of Pune, 394(59%) of the respondents have nuclear family and 253(38%) respondents have joint family. 21(3%) have not responded to this question. Some these would be those staying alone. Among the respondents with nuclear families, about half are using credit cards and the other half of them do not use credit card. Those with joint families 113(45%) are cardholders and the remaining 140(55%) are non-users.

Table 4.12: FREQUENCY OF RESPONDENTS' FAMILY TYPE

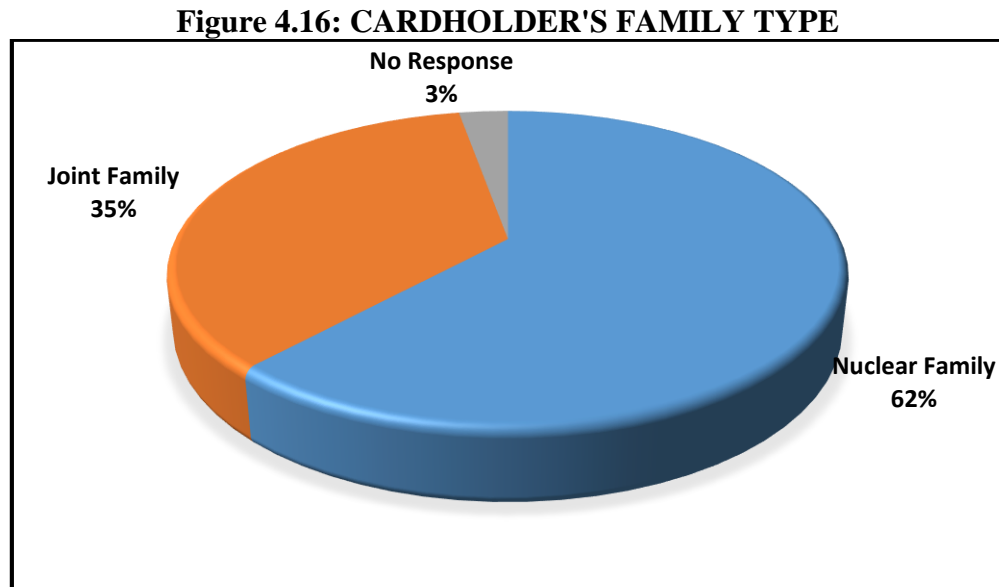
Family Type	Cardholders	Non-Cardholders	Total
Nuclear Family	198(50)	196(50)	394
Joint Family	113(45)	140(55)	253
No Response	9	12	21
Total	320	348	668

Source: Primary Data

Note: Figures in the brackets show the percentage of row total.

4.2.1.7.2 Family Type of Credit Cardholders

Figure 4.16 shows the credit card users' family type. About 62% of the card users have nuclear family and 35% have joint family. About 3% have not responded (for frequency refer table 4.12).



Source: Primary Data (refer table 4.12)

With Chi-square test p value = $3.29539E-37$ less than .05, is significant and therefore it is concluded that family type affects the credit card use. Hence the null hypothesis is rejected.

4.2.1.8 Family Size

4.2.1.8.1 Family size of the Respondents

As per the data in table 4.13, about 379 (57%) respondents have a family size with 3 to 4 members and 243(36%) of the respondents have families with 5 and more members. Only 28 (4%) of the respondents have families with 2 members and 18(3%) have not responded.

Table 4.13: FAMILY SIZE OF RESPONDENTS

Number of Family Members	Cardholder	Non-Cardholder	Total
2	14(50)	14(50)	28
3 to 4	195(51)	184(49)	379
5 and more	102(42)	141(58)	243
No response	9(50)	9(50)	18
Total	320	348	668

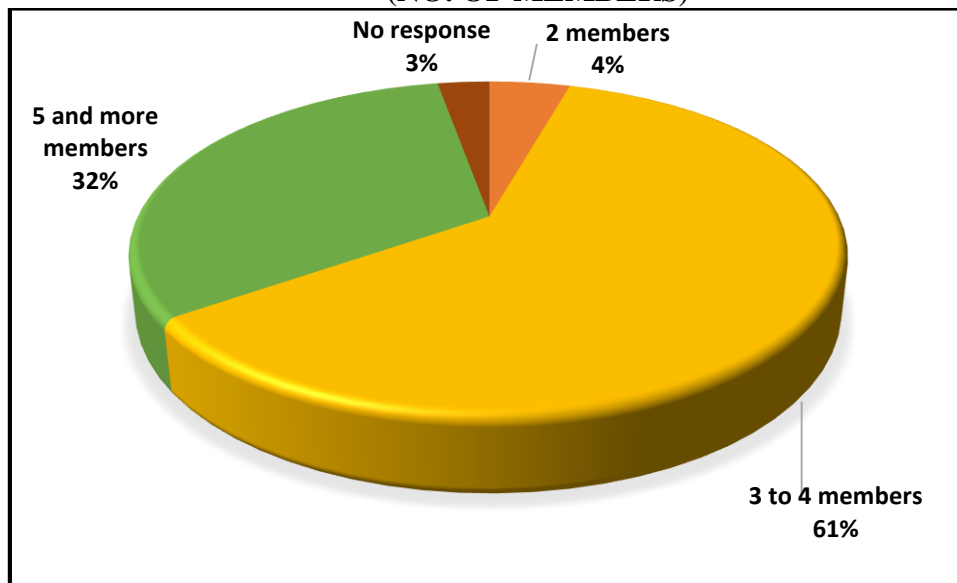
Source: Primary Data

Note: Figures in the brackets show the percentage of row total.

4.2.1.8.2 Cardholders' Family Size

Among the 320 credit cardholders, about 61% have 3 to 4 member family, 32% have 5 and more member family and only 4% have two member family. 3% have not responded (Figure 4.17).

Figure 4.17: CARDHOLDERS' SIZE OF FAMILY (NO. OF MEMBERS)



Source: Primary Data (refer table 4.13)

The Chi-square test p value = 2.60736E-62 less than .05 is significant for family size of the card-holders. It means there is a significant difference between sizes of family of credit card users.

4.2.1.9 Earning Members

4.2.1.9.1 Frequency distribution of respondents' for the number of earning members

According to the data in table 4.14, 361(54%) of the respondents' have two earning members, 149(22%) respondents are single income families and 143(21%) have three or more earning members in their family. About 2% have not responded to this.

Table 4.14: NUMBER OF EARNING MEMBERS IN RESPONDENTS' FAMILY

No. of Earning Members	Cardholder	Non-Cardholder	Total
1	62(42)	87(58)	149
2	184(51)	177(49)	361
3 or more	67(47)	76(53)	143
No response	7(47)	8(53)	15
Total	320	348	668

Source: Primary Data

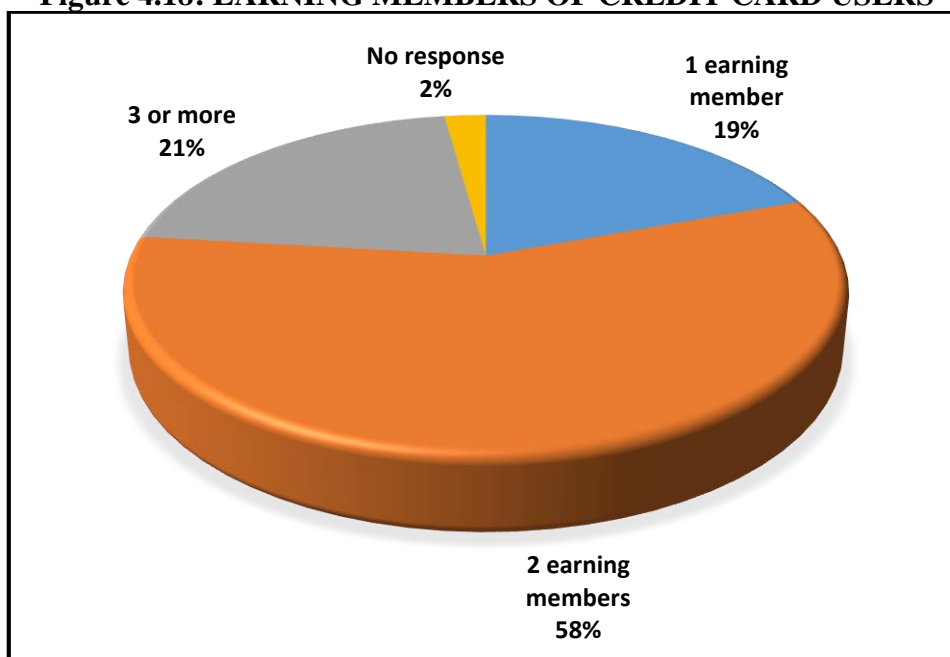
Note: Figures in the brackets show the percentage of row total.

The data shows that in families with one earning member the credit card-holders are 62(42%) were as, non-card users are 87(58%). But in double income families, card users are more 51% and non-card users are 49%. Those with three or more earning members, card users are less at 47% and non-card users are 53%.

4.2.1.9.2 Earning members of Credit card users

The data in figure 4.18 reveals that families with double income have the most number of credit card users (58%) followed by 3 or more earning members (21%) and 19% of the card users have only one earning member.

Figure 4.18: EARNING MEMBERS OF CREDIT CARD USERS



Source: Primary data (refer table 4.14)

Chi-square test $p = 7.97667E-45$ is less than .05 means there is significant difference between the number of earning members in a family and credit card use. Hence reject null hypothesis. It means number of earning members affects the use of credit card.

4.2.1.10 Occupation

4.2.1.10.1 Occupational Composition of Respondents

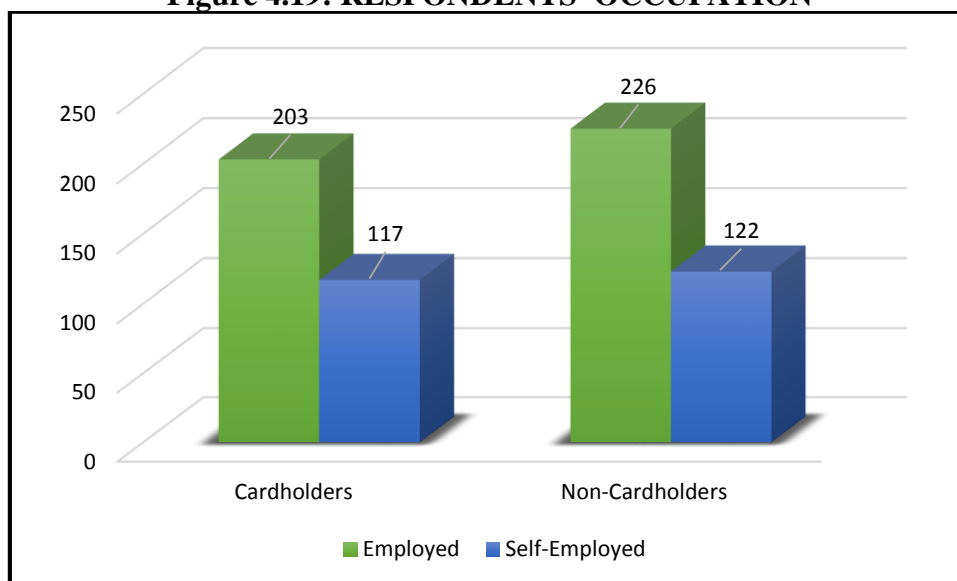
According to table 4.15, out of the total sample population, 429(64%) are employed and 239(36%) are self-employed. Among the employed consisting of government (including semi-government) and private employees, 203(47%) are using the credit card and the remaining 225(53%) are non-cardholders. Among the self-employed that includes businessmen, doctors, lawyers, consultants, chartered accountants and agents, 117(49%) are credit cardholders and the rest 123(51%) are not using the credit cards. Figure 4.19 shows the graphical representation of the occupational composition of the respondents.

Table 4.15: RESPONDENTS' OCCUPATIONAL COMPOSITION

Occupation	Cardholders	Non-Cardholders	Total
Employed	203(47)	226(53)	429
Self-Employed	117(49)	122(51)	239
Total	320	348	668

Note: Figures in the brackets show the percentage of row total.

Figure 4.19: RESPONDENTS' OCCUPATION



Source: Primary Data (refer table 4.15)

4.2.1.10.2 Nature/type of Employment

The table 4.16 shows the distribution of employed respondents as per the type of employment i.e. whether they are government employees or private employees. It also shows how many are permanent and how many are temporary.

Table 4.16: FREQUENCY DISTRIBUTION AS PER RESPONDENTS' EMPLOYMENT TYPE

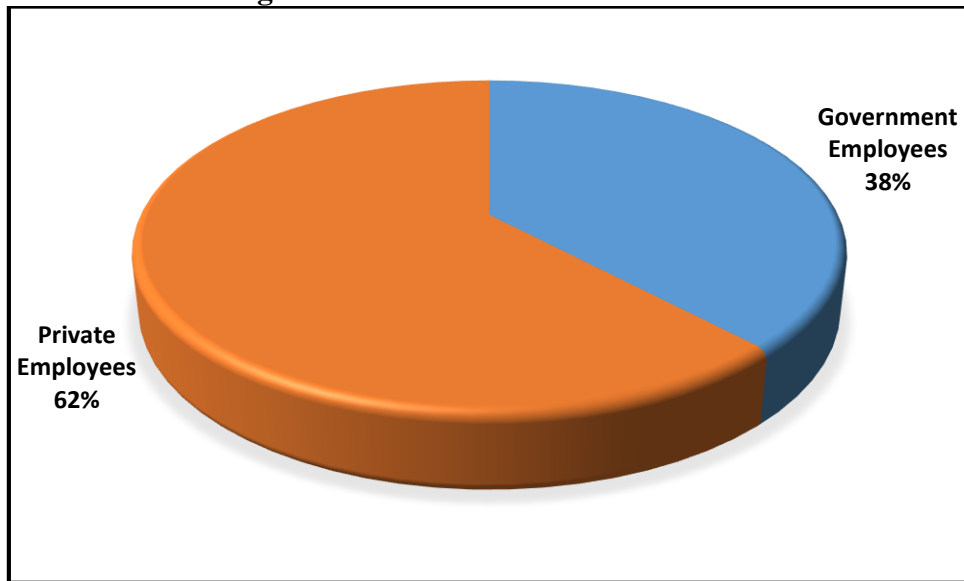
	Government Employees		Private Employees		Total
	Permanent	Temporary	Permanent	Temporary	
Cardholders	76(47)	12(7)	103(39)	12(5)	203(47)
Non-cardholders	60(37)	15(9)	92(35)	59(22)	226(53)
Total	136	27	195	71	
Grand Total		163(38)		266(62)	429

Source: Primary Data

Note: Figures in the brackets show the percentage of row total.

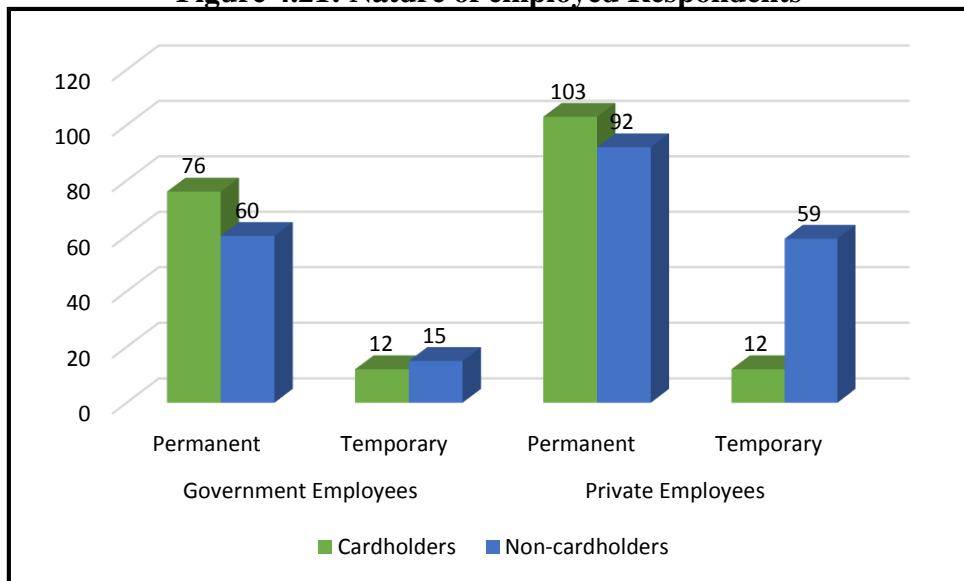
Figure 4.20 shows the percentage of government employees and private employees. In the city of Pune, out of the 429 respondents who are employed, 163(38%) are government employees and 266(62%) are working in private firms (Figure 4.20). Among the 163 government employees, 136(83%) are permanent employees and the remaining 27(17%) are temporary employees. Out of the 266 private employees, 195(73%) are permanent employees while 71(27%) are temporary employees (Table 4.16).

Figure 4.20: TYPE OF EMPLOYEES



Source: Primary Data (refer table 4.16)

Figure 4.21: Nature of employed Respondents



Source: Primary data (refer table 4.16)

Figure 4.21, is the graphical representation of table 4.16. From the data it can be inferred that out of the 429 employed respondents 203(47%) are credit card users and 226(53%) are non-cardholders.

4.2.1.10.3 Nature/type of Self-employed Respondents

The table 4.17 shows the frequency distribution of the respondents as per the various types of self-employment in the city. Among the 254 self-employed respondents, 118 (46%) are businessmen and 49(42%) are credit card users while 69(58%) do not use credit card. The medical practitioners (doctors) are 34(13%) and 23(68%) are cardholders while 11(32%) are non-card users. The lawyers 32(13%), among them most of them responded that since they are lawyers banks were reluctant to issue credit card to them. Most of them were using add-on cards. 22(69%) do not use credit card only 10(31%) said they used credit cards. Most of the chartered accountants (19(95%) out of 20) used credit card. Only one did not use the credit card. Consultants and agents/brokers were 25(5%) each. But 14(56%) of the consultants used credit cards while only 9(36%) of the agents used credit card.

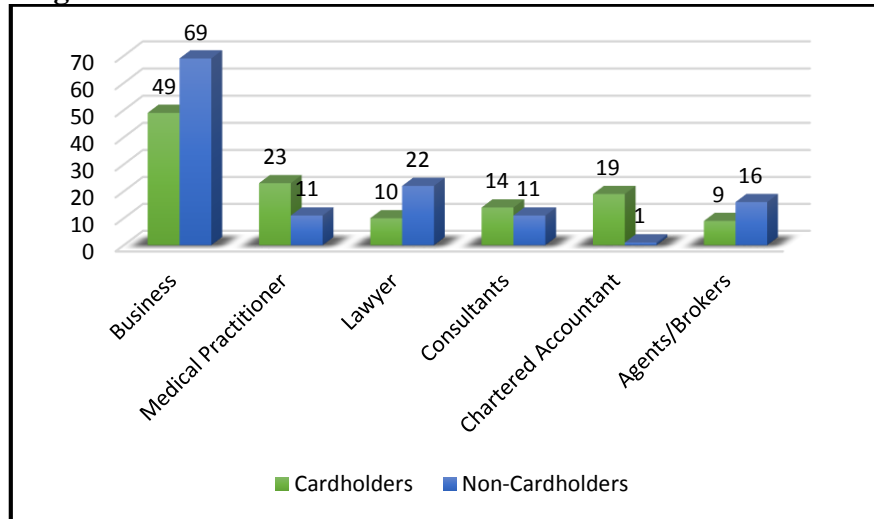
Table 4.17: RESPONDENTS' SELF-EMPLOYMENT TYPE

Type	Cardholders	Non-Cardholders	Total
Business	49(42)	69(58)	118
Medical Practitioner	23(68)	11(32)	34
Lawyer	10(31)	22(69)	32
Consultants	14(56)	11(44)	25
Chartered Accountant	19(95)	1(5)	20
Agents/Brokers	9(36)	16(64)	25
Total	124(49)	130(51)	254

Source: Primary Data

Note: Figures in the brackets show the percentage of row total.

Figure 4.22: RESPONDENTS' SELF-EMPLOYMENT TYPE



Source: Primary data (refer table 4.17)

Figure 4.22, is the graphical representation of table 4.17. From the data it can be inferred that out of the 254 self-employed respondents 124(49%) are credit card users and 130(51%) are non-cardholders.

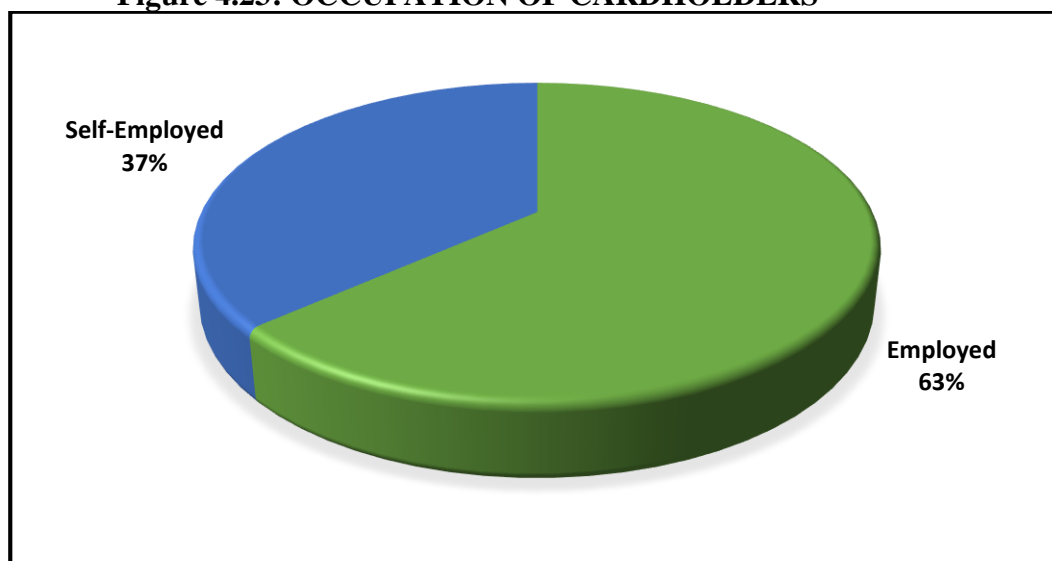
Among the 124 self-employed, 7 respondents are actually employed but they are also have their own private practice. Among these 7, one is employed in semi-government and 3 in private firm and they are also Consultants. Another one is working in a private firm and is also a medical practitioner. One among the 7 is privately employed plus has a business of his own. Another one is lawyer but also employed. This data shows that among the 320 credit card users in Pune city, there are about 2% salaried employees who also have some or the other kind of self-employment.

Hence, in the data, when only the number of self-employed is considered it is 117 and adding the 7 respondents who are both employed as well as self-employed the figure becomes 124.

4.2.1.10.4 Occupational composition of Credit Cardholders

Out of the 320 cardholders surveyed, 203(63%) are employed and rest 117(37%) are self-employed. This is shown in the figure 4.23.

Figure 4.23: OCCUPATION OF CARDHOLDERS



Source: Primary data (refer table 4.15)

4.2.1.10.4.1 Nature of Employed Cardholders

Out of the 203 cardholders who are employed, 88(43%) are government employees and 115(57%) are employees working in private firms (table 4.18). The figure 4.24 shows the percentage distribution of employed cardholders.

Table 4.18: NATURE OF EMPLOYED CARDHOLDERS

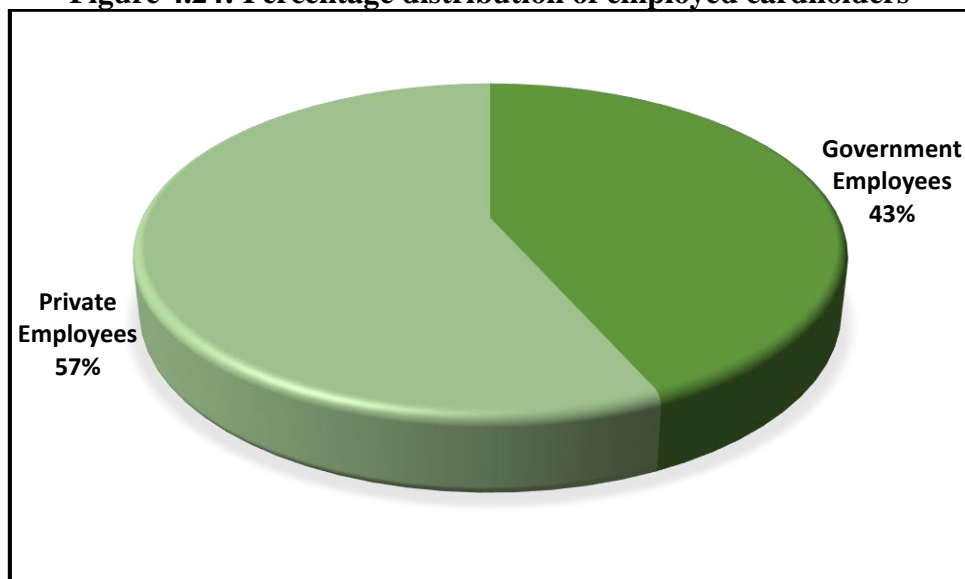
	Permanent	Temporary	Total
Government Employees	76(86)	12(14)	88
Private Employees	103(90)	12(10)	115
Total	179	24	203

Source: Primary Data

Note: Figures in the brackets show the percentage of row total.

The Chi-square test $p = 0.058088626$, means there is no significant difference between government and private employees regarding credit card use. Hence null hypothesis is accepted.

Figure 4.24: Percentage distribution of employed cardholders



Source: Primary data (refer table 4.18)

From the table 4.18, it is seen that among both the types of employees, both permanent as well as temporary employees are using credit card. Among the government employees 76(86%) are permanent and 12(14%) are temporary. About 103(90%) of private employees and 12(10%) of temporary employees are using credit card.

4.2.1.10.4.2 Nature of Self-employed Cardholders

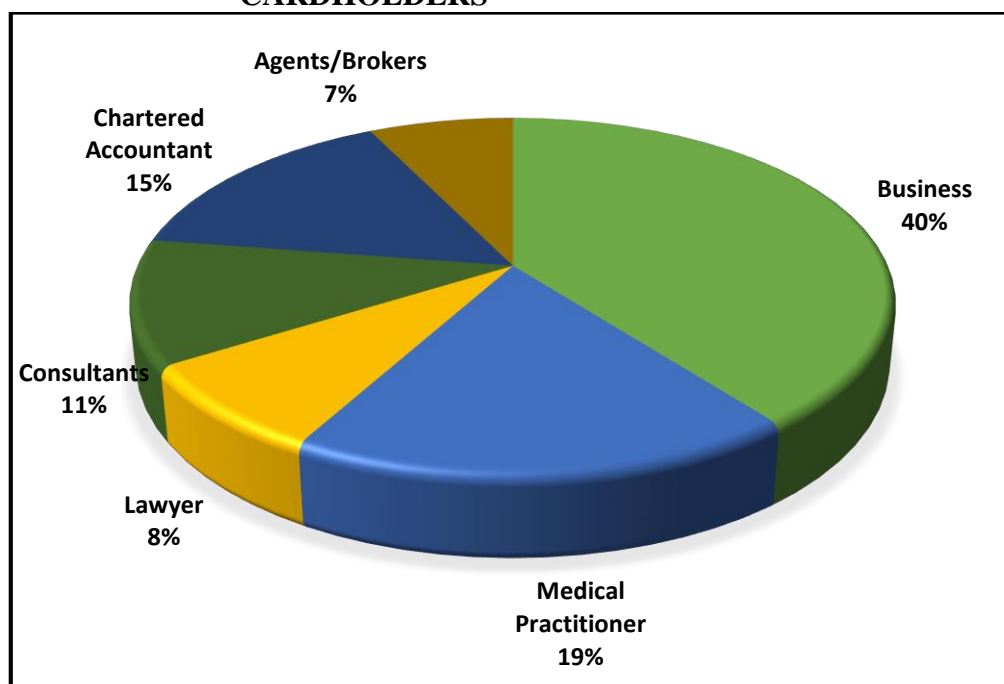
As per the data in table 4.19, out of 124 self-employed cardholders, 49(40%) are businessmen. This is followed by medical practitioner 23(19%), Chartered Accountants 19(15%) and consultants 14(11%). It is found that among the lawyers and agents/brokers, the use of credit card is less compared to the other types of self-employed (figure 4.25).

Table 4.19: NATURE OF SELF-EMPLOYED CARDHOLDERS

Type of Self-employment	Cardholders	Percent
Business	49	40
Medical Practitioner	23	19
Lawyer	10	8
Consultants	14	11
Chartered Accountant	19	15
Agents/Brokers	9	7
Total	124	100

Source: Primary Data

Figure 4.25: PERCENTAGE DISTRIBUTION OF SELF-EMPLOYED CARDHOLDERS



Source: Primary data (refer table 4.19)

The chi-square test, $p = 2.67549E-10$, is highly significant and hence the hypothesis that there is difference in the use of credit card by the different types of self-employed holds true.

4.2.1.10.5 Age-wise Occupational Composition of Cardholders

This section shows the age-wise distribution of the cardholders for different occupations. Table 4.20 shows the age composition of the employed and self-employed cardholders.

Table 4.20: AGE-WISE OCCUPATIONAL COMPOSITION

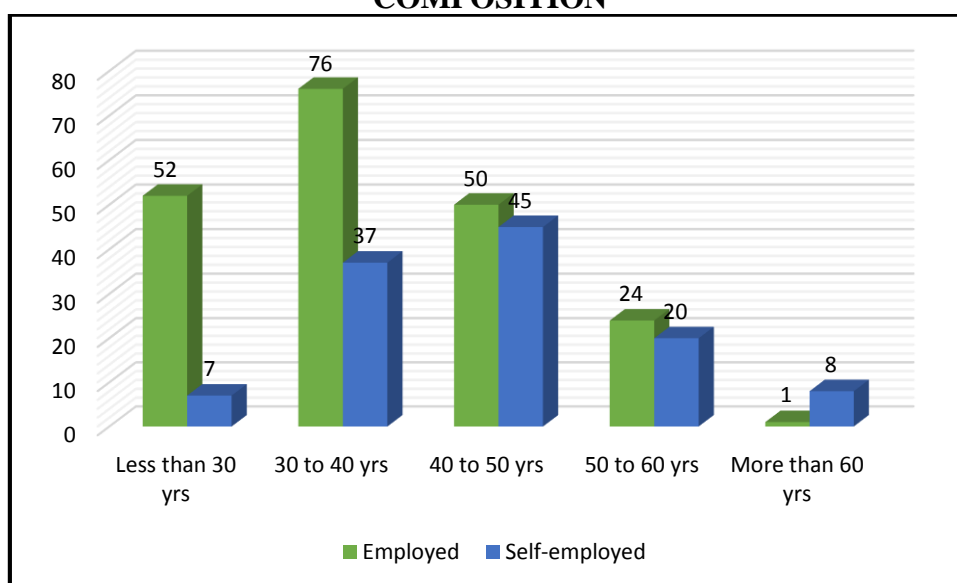
Age	Employed	Self-employed	Total
Less than 30 yrs.	52(88)	7(12)	59
30 to 40 yrs.	76(67)	37(33)	113
40 to 50 yrs.	50(53)	45(47)	95
50 to 60 yrs.	24(55)	20(45)	44
More than 60 yrs.	1(11)	8(89)	9
Total	203	117	320

Source: Primary Data

Note: Figures in the brackets show the percentage of row total.

Table 4.20 shows that among the cardholders below the age of 30 years, 52(88%) are employed and only 7(12%) are self-employed. On the other end, as per the data, only 1(11%) of those above 60 years are employed and 8(89%) are self-employed. In rest of the age groups the distribution of employed and the self-employed shows that it is the employed who use credit card more than the self-employed. Figure 4.26 is the graphical representation of the data.

Figure 4.26: CARDHOLDERS' AGE-WISE OCCUPATIONAL COMPOSITION



Source: Primary data (refer table 4.20)

The data regarding age-wise occupational composition reveals that it is employed youngsters below the age of 40 years are more credit card users than their counterparts who are self-employed.

4.2.1.10.6 Gender-wise Occupational Composition of Cardholders

Table 4.21 shows gender-wise occupational distribution of the cardholders. The male-female percentage of cardholders as per their occupation is analyzed in this section.

Table 4.21: GENDER-WISE OCCUPATIONAL COMPOSITION OF CARDHOLDER

Gender	Employed	Self-employed	Total
Male	152(75)	93(79)	245
Female	51(25)	24(21)	75
Total	203	117	320

Source: Primary data

Note: Figures in the brackets show the percentage of column total.

It is seen that both among the employed and the self-employed, credit card use among both the genders are almost same, 152(75%) of males and 51(25%) of females among employed and 93(79%) males and 24(21%) females among the self-employed use credit card (Figure 4.27).

Figure 4.27: GENDER-WISE OCCUPATIONAL COMPOSITION OF CARDHOLDER



Source: Primary data (refer table 4.21)

4.2.1.11 Monthly Income

4.2.1.11.1 Respondents' Monthly Income

The data in table 4.22 regarding monthly income of the respondents shows that most of them 232(35%) have a monthly income between Rs.20,000/- to Rs.50,000/-. It also shows that in less income group, the credit card use is less compared to higher income group. Those with income less than Rs.10,000/- most of them 44(96%) do not use credit card, only 2(4%) are using credit card. As the income increases, credit card use increases among the respondents. Those with monthly income more than Rs.1,00,000/- , 72(77%) are using credit card and only 21(23%) of the respondents do not use credit card. Among the non-cardholders 3 respondents did not respond to the question regarding monthly income. Figure 4.28 is the graphical representation of respondents' monthly income.

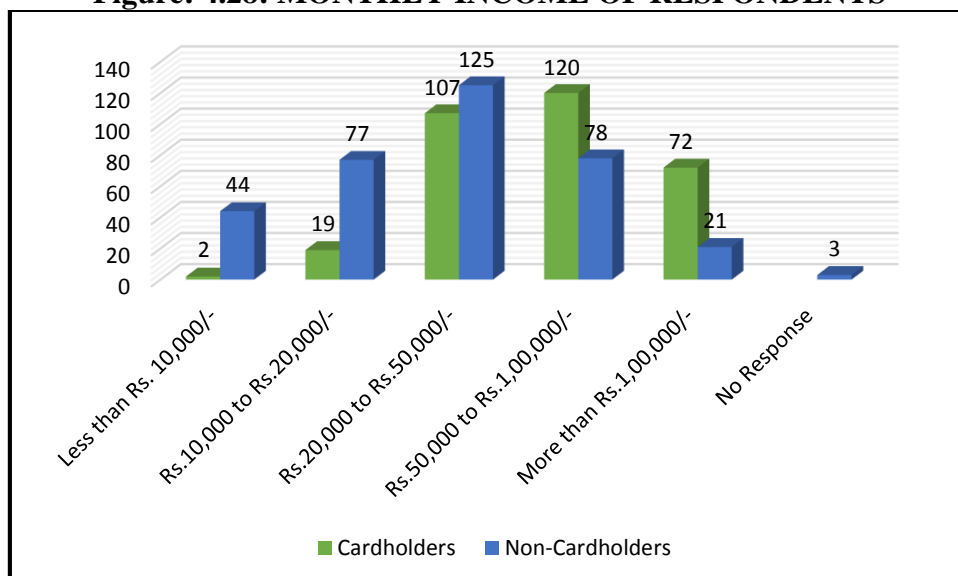
Table 4.22: FREQUENCY DISTRIBUTION OF RESPONDENTS AS PER MONTHLY INCOME

Monthly Income	Cardholders	Non-Cardholders	Total
Less than Rs. 10,000/-	2(4)	44(96)	46
Rs.10,000/- to Rs.20,000/-	19(20)	77(80)	96
Rs.20,000/- to Rs.50,000/-	107(46)	125(54)	232
Rs.50,000/- to Rs.1,00,000/-	120(61)	78(39)	198
More than Rs.1,00,000/-	72(77)	21(23)	93
No Response	-	3(1)	3
Total	320	348	668

Source: Primary Data

Note: Figures in the brackets show the percentage of row total.

Figure: 4.28: MONTHLY INCOME OF RESPONDENTS



Source: Primary data (refer table 4.22)

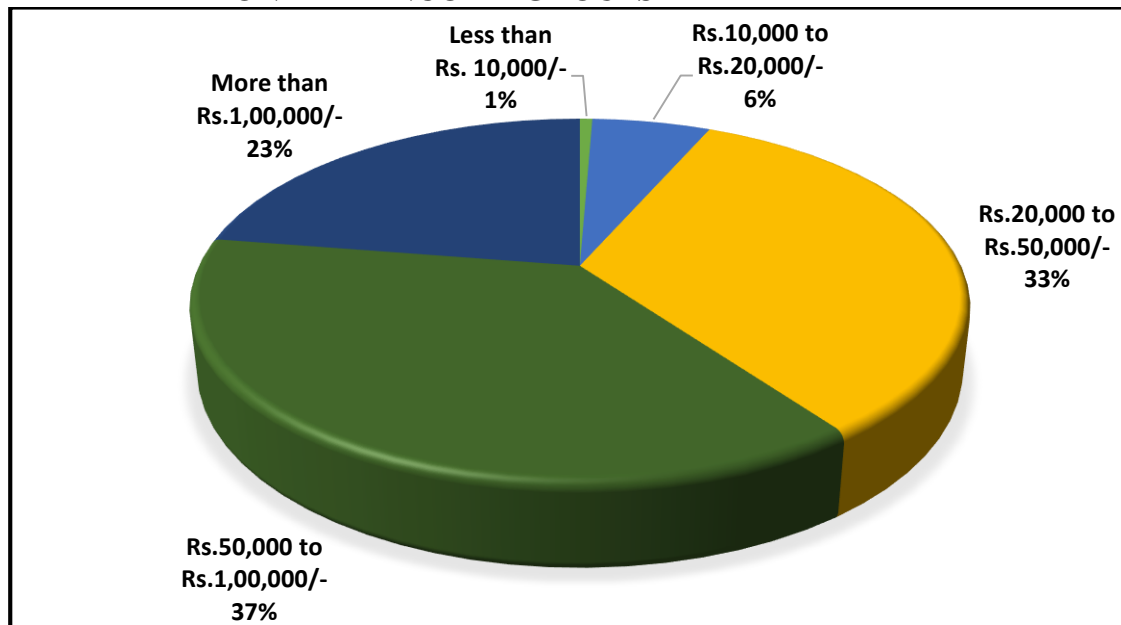
The figure 4.28 clearly reveals the fact that most of the respondents fall in the monthly income group of Rs.20,000/- to Rs.50,000/- and up to this income group, the number of non-cardholders are more than card users. From the monthly income group of Rs. 50,000/- and above the number of credit card users are more than non-users.

The average monthly income of the credit card users is Rs. 75,625/- while the average monthly income of non-card users is Rs.42,687/-.

4.2.1.11.2 Monthly Income Group of Credit Card users

Figure 4.29 shows the percentage distribution of credit card users as per their monthly incomes based on the data from table 4.22. About 120 (37%) cardholders have monthly income in the range of Rs.50,000/- to Rs.1,00,000/-, followed by 107(33%) in the monthly income group of Rs.20,000/- to Rs.50,000/-. About 72(23%) of them have monthly income more than Rs.1,00,000/-. Only 2(1%) cardholders have monthly income less than Rs.10,000/- and 19(6%) have monthly income in the range of Rs.10,000/- to Rs.20,000/-.

Figure 4.29: PERCENTAGE OF CARDHOLDERS IN DIFFERENT MONTHLY INCOME GROUPS



Source: Primary data (refer table 4.22)

This shows that higher the monthly income the number of people using credit card is more. This is proved by the chi-square test p value = 7.79889E-36 which is less than .05, means there is significant difference in credit card use according to monthly income.

4.2.1.12 Source of income

4.2.1.12.1 Respondents' Sources of Income

Sources of income included salary for the employed, profit for the businessmen, professional charges for the medical practitioners, lawyers, consultants and chartered accountants, and commission for agents/brokers or those working in sales.

The data in table 4.23 shows the number of employed respondents with more than one source of income. The data reveals that 65(15%) of the employed respondents have income from sources other than salary.

Table 4.23: MORE THAN ONE SOURCE OF INCOME OF EMPLOYED RESPONDENTS

	Cardholders	Non-Cardholders	Total
Salary + Profit	1(20)	4(80)	5(8)
Salary + Commission	5(36)	9(64)	14(22)
Salary + Rent	21(64)	12(36)	33(51)
Salary + Professional-charges	3(27)	8(73)	11(17)
Salary + Professional-charges + Rent	1(50)	1(50)	2(3)
Total	31(48)	34(52)	65

Source: Primary Data

Note: Figures in the brackets show the percentage of row total.

About 33(51%) of the respondents have rent as another source of income with their salary and those in sales or marketing 14(22%) has commission along with their salary. There are respondents 11(17%) who are employed but also have their own consultancy or the medical practitioners have their own private clinic, they have professional charges as another income source along with salary. About 5(8%) of the employed respondents have their own business and hence profit is their other income source. Two respondents had professional charges and rent as other source of income apart from salary. Only among the respondents earning rent along with salary, out of 33, 21(64%) are using credit cards and the rest 12(36%) do not use credit cards. The data reveals that **among the employed respondents with more than one source of income, only 31(48%) are using credit cards while the remaining 34(52%) are non-cardholders.**

The data in table 4.24 shows the number of self-employed respondents with more than one source of income. The data reveals that 39(16%) of the self-employed respondents have income from sources other than salary.

Table 4.24: MORE THAN ONE SOURCE OF INCOME OF SELF EMPLOYED RESPONDENTS

	Cardholders	Non-Cardholders	Total
Profit+ Rent	9(56)	7(44)	16(41)
Professional-charges + Rent	9(75)	3(25)	12(31)
Commission + Rent	3(50)	3(50)	6(15)
Profit + Commission	3(60)	2(40)	5(13)
Total	24(62)	15(38)	39

Source: Primary Data

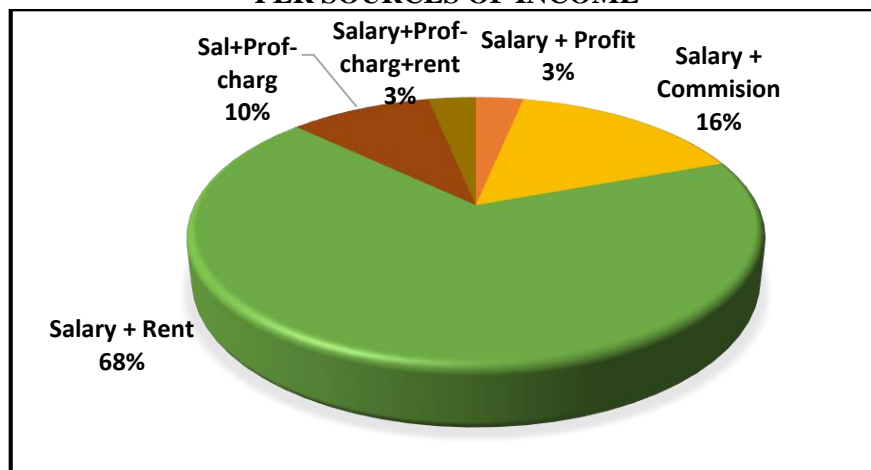
Note: Figures in the brackets show the percentage of row total.

As per the data in table 4.24, among the self-employed, the respondents having business 16(41%) have rent as another income source and among them 9(56%) are credit cardholders. Among the respondents who earn professional-charges there are respondents 12(31%) who also get rent and in this group, 9(75%) use credit cards. About 6(15%) earn commission plus rent and 5(13%) earn profit plus commission. The data reveals that **among the self-employed respondents with more than one source of income, more than half 24(62%) are using credit cards while the remaining 15(38%) are non-cardholders.**

4.2.1.12.2 Credit Cardholders' Source of Income

The figure 4.30 shows the percentage distribution of the employed cardholders with more than one source of income.

Figure 4.30: PERCENTAGE DISTRIBUTION OF EMPLOYED CARDHOLDERS AS PER SOURCES OF INCOME

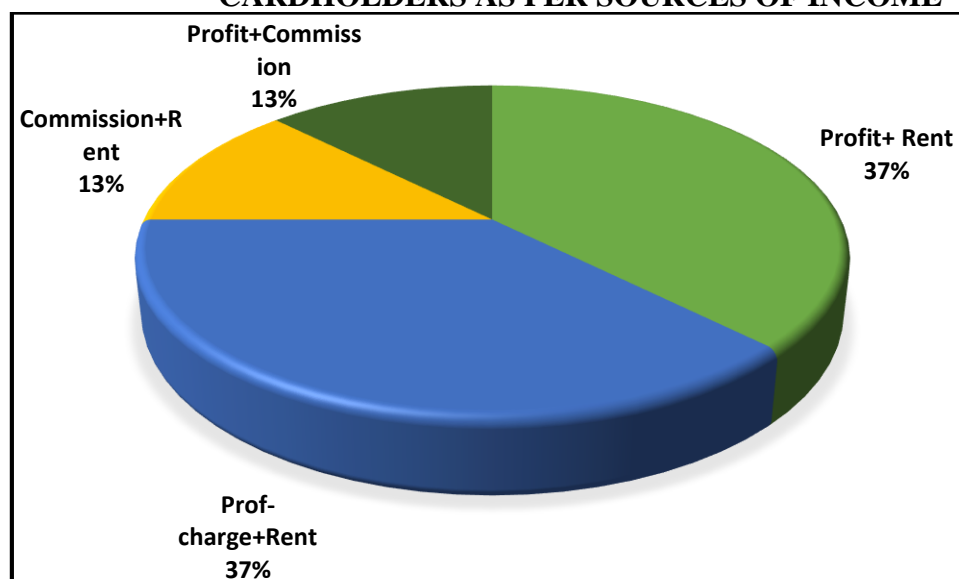


Source: Primary data (refer table 4.23)

The data regarding the sources of income of cardholders reveals that out of the 31 cardholders with more than one source of monthly income, about 21(68%) have rent as additional source of income. This is followed by those having commission along with their monthly income 5(16%) and credit card users with salary plus professional charges are 3(10%). One cardholder each has salary plus profit and salary plus professional charges and rent as their sources of monthly income.

The Chi-square test for significance of type of sources of income and credit card use shows that p value = 2.54017E-09 less than 0.05 is highly significant. It means that type of source of income affects the use of credit card.

Figure 4.31: PERCENTAGE DISTRIBUTION OF SELF-EMPLOYED CARDHOLDERS AS PER SOURCES OF INCOME



Source: Primary data (refer table 4.24)

The figure 4.31 shows that an equal number of self-employed cardholders 9(37%) have profit plus rent and professional charges and rent as their sources of income. Around 3(13%) each have profit plus commission and commission plus rent as sources of incomes.

An important finding is that **most of the respondents with rent as additional source of monthly income are using credit cards.** This is true for both the employed as well as the self-employed. Rent being to some extent a continuous additional source of income makes the people to use credit card.

4.2.1.13 Savings/Investments

4.2.1.13.1 Nature/type of savings/investments

Table 4.25 shows the various types of savings/investments of the respondents. The respondents were to select any number of savings/investment options: General Provident Fund (GPF)/ Contributory Provident Fund (CPF)/ National Pension Scheme (NPS), bank deposits/bonds which are fixed interest earning assets, shares/mutual funds, real estate and gold/silver.

Table 4.25: NATURE/TYPE OF SAVINGS/INVESTMENTS OF RESPONDENTS

Type of Savings/Investments	Cardholders	Non-cardholders
GPF/CPF/NPS	110	80
Bank Depo/Bonds	250	262
Shares/Mutual Funds	123	57
Real Estate	154	124
Gold/Silver	73	62
All Types of Savings/Investments	5	3
No Savings/Investment at all	15	24

Source: Primary Data

The data in table 4.25 reveals the following:

- It seems that overall the credit card users' savings/investment in each type is more than the non-cardholders except for the bank deposits.
- Both credit card users' as well as non-users' have the maximum savings/investment in bank deposits/bonds. But the point to be noted is that this is comparatively less for cardholders (250) than that of non-cardholders (262).
- There is difference in the nature of savings/investment of the credit card users and non-users in Pune city. Since from the data it can be inferred that on an average the cardholders savings/investment is 2.22 and that of non-cardholders' it is 1.68. This is also proved by the chi-square test as **the p value = 0.000253562** means there is small significant difference between the cardholders' and non-cardholders' nature of savings/investment.

- Another point to be noted is that five of the cardholders and three non-cardholders had all the different types of savings/investment. But there are 15 cardholders and 24 non-cardholders who do not have any savings/investment at all. They feel that the incomes that they earn is almost completely is spend.

4.2.1.13.2 Type of Investments in Real Estate

Those who had real estate as one of the type of savings/investment had to select the type of real estate investment. Table 4.26 shows the various types of real estate investments of the respondents.

Table 4.26: TYPE OF REAL ESTATE INVESTMENTS OF RESPONDENTS

Real Estate Investments	Cardholders	Non-Cardholders
Self-Occupied House	121	106
House given on Rent	41	25
House not Occupied	7	6
Plot of Land	40	18

Source: Primary Data

The data in table 4.26 reveals the following:

- The number of credit cardholders having different types of investments in real estate is more than the non-cardholders.
- About 121 respondents who use credit cards and 106 non card-users have ‘self-occupied house’. This means they do not have to spend for their stay (give rent). Hence it can be said that one of the reasons for using cards could be that they already own a house of their own and so can afford to have extra expenditure through credit cards.
- ‘House given on rent’ means an additional income to spend and save, hence may be the reason for using credit cards. There are 41 responses for house given on rent among the cardholders while this figure is only 25 in case of non-cardholders.
- In case of ‘house not occupied’ the number of cardholders and non-cardholders is almost same at 7 and 6 respectively.
- Again in case of ‘plot of land’ there were about 40 responses from cardholders and only 18 from non-cardholders.

4.2.1.14 Monthly Expenditure

4.2.1.14.1 Respondents' Monthly Expenditure

The monthly expenditure as percentage of monthly income (including EMIs) was asked to the respondents. This is shown in the table 4.27. The respondents had to select any one of the range of percentage of monthly expenditure. The data reveals that about 215(32%) respondents have a monthly expenditure between 50 to 60% of their monthly income. In this group 142(66%) use credit cards and the remaining 73(34%) do not use credit cards. About 147(22%) of the respondents have monthly expenditure less than 50% of monthly income. Among this group, 58(39%) are cardholders while 89(61%) are non-cardholders. Those having monthly expenditure more than 80% of their monthly income only 21(29%) are cardholders while 51(71%) do not use credit cards. The figure 4.32 is the graphical representation of monthly expenditure.

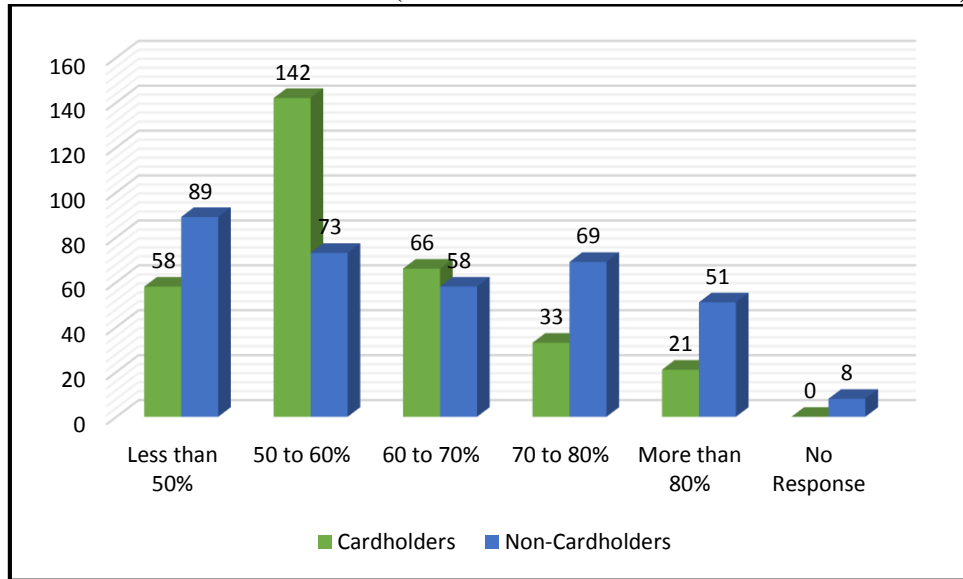
Table 4.27: MONTHLY EXPENDITURE OF THE RESPONDENTS

	Cardholders	Non-Cardholders	Total
Less than 50%	58(39)	89(61)	147
50 to 60%	142(66)	73(34)	215
60 to 70%	66(53)	58(47)	124
70 to 80%	33(32)	69(68)	102
More than 80%	21(29)	51(71)	72
No Response	0	8	8
Total	320	348	668

Source: Primary Data

Note: Figures in the brackets show the percentage of row total.

Figure 4.32: FREQUENCY DISTRIBUTION OF RESPONDENTS AS PER MONTHLY EXPENDITURE (PERCENTAGE OF MONTHLY INCOME)



Source: Primary data (refer table 4.27)

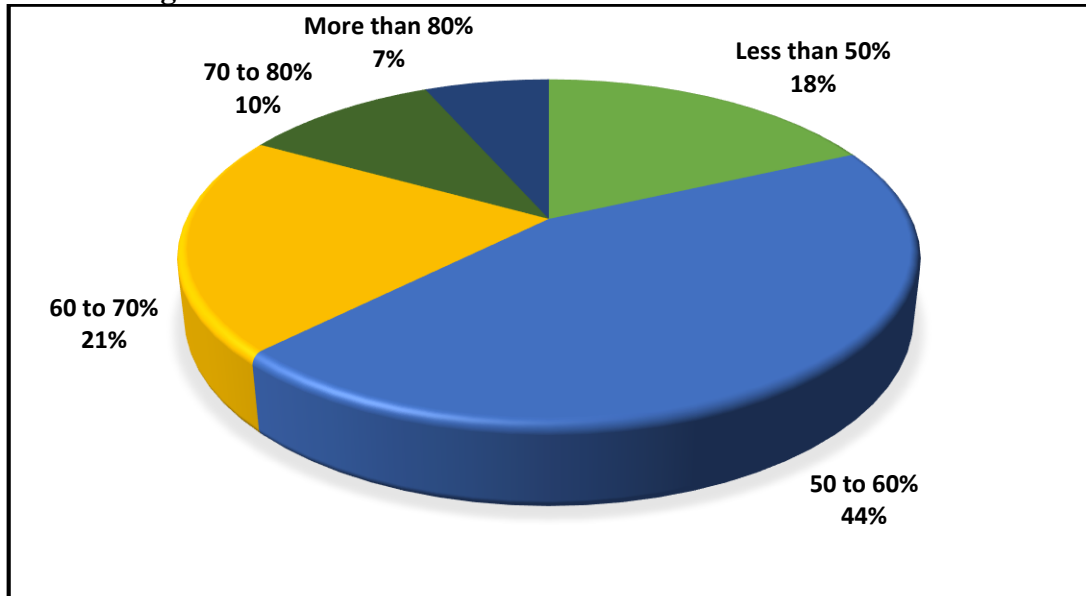
The figure 4.32 shows that the number of cardholders are more in the group where monthly expenditure is more than 70% and the group where monthly expenditure is less than 50% of the monthly income. Most of the cardholders have a monthly expenditure between 50 to 60%.

The chi-square test $p\text{ value} = 0$ means there is significant difference among the credit cardholders' and non-cardholders' monthly expenditure.

4.2.1.14.2 Cardholders' Monthly Expenditure

The figure 4.33 shows out of the total credit cardholders (320), about 142(44%) of the cardholders' monthly expenditure is between 50 to 60% of the monthly income. This is followed by monthly expenditure between 60 to 70%, in which 66(21%) cardholders are present. With higher monthly expenditure the number of credit card users decline. In the range of 70 to 80% and more than 80% monthly expenditure, there are only 33(32%) and 21(29%) cardholders respectively.

Figure 4.33: MONTHLY EXPENDITURE OF CARDHOLDERS



Source: Primary data (refer table 4.27)

The Chi-square test $p = 3.44839\text{E-}29$ is less than .05 and hence shows there is significant difference in the monthly expenditure of cardholders. The null hypothesis is rejected and it is accepted that the credit card use affects the monthly expenditure.

4.2.1.15 Comparison of Various Economic Parameters of Respondents

4.2.1.15.1 Monthly Income and Expenditure

4.2.1.15.1.1 Composition of Credit card users as per Monthly Income and Expenditure

The data in table 4.28 shows the frequency distribution of cardholders as per monthly income and monthly expenditure. It can be seen that most of the credit card users 56(18%) have a monthly income between Rs.50,000 to Rs.1,00,000/- and monthly expenditure in the range of 50 to 60%. This is followed by 41(13%) cardholders having monthly income in the range of Rs.20,000 to Rs.50,000/- whose monthly expenditure is again in the range of 50 to 60%.

Table 4.28: FREQUENCY DISTRIBUTION OF CREDIT CARD USERS AS PER MONTHLY INCOME AND EXPENDITURE

Monthly Expenditure →	<50%	50 - 60%	60 - 70%	70 - 80%	>80%	Total
Monthly Income ↓						
Less than Rs.10,000/-	0(0)	1(0)	0(0)	1(0)	0(0)	2
Rs.10,000 to Rs.20,000/-	7(2)	8(3)	2(1)	0(0)	2(1)	19
Rs.20,000 to Rs.50,000/-	19(6)	41(13)	24(8)	15(5)	8(3)	107
Rs.50,000 to Rs.1,00,000/-	18(6)	56(18)	31(10)	7(2)	8(3)	120
More than Rs.1,00,000/-	14(4)	36(11)	9(3)	10(3)	3(1)	72
Total	58	142	66	33	21	320

Source: Primary Data

Note: Figures in the brackets show the percentage of total cardholders.

4.2.1.15.1.2 Composition of Non-card users as per Monthly Income and Expenditure

As per the data in table 4.29, among the non-cardholders, most of them about 87 have monthly expenditure less than 50%. The overall frequency distribution shows that the monthly expenditure of the non-cardholders is somewhat similar across various income groups. Only 31(9%) have monthly income in the range of Rs.20,000 to Rs.50,000/- but monthly expenditure is between 70 to 80%.

Table 4.29: FREQUENCY DISTRIBUTION OF NON-CARD USERS AS PER MONTHLY INCOME AND EXPENDITURE

Monthly Exp. → Monthly Income ↓	<50%	50 to 60%	60 to 70%	70 to 80%	>80%	Total
Less than Rs.10,000/-	12(3)	5(1)	1(0)	10(3)	14(4)	42
Rs.10,000 to Rs.20,000/-	21(6)	20(6)	7(2)	16(5)	13(4)	77
Rs.20,000 to Rs.50,000/-	27(8)	21(6)	28(8)	31(9)	16(5)	123
Rs.50,000 to Rs.1,00,000/-	24(7)	22(6)	15(4)	9(3)	6(2)	76
More than Rs.1,00,000/-	3(1)	5(1)	7(2)	3(1)	2(1)	20
No Response						10
Total	87	73	58	69	51	348

Source: Primary Data

Note: Figures in the brackets show the percentage of total non-cardholders.

The comparison between the credit card users and non-users show that the cardholders' monthly expenditure as percentage of monthly income is more than the non-cardholders as it is seen from the data in table 4.30 and 4.31, **142(44%) cardholders' monthly expenditure is in the range of 50 to 60% of their monthly income whereas, the maximum 87(25%) non-cardholders' monthly expenditure is less than 50%. The hypothesis that credit card use increases the monthly expenditure is true.**

In case of monthly income, maximum number of the cardholders **120(38%) fall in the income group of Rs.50,000 to Rs.1,00,000/-** whereas, the maximum number of non-cardholders **123(35%) is in the income group of Rs.20,000 to Rs.50,000/-**. Hence the hypothesis that monthly income affects the credit card use is true.

4.2.1.15.2 Monthly Income and Occupation-wise Composition of Respondents

Table 4.29 shows the frequency distribution of respondents as per their occupation and monthly income. Among the government employees, most of the cardholders 33(20%) and most of the non-cardholders 39(24%) have monthly income in between Rs.50,000/- to Rs.1,00,000/-. Among private employees most of the card users 45(17%) have monthly income between Rs.20,000/- to Rs.50,000/- but among the non-card users, about 53(20%) have monthly income between Rs.10,000 to Rs.20,000/-. As far as self-employed are concerned in case of cardholders the maximum of 58(24%) are having monthly income in the range of Rs.50,000/- to Rs.1,00,000/-.

But among self-employed non-cardholders 55(23%) have monthly income between Rs.20,000/- to Rs.50,000/-.

**Table 4.29(a): OCCUPATION AND MONTHLY INCOME WISE
FREQUENCY DISTRIBUTION OF RESPONDENTS**

	Government Employees		Private Employees		Self-employed	
Monthly Income	Cardholders	Non-cardholders	Cardholders	Non-cardholders	Cardholders	Non-cardholders
Less than Rs.10,000/-	0(0)	1(1)	2(1)	30(11)	0(0)	13(5)
Rs.10,000 to Rs.20,000/-	3(2)	4(2)	9(3)	53(20)	7(3)	20(8)
Rs.20,000 to Rs.50,000/-	27(17)	28(17)	45(17)	42(16)	35(15)	55(23)
Rs.50,000 to Rs.1,00,000/-	33(20)	39(24)	29(11)	16(6)	58(24)	23(10)
More than Rs.1,00,000/-	25(15)	3(2)	30(11)	9(3)	17(7)	9(4)
No response				1(0)		2(1)
Total	88	75	115	151	117	122
Grand Total		163		266		239

Source: Primary Data

The data in the table 4.29(a) reveals that, in case of government employees, the number of credit card users and non-users are similar for almost all the income groups except for the highest income group. In the group with monthly incomes more than Rs.1,00,000/-, the number of card users 25(15%) are more than non-users 3(2%). This difference can be found in other types i.e. among private employees and the self-employed. It means that in **higher income groups the number of credit card users are more.**

The Chi-square test $p\text{ value} = 0$ means there is only some significant difference among the credit card users' and non-users' monthly income among the different types of employment.

4.2.1.15.3 Monthly Expenditure and Occupation-wise Composition of Respondents

Table 4.30 shows the data for frequency distribution of respondents for their Monthly Expenditure, occupation-wise. It is seen that most of the cardholders across all types of employees have monthly expenditure between 50 to 60% of their monthly income. The number among the government employees is 48(29%), private employees it is 38(14%) and self-employed it is 56(23%).

Table 4.30: COMPOSITION OF RESPONDENTS AS PER MONTHLY EXPENDITURE AND OCCUPATION

	Government Employees		Private Employees		Self-employed	
Monthly Expenditure	Cardholders	Non-cardholders	Cardholders	Non-cardholders	Cardholders	Non-cardholders
Less than 50%	13(8)	26(16)	27(10)	41(15)	18(8)	22(9)
50 to 60%	48(29)	19(12)	38(14)	30(11)	56(23)	24(10)
60 to 70%	16(10)	14(9)	23(9)	18(7)	27(11)	26(11)
70 to 80%	5(3)	7(4)	20(8)	29(11)	8(3)	33(14)
More than 80%	6(4)	6(4)	7(3)	30(11)	8(3)	15(6)
No response		3(2)		3(1)		2(1)
Total	88	75	115	151	117	122
Grand Total		163		266		239

Source: Primary Data

Note: Figures in the brackets show the percentage of grand total of each type of employee.

Among the government employees monthly expenditure for both cardholders and non-cardholders, most of the respondents have expenditure below 70% of their monthly income but in case of private employees and the self-employed there are respondents in almost all the expenditure categories.

Chi-square test $p = 0$ for monthly expenditure and occupation means reject the null hypothesis and accept that there is some significant difference among the credit card users' monthly expenditure according to the type of employment.

4.2.1.15.4 Savings/Investment and Occupation-wise Composition of Respondents

Table 4.31: FREQUENCY DISTRIBUTION OF RESPONDENTS AS PER OCCUPATION AND THEIR SAVINGS/INVESTMENT

	Government Employees		Private Employees		Self-employed	
Savings/Investment	Card-users	Non-Card-users	Card-users	Non-Card-users	Card-users	Non-Card-users
GPF/CPF/NPS	76	56	22	18	12	6
Bank Deposits/Bonds	73	50	79	113	98	99
Shares/Mutual Funds	26	16	46	18	51	23
Real Estate	43	30	44	44	67	50
Gold/Silver	17	16	31	22	25	24

Source: Primary Data

The data in table 4.31 shows that bank deposits/bonds is one of the main savings/investments of the respondents across the types of employees. Whether credit card users or not, be it government, private or self-employed all have said mostly they have bank deposits. The savings pattern in case of bank deposits is more or less similar among all the three types of employed. More responses (98 and 99 respectively for cardholders and non-cardholders) is found in case of the self-employed for bank deposits/bonds. As their monthly income may not always be constant as in case of the employed, savings or investments in bank deposit or bonds means a secure source of income.

Only in case of GPF/CPF/NPS, it the government employees have more responses compared to private and the self-employed. Among the cardholders also there were 76 responses for it. This is obvious as it is one of the mandatory benefit given by the government.

But for the other types of savings/investments, more responses are seen among the private employees and the self-employed. Responses of cardholders for Investments in shares/mutual funds was highest in case of the self-employed (51) followed by private employees (46) and the least response was from government employees (26). From this, it can be inferred that government employees with job security and savings in GPF/CPF, they do not wish to take the risk in investing shares and mutual funds.

In case of investment in real estate, there is a similar pattern among the employed but higher in case of self-employed (67). As far as investing in gold/silver, responses are less compared to other types of savings/investments.

Chi-square test $p\text{ value} = 0$ for savings/investments and occupation means reject the null hypothesis and accept that there is some significant difference among the credit card users' savings/investments according to the type of employment.

4.2.2 CREDIT CARD USAGE PATTERN

4.2.2.1 Number of Credit Cards Owned

Table 4.32 shows the frequency distribution of credit card users according to the number of credit cards owned and their type of employment.

Table 4.32: NUMBER OF CREDIT CARDS OWNED

Number of cards	Government Employees	Private Employees	Self-employed	Total
1	71(81)	67(58)	74(63)	212(66)
2 to 3	15(17)	46(40)	40(34)	101(32)
4 to 5	1(1)	1(1)	3(3)	5(2)
More than 5	1(1)	1(1)	0(0)	2(1)
Total	88	115	117	320

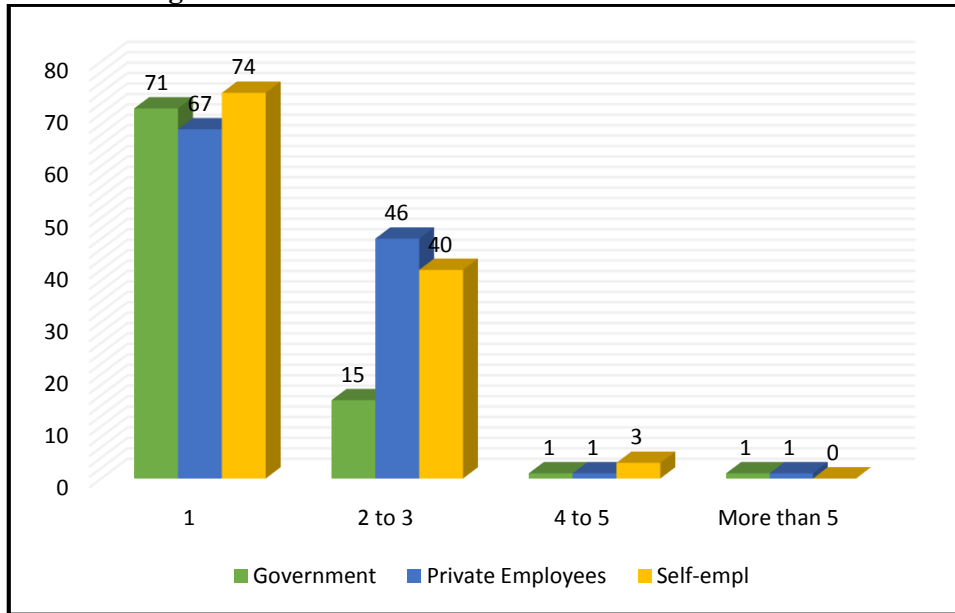
Source: Primary Data

Note: Figures in the brackets show the percentage of column total.

As per the data in table 4.32, among the government employees 71(81%), private sector employees 67(58%) and self-employed 74(63%) are having one credit card each. **Government employees are mostly single card users.** About 46(40%) of private sector employees and 40(34%) of self-employed have 2 to 3 credit cards but this number is less in case of government employees, its only 15(17%). It is seen that among government and private sector employees, only one (1%) cardholder each and 3(3%) self-employed cardholders had said that they have 4 to 5 cards. In the sample, 2 cardholders one each from government and private organization are having more than 5 credit cards. The government employee is using 7 credit cards and the private employee is using 10 credit cards.

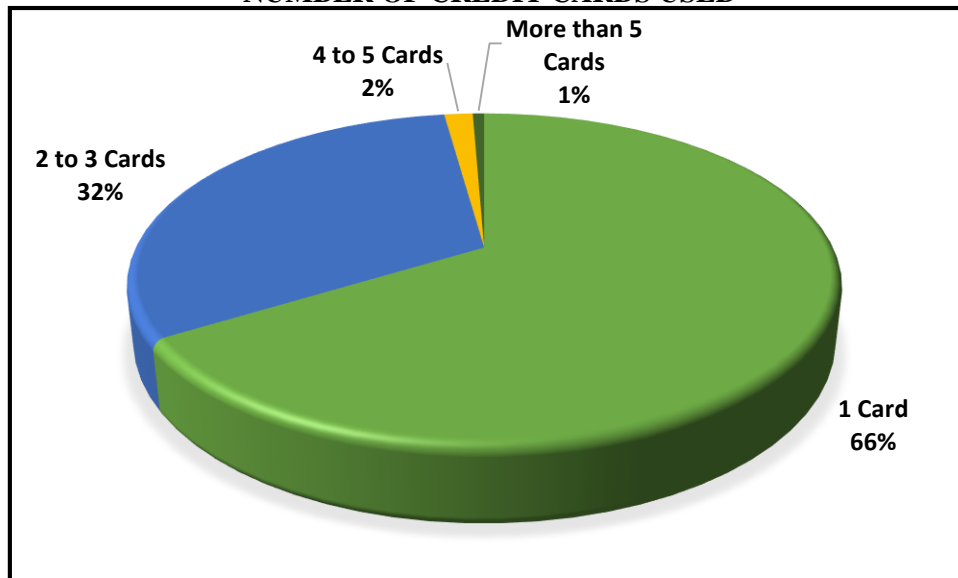
Figure 4.34 is the graphical representation of table 4.33. This **shows that although 66% of the cardholders own 1 credit card, most of the government employees 81% own one card but this number is 53% for private employees and 64% for the self-employed.**

Figure 4.34: NUMBER OF CREDIT CARDS OWNED



Source: Primary Data (refer table 4.32)

Figure 4.35: PERCENTAGE DISTRIBUTION OF CARDHOLDERS AS PER NUMBER OF CREDIT CARDS USED



Source: Primary data (refer table 4.32)

Among the credit cardholders, 66% are using only one card, 32% use 2 to 3 cards, 2% use 4 to 5 cards and only 1% have more than 5 cards. Chi-square test $p = 0$ is less than .05, is significant and hence it is accepted that there is difference in the number of credit cards owned by the different groups of cardholders.

4.2.2.2 Add-on Cards

The table 4.33 shows the number of credit cardholders having add-on cards. Add-on cards are issued to the cardholders for their immediate relatives to use along with the main card. It may be used by the spouse, siblings, children or parents. Figure 4.36 is graphical representation of the data.

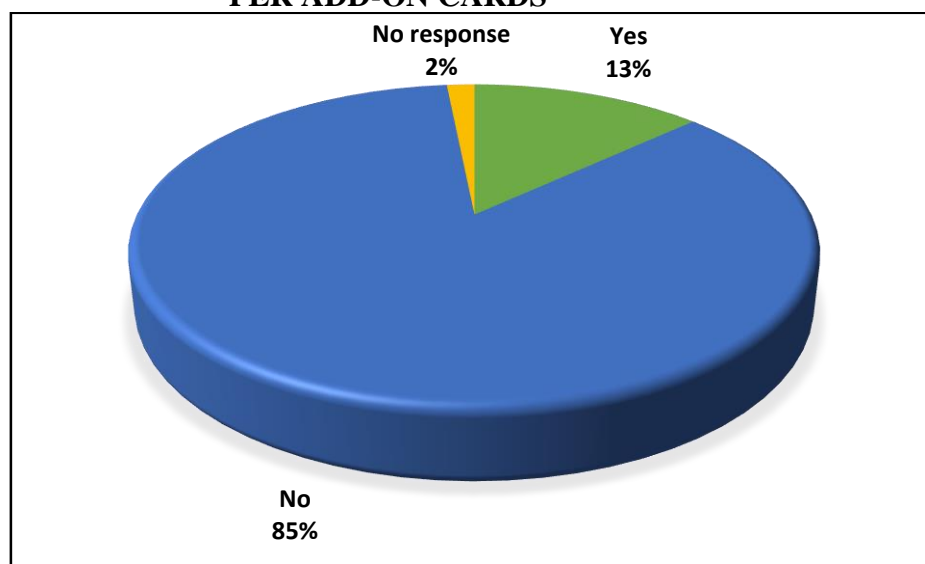
Table 4.33: FREQUENCY DISTRIBUTION OF CARDHOLDERS AS PER ADD-ON CARDS

Add-On Cards	Frequency
Yes	42(13)
No	273(85)
No response	5(2)
Total	320

Source: Primary Data

Note: Figures in the brackets show the percentage of column total.

Figure 4.36: PERCENTAGE DISTRIBUTION OF CARDHOLDERS AS PER ADD-ON CARDS



Source: Primary Data (refer table 4.33)

Most of the credit card holders do not have add-on card. 273(85%) of cardholders do not have add-on card but only 42(13%) have add-on cards. About 5(2%) cardholders did not give response to this question. Having add-on cards can mean increase in spending.

4.2.2.3 Duration of Credit Card Use

The data in table 4.34 reveals the duration of credit card use by the cardholders in Pune city. The frequency distribution is per their nature of employment. Figure 4.32 shows its graphical representation. Figure 4.33 shows the percentage distribution of cardholders as per the duration of card use.

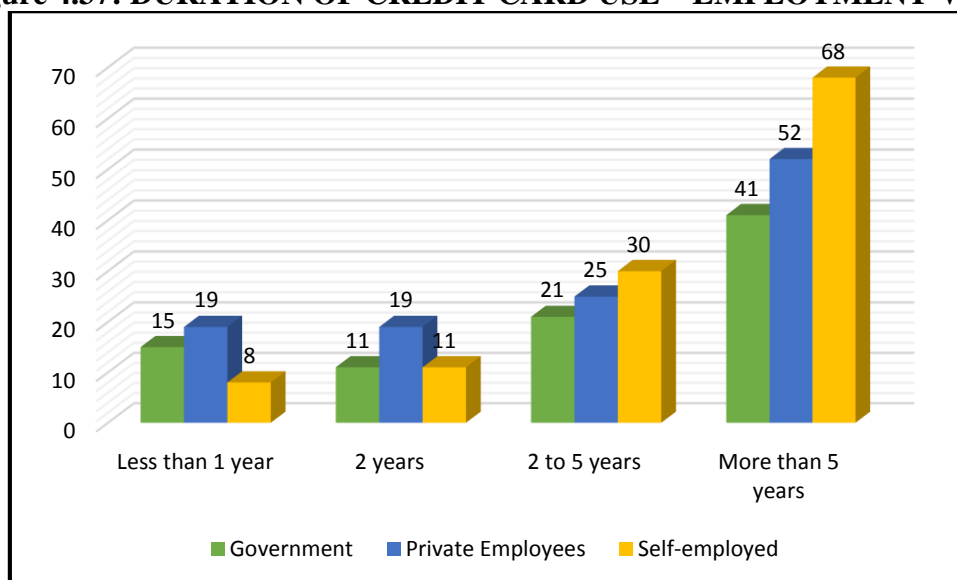
Table 4.34: DURATION OF CREDIT CARD USE AS PER EMPLOYMENT TYPE OF CARDHOLDERS

Duration	Govt. Employees	Private Employees	Self-employed	Total
Less than 1 year	15(17)	19(17)	8(7)	42(13)
2 years	11(13)	19(17)	11(9)	41(13)
2 to 5 years	21(24)	25(22)	30(26)	76(24)
More than 5 years	41(47)	52(45)	68(58)	161(50)
	88	115	117	320

Source: Primary Data

Note: Figures in the brackets show the percentage of column total.

Figure 4.37: DURATION OF CREDIT CARD USE – EMPLOYMENT-WISE



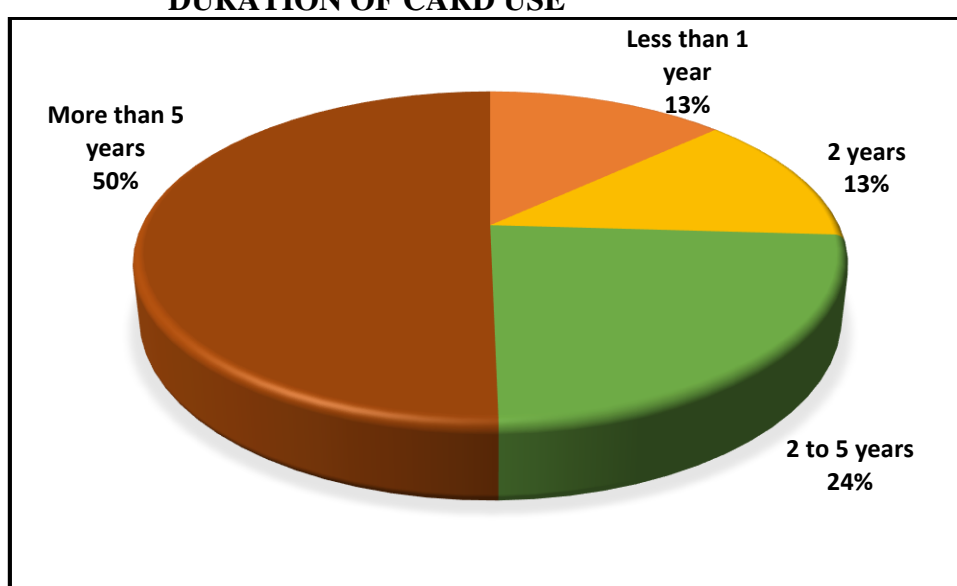
Source: Primary data (refer table 4.34)

According to table 4.34, most of the cardholders 161(50%) are using the credit card for more than 5 years. This percentage is among the government employees 41(47%), private employees 52(45%) and self-employed 68(58%).

Around 76(24%) are using the card for 2 to 5 years. In this group, government employees 21(24%), private employees 25(22%) and self-employed 30(26%) are using the cards.

For a duration less than one year and a duration of two years, there is almost equal frequency 42(13%) and 41(13%) respectively. It is 15(17%) and 11(13%) respectively for government employees, 19(17%) for both duration in case of private employees and 8(7%) and 11(9%) in case of self-employed.

Figure 4.38: PERCENTAGE DISTRIBUTION OF CARDHOLDERS AS PER DURATION OF CARD USE



Source: Primary data (refer table 4.34)

It is obvious from figure 4.38 that 50% of the credit cardholders in the city are using the card for more than five years. The data says that the average duration of credit card use in Pune city is 5.05 years.

Chi-square test $p < 0.05$ is statistically significant and hence it supports the hypothesis that duration of card use depends on type of employment.

4.2.2.4 Credit card use since Demonetization

To know the effect of demonetization in India on 8th November 2016, a question on whether credit card use was before demonetization or after it was included for those who were using the card for less than a year. Table 4.35 shows the data regarding the duration of credit card use for those using is for less than one year.

Table 4.35: CREDIT CARD USE SINCE DEMONETIZATION

Demonetization	Govt. Employees	Private Employees	Self-employed	Total
Before	4	6	5	15(68)
After	3	3	1	7(32)
Total	7	9	6	22

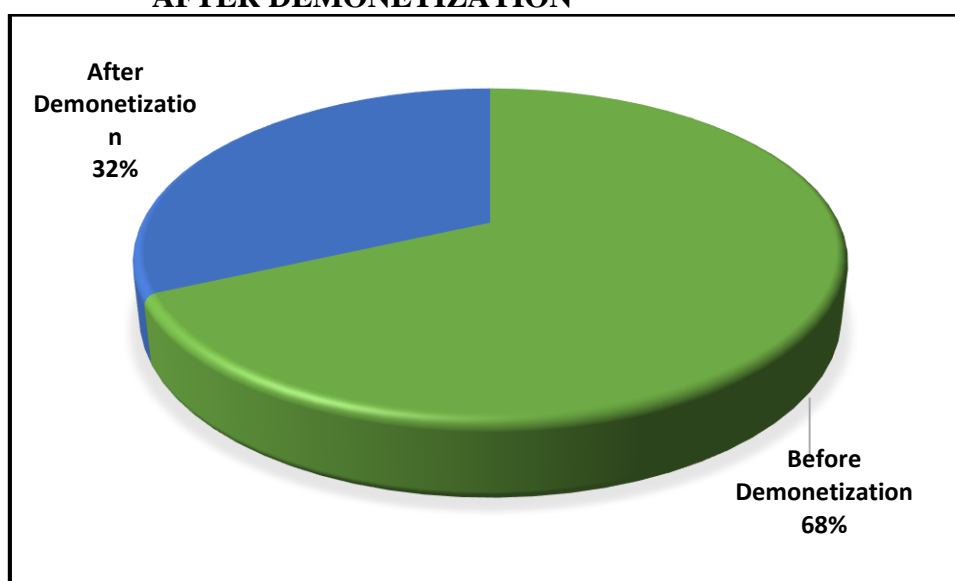
Source: Primary Data

Note: Figures in the brackets show the percentage of column total.

The table 4.35 shows that the use of credit card after demonetization among the different types of employees is similar for both government and private employees but among the self-employed it is less.

It is seen that 32% of cardholders using it for less than one year has started using it after demonetization (refer figure 4.39).

Figure 4.39: PERCENTAGE DISTRIBUTION OF CARDHOLDERS USING IT AFTER DEMONETIZATION



Source: Primary Data (refer table 4.35)

4.2.2.5 Type of cards

The respondents using credit card had to answer the question on type of card they used. During the survey it was realized that nearly fifty percent of the cardholders were not sure about the type of card they were using. They had to look at their cards and then answer, and many just ticked one of the options. As the respondents may have more than one credit card they could select more than one type of card, the table shows the

number of responses, hence it is the frequency of responses and not the frequency of respondents.

Table 4.36: TYPE OF CREDIT CARDS USED

Type of Cards	Government Employees	Private Employees	Self-employed	Frequency of responses
Silver	6	16	14	36
Gold	33	24	32	89
Platinum	51	67	74	192
Titanium	7	31	18	56
CO-Branded	0	2	1	3
International	3	15	10	28

Source: Primary Data

Table 4.36 shows that most of them had Platinum card (about 192) followed by Gold card (89), Titanium (56), then Silver card (36), International card (28). For Co-branded card there were only 3 responses. This shows that the concept of co-branded cards in our country is not that familiar as in case of the other countries.

Among the self-employed using Platinum card is the highest with 74 responses, followed by private sector employees (67) and then government employees (51). Across all the types of employment, the type of card use shows a similar trend that is, number of responses increase from silver to platinum card and from titanium the number declines. As the type of card depends on their incomes most of the cardholders either have silver, gold or platinum cards.

Table 4.37 shows the type of credit card use as per the income groups. Type of card depends on the income of the cardholders. Silver and gold are considered basic card and with higher incomes, one can get platinum, titanium cards.

Table 4.37: INCOME-WISE CREDIT CARD TYPE USED

Income Group	Silver	Gold	Platinum	Titanium	Co-branded	International
Less than Rs. 10,000/-	6	0	0	0	0	0
Rs.10,000 to Rs.20,000/-	11	5	0	0	1	2
Rs.20,000 to Rs.50,000/-	12	33	56	16	0	4
Rs.50,000 to Rs.1,00,000/-	6	33	84	22	1	13
More than Rs.1,00,000/-	5	18	52	18	1	9
Total	34	89	192	56	3	28

Source: Primary Data

Note: Figures in the brackets show the percentage.

Data in table 4.37 shows that in higher income groups, number of cardholders having platinum and titanium cards increases. Using co-branded and international card also increases with increase in income.

4.2.2.6 Card Payment Network

Table 4.38 shows the various payment card network of the different types of cards used.

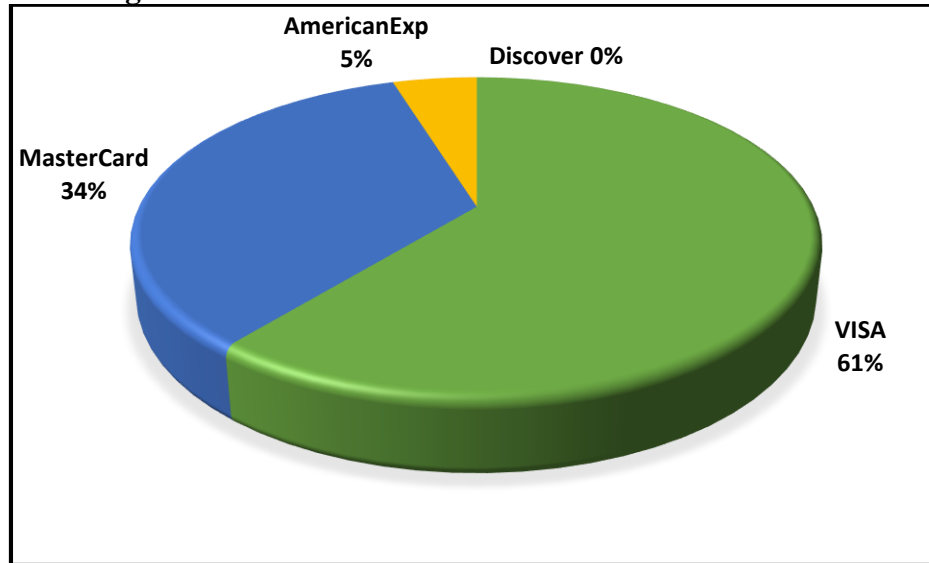
Table 4.38: PAYMENT CARD NETWORK

Payment Network	Frequency of Responses
VISA	243(61)
MasterCard	137(34)
American Express	19(5)
Discover	0

Source: Primary Data

VISA has the highest number of responses of 243, followed by MasterCard (137). Only 19 response for American Express as this is mainly for the high end users. No cardholder was using card by Discover payment network. Figure 4.40 is the graphical representation of table 4.38.

Figure 4.40: TYPE OF CARD PAYMENT NETWORK



Source: Primary data (refer table 4.38)

4.2.2.7 Credit Limit

Credit limit for a cardholder depends on his income and type of card. Table 4.39 shows credit limit of cardholders as per their employment.

Table 4.39: CREDIT LIMIT OF CARDHOLDERS

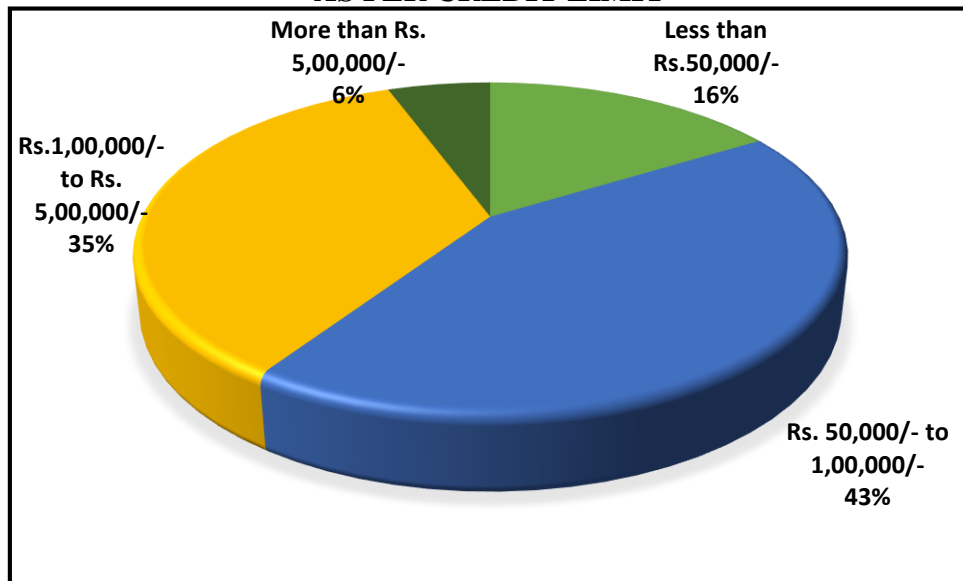
Credit Limit	Govt. Employee	Private Employee	Self-Employed	Total
Less than Rs.50,000/-	12(14)	24(21)	16(14)	52(16)
Rs.50,000/- to 1,00,000/-	38(43)	52(45)	48(41)	138(43)
Rs.1,00,000/- to Rs.5,00,000/-	35(40)	30(26)	47(40)	112(35)
More than Rs.5,00,000/-	3(3)	9(8)	6(5)	18(6)
Total	88	115	117	320

Source: Primary Data

Note: Figures in the brackets show the percentage of column total.

Data in table 4.39 shows that 138(43%) of the cardholders have credit limit in the range of Rs.50,000/- to 1,00,000/-. About 38(43%) of government employees, 52(45%) of private employees and 48(41%) of self-employed have credit limit in this range. About 112(35%) have a credit limit of Rs.1,00,000/- to Rs.5,00,000/-, followed by 52(16%) having less than Rs.50,000/- and only 18(6%) having a credit limit of more than Rs.5,00,000/- (see figure 4.41).

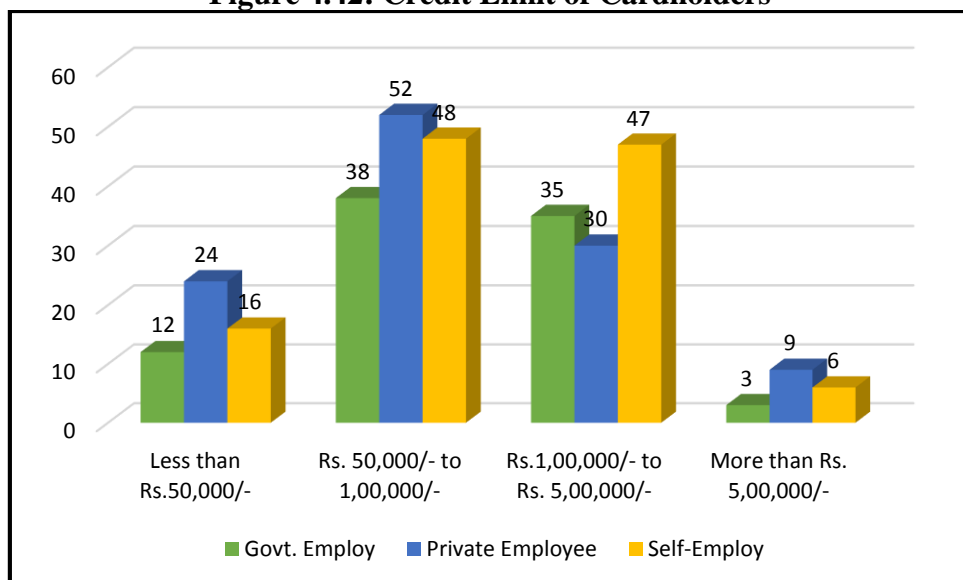
Figure 4.41: PERCENTAGE DISTRIBUTION OF CARDHOLDERS AS PER CREDIT LIMIT



Source: Primary Data (refer table 4.39)

Figure 4.42 is the graphical representation of table 4.39. The data shows that private employees have the highest frequency of cardholders across all the ranges except for the range of Rs.1,00,000/- to Rs.5,00,000/-. Most of the self-employed 47(40%) have credit limit in the range of Rs.1,00,000/- to Rs.5,00,000/-.

Figure 4.42: Credit Limit of Cardholders



Source: Primary Data (refer table 4.39)

Chi-square test $p < 0.05$ is significant and hence it is accepted that there is difference in credit limit according to the type of employment.

4.2.2.8 Frequency of Credit Card use in a month

The cardholders were asked to select the option on frequency of credit card use in a month (table 4.40).

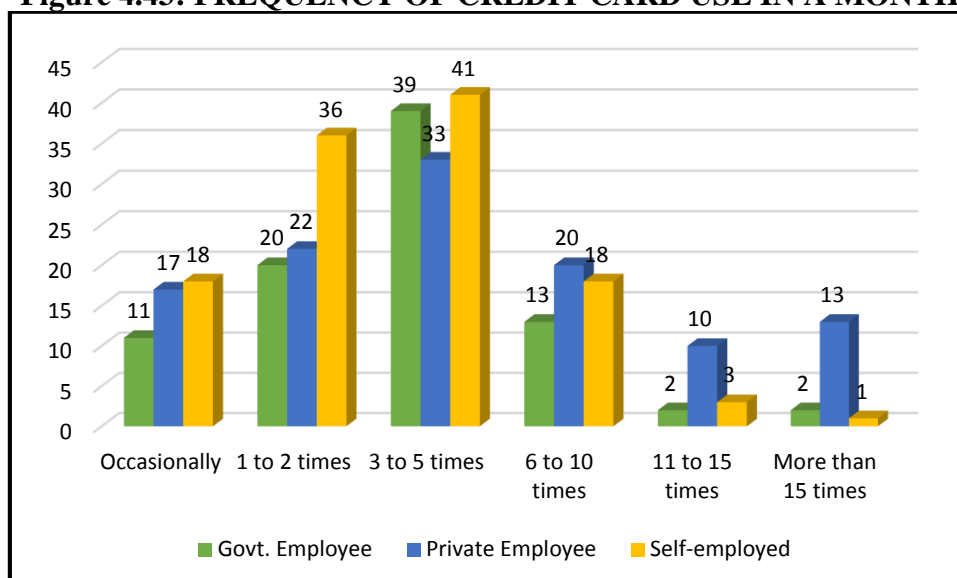
Table 4.40: FREQUENCY OF CREDIT CARD USE IN A MONTH

Frequency of Credit Card Use in a month	Government Employees	Private Employee	Self-employed	Total
Occasionally	11(13)	17(15)	18(15)	46(14)
1 to 2 times	20(23)	22(19)	36(31)	78(24)
3 to 5 times	39(44)	33(29)	41(35)	113(35)
6 to 10 times	13(15)	20(17)	18(15)	51(16)
11 to 15 times	2(2)	10(9)	3(3)	15(5)
More than 15 times	2(2)	13(11)	1(1)	16(5)
No response	1(1)			1(0)
Total	88	115	117	320

Source: Primary Data

Table 4.40 shows maximum number of cardholders 113(35%) use their card about 3 to 5 times in a month. In this category, 39(44%) of the government employees, 33(29%) of private employees and 41(35%) of self-employed use credit card for 3 to 5 times in a month. Around 78(24%) use the card once or twice in a month whereas, 46(14%) use it occasionally. From figure 4.43 it is clear that most of the cardholders use the card maximum up to 5 times in a month. It is seen that the self-employed number is more among the first three ranges of frequency of card use in a month i.e. occasionally, 1 to 2 times and 3 to 5 times. But it is seen that private employees use the card for even more number of times. There were 13(11%) private employees who use the card for more than 15 times in a month. The government and self-employed number for this range is very small.

Figure 4.43: FREQUENCY OF CREDIT CARD USE IN A MONTH



Source: Primary Data (refer table 4.40)

Chi-square test $p < 0.05$ is marginally significant therefore it can be stated that there is difference in the frequency of credit card use in a month among three types of employment.

4.2.2.9 Percentage of Credit Limit Used

Table 4.44 shows the frequency distribution of cardholders (employment-wise) as per the credit limit they use.

Table 4.41: PERCENTAGE OF CREDIT LIMIT USED

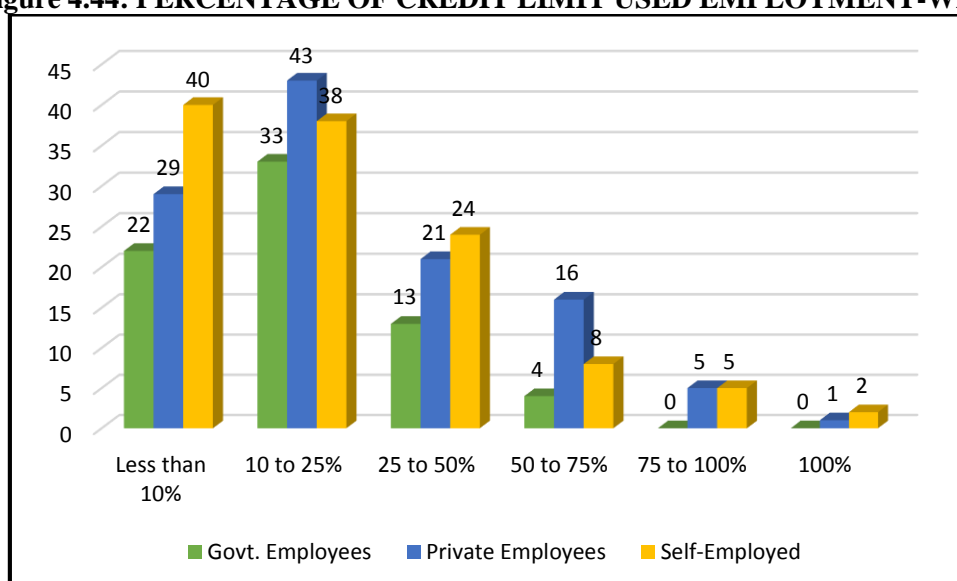
Percentage of Credit Limit Use	Government Employees	Private Employees	Self-Employed	Total
Less than 10%	22(25)	29(25)	40(34)	91(28)
10 to 25%	33(38)	43(37)	38(32)	114(36)
25 to 50%	13(15)	21(18)	24(21)	58(18)
50 to 75%	4(5)	16(14)	8(7)	28(9)
75 to 100%	0	5(4)	5(4)	10(3)
100%	0	1(1)	2(2)	3(1)
No response	16(18)			16(5)
Total	88	115	117	320

Source: Primary Data

Note: Figures in the brackets show the percentage of column total.

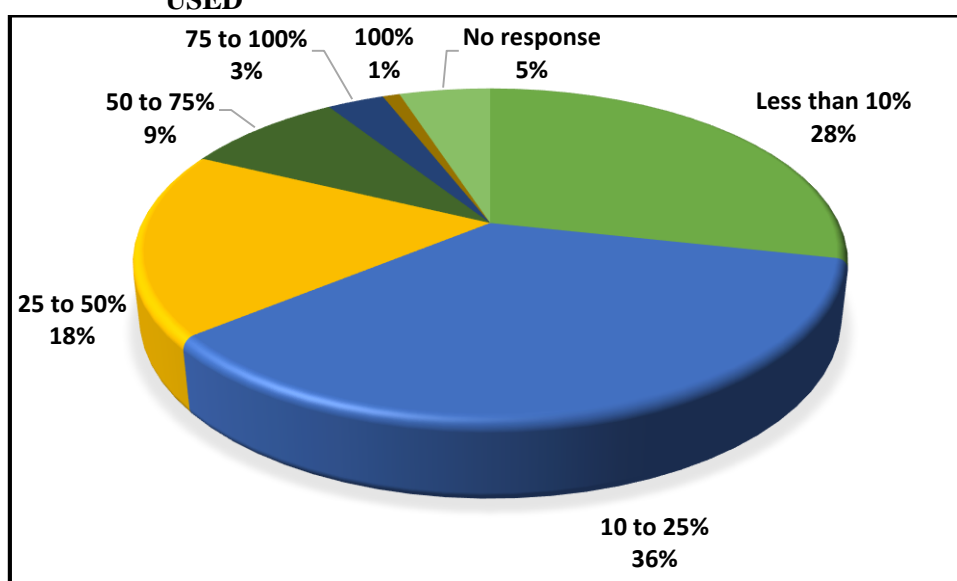
The table 4.41 reveals that most of the cardholders 114(36%) use about 10 to 25% of their credit limit. In this group, among the government employees about 33(38%), private employees 43(37%) and self-employed 38(32%) use 10 to 25% of their credit limit. About 91(28%) use only less than 10% of their credit limit. Most of the self-employed 40(34%) is in this range, and among government and private employees are 22(25%) and 29(25%) respectively in this range. The data shows that the number of cardholders becomes less as the percentage of credit limit increases across all types of employees, refer figure 4.44.

Figure 4.44: PERCENTAGE OF CREDIT LIMIT USED EMPLOYMENT-WISE



Source: Primary data (refer table 4.41)

Figure 4.45: PERCENTAGE OF RESPONDENTS AS PER CREDIT LIMIT USED



Source: Primary data (refer table 4.41)

Chi-square test $p < 0.05$ is marginally significant therefore it can be stated that there is difference in the use of credit limit across the employment type to some extent.

4.2.2.10 Awareness of Reward Points

As per table 4.42, about 292(91%) cardholders are aware of the reward points that one gets when using a credit card. Only 28(9%) have said they did not know about reward points figure 4.46.

Table 4.42: DISTRIBUTION OF CARDHOLDERS AS PER AWARENESS OF REWARD POINTS

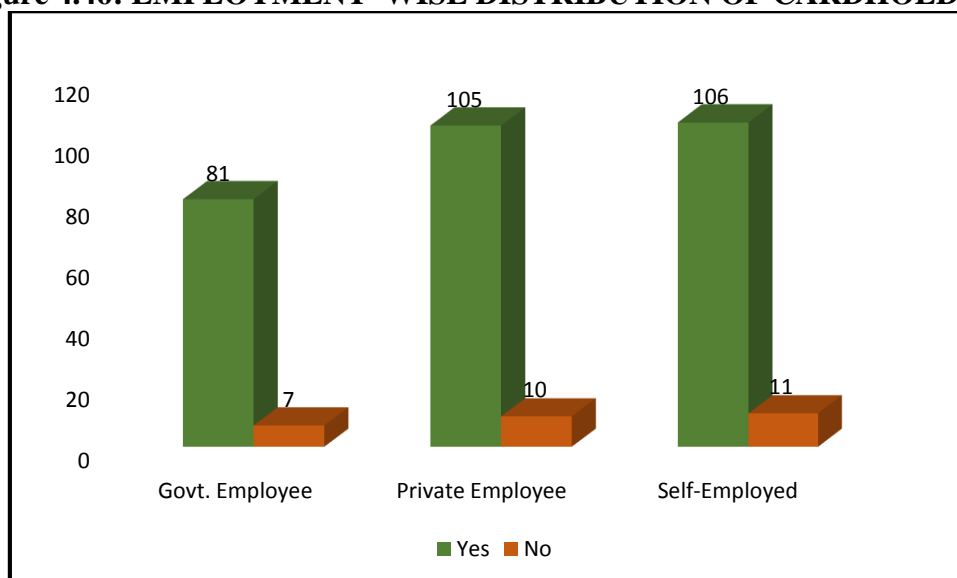
Aware of Reward Points	Government Employees	Private Employees	Self-Employed	Total
Yes	81(92)	105(91)	106(91)	292(91)
No	7(8)	10(9)	11(9)	28(9)
Total	88	115	117	320

Source: Primary Data

Note: Figures in the brackets show the percentage of column total.

The data in table 4.42 reveals that across all types of cardholders, there is equal percentage of cardholders who are aware about reward points.

Figure 4.46: EMPLOYMENT-WISE DISTRIBUTION OF CARDHOLDERS



Source: Primary Data (refer table 4.42)

There is no difference between types of employees with regard to awareness of reward points.

This is proved by the chi-square test $p = 0.935942948$ more than 0.05 is insignificant at 1df. It means there is no significant difference between the cardholders regarding awareness of reward points.

4.2.2.11 Accumulate Reward Points

For the 292 cardholders, it was asked whether they accumulate reward points. Table 4.43 shows the data regarding accumulation of reward points. This is one of the factors which would facilitate consumption and expenditure.

Table 4.43: DISTRIBUTION OF CARDHOLDERS AS PER ACCUMULATION OF REWARD POINTS

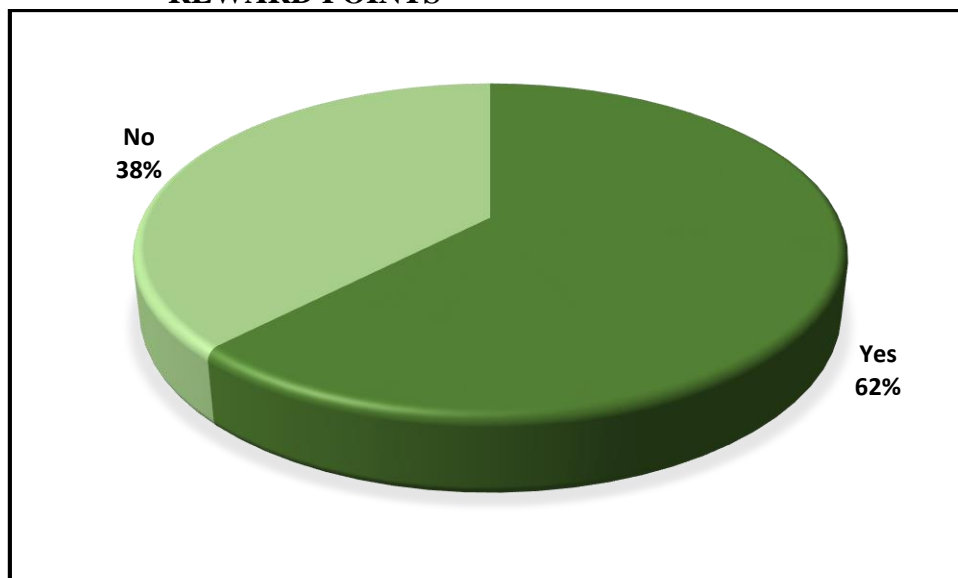
Accumulate Reward Points	Government Employees	Private Employees	Self-Employed	Total
Yes	54(67)	76(72)	52(49)	182(62)
No	27(33)	29(28)	54(51)	110(38)
Total	81	105	106	292

Source: Primary Data

Note: Figures in the brackets show the percentage of column total.

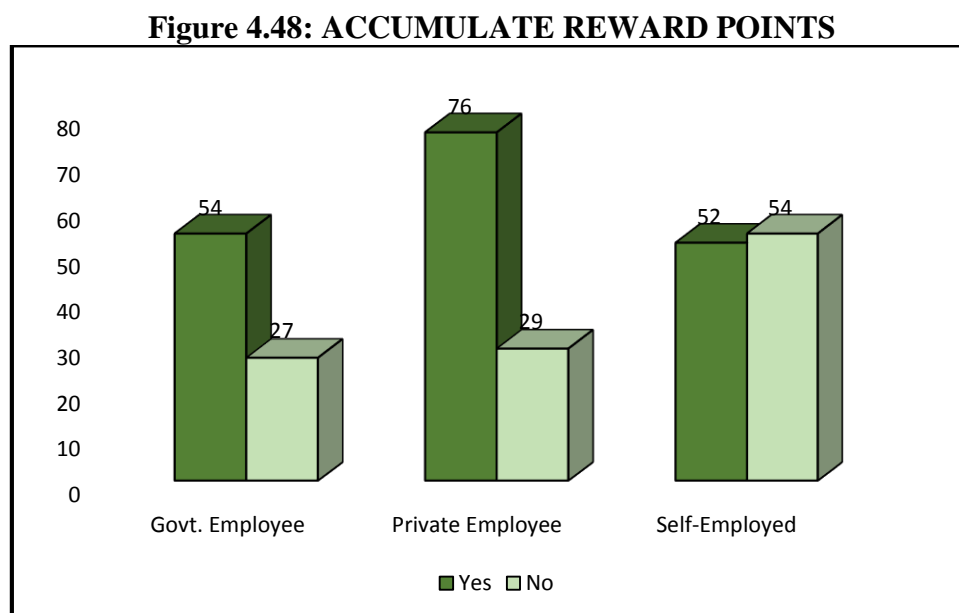
Figure 4.47 shows the percentage of cardholders who accumulated reward points and who do not. It shows that 182(62%) accumulate reward points and 110(38%) don't accumulate reward points.

Figure 4.47: PERCENTAGE OF CARDHOLDERS ACCUMULATING REWARD POINTS



Source: Primary Data (refer table 4.43)

It is seen that it is the private employees 76(72%), who accumulate reward points mostly, followed by 54(67%) of government employees and only 52(49%) of the self-employed accumulate reward points (Figure 4.48).



Source: Primary Data (refer table 4.43)

Chi-square test p value = 0.001415814 less than 0.05, is significant and hence it is accepted that there is difference among the types of employment with regard to accumulating reward points.

4.2.2.12 Credit Card Use

Respondents were asked whether they used the credit card for their personal or business use. Table 4.44 shows the responses for this question. They could select more than one response.

Table 4.44: CREDIT CARD USE

Credit card use	Government Employee	Private Employee	Self-Employed	Total
Personal Use	88	115	113	316(99)
Business Use	3	9	29	41(13)
Personal & Business Use	3	9	26	38
Only Business use			3	3
No response			1	1

Source: Primary Data

Note: Figures in parenthesis are percent out 320 cardholders

Data in table 4.44 shows that among the 320 credit cardholders, 316 (99%) use it for personal use and 41 (13%) for business use. Among those 41, about 38 use the card for both personal as well as business use and only 3 self-employed use it only for business purpose. There are 3(three) government employees and 9(nine) private employees who use the card for business purpose as well. Among the self-employed 26 responses for both purposes were recorded. The 3(three) response of self-employed for only business purpose included 2(two) businessmen and 1(one) chartered accountant.

4.2.2.13 Purpose of Credit Card Use

The cardholders could select multiple purposes for which they used the credit card. Table 4.45 shows the details of purpose of credit card use by the various types of employees.

Table 4.45: PURPOSE OF CREDIT CARD USE

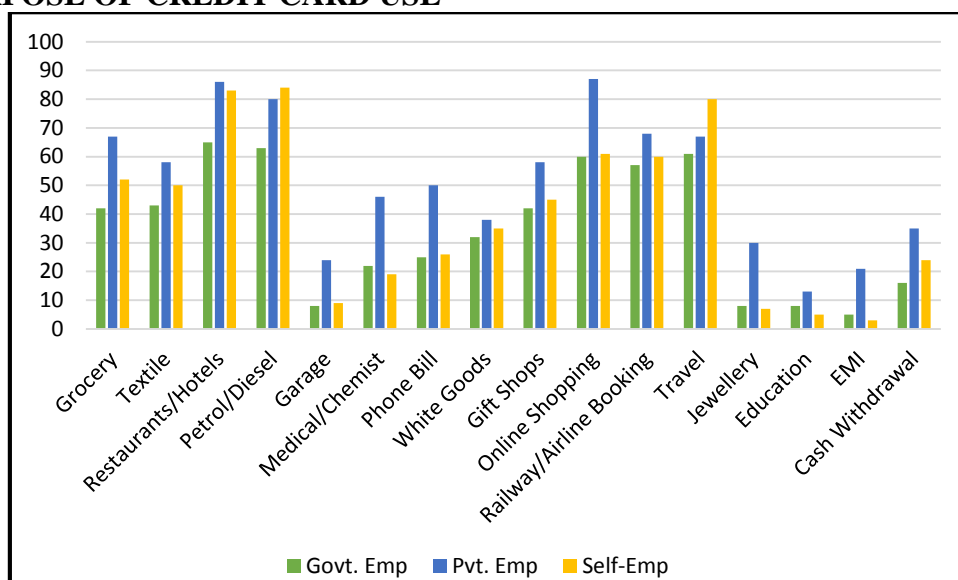
Purpose	Government Employees	Private Employees	Self Employed	Total	In %
Grocery	42	67	52	161	50
Textile	43	58	50	151	47
Restaurants/Hotels	65	86	83	234	73
Petrol/Diesel	63	80	84	227	71
Garage	8	24	9	41	13
Medical/Chemist	22	46	19	87	27
Phone Bill	25	50	26	101	32
White Goods	32	38	35	105	33
Gift Shops	42	58	45	145	45
Online Shopping	60	87	61	208	65
Railway/Airline Booking	57	68	60	185	58
Travel	61	67	80	208	65
Jewellery	8	30	7	45	14
Education	8	13	5	26	8
EMI	5	21	3	29	9
Cash Withdrawal	16	35	24	75	23

Source: Primary Data

Table 4.45 shows that credit card is used for paying the bills at restaurants/hotels by most of the cardholders 234(73%), this is followed by paying for petrol/diesel 227(71%). The number of responses for online shopping and use while travel is same 208(65%). The credit card is least used for education purpose 26(8%). Figure 4.49 shows the distribution of purpose of credit card use.

Among the different types of employees, it is found that in each type of purpose of use it is the private employees who use them in highest number except in case for travel where it is self-employed who use is more often. For travel it is 61 for government employees, 67 for private employees and 80 for self-employed.

Figure 4.49: DISTRIBUTION OF CREDIT CARDHOLDERS AS PER PURPOSE OF CREDIT CARD USE



Source: Primary Data (refer table 4.45)

From table 4.45 it can be seen that there is 73% response for restaurants/hotels, then petrol/diesel 71%, followed by online shopping and travel 65% each. For railway/airline booking it is 58%, grocery 50%, textile 47% and gift shops 45%. Buying white goods/domestic appliances response is 33% and paying the phone bill using credit card is 32%, expenses for medical or at chemist is 27% and withdrawing cash through credit card is 23%. Credit cardholders in the city using the cards for purchasing jewellery is 14% and in garage it is 13%. For paying EMIs only 9% response and educational purpose it is the least at only 8% response.

Chi-square test $p = 0$, is less than .05, is significant and hence it is proved that there is a difference in the purpose of credit card use among the different groups of cardholders.

4.2.2.14 Cash Withdrawal using Credit Cards

4.2.2.14.1 Frequency of Cash withdrawal

It was found that there is about 75(23%) of cardholders are using credit cards for withdrawing cash (table 4.46 and figure 4.50). Those using credit cards for cash

withdrawal where asked about the frequency of withdrawing cash using the card. Table 4.46 shows the composition of cardholders using credit card for withdrawing cash.

Table 4.46: FREQUENCY OF CASH WITHDRAWAL

How often cash is withdrawn	Government Employees	Private Employees	Self Employed	Total
Frequently (at least once a month)	2(2)	6(5)	4(3)	12(4)
Not Frequently (2 to 4 times a year)	2(2)	5(4)	3(3)	10(3)
Rarely (once in a year or less)	12(14)	24(21)	17(15)	53(17)
Total	16(18)	35(30)	24(21)	75(23)
Grand total of Cardholders	88	115	117	320

Source: Primary Data

Note: Figures in the brackets show the percentage of grand total (column).

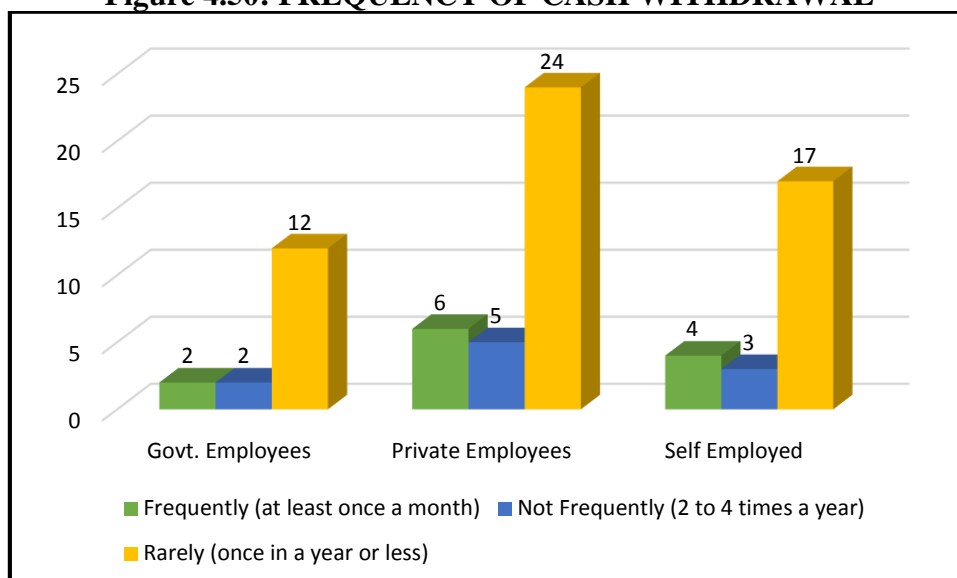
Table 4.46 shows that it is the private employees 35(30%) who use credit card for withdrawing cash the most. Then it is the self-employed 24(21%) and government employees 16(18%) who use credit card for cash withdrawal. But it is found that across all the types of employed it is used rarely 53(17%) i.e. once in a year only the card is used for withdrawing cash. There are 12(4%) cardholders frequently (at least once a month) use it and 10(3%) use it not-frequently i.e. only 2 to 4 times, in a year for withdrawing cash. Figure 4.50 is the graphical representation of table 4.46.

Among the government employees 2(2%) each use it frequently and not-frequently i.e. only 2 to 4 times in a year. About 12(14%) use the card rarely (once in a year or less) for cash withdrawal.

In case of private employees 6(5%) use it frequently, 5(4%) use it not-frequently and 24(21%) use it rarely for cash withdrawal.

Among the self-employed 4(3%) use it frequently, 3(3%) use it no-frequently and 17(15%) use it rarely for withdrawing cash.

Figure 4.50: FREQUENCY OF CASH WITHDRAWAL



Source: Primary Data (refer table 4.46)

The Chi Square $p = 0.991859163$ being greater than alpha is insignificant. It means there is no significant difference among the various employees in using the credit card for withdrawing cash.

4.2.2.14.2 Employment-wise distribution of Credit Cardholders for frequency of cash withdrawal

Table 4.47(a) shows distribution of employed cardholders, using credit card for cash withdrawal and table 4.47(b) shows the distribution of self-employed cardholders, using credit card for cash withdrawal

Table 4.47(a): DISTRIBUTION OF EMPLOYED CARDHOLDERS AS PER FREQUENCY OF CASH WITHDRAWAL

Cash Withdrawal ➡	Frequently	Not frequently	Rarely	Total	
	Employed using card for cash withdrawal				Total Employees
Permanent Govt. Employees	02(3)	01(1)	08(11)	11(14)	76
Temporary Govt. Employees	0	01(8)	04(33)	05(42)	12
Permanent Private Employees	03(3)	05(5)	21(20)	29(28)	103
Temporary Private Employees	03(25)	0	03(25)	06(50)	12
Total	08(4)	07(3)	36(18)	51(25)	203

Source: Primary Data

Note: Figures in parenthesis are percentage of row total.

Table 4.47(b): DISTRIBUTION OF SELF-EMPLOYED CARDHOLDERS AS PER FREQUENCY OF CASH WITHDRAWAL

Cash Withdrawal →	Frequently	Not frequently	Rarely	Total	
	Self-Employed using card for cash withdrawal				Total Self-employed
Business	03(6)	03(6)	08(16)	14(11)	49
Doctor	0	0	0	0	23
Lawyer	01(10)	0	01(10)	02(2)	10
Consultant	0	01(7)	03(21)	04(3)	14
CA	0	0	0	0	19
Agents	0	0	06(67)	06(5)	9
Total	04	04	18	26	124
Grand Total	12	11	54	77	

Source: Primary Data

Note: Figures in parenthesis are percentage of row total.

The data in table 4.47(a) shows that among the government employees, 11(76%) of the permanent government employees are using credit card for withdrawing cash. Among them 2(3%) are using the card frequently for withdrawing cash, 1(1%) use it not-frequently and 8(11%) use it rarely for withdrawing cash. About 5(42%) of the temporary employees are using credit card for withdrawing cash. Among them 1(8%) use it not-frequently and 4(33%) use it rarely for withdrawing cash.

Among the permanent private employees, 3(3%) use the card frequently, 5(5%) use it not-frequently and 21(20%) use it rarely for withdrawing cash. Among the temporary private employees, 3(25%) use the card frequently and another 3(25%) use it rarely to withdraw cash.

Among the 203 salaried cardholders, 51(25%) are using the card to withdraw cash. It is the temporary employees who are mostly withdrawing cash using the credit card. Among the government temporary employees 5(42%) and private temporary employees 6(50%) use card for cash withdrawal.

Chi-square test p value = 0 proves that there is significant difference among the permanent and temporary employees in using the credit card for withdrawing cash.

As per table 4.47(b), in case of self-employed, the medical practitioners and chartered accountants are not using the card for cash withdrawal. Among the business-men 3(6%) each use card for cash withdrawal frequently and not frequently but 8(16%) use the

card rarely for cash withdrawal. Among the lawyers, one each uses the card frequently and rarely. In case of consultants, one uses it not-frequently and 3(21%) use it rarely for cash withdrawal. Among the agents 6(67%) use the card rarely for withdrawing cash.

4.2.2.14.3 Monthly Income-wise distribution of Credit Cardholders who withdraw cash using credit card

Monthly Income-wise distribution of Salaried Employees

Table 4.48(a) shows the monthly income frequency distribution of employed cardholders who use credit card for withdrawing cash. This table shows relation between the monthly income and withdrawing cash, and nature of employment and cash withdrawal i.e. whether temporary or permanent employees of government organization or private firms use the card for cash withdrawal.

Table 4.48(a): INCOME-WISE FREQUENCY DISTRIBUTION OF EMPLOYED CARDHOLDERS WITHDRAWING CASH USING CREDIT CARD

Monthly Income	Government Employees		Total	Private Employees		Total	Grand Total
	Permanent	Temporary		Permanent	Temporary		
Less than Rs. 10,000/-	0(0)	0(0)	0(0)	0(0)	1(8)	1(1)	1(0)
Rs.10,000 to Rs.20,000/-	1(1)	0(0)	1(1)	3(3)	2(17)	5(4)	6(3)
Rs.20,000 to Rs.50,000/-	2(3)	4(33)	6(7)	13(13)	3(25)	16(14)	22(11)
Rs.50,000 to Rs.1,00,000/-	6(8)	1(8)	7(8)	6(6)	0(0)	6(5)	13(6)
More than Rs.1,00,000/-	2(3)	0(0)	2(2)	7(7)	0(0)	7(6)	9(4)
Total	11(14)	5(42)	16(18)	29(28)	6(50)	35(30)	51(25)
Grand Total	76	12	88	103	12	115	203

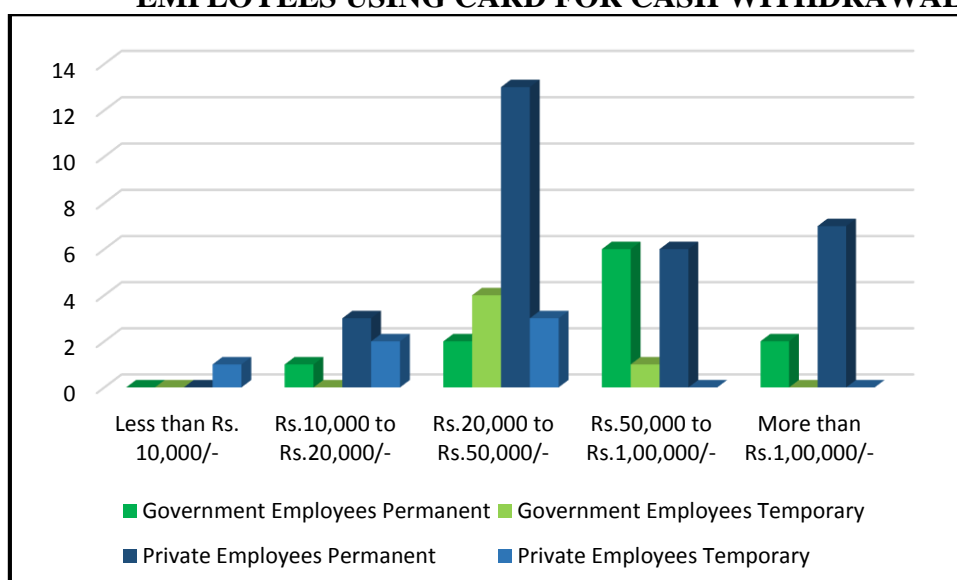
Source: Primary Data

Note: Figures in the brackets show the percentage of grand total (column).

Data in table 4.48(a) shows that out of 203 salaried cardholders in Pune city, 51(25%) use credit card for cash withdrawal.

- Among the government employees 16(18%) use the card for cash withdrawal. It is found that among the permanent government employees i.e. out of 76, 11(14%) and among temporary government employees, i.e. out of 12, 5(42%) withdraw cash using credit card.
- Among the private employees 35(30%) use the card for cash withdrawal. Out of 103 permanent private employees 29(28%) and out of 12 temporary private employees 6(50%) use the card for withdrawing cash.
- Among both government and private employees, most of the temporary employees use credit card for withdrawing cash.

Figure 4.51: MONTHLY INCOME-WISE DISTRIBUTION OF SALARIED EMPLOYEES USING CARD FOR CASH WITHDRAWAL



Source: Primary Data (refer table 4.48(a))

Among the salaried employees those having monthly income between Rs.20,000/- to Rs.50,000/- are using card for withdrawing cash.

Monthly Income-wise distribution of the Self-employed cardholders withdrawing cash using credit card

Table 4.48(b) shows the monthly income frequency distribution of self-employed cardholders who use credit card for withdrawing cash. This table shows relation between the monthly income and withdrawing cash, and type of self-employed and cash withdrawal i.e. among businessmen, medical practitioners, lawyers, consultants, chartered accountants (CA) and agents/brokers, who all use the card for cash withdrawal.

Table 4.48(b): INCOME-WISE FREQUENCY DISTRIBUTION OF EMPLOYED CARDHOLDERS WITHDRAWING CASH USING CREDIT CARD

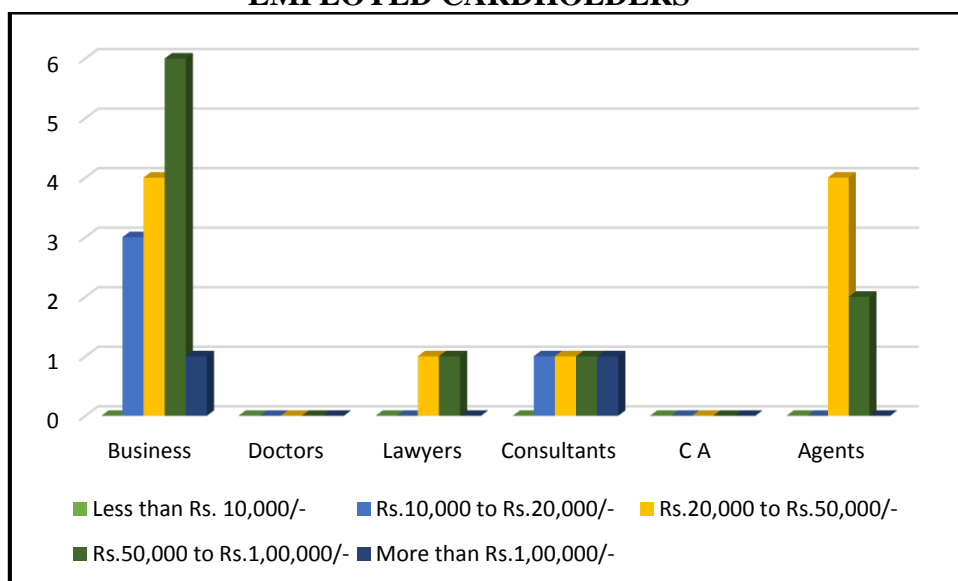
Monthly Income	Business	Doctors	Lawyers	Consultants	C.A.	Agents	Total
Less than Rs. 10,000/-	0(0)	0	0(0)	0(0)	0	0(0)	0(0)
Rs.10,000 to Rs.20,000/-	3(6)	0	0(0)	1(7)	0	0(0)	4(3)
Rs.20,000 to Rs.50,000/-	4(8)	0	1(10)	1(7)	0	4(44)	10(8)
Rs.50,000 to Rs.1,00,000/-	6(12)	0	1(10)	1(7)	0	2(22)	10(8)
More than Rs.1,00,000/-	1(2)	0	0(0)	1(7)	0	0(0)	2(2)
Total	14(29)	0	2(20)	4(29)	0	6(67)	26(21)
Grand Total	49	23	10	14	19	9	124

Source: Primary Data

Note: Figures in the brackets show the percentage of grand total (column).

Out of the 124 self-employed credit card users, 26(21%) use the card for withdrawing cash (table 4.50(b)). From the table it can be seen that the doctors (medical practitioners) and chartered accountants (C.A.) are never using credit card for withdrawing cash. Among the agents, 6(67%) are using the card for cash withdrawal. Businessmen and consultants have equal percentage (29%) of them using the card for cash withdrawal and among lawyers out of 10, only 2(20%) use the card for withdrawing cash.

Figure 4.52: MONTHLY INCOME-WISE DISTRIBUTION OF SELF EMPLOYED CARDHOLDERS



Source: Primary Data (refer table 4.48(b))

Figure 4.52 reveals the fact that most of the self-employed using card for cash withdrawal have income between Rs.20,000/- to Rs.50,000/-. Among the businessmen those having income between Rs. 50,000/- to Rs.1,00,000/- mostly use the card for cash withdrawal. In case of lawyers equal number of cardholders in the income group of Rs.20,000/- to Rs.50,000/- and Rs. 50,000/- to Rs.1,00,000/-. Among consultants there are equal number of cardholders using card for withdrawing cash from all the income groups except the monthly-income group of less than Rs.20,000/-. Among the agents mostly have monthly-income between Rs.20,000/- to Rs.50,000/-.

4.2.2.14.4 Monthly-expenditure wise frequency distribution of cardholders withdrawing cash using credit card

Table 4.49 shows the frequency distribution of credit cardholders according to their monthly expenditure and type of employment. Around 28(37%) of those who use credit card for withdrawing cash have a monthly expenditure of 50 to 60% of their monthly income. This is true in case of government and private employees as most number of cardholders have expenditure in this group. But among the self-employed 8(7%) have monthly expenditure of 60 to 70% of their monthly income.

Table 4.49: MONTHLY-EXPENDITURE WISE FREQUENCY DISTRIBUTION OF CARDHOLDERS WITHDRAWING CASH USING CREDIT CARD

Monthly Expenditure	Government Employees	Private Employees	Self-employed	Total
Less than 50%	2(2)	9(8)	3(3)	14(19)
50 to 60%	8(9)	14(12)	6(5)	28(37)
60 to 70%	3(3)	4(3)	8(7)	15(20)
70 to 80%	2(2)	7(6)	5(4)	14(19)
More than 80%	1(1)	1(1)	2(2)	4(5)
Total	16	35	24	75
Total Cardholders	88	115	117	320

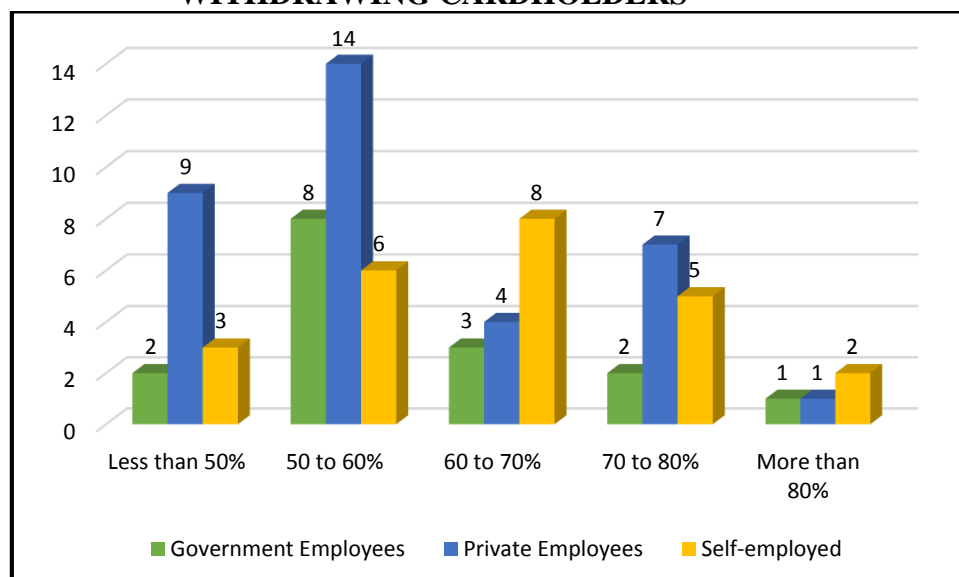
Source: Primary data

Note: Figures in parenthesis is percentage of column total

Table 4.49 shows that among those with monthly expenditure of less than 50% of their monthly income, 2(2%) of the government employees, 9(8%) of private employees and 3(3%) of the self-employed use credit card for withdrawing cash. In the monthly expenditure range of 50 to 60% of their monthly income, 8(9%) of the government

employees, 14(12%) of private employees and 6(5%) of the self-employed use credit card for withdrawing cash. Among the cardholders with monthly expenditure of 60 to 70% of their monthly income, 3(3%) of the government employees, 4(3%) of private employees and 8(7%) of the self-employed use credit card for withdrawing cash. In the monthly expenditure of 70 to 80% of their monthly income, 2(2%) of the government employees, 7(6%) of private employees and 5(4%) of the self-employed use credit card for withdrawing cash. In the monthly expenditure of more than 80% of their monthly income, only 1(1%) of the government employees, 1(1%) of private employees and 2(2%) of the self-employed use credit card for withdrawing cash. Figure 4.53 is the graphical representation of the table 4.49.

Figure 4.53: MONTHLY EXPENDITURE WISE DISTRIBUTION OF CASH WITHDRAWING CARDHOLDERS



Source: Primary Data (refer table 4.49)

Chi-square test p value = 0 proves that there is significant difference in the monthly expenditure of the credit cardholders of different group of employees those using the card for withdrawing cash.

4.2.2.15 Cash Withdrawal as Percentage of Monthly Credit Card Transaction

The cardholders using the card for withdrawing cash had to answer the question as to what percent of monthly credit card transaction was the cash withdrawal. Table 4.50 shows the data regarding cash withdrawal as percentage of monthly credit card transaction.

Table 4.50: CASH WITHDRAWAL AS PERCENTAGE OF MONTHLY CREDIT CARD TRANSACTION

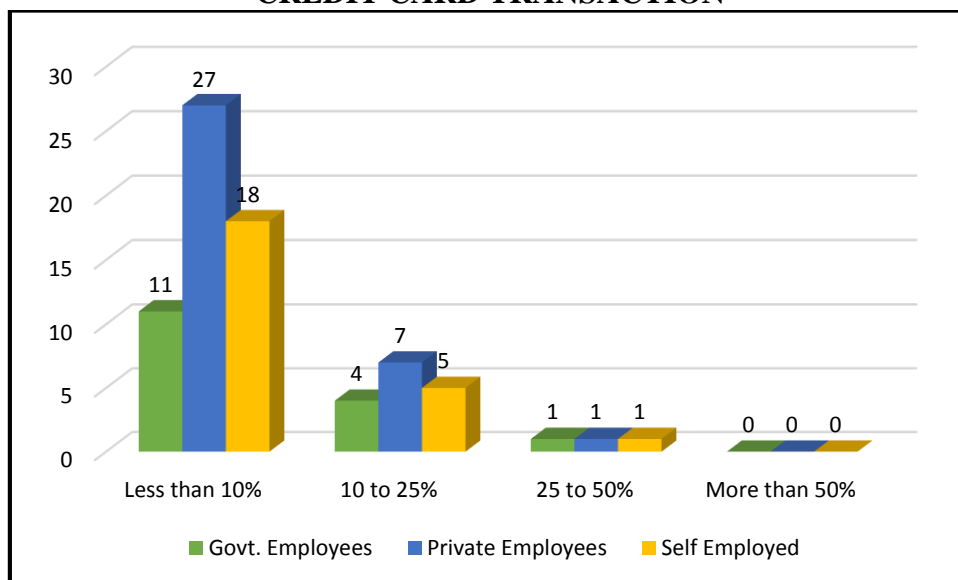
Cash Withdrawal as % of Monthly card transaction	Govt. Employees	Private Employees	Self Employed	Total
Less than 10%	11(69)	27(77)	18(75)	56(75)
10 to 25%	4(25)	7(20)	5(21)	16(21)
25 to 50%	1(6)	1(3)	1(4)	3(4)
More than 50%	0	0	0	0
Total	16	35	24	75

Source: Primary data

Note: Figures in parenthesis is percentage of column total

Data in table 4.50 shows the fact that 56(75%) of the cardholders who use credit card for withdrawing cash, the cash withdrawal is less than 10% of the monthly credit card transaction. About 16(21%) have cash withdrawal of 10 to 25% of their monthly card transaction. Only 3(4%) have cash withdrawal of 25 to 50% of their monthly card transaction and no cardholder has cash withdrawal more than 50% of monthly card transaction. Figure 4.54 is the graphical representation of table 4.50

Figure 4.54: CASH WITHDRAWAL AS PERCENTAGE OF MONTHLY CREDIT CARD TRANSACTION



Source: Primary Data (refer table 4.50)

Figure 4.54 reveals the fact that most of the cardholders cash withdrawing pattern as percentage of monthly card transaction is similar across the different range. Most of them whether government, private and self-employed have less than 10% of monthly

card transaction as cash withdrawal. Around 8.33 is the average of cash withdrawal as percentage of monthly card transaction. But it is the private employee whose frequency is more in first two ranges.

The Chi Square p value = 0.967890744 being greater than alpha is insignificant at 6df. It means there is no significant difference among the various employees in using the credit card for withdrawing cash (as percentage of monthly card transaction).

4.2.2.16 Monthly Credit Card Transaction

The credit cardholders were asked an open ended question regarding their monthly credit card transaction. **The average monthly card transaction is Rs. 19,556/-**. Table 4.51 shows the distribution of cardholders as per their monthly credit card transaction and employment.

Table 4.51: MONTHLY CREDIT CARD TRANSACTION

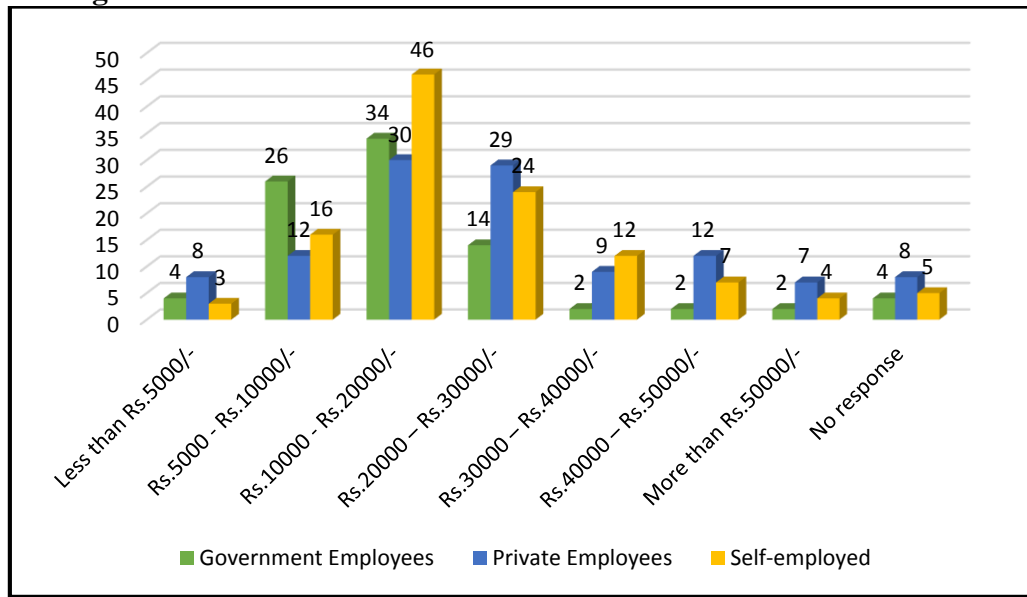
Monthly Transaction	Government Employees	Private Employees	Self-employed	Total
Less than Rs.5000/-	4(5)	8(7)	3(3)	15(5)
Rs.5000 - Rs.10000/-	26(30)	12(10)	16(14)	54(17)
Rs.10000 - Rs.20000/-	34(39)	30(26)	46(39)	110(34)
Rs.20000 – Rs.30000/-	14(16)	29(25)	24(21)	67(21)
Rs.30000 – Rs.40000/-	2(2)	9(8)	12(10)	23(7)
Rs.40000 – Rs.50000/-	2(2)	12(10)	7(6)	21(7)
More than Rs.50000/-	2(2)	7(6)	4(3)	13(4)
No response	4(5)	8(7)	5(4)	17(5)
Total	88	115	117	320

Source: Primary data

Note: Figures in parenthesis is percentage of column total

The data in table 4.51 reveals that 110(34%) of the cardholders have a monthly credit card transaction in the range of Rs.10,000/- to Rs.20,000/- and 67(21%) have monthly card transaction in the range of Rs.20,000 – Rs.30,000/-. Around 54(17%) have monthly transaction in the range of Rs.5,000/- to Rs.10,000/-. Only 15(5%) cardholders have monthly transaction of less than Rs.5,000/- and 13 (4%) cardholders have monthly credit card transaction of more than Rs.50,000/-.

Figure 4.55: MONTHLY CREDIT CARD TRANSACTION



Source: Primary Data (refer table 4.51)

Figure 4.55 is the graphical representation of table 4.51.

Among the government employees 34(39%) have monthly credit card transaction in the range of Rs.10000 to Rs.20000/- and 26(30%) are in the range of Rs.5000 to Rs.10000/- Another 14(16%) have monthly card transaction in between Rs.20000 to Rs.30000/-.

Among the private employees 30(26%) have monthly credit card transaction in the range of Rs.10000 to Rs.20000/- and 29(25%) are in the range of Rs.20000 to Rs.30000/-. Another 12(10%) have monthly card transaction in between of Rs.5000 to Rs.10000/-.

In case of self-employed 46(39%) have monthly credit card transaction in the range of Rs.10000 to Rs.20000/- and 24(21%) are in the range of Rs.20000 to Rs.30000/-. Another 16(14%) have monthly card transaction in between of Rs.5000 to Rs.10000/-. Chi-square test $p\text{ value} = 0$ is less than 0.05 is significant. This means reject the null hypothesis and accept the alternative hypothesis that there is significant difference among the type of employees with regard to the monthly credit card transaction.

4.2.2.17 Demonetization Increased Monthly Credit Card Transaction

Due to demonetization in the country on 8th November 2016, more number of people started using the plastic money. Therefore, this question on whether demonetization resulted in increase in monthly credit card transaction was asked to the respondents.

Since data collection was already half-way through, for this particular question, total respondents/credit card users is 162 and not 320. Table 4.52 shows the frequency distribution of cardholders for the effect of demonetization.

Table 4.52: INCREASE IN MONTHLY CREDIT CARD TRANSACTION DUE TO DEMONETIZATION

Transactions affected	Government Employees	Private Employees	Self-employed	Total
Yes	12(26)	12(28)	19(26)	43(27)
No	34(74)	31(72)	54(74)	119(73)
Total*	46	43	73	162

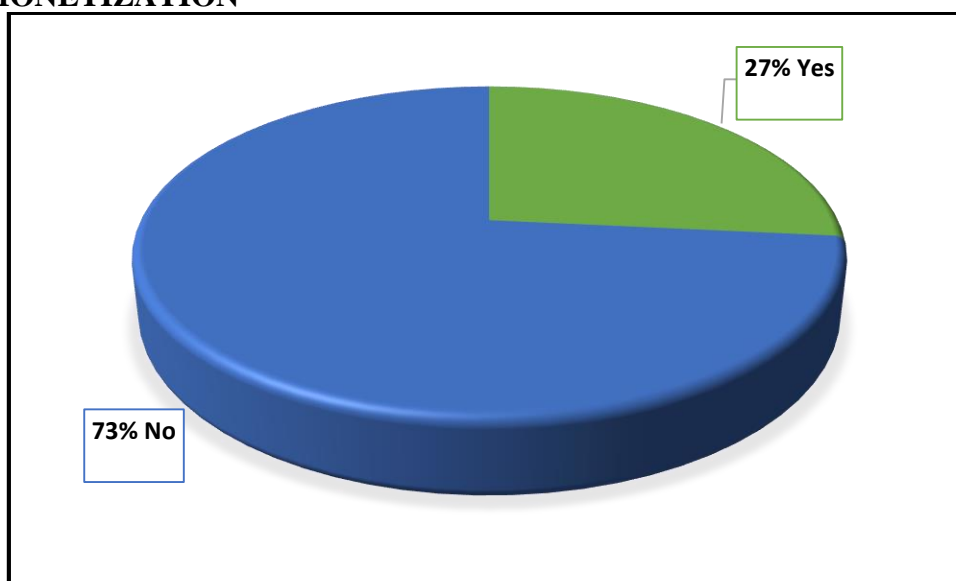
Source: Primary Data

Note: Figures in parenthesis is the percentage of column total

*As the question on whether monthly transaction through credit card increased after demonetization was added in the questionnaire later in January 2017, the total number of respondents using credit card is 162.

Data in table 4.52 shows that out of the 162 cardholders, 43(27%) has said 'yes' for the question whether monthly transaction through credit card increased after demonetization, i.e. they feel that due to demonetization, their monthly credit card transactions have increased. But 119(73%) do not agree that due to demonetization, their monthly credit card transactions have increased (Figure 4.56).

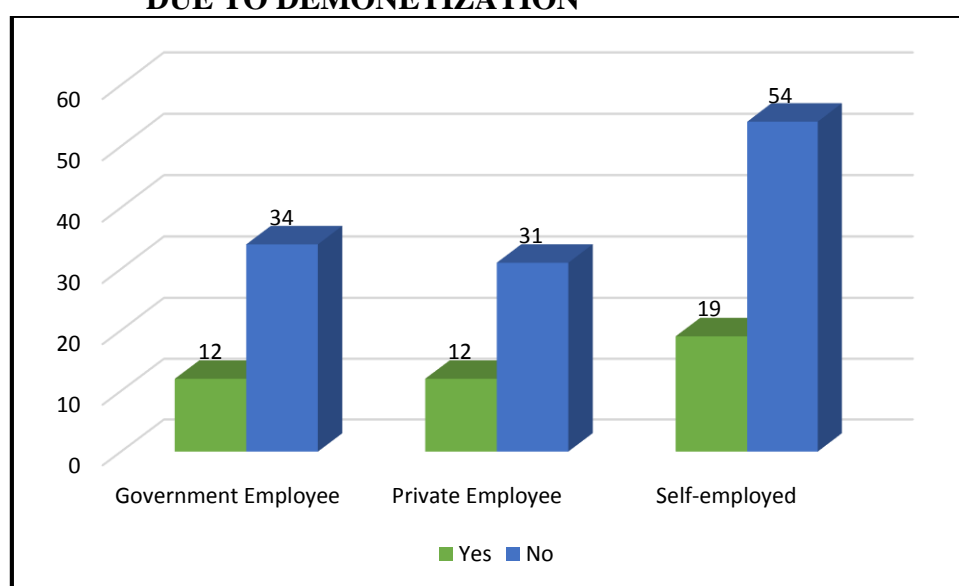
Figure 4.56: PERCENTAGE DISTRIBUTION OF CREDIT CARDHOLDERS FOR INCREASE IN MONTHLY CARD TRANSACTION DUE TO DEMONETIZATION



Source: Primary Data (refer table 4.52)

Table 4.52 shows that among the government employees, 12(26%) feel that demonetization has increased their card transaction and 34(74%) does not feel so. In case of private sector employees, 12(28%) feel that demonetization has increased their card transaction and 31(72%) does not feel it increased the card transactions. Among the self-employed, 19(26%) feel that demonetization has increased their card transaction and 54(74%) does not feel demonetization increased the card transactions. Figure 4.57 is the graphical representation of table 4.52.

Figure 4.57: INCREASE IN MONTHLY CREDIT CARD TRANSACTION DUE TO DEMONETIZATION



Source: Primary Data (refer table 4.52)

Figure 4.57 reveals that across the different groups of cardholders the opinion about the effect of demonetization increasing the monthly credit card transaction is almost similar.

This is proved by Chi-square test $p = 0.972442075$, is more than .05 is insignificant and hence the null hypothesis is accepted. There is similar view of all types of cardholders about demonetization effect.

4.2.2.18 Percentage increase of monthly card transaction due to demonetization

Those who felt that due to demonetization their monthly credit card transactions have increased, they had to answer by how much percent it increased. This data is shown in table 4.53.

Table 4.53: PERCENTAGE INCREASE IN MONTHLY CREDIT CARD TRANSACTION DUE TO DEMONETIZATION

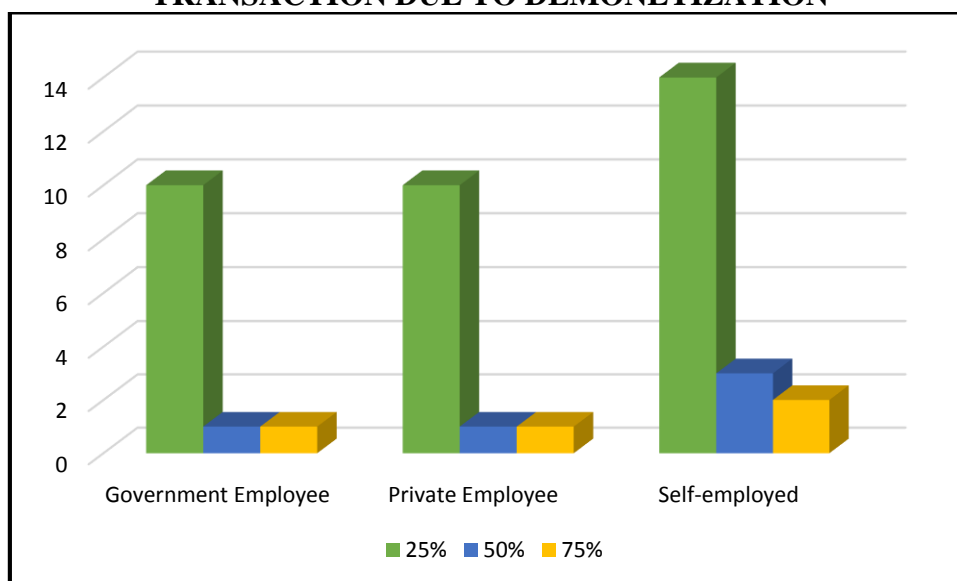
Monthly card transaction increased by -	Government Employee	Private Employee	Self-employed	Total
25%	10(83)	10(83)	14(74)	34(79)
50%	1(8)	1(8)	39(16)	5(12)
75%	1(8)	1(8)	2(11)	4(9)
Total	12	12	19	43

Source: Primary Data

Note: Figures in parenthesis are percentage of column total

Table 4.53 shows that among those card-users who felt that their monthly credit card transaction has increased, 34(79%) felt the transaction increased by 25%, another 5(12%) card-users felt it increased by 50% and about 4(9%) cardholders said the transaction increased by 75% after demonetization. Figure 4.58 is the graphical representation of table 4.53.

Figure 4.58: PERCENTAGE INCREASE IN MONTHLY CREDIT CARD TRANSACTION DUE TO DEMONETIZATION



Source: Primary data (refer table 4.53)

From the figure 4.58 it can be inferred that both the government and private sector employees have exactly similar opinion about increase in card transactions due to demonetization. It is same frequency distribution i.e. 10(83%) for 25% increase and 1(8%) each for 50% increase and 75% increase in monthly card transactions for both government and private sector employees.

Chi-square test $p = 0.952957301$ is greater than .05 is insignificant and hence null hypothesis is accepted. It means increase in monthly credit card transaction due to demonetization is similar across the different groups of cardholders.

4.2.2.19 Monthly Credit Card Bill Payment

Payment practice of credit card bill has a significant role to play in the personal finance of the cardholder. Those who make the payment in full every month they are actually using free money i.e. no need to pay any interest, they are the convenience users. But once they do a part-payment or roll-over (only minimum balance is paid), then they have to pay interest on the whole transaction amount, they are the ones with outstanding balance. Table 4.54 shows the bill payment practice of the cardholders in the City.

Table 4.54: MONTHLY CREDIT CARD BILL PAYMENT

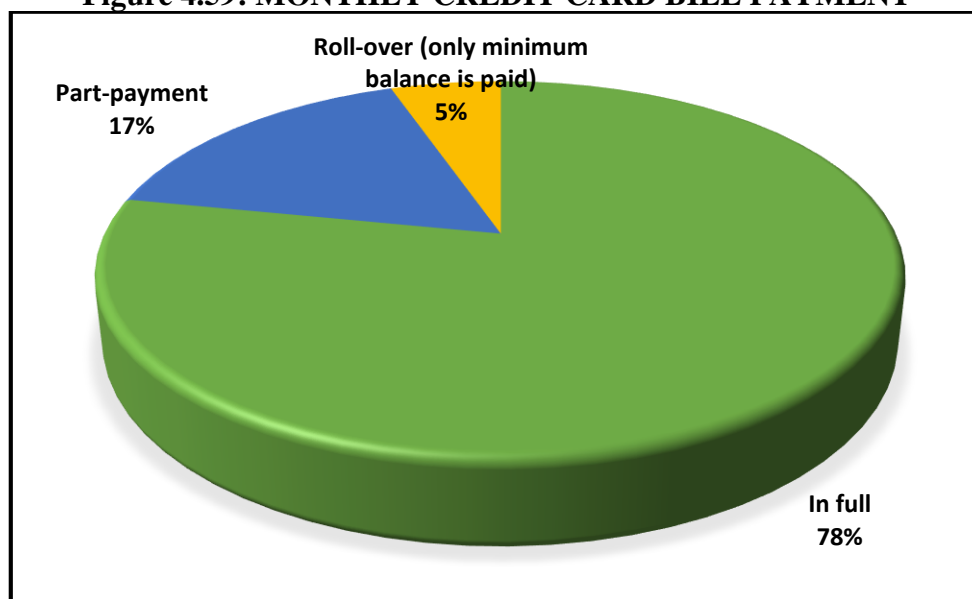
Payment done is -	Government Employee	Private Employee	Self-employed	Total
In full	70(80)	82(71)	98(84)	250(78)
Part-payment	18(20)	23(20)	12(10)	53(17)
Roll-over (only minimum balance is paid)	0	10(9)	7(6)	17(5)
Total	88	115	117	320

Source: Primary Data

Note: Figures in parenthesis are the percentage of column total.

Data in table 4.54 shows that 250(78%) cardholders make their monthly credit card bill payment in full. About 53(17%) make par-payment and 17(5%) does roll-over (figure 4.59). They only pay the minimum amount due which differs from bank to bank e.g. it may be 1%, 2% or 5% of the bill amount. Once a roll-over is done interest is added on the whole transaction for the next bill as well. Hence when using credit card the user should try as far as possible not to roll-over or make a part-payment. Both if not checked would lead to debt trap.

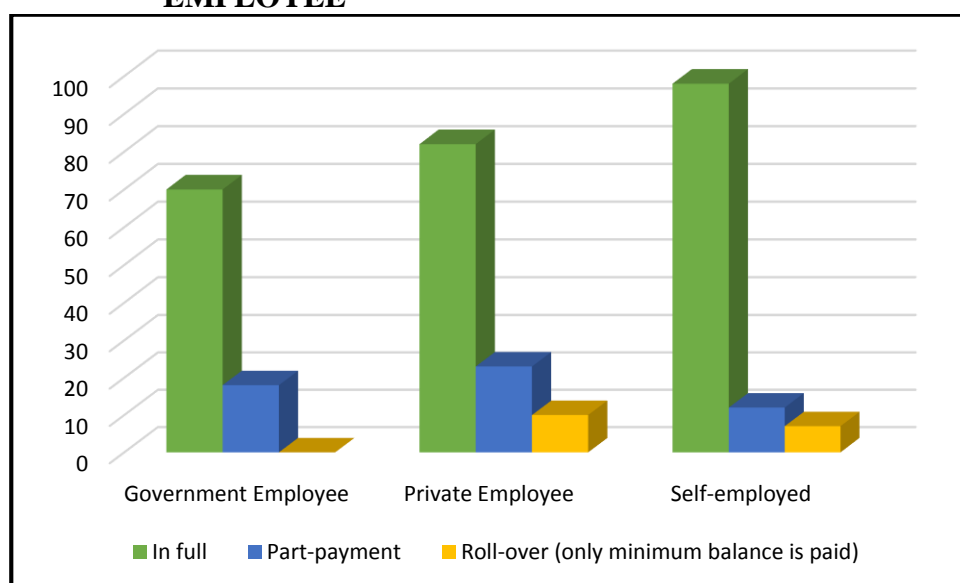
Figure 4.59: MONTHLY CREDIT CARD BILL PAYMENT



Source: Primary Data (refer table 4.54)

Figure 4.60 is the graphical representation of table 4.54. It shows how the card payment across the different groups of card-holders are almost similar. Among government employees 70(80%) make full-payment; 18(20%) make part-payment; and no cardholder ever rolls over the bill amount. In case of private sector employee, 82(71%) make full-payment; 23(20%) make part-payment; and 10(4%) does roll-over of the credit card bill. Among the self-employed 98(84%) make full-payment; 12(10%) make part-payment; and 7(6%) does roll-over of their credit card bill.

Figure 4.60: CREDIT CARD PAYMENT PERCENTAGE AS PER TYPE OF EMPLOYEE



Source: Primary Data (refer table 4.54)

Credit Card Debt: Those cardholders who do not make payment in full, fall into debt trap if they do not repay the amount immediately. **There are 70(22%) who do not make full payment. The distribution of these are in the following way (refer table 4.54):**

- **Government Employees – 18(20%)**
- **Private Sector Employees – 33(29%)**
- **Self-employed – 19(16%)**

From this it is inferred that **private sector employees** are more prone to fall into credit card **debt trap** in Pune.

The difference in payment practice of the cardholders is proved with the Chi-square test. The p value = 0.011932354 is less than .05 is significant, and hence the null hypothesis is rejected. It is proved that there is difference among the credit cardholders with respect to the bill payment practice.

4.2.2.20 Interest Paid

4.2.2.20.1 Average interest paid per month

The cardholders who did not make full payment of their credit card bill were asked about the average interest they paid. Table 4.55 shows the details.

Table 4.55: AVERAGE INTEREST PAID BY CARDHOLDERS

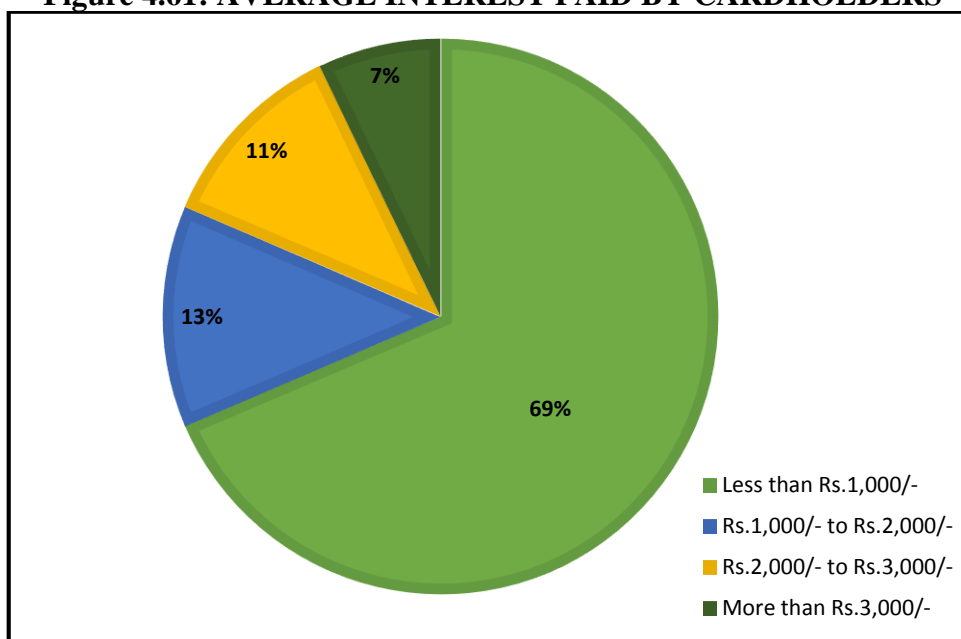
Average Interest paid	Government Employee	Private Employee	Self-employed	Total
Less than Rs.1,000/-	12(67)	22(67)	14(74)	48(69)
Rs.1,000/- to Rs.2,000/-	2(11)	5(15)	2(11)	9(13)
Rs.2,000/- to Rs.3,000/-	3(17)	4(12)	1(5)	8(11)
More than Rs.3,000/-	1(6)	2(6)	2(11)	5(7)
Total	18	33	19	70

Source: Primary Data

Note: Figures in parenthesis are percentage of column total

Table 4.55 shows that 48(69%) cardholders pay less than Rs.1.000/- as interest; 9(13%) pay interest between Rs.1,000/- to Rs.2,000/-; 8(11%) pay between Rs.2,000/- to Rs.3,000/- as interest; and 5(7%) pay more than Rs.3,000/- as interest (figure 4.61).

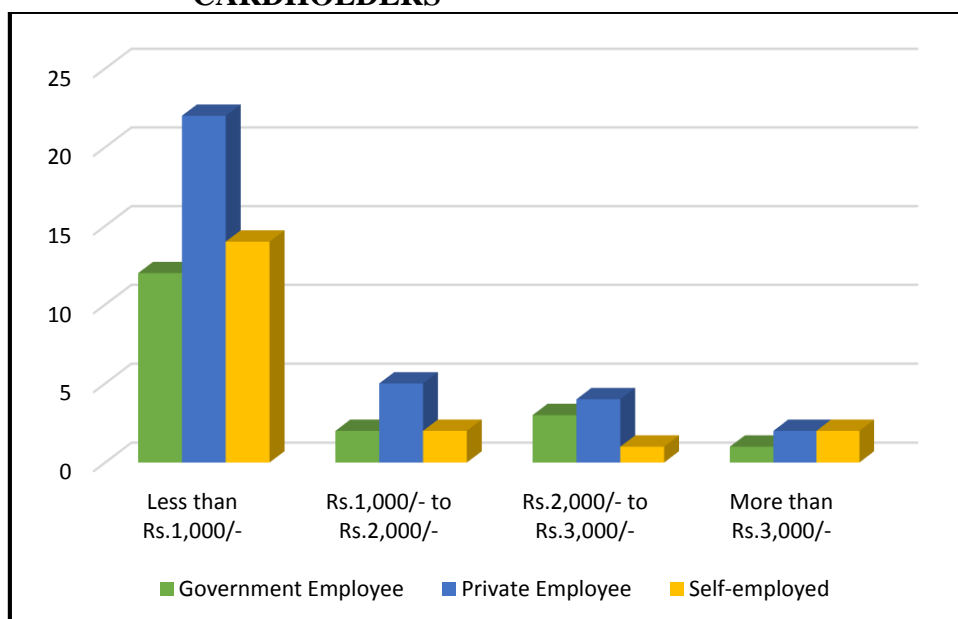
Figure 4.61: AVERAGE INTEREST PAID BY CARDHOLDERS



Source: Primary Data (refer table 4.55)

Figure 4.62 shows the average interest paid by the different groups of cardholders. Among the government employees 12(67%) pay less than Rs.1,000/- as interest; 2(11%) pay interest between Rs.1,000/- to Rs.2,000/-; 3(17%) pay between Rs.2,000/- to Rs.3,000/- as interest; and 1(6%) pay more than Rs.3,000/- as interest.

Figure 4.62: AVERAGE INTEREST PAID BY DIFFERENT GROUPS OF CARDHOLDERS



Source: Primary Data (refer table 4.55)

Among the private sector employees, 22(67%) pay less than Rs.1,000/- as interest; 5(12%) pay interest between Rs.1,000/- to Rs.2,000/-; 4(12%) pay between Rs.2,000/- to Rs.3,000/- as interest; and 2(6%) pay more than Rs.3,000/- as interest.

In case of self-employed, 14(74%) pay less than Rs.1,000/- as interest; 2(11%) pay interest between Rs.1,000/- to Rs.2,000/-; 1(5%) pay between Rs.2,000/- to Rs.3,000/- as interest; and 2(11%) pay more than Rs.3,000/- as interest.

The mean interest paid by the cardholders is Rs.1071.43.

Chi-square *test p* value = 1 is more than .05, is insignificant and hence null hypothesis is accepted and it is proved the cardholders across different groups interest payment on credit card bill is similar.

4.2.2.20.2 Bill Payment Period of part-payment/roll-over

The cardholders who were having outstanding balance, were asked period of payment of the outstanding balance i.e. within how many months or years it takes them to repay the amount. Table 4.56 shows the details. Figure 4.63 is the graphical representation of table 4.56.

Table 4.56: BILL PAYMENT PERIOD OF PART-PAYMENT/ROLL-OVER

Period	Government Employee	Private Employee	Self-employed	Total
2 to 3 months	11(61)	26(79)	12(63)	49(70)
6 months to 1 year	5(28)	5(15)	5(26)	15(21)
1 year and more	2(11)	2(6)	2(11)	6(9)
Total	18	33	19	70

Source: Primary Data

Note: Figures in parenthesis are percentage of column total

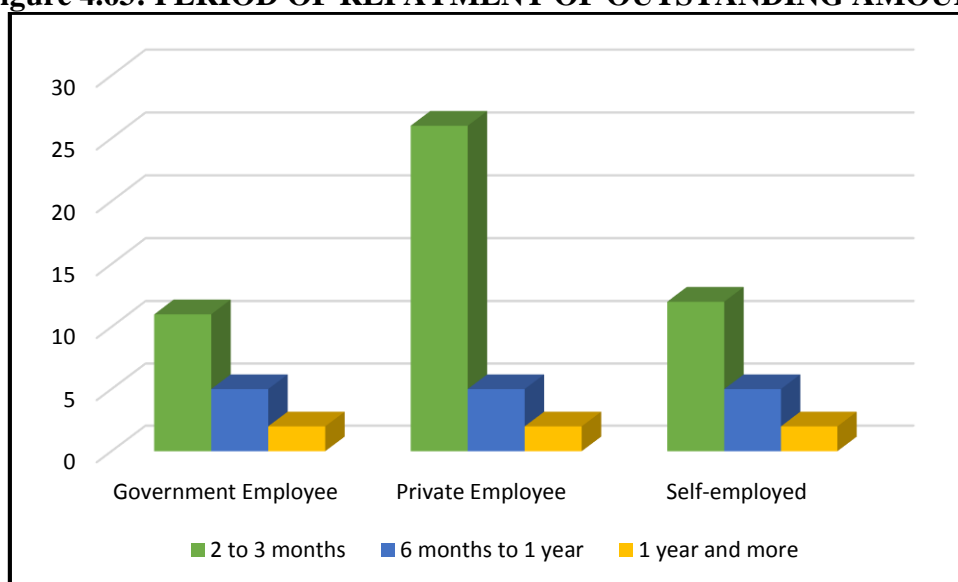
According to the data in table 4.56, 49(70%) repays the outstanding bill with 2 to 3 months. This category consists of 11(61%) of government employees, 26(79%) of private sector employees and 12(63%) of self-employed.

There are 15(21%) who repays the outstanding amount within 6 months to 1 year. This category has same consistency of 5 cardholders each across the three groups of cardholders. For this the percentage is 28% government employees, 15% private sector employees and 26% self-employed.

Those who take 1 year and more to repay the outstanding amount are 6(9%), 2 each in the three groups of cardholders. For this the percentage is 11% government employees, 6% private sector employees and 11% self-employed.

On an average the revolvers take 5 to 6 months to repay the credit card bill amount.

Figure 4.63: PERIOD OF REPAYMENT OF OUTSTANDING AMOUNT



Source: Primary Data (refer table 4.56)

The chi-square test p value = 0.678153681, greater than .05 is insignificant and hence null hypothesis is accepted. It means the time period taken or repayment behaviour of outstanding amount across the cardholders is same.

4.2.2.21 Awareness of CIBIL Credit Score

The CIBIL credit score is checked by the bank if anyone applies for a loan or a credit card. A poor CIBIL score means credit may not be sanctioned. This score depends on the way the debtors repay their loan amount. To get a good score one should be always making the repayment in time or else the credit score is poor. Table 4.57 shows the awareness of credit score of the cardholders in Pune and figure 4.64 is its graphical representation.

Table 4.57: AWARENESS OF CIBIL CREDIT SCORE

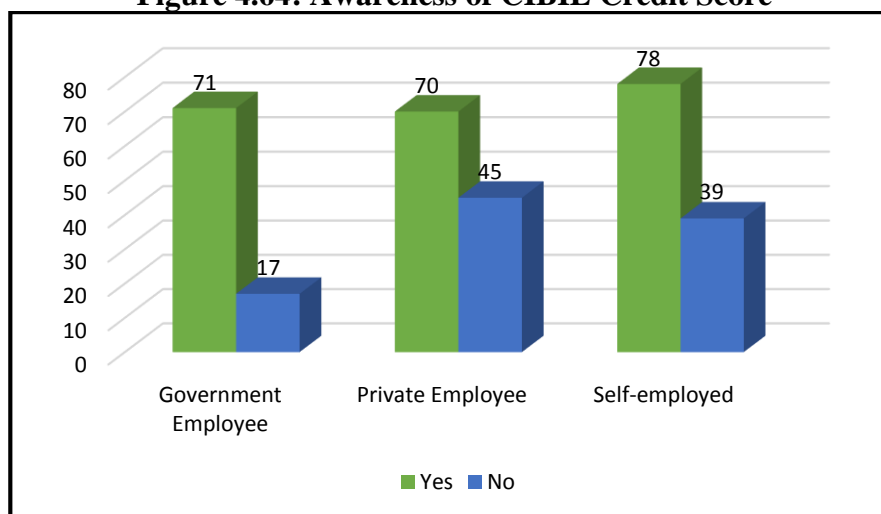
Aware of CIBIL credit score	Government Employee	Private Employee	Self-employed	Total
Yes	71(81)	70(61)	78(67)	219(68)
No	17(19)	45(39)	39(33)	101(32)
Total	88	115	117	320

Source: Primary Data

Note: Figures in parenthesis are percentage of column total.

Table 4.57 shows that 219(68%) of the credit card users are aware of CIBIL credit score. Out of this 71(81%) government employees, 70(61%) private sector employees and 78(67%) self-employed are aware of this score.

About 101(32%) of the credit card users are not aware of the CIBIL credit score. Among these, 17(19%) government employees, 45(39%) private sector employees and 39(33%) self-employed are not aware of this score.

Figure 4.64: Awareness of CIBIL Credit Score

Source: Primary Data (refer table 4.57)

The chi-square test p value = 0, less than .05 is significant and hence null hypothesis is rejected. It means awareness of CIBIL credit score is not the same among the different groups of cardholders.

4.2.2.22 Advantages of Credit Card Use

Advantages of using credit card was asked to the cardholders. They could select more than one option. Hence table 4.58 shows the frequency of responses for various advantages and figure 4.65 is its graphical representation.

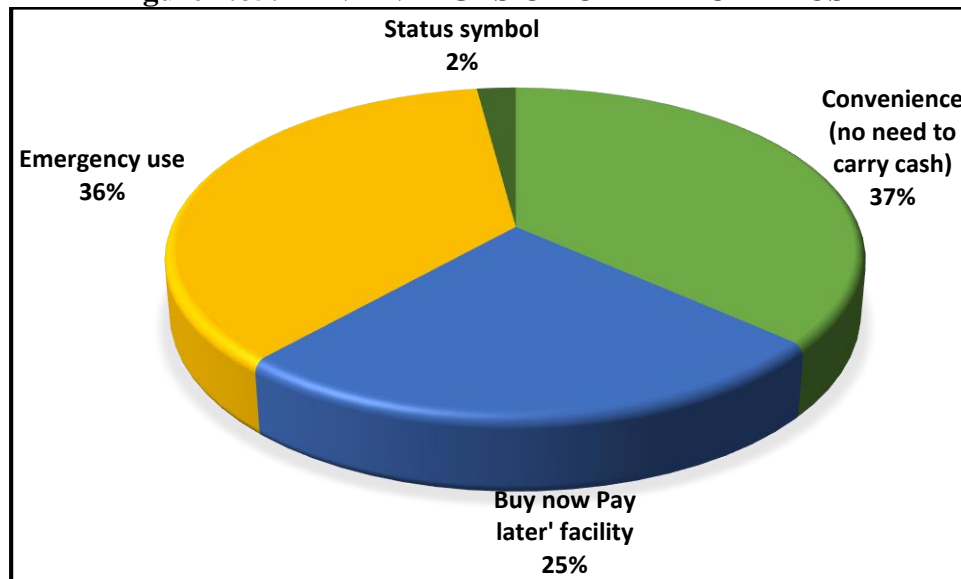
Table 4.58: ADVANTAGES OF CREDIT CARD USE

Advantages of using credit card	Frequency of responses	In %
Convenience (no need to carry cash)	244	37
'Buy now Pay later' facility	168	25
Emergency use	242	36
Status symbol	14	2

Source: Primary Data

Table 4.58 reveals that cardholders feel convenience i.e. no need to carry cash and for emergency use, credit card is advantageous. There are 244(37%) and 242(36%) response for these types of advantages respectively. There are 168(25%) response for 'Buy now Pay later' facility and only 14(2%) response for status symbol as an advantage.

Figure 4.65: ADVANTAGES OF CREDIT CARD USE



Source: Primary Data (refer table 4.58)

4.2.2.23 Disadvantages of Credit Card Use

Disadvantages of using credit card was asked to the cardholders. They could select more than one option. Table 4.59 shows the frequency of responses for various advantages and figure 4.66 is its graphical representation.

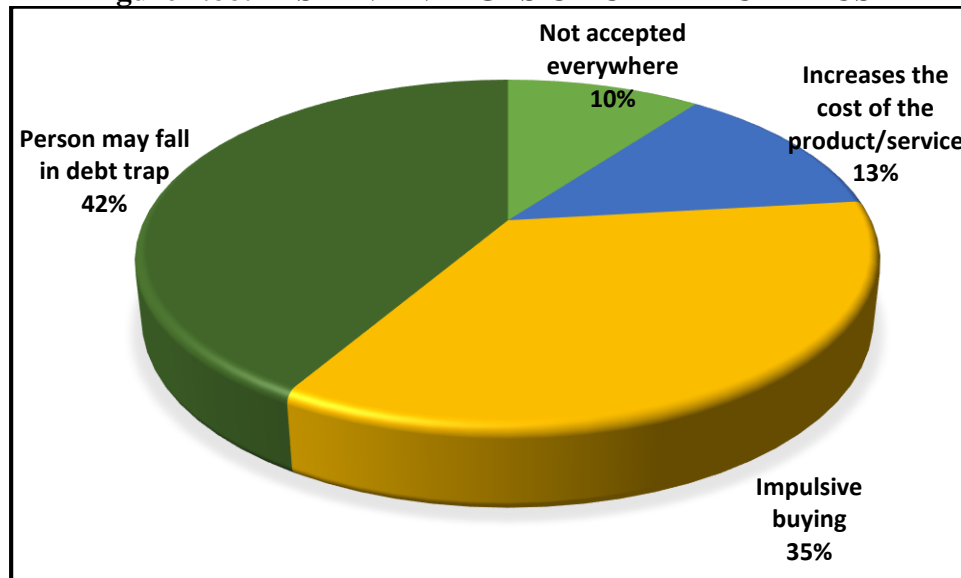
Table 4.59: DISADVANTAGES OF CREDIT CARD USE

Disadvantages of using Credit Card	Frequency of responses	In %
Not accepted everywhere	51	10
Increases the cost of the product/service	65	13
Impulsive buying	177	35
Person may fall in debt trap	208	42

Source: Primary Data

Table 4.59 reveals that most of the cardholders feel that impulsive buying and person falling in debt trap is the most disadvantageous when using credit card. There are 177(35%) response for impulsive buying and 208(42%) response for person falling in debt trap. There are 51(10%) responses for ‘not accepted everywhere’ and 65(13%) response for ‘increases the cost of the product/service’.

Figure 4.66: DISADVANTAGES OF CREDIT CARD USE



Source: Primary Data (refer table 4.59)

4.2.2.24 Awareness of Cyber-crime

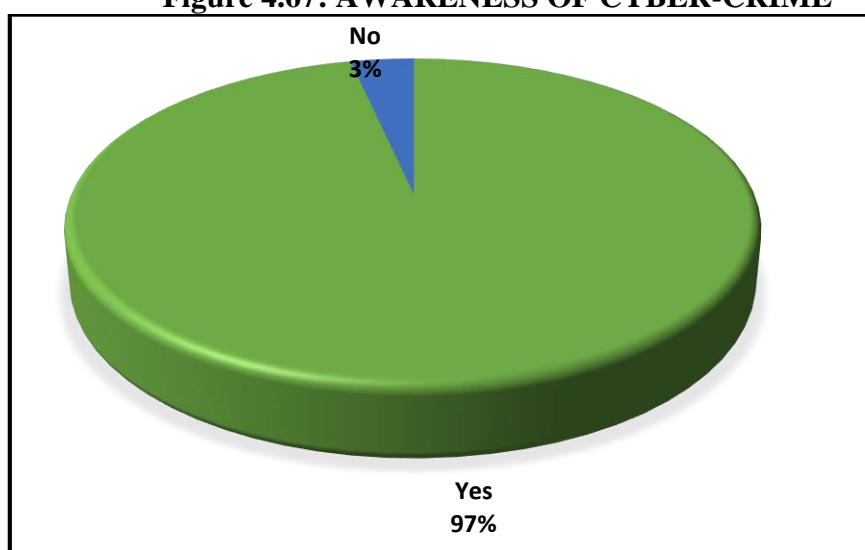
Cardholders were asked a dichotomous question about the awareness of cyber-crimes due to credit card use. As this question was added later, total frequency is less. Table 4.60 shows the awareness of cyber-crime. Figure 4.67 is its graphical representation.

Table 4.60: AWARENESS OF CYBER-CRIME

Aware of Cyber Crime	Frequency	In %
Yes	167	97
No	6	3
Total	173	

Source: Primary Data

Among the cardholders, 167(97%) are aware of the cyber-crimes committed due to credit card use and 6(3%) are not aware of cyber-crimes.

Figure 4.67: AWARENESS OF CYBER-CRIME

Source: Primary Data (refer table 4.60)

Those cardholders who are aware of cyber-crimes had to answer whether they had any bad experience of cyber-crime (a dichotomous question). Table 4.61 shows frequency distribution cardholders who are aware of cyber-crimes and had a bad experience of cyber-crime.

Table 4.61: BAD EXPERIENCE OF CYBER-CRIME

Bad Experience Due Of Cyber-Crime	Frequency	In %
Yes	5	3
No	162	97
Total	167	

Source: Primary Data

The data in table 4.61 shows that 162(97%) never had any bad experience of cyber-crimes due to the use of credit cards but 5(3%) cardholders did have bad experience.

Among the 5 cardholders who experienced cyber-crime 3 are self-employed and 1 each is a government employee and a private sector employee. Among them 4 are below 40 years of age and 3 are females and 2 males. Regarding their educational qualifications it is found that all except one are post-graduate (professional).

4.2.2.25 Credit Card Use Increases Expenditure and Reduces Savings

Table 4.62 shows the data for frequency of credit cardholders as per their opinion about use of credit card increasing the expenditure and reducing savings. It is seen that 164(51%) cardholders are of the view that credit card use increases spending and reduces savings. Another 156(49%) feels it does not increase spending and adversely affect savings.

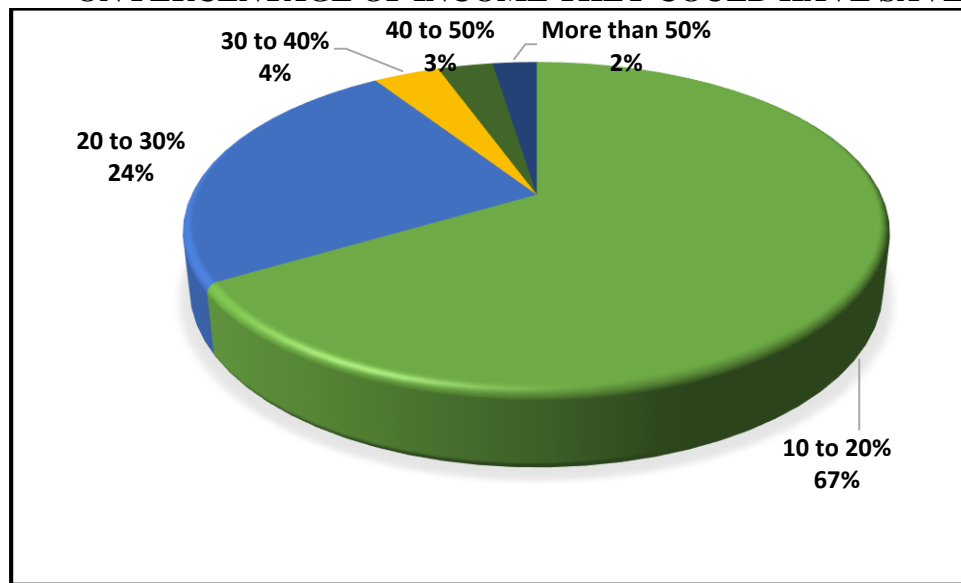
Table 4.62: CREDIT CARD USE INCREASES EXPENDITURE AND REDUCES SAVINGS

Increases Expenditure & Reduce Savings	Frequency	In %
Yes	164	51
No	156	49
Total	320	
Percentage of Income that could have Saved (for 164 cardholders who says credit card use increases expenditure & reduces savings)		
10 to 20%	109	67
20 to 30%	40	24
30 to 40%	6	4
40 to 50%	5	3
More than 50%	4	2
Total	164	

Source: Primary Data

The table 4.62 also shows the cardholders' view on percentage of income they could have saved if they had not used credit cards. About 109(67%) feels they could have saved 10 to 20% of their income; 40(24%) feels they could have saved 20 to 30% of their income; 6(4%) feels they could have saved 30 to 40% of their income; 5(3%) feels they could have saved 40 to 50% of their income; 4(2%) feels they could have saved more than 50% of their income if they had not used credit card (figure 4.68).

Figure 4.68: FREQUENCY DISTRIBUTION OF CARDHOLDERS BASED ON PERCENTAGE OF INCOME THEY COULD HAVE SAVED



Source: Primary Data (refer table 4.62)

Chi-square test p value = 0.654720846 more than .05 is insignificant which means the null hypothesis is accepted. The cardholders does not have much difference in their views regarding increased expenditure and reduced savings when credit card is used.

4.3 HYPOTHESES TESTING

Chi-square test is used to test the hypotheses.

Following are the hypotheses of the study.

H1: The socio-economic parameters of the cardholders like age, gender, educational qualification, marital status, family size, earning members, monthly income affects the credit card use.

H2: The number of cardholders differ among the different groups of cardholders i.e. among government employees, private employees and the self-employed.

H3: There is difference in the monthly income, expenditure and nature of savings/investment between the cardholders and non-cardholders among the government, private and self- employed.

H4: The use of credit card affects monthly expenditure and savings of the cardholders.

H5: Demonetization in India has increased the monthly credit card transaction across all groups of cardholders.

The hypotheses test result using χ^2 is discussed further.

H1	Null - The socio-economic condition of the cardholders does not affect the use of credit card. The age, gender, educational qualification, marital status, family size, earning members, monthly income, does not affect the credit card use among different groups of cardholders.		
	Alternate - The socio-economic conditions of the cardholders affects the use of credit card.		
	Parameters	χ^2 test <i>p</i> value	Test Result
a	Age	4.183E-22	<p><i>p</i> value < 0.05</p> <p>Rejected Null Hypothesis</p> <p>Alternate hypothesis is accepted that the socio-economic condition of the cardholders affects the use of credit card.</p>
b	Gender.	2.033E-21	
c	Educational qualifications	1.910E-47	
d	Marital status	0.0478471	
e	Type of Family	3.295E-37	
f	Size of family	2.607E-62	
g	Number of earning members	7.976E-45	
h	Monthly income	7.798E-36	
i	Sources of income	2.540E-09	

Hypothesis 1 addressed the influence of socio-economic parameters like age, gender, educational qualifications, marital status, type of family, size of family number of earning members, monthly income and the source of income on the use of credit card. The chi-square test *p* value less than 0.05 for all the socio-economic parameters indicates that they have a significant effect on the use of credit card.

Age of cardholder affects the use of credit card as it is significant at 5*df*, gender has significant difference at 1*df* and educational qualification is significant at 6*df*. Marital status, family type, size of family and number of earning members are significant at 2*df*, monthly income at 4*df* and the sources of income at 5*df* is significant and affects the use of credit card.

H2	<p>Null – There are equal number of cardholders across different groups of cardholders i.e. among government employees, private sector employees and the self-employed.</p> <p>Alternate – The number of cardholders differ among the different groups of cardholders i.e. among government employees, private sector employees and the self-employed.</p>		
	Parameters	χ^2 test <i>p value</i>	Test Result
A	Salaried Cardholders – Government and Private	0.0580886	<p><i>p value</i> = 0.05</p> <p>Accepted the Null hypothesis</p> <p>It proves that there are equal number of cardholders among the salaried employees.</p>
B	Self-employed	2.675E-10	<p><i>p value</i> < 0.05</p> <p>Rejected the Null hypothesis.</p> <p>Alternate hypothesis is accepted that the number of cardholders differ among the various types of self-employed.</p>

Hypothesis 2 addresses number of cardholders in the different groups i.e. among government employees, private sector employees and the self-employed. With Chi-square test among the salaried cardholders, *p value* = 0.0580886 indicates there is insignificant difference in the number of government and private sector employees at 12*df*. But for the self-employed *p value* < 0.05, there is significant difference at 4*df*.

H3	<p>Null – There is no difference in monthly income, expenditure and nature of savings/investment of the cardholders and non-cardholders among the government, private and self- employed.</p> <p>Alternate – There is difference in the monthly income, expenditure and nature of savings/investment of the cardholders and non-cardholders among the government, private and self- employed.</p>		
	Parameters	χ^2 test <i>p value</i>	Test Result
a	Monthly Income	0	<p><i>p value</i> < 0.05</p> <p>Rejected the Null hypothesis.</p> <p>Alternate hypothesis is accepted that there is difference in the monthly income, expenditure and nature of savings/investment of the cardholders and non-cardholders.</p>
b	Monthly Expenditure	0	
c	Savings/investment	0.0002535	

Hypothesis 3 addressed the income, expenditure and savings behaviour of the respondents. The alternate is accepted that there is difference in the monthly income and the spending and savings behaviour of the cardholders and non-cardholders as Chi-square test *p value* < 0.05 is significant at 4df.

H4	<p>Null - Credit card use does not affect expenditure and savings of cardholders.</p> <p>Alternate - The use of credit card affects monthly expenditure and savings of the cardholders.</p>		
	Parameters	χ^2 test <i>p value</i>	Test Result
a	Expenditure and Savings	0	<p><i>p value</i> < 0.05</p> <p>Rejected Null hypothesis</p> <p>Alternate hypothesis is accepted that the use of credit card affects the monthly expenditure and savings.</p>

Hypothesis 4 shows whether the use of credit card affects the monthly expenditure and savings of cardholders. Chi-square test *p value* < 0.05 is significant at 4df and hence

the alternate hypothesis is accepted that the use of credit card affects the monthly expenditure and savings.

H5	Null - Demonetization in India has increased the monthly credit card transaction across all groups of cardholders. Alternate – Monthly credit card transactions has not increased across all groups of cardholders.		
	Parameters	χ^2 test <i>p value</i>	Test Result
a	Demonetization affected	0.9724420	<p><i>p value</i> > 0.05</p> <p>Accepted Null hypothesis.</p> <p>It means there is increase in monthly credit card transaction due to demonetization for all groups of cardholders.</p>
b	Percentage increase in Monthly Credit Card Transaction	0.9529573	

Hypothesis 5 addressed the effect of demonetization in India on the credit card use by the various group of cardholders. Chi-square test p value > 0.05 is insignificant at 2df for whether demonetization affects the use of credit card and is also insignificant at 4df for percentage increase in monthly credit card transaction by the government and private sector employees and the self-employed.

4.4 DESCRIPTIVE STATISTICS

The table 4.63 is the descriptive statistics of some of the parameters under the study that affect the credit card use of the cardholder.

Table 4.63: DESCRIPTIVE STATISTICS

Parameters Affecting Credit Card Use	Sample Population (N)	Mean (M)	Standard Deviation (SD)	Standard Error (SEM)
Age	320	37.87 years	13.24	0.74
Monthly Income	320	Rs.71156.25	48252.11	26.99
Monthly Expenditure	320	55.65%	16.84	0.94
No. of Credit Cards	320	2	0.86	0.04
Percentage of Credit Limit Used	320	22.65	20.20	1.12
Cash Withdrawn	75	8.69%	7.73	0.43
Monthly Credit Card Transaction	320	Rs.19392.18	12828.01	717.10
Interest Paid	70	Rs.1071.43	941.75	113.51
Percentage of Income that could be saved if Credit Card was not used	164	20.06%	8.93	0.69

Source: Primary Data

INTERPRETATIONS

Age: Age is one of the factor that affects the use of credit cards. Data for age from sample population of 320 cardholders has mean = 37.87 years, SD = 13.24, SEM = 0.74, the spread being small the population mean can be estimated to be similar.

Monthly Income: Income is one of the main factor that affects the use of credit card. The 320 cardholders in the study had a mean monthly income of Rs.71156.25; SD=48252.11; SEM=26.99. The spread between sample mean and population mean is large.

Monthly Expenditure: Monthly expenditure as percentage of monthly income for $N=320$, $M = 55.65\%$, $SD = 16.84$ and $SEM = 0.94$ has a smaller spread from the sample mean.

Number of Credit Cards used: The mean number of credit cards used are 2 for $N=320$; $SD=0.86$ and $SEM=0.04$. This indicates that the population mean for Pune city will have similar result.

Percentage of Credit Limit Used: Percentage of credit limit used by the 320 cardholders (N), ($M=22.65$; $SD=20.20$; $SEM= 1.12$) shows that deviation from the mean is small and it is estimated that the population mean will have similar result.

Cash Withdrawn using credit card: Cash withdrawn as percentage of monthly credit card transaction by sample population (N) of 75 has $M=8.96\%$, $SD=7.73$ and $SEM=0.43$ indicates similar result for population mean.

Monthly Credit Card Transaction: $N=320$; $M=Rs.19392.18$; $SD=12828.01$; $SEM=717.10$ indicates a vast deviation from the sample mean.

Interest Paid: The credit card users who did not make full-payment i.e. who paid only the minimum due or roll-over payment has to pay interest on the future transactions until they make full payment. Those who had to pay interest were $N=70$ ($M=Rs.1071.43$; $SD= 941.75$; $SEM=113.51$), shows that there is large deviation from the sample mean.

Percentage of Income that could be saved: About half the cardholders ($N=164$) are of the opinion that credit card use increased the expenses. If they had not used credit card they could save certain percentage of income. Hence the descriptive statistics shows the mean for the percentage of income that could be saved is 20.06% ; $SD=8.93$; $SEM=0.69$. Standard deviation and standard error of mean being small, it is estimated that the population mean would similar result.

CHAPTER 5

DISCUSSION & SUMMARY

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DISCUSSION & SUMMARY

This chapter has three sections. First section is the summary & discussion of the study. This section is divided into two sub-sections of socio-economic profile of the respondents and credit card usage pattern of the cardholders in Pune city. Second section the conclusion and third section is suggestions and brief note on the scope for further research in this area.

5.1 DISCUSSION & SUMMARY

With dynamic changes in economic scenario across the world, production, distribution and consumption pattern changes. New forms of production units finds its way into the economy. The scope of employment and incomes to grow, increases. Financial sector, key to growth in the economy, modifies itself to the changing requirements. This leads to transaction and payment process to evolve into a much better and convenient process. With information technology and digitalization payment system has evolved from commodity money to use of currency and now to plastic money. Society becoming cashless is talk of the day. Since the introduction of credit cards as a payment instrument, it has become a ubiquitous financial instrument held by individuals across the world.

Credit cards works on ‘charge first, pay later’ principle. It provides the consumers, two distinct functions – a means of payment and a source of credit. As a means of payment it is considered as the modern form of money. For the consumers, credit cards are a source of unsecured loans with a revolving credit facility. The credit cards enhances liquidity and thus the purchasing power of the consumers. With increasing incomes and easy availability of credit cards, the consumption pattern is changing. Unlike earlier, consumption no more depends only on incomes of the consumer. Hence it’s found that there is increase in consumption expenditure but simultaneously if the credit card bill payment is not done within the month, it leads the consumer into debt. This effects the savings adversely.

This scenario is happening in India as well. India en emerging economy has become a market oriented economy and now is trying to become production oriented economy. Hence changes in the economy is much visible since the 1991 economic reforms in our country. With globalization, liberalization and privatization, forms of production units has evolved. Occupational structure is changing. India a mixed economy, has public

sector, private sector and now again with changing policies the scope of self-employment is increasing. Different types of working population of India, with changes in income and thereby disposable income can maintain their lifestyles due to the use of credit cards and loans available. There is a growing change in spending behavior of the consumers.

Pune, the cultural capital of Maharashtra state has witnessed a sea change in the last few decades. It has changed itself from 'pensioner's paradise' to 'industrial hub'. Increasing incomes, changing lifestyles has led to a change in expenditure pattern.

This research work is a study about the socio-economic conditions of the salaried and the self-employed cardholders. It is a comparative study of behavior pattern of credit cardholders working in government and private organizations and the self-employed. The study answers the questions like who all are using credit card, whether the income, age, gender, education, marital status and the organization where the cardholder is employed, affects the spending behavior. For what purpose, what duration, and what frequency the credit card is used? What is the average number of transactions per month? What is the average amount of transaction per month? Whether the cardholders use the revolving line of credit facility i.e. whether they carry forward their payment to the next month and thereby have to pay interest? What is the amount of interest they pay? Are they into debt trap due to not paying the credit card dues? For this primary data is collected through a structured questionnaire from 668 respondents which includes government, private sector employees and the self-employed in Pune city.

5.1.1 Socio-Economic Profile of Respondents

5.1.1.1 Number of credit card users and non-users

Out of the total sample of 668 from Pune city, 320(48%) are credit card users and the rest 348(52%) are not using credit cards.

5.1.1.2 Number of respondents never owned credit card and those discontinued using the card

It is found that among those not using credit card, i.e. out of 348 non cardholders, 283 (81%) respondents never owned a credit card and 65 (19%) respondents had owned a credit card but discontinued using it.

5.1.1.2.1 Reasons for never using credit card and discontinuing the credit card use

The reason given by 76% of those who never owned a credit card is that they are not interested in using a credit card i.e. they have consciously decided not to use a credit card and 6% finds it not affordable. But 18% said they were never approached by anyone. It means there is a possibility that in future they might use credit card if the banks offer a credit card.

Among those who discontinued using the credit card, about 30 respondents felt that it increased their spending and 13 of them said it reduced savings. 20 respondents did not find the card useful. But 20 respondents had bad experience of using the card. Bad experience included, as per the respondents, the bill not received in time, harassment by the recovery agents, high interest, falling in debt trap and the card issuers not ready to listen to their grievances.

5.1.1.3 Age

5.1.1.3.1 Age-wise Frequency Distribution of Respondents

In age group from 30 years to 50 years, credit card holders are more than non-cardholders. Among those who are less than 30 years and those more than 60 years, cardholders are less than the non-cardholders.

5.1.1.3.2 Age-wise distribution of credit card holders

About 35% of the card users are in the age group of 30 to 40 years. It is found that as the age group increases the number of card users has declined after the age group of 30 to 40 years. The mean age of credit cardholder is 39.7 years. $SD = 13.24$, $SEM = 0.74$, the spread being small the population mean can be estimated to be similar. Thus it is concluded that age does affect the use of credit card.

The findings of this study is similar to findings of Barker & Sekerkya (1993) and Kayank and Harcar (2001) in which it was found that in Turkey middle age group (36 to 45 years) was more likely to hold and use the credit card. The past researchers Awh and Waters 1974; Adcock et al. 1977 and Wasberg et al. 1992 have reported a negative impact of age on credit card usage in America.

Though only about 38% in the age group above 60 years and above are using credit card, it is quite noticeable. In the US, the senior citizen market is of impressive size due reasons like bankruptcy, increasing health care expenses, and low retirement income (Dellutri, 2010).

5.1.1.4 Gender

5.1.1.4.1 Respondents' Gender-wise frequency distribution

According to the data in table 4.4, 458 (69%) are male respondents and 210 (31%) are females. Among the males, 245 (53%) respondents are cardholders and 213 (47%) respondents are not cardholders. Among the females, 75 (36%) respondents are cardholders and the remaining (64%) respondents do not use credit card.

5.1.1.4.2 Gender-wise frequency distribution of Credit card holders

Percentage of male cardholders (77%) is more than the female cardholders (23%).

More males use credit card in most part of the world. Studies done by White (1975) and Adcock et al. (1977), males use credit card more. But the Turkish study found no difference among the genders in use of credit cards Kayank and Harcar (2001).

5.1.1.5 Educational Qualifications

5.1.1.5.1 Respondents' educational qualifications

It is found that 32% of the respondents are having a Professional Post Graduate degree. In this group 126(59%) are credit card users and the remaining 87(41%) do not use credit card. This is followed by Professional Graduate degree holders with about 73(49%) being card users and 75(51%) not using credit card. The data also reveals that with higher education i.e. PG and Doctorates, the number of credit card users are more than the non-users. But people who are not graduates, mostly do not use credit card. Those who are non-metric, 6 respondents, all do not use credit card. Among the SSCs, only 7(30%) use credit card and the rest 16(70%) do not use credit card. Those who are HSC complete, only 10(22%) are cardholders and the rest 35(78%) are non-cardholders.

5.1.1.5.2 Educational Qualifications of Credit Card users

Among the credit card users, 39% are having a Professional Post Graduate degree, followed by Professional Graduate degree holders 23%.

This finding is similar to the study done by Awh & Waters 1974; Adcock et al. 1977; Canner & Cynrak 1985 which reports that people with higher education and knowledge in the US are using credit card more.

5.1.1.6 Marital Status

5.1.1.6.1 Respondents' Marital Status

Marital status of the respondents shows whether more number of married respondents are using credit cards or unmarried/single respondents. The data show that, about 533 (80%) of the respondents are married and 133 (20%) are unmarried, and 2 respondents were divorced/separated. Half of the married are credit card users and the other half is not using credit card. Among the unmarried or single, only 51 (38%) are cardholders and the rest 82 (62%) are non-users. Among the respondents who are divorced or separated, one is using credit card and the other is not. The percentage of married cardholders is more than the unmarried/single cardholders.

5.1.1.6.2 Marital Status of the Cardholders

Among the total credit card users, 84% are married and 16% are unmarried. With only 1 respondent who is a divorcee using the card, it becomes zero percent of the sample population. It is concluded that marital status affects the credit card use.

Dolener & Katzenstein 1994 also reported similar result that marital status affects the credit card use, as the married respondents using credit card are more than the unmarried, divorced or separated. Similar study confirms the relationship between marital status and credit card spending behaviour, with married respondents more likely to spend more compared to those who are single (Devlin et al., 2007; Godwin, 1998). Same is the situation in Malaysia (Teoh et al. 2013).

5.1.1.6.3 Unmarried / divorced /separated Respondents – staying with family

Among the respondents who were either unmarried or divorced/separated, 33(25%) were staying alone and 98(75%) were staying with family. But the fact is that both the credit card users (39) and non-users (61) percentage distribution is the same for those staying alone and those staying with family. Out of the 133 unmarried, divorced/separated respondents, 40% (53) are credit card users and the remaining 60% (80) are non-users.

5.1.1.7 Family Type (Nature of family)

5.1.1.7.1 Respondents' family type

It is found that in the city of Pune, 394(59%) of the respondents have nuclear family and 253(38%) respondents have joint family. 21(3%) have not responded to this question. Among the respondents with nuclear families, about half are using credit cards and the other half of them do not use credit card. Those with joint families 113(45%) are cardholders and the remaining 140(55%) are non-users.

5.1.1.7.2 Family Type of Credit Cardholders

It is found that in case of credit card users' family type, about 62% of the card users have nuclear family and 35% have joint family. About 3% have not responded.

5.1.1.8 Family Size

5.1.1.8.1 Family size of the Respondents

About 379 (57%) respondents have a family size with 3 to 4 members and 243(36%) of the respondents have families with 5 and more members. Only 28 (4%) of the respondents have families with 2 members and 18(3%) have not responded.

5.1.1.8.2 Cardholders' Family Size

Among the 320 credit cardholders, about 61% have 3 to 4 member family, 32% have 5 and more member family and only 4% have two member family. 3% have not responded.

5.1.1.9 Earning Members

5.1.1.9.1 Respondents' number of earning members in the family

It is found that 361(54%) of the respondents' have two earning members, 149(22%) respondents are single income families and 143(21%) have three or more earning members in their family. About 2% have not responded to this.

Families with one earning member the credit card-holders are 62(42%) were as, non-card users are 87(58%). But in double income families, card users are more 51% and non-card users are 49%. Those with three or more earning members, card users are less at 47% and non-card users are 53%.

5.1.1.9.2 Earning members of Credit card users

Families with double income have the most number of credit card users (58%) followed by 3 or more earning members (21%) and 19% of the card users have only one earning member.

5.1.1.10 Occupation

5.1.1.10.1 Occupational Composition of Respondents

Out of the total sample population (668), 429(64%) are employed and 239(36%) are self-employed in Pune city. As per the 2011 census, Pune city had about 60.4% salaried and 39.6% self-employed population¹¹².

Among the employed consisting of government (including semi-government) and private sector employees, 203(47%) are using the credit card and the remaining 225(53%) are non-cardholders. Among the self-employed that includes businessmen, doctors, lawyers, consultants, chartered accountants and agents, 117(49%) are credit cardholders and the rest 123(51%) are not using the credit cards.

5.1.1.10.1.1 Nature/type of Employed Respondents

Distribution of employed respondents as per the type of employment i.e. whether they are government employees or private sector employees was analyzed. It also includes analysis regarding how many are permanent and how many are temporary.

In the city of Pune, out of the 429 respondents who are employed, 163(38%) are government employees and 266(62%) are working in private firms. Among the 163 government employees, 136(83%) are permanent employees and the remaining 27(17%) are temporary employees. Out of the 266 private sector employees, 195(73%) are permanent employees while 71(27%) are temporary employees.

Among the employed respondents 203(47%) are credit card users and 226(53%) are non-cardholders.

5.1.1.10.1.2 Nature/type of Self-employed Respondents

Among the 254 self-employed respondents, 118 (46%) are businessmen and 49(42%) are credit card users while 69(58%) do not use credit card. The medical practitioners (doctors) are 34(13%) and 23(68%) are cardholders while 11(32%) are non-card users. The lawyers 32(13%), among them most of them responded that since they are lawyers banks were reluctant to issue credit card to them. Most of them were using add-on cards. 22(69%) do not use credit card only 10(31%) said they used credit cards. Most of the chartered accountants (19(95%) out of 20) used credit card. Only one did not use the credit card. Consultants and agents/brokers were 25(5%) each. But 14(56%) of the consultants used credit cards while only 9(36%) of the agents used credit card. It is

¹¹² Economic Survey of Maharashtra, retrieved from <https://www.mahadesmaharashtra.gov.in>

found that out of the 254 self-employed respondents 124(49%) are credit card users and 130(51%) are non-cardholders.

Among the 124 self-employed, 7 respondents are actually employed but they are also have their own private practice. Among these 7, one is employed in semi-government and 3 in private firm and are also Consultants. Another one is working in a private firm and is also a medical practitioner. One among the 7 is privately employed plus has a business of his own. Another one is lawyer but also employed. This data shows that among the 320 credit card users in Pune city, there are about 2% salaried employees who also have some or the other kind of self-employment.

5.1.1.10.2 Occupational composition of Credit Cardholders

Out of the 320 cardholders surveyed, 203(63%) are employed and rest 117(37%) are self-employed.

5.1.1.10.2.1 Nature of Employed Cardholders

Out of the 203 cardholders who are employed, 88(43%) are government employees and 115(57%) are employees working in private sector.

Among the government employees 76(86%) are permanent and 12(14%) are temporary. About 103(90%) of private sector employees and 12(10%) of temporary employees are using credit card.

5.1.1.10.2.2 Nature of Self-employed Cardholders

Out of 124 self-employed cardholders, 49(40%) are businessmen. This is followed by medical practitioner 23(19%), Chartered Accountants 19(15%) and consultants 14(11%). It is found that among the lawyers and agents/brokers, the use of credit card is less compared to the other types of self-employed.

This finding is different from Joo and Pauwels (2002), where they found that the self-employed are most likely to be heavy users of credit cards.

5.1.1.10.3 Age-wise Occupational composition of cardholders

Among the cardholders below the age of 30years, 52(88%) are employed and only 7(12%) are self-employed. On the other end, as per the data, only 1(11%) of those above 60 years are employed and 8(89%) are self-employed. In rest of the age groups the distribution of employed and the self-employed shows that it is the employed who use credit card more than the self-employed.

Age-wise occupational composition reveals that it is employed youngsters below the age of 40 years are more credit card users than their counterparts who are self-employed.

5.1.1.10.4 Gender-wise Occupational Composition of Cardholders

In case of those employed, it is seen that both among the employed and the self-employed, credit card use among both the genders are almost same, 152(75%) of males and 51(25%) of females among employed and 93(79%) males and 24(21%) females among the self-employed use credit card.

5.1.1.11 Monthly Income

5.1.1.11.1 Respondents' Monthly Income

It is seen that regarding monthly income of the respondents, most of them 232(35%) have a monthly income between Rs.20,000/- to Rs.50,000/-. It also shows that in less income group, the credit card use is less compared to higher income group. Those with income less than Rs.10,000/- most of them 44(96%) do not use credit card, only 2(4%) are using credit card. As the income increases, credit card use increases among the respondents. Those with monthly income more than Rs.1,00,000/-, 72(77%) are using credit card and only 21(23%) of the respondents do not use credit card. Among the non-cardholders 3 respondents did not respond to the question regarding monthly income. Most of the respondents fall in the monthly income group of Rs.20,000/- to Rs.50,000/- and up to this income group, the number of non-cardholders are more than card users. From the monthly income group of Rs. 50,000/- and above the number of credit card users are more than non-users.

The average monthly income of the credit card users is Rs. 75,625/- while the average monthly income of non-card users is Rs.42,687/-.

5.1.1.11.2 Monthly Income Group of Credit Card users

About 120 (37%) cardholders have monthly income in the range of Rs.50,000/- to Rs.1,00,000/-, followed by 107(33%) in the monthly income group of Rs.20,000/- to Rs.50,000/-. About 72(23%) of them have monthly income more than Rs.1,00,000/-. Only 2(1%) cardholders have monthly income less than Rs.10,000/- and 19(6%) have monthly income in the range of Rs.10,000/- to Rs.20,000/-.

Higher the monthly income the number of people using credit card is more.

Similar are the findings of various studies. Barker & Sekerkaya 1992; Kayank *et al.* 1995; Kayank & Harcar 2001, reports that there is a strong positive relation between high income and credit card use. They spend more on different products. Economically less privileged use the credit card for installment credit as they do not get credit easily from the banks according to study done by Mathews and Slocum 1970.

5.1.1.12 Source of income

5.1.1.12.1 Respondents' Sources of Income

It is found that 65(15%) of the employed respondents have income from sources other than salary. The data reveals that among the employed respondents with more than one source of income, only 31(48%) are using credit cards while the remaining 34(52%) are non-cardholders. Among the self-employed 39(16%) have income from sources other than salary.

It is seen that among the self-employed respondents with more than one source of income, more than half 24(62%) are using credit cards while the remaining 15(38%) are non-cardholders.

5.1.1.12.2 Credit cardholders' source of income

The data regarding the sources of income of cardholders reveals that out of the 31 cardholders with more than one source of monthly income, about 21(68%) have rent as additional source of income. This is followed by those having commission along with their monthly income 5(16%) and credit card users with salary plus professional charges are 3(10%). One cardholder each has salary plus profit and salary plus professional charges and rent as their sources of monthly income.

Type of source of income affects the use of credit card.

An equal number of self-employed cardholders 9(37%) have profit plus rent and professional charges and rent as their sources of income. Around 3(13%) each have profit plus commission and commission plus rent as sources of incomes.

An important finding is that **most of the respondents with rent as additional source of monthly income are using credit cards.** This is true for both the employed as well as the self-employed. Rent being to some extent a continuous additional source of income makes the people to use credit card.

5.1.1.13 Savings/Investments

5.1.1.13.1 Nature/type of savings/investments

- It seems that overall the credit card users' savings/investment in each type is more than the non-cardholders except for the bank deposits.
- Both credit card users' as well as non-users' have the maximum savings/investment in bank deposits/bonds. But the point to be noted is that this is comparatively less for cardholders (250) than that of non-cardholders (262).
- There is no much difference in the nature of savings/investment of the credit card users and non-users in Pune city. Since from the data it can be inferred that on an average the cardholders savings/investment is 2.22 and that of non-cardholders' it is 1.68, which when rounded off, would be equal to 2 for both the cardholders and non-cardholders. This is also proved by the chi-square test as the *p value* = 0.000253562 means there is no much significance between the cardholders' and non-cardholders' nature of savings/investment.
- Another point to be noted is that five of the cardholders and three non-cardholders had all the different types of savings/investment. But there are 15 cardholders and 24 non-cardholders who do not have any savings/investment at all. They feel that the incomes that they earn is almost completely is spend.

The life-cycle hypothesis postulates that consumers should allocate their lifetime income over time in order to smooth their consumption (Ando and Modigliani 1963). Consumers use past income in the future as it is stored in the form of savings and investments which is used later. But a consumer to use his future income at present will need credit which is provided by the credit card that provides additional spending power. This needs to be repaid in future. Based on this it can be inferred that both the card users and non-users nature of savings are similar.

5.1.1.13.2 Type of Investments in Real Estate

- The number of credit cardholders having different types of investments in real estate is more than the non-cardholders.
- About 21 respondents who use credit cards and 106 non card-users have 'self-occupied house'. This means they do not have to spend for their stay (give rent). Hence it can be said that one of the reasons for using cards could be that they already own a house of their own and so can afford to have extra expenditure through credit cards.

- ‘House given on rent’ means an additional income to spend and save, hence may be the reason for using credit cards. There are 41 responses for house given on rent among the cardholders while this figure is only 25 in case of non-cardholders.
- In case of ‘house not occupied’ the number of cardholders and non-cardholders is almost same at 7 and 6 respectively.
- Again in case of ‘plot of land’ there were about 40 responses from cardholders and only 18 from non-cardholders.

5.1.1.14 Monthly Expenditure

5.1.1.14.1 Respondents’ Monthly Expenditure

The data reveals that about 215(32%) respondents have a monthly expenditure between 50 to 60% of their monthly income. In this group 142(66%) use credit cards and the remaining 73(34%) do not use credit cards. About 147(22%) of the respondents have monthly expenditure less than 50% of monthly income. Among this group, 58(39%) are cardholders while 89(61%) are non-cardholders. Those having monthly expenditure more than 80% of their monthly income only 21(29%) are cardholders while 51(71%) do not use credit cards.

5.1.1.14.2 Cardholders’ Monthly Expenditure

Among the total credit cardholders (320), about 142(44%) of the cardholders’ monthly expenditure is between 50 to 60% of the monthly income. This is followed by monthly expenditure between 60 to 70%, in which 66(21%) cardholders are present. With higher monthly expenditure the number of credit card users decline. In the range of 70 to 80% and more than 80% monthly expenditure, there are only 33(32%) and 21(29%) cardholders respectively.

5.1.1.15 Comparison of various economic parameters of respondents

5.1.1.15.1 Monthly Income and Expenditure

5.1.1.15.1.1 Composition of Credit card users as per Monthly Income and Expenditure

It is seen that most of the credit card users 56(18%) have a monthly income between Rs.50,000 to Rs.1,00,000/- and monthly expenditure in the range of 50 to 60%. This is

followed by 41(13%) cardholders having monthly income in the range of Rs.20,000 to Rs.50,000/- whose monthly expenditure is again in the range of 50 to 60%.

5.1.15.1.2 Composition of Non-card users as per Monthly Income and Expenditure

As per the data in table 4.31, among the non-cardholders, most of them about 87 have monthly expenditure less than 50%. The overall frequency distribution shows that the monthly expenditure of the non-cardholders is somewhat similar across various income groups. Only 31(9%) have monthly income in the range of Rs.20,000 to Rs.50,000/- but monthly expenditure is between 70 to 80%.

About 142(44%) cardholders' monthly expenditure is in the range of 50 to 60% of their monthly income whereas, the maximum 87(25%) non-cardholders' monthly expenditure is less than 50%.

In case of monthly income, maximum number of the cardholders 120(38%) fall in the income group of Rs.50,000 to Rs.1,00,000/- whereas, the maximum number of non-cardholders 123(35%) is in the income group of Rs.20,000 to Rs.50,000/-. Hence the hypothesis that monthly income affects the credit card use is true.

5.1.15.2 Monthly Income and Occupation-wise Composition of Respondents

Among the government employees, most of the cardholders 33(20%) and most of the non-cardholders 39(24%) have monthly income in between Rs.50,000/- to Rs.1,00,000/-. Among private sector employees most of the card users 45(17%) have monthly income between Rs.20,000/- to Rs.50,000/- but among the non-card users, about 53(20%) have monthly income between Rs.10,000 to Rs.20,000/-. As far as self-employed are concerned in case of cardholders the maximum of 58(24%) are having monthly income in the range of Rs.50,000/- to Rs.1,00,000/-. But among self-employed non-cardholders 55(23%) have monthly income between Rs.20,000/- to Rs.50,000/-. It is found that in higher income groups the number of credit card users are more.

5.1.15.3 Monthly Expenditure and Occupation-wise Composition of Respondents

It is seen that most of the cardholders across all types of employees have monthly expenditure between 50 to 60% of their monthly income. The number among the government employees is 48(29%), private sector employees it is 38(14%) and self-employed it is 56(23%).

5.1.1.15.4 Savings/Investment and Occupation-wise Composition of Respondents

The savings pattern in case of bank deposits is more or less similar among all the three types of employed. Only in case of GPF/CPF/NPS, it the government employees have more responses compared to private sector employees and the self-employed. Among the cardholders also there were 76 responses for it. This is obvious as it is one of the mandatory benefit given by the government.

But for the other types of savings/investments, more responses are seen among the private sector employees and the self-employed. Government employees with job security and savings in GPF/CPF, they do not wish to take the risk in investing shares and mutual funds.

In case of investment in real estate, there is a similar pattern among the employed but higher in case of self-employed. As far as investing in gold/silver, responses are less compared to other types of savings/investments.

5.1.2 Credit Card Usage Pattern

5.1.2.1 Number of Credit Cards Owned

Pune city credit cardholders, on an **average use 2 credit cards**.

Although 66% of the cardholders own 1 credit card, most of the government employees 81% own one card but this is number is 53% for private sector employees and 64% for the self-employed. Among the government employees 71(81%), private sector employees 67(58%) and self-employed 74(63%) are having one credit card each. **Government employees are mostly single card users.** About 46(40%) of private sector employees and 40(34%) of self-employed have 2 to 3 credit cards but this number is less in case of government employees, its only 15(17%). It is seen that among government and private sector employees, only one (1%) cardholder each and 3(3%) self-employed cardholders had said that they have 4 to 5 cards. In the sample, 2 cardholders one each from government and private organization are having more than 5 credit cards.

Various studies across the world shows similar trend in number of credit cards owned. In USA, according to the data released in 2018, by the American Banking Association there are 3 credit cards on an average per person. In Singapore the mean number of credit card owned was 2.27 (Gan *et al.* 2005). As per data of UK Card Association the average is 1.7 credit cards per cardholder in the UK in 2017. In Japan the average

number of credit card is 2.5 as per report of Japan Consumer Credit Association (JCA). In Shanghai (China) there were less than 2 cards per person (Jiang, 2012). Australia it is 2.01, Canada 3.7 and Taiwan the credit card per person is 4.68 as per a market study by Financial Conduct Authority, UK in 2015.

5.1.2.2 Add-on Cards

About 273(85%) of cardholders do not have add-on card but only 42(13%) have add-on cards. About 5(2%) cardholders did not give response to this question. Using add-on cards mean further increase in spending.

5.1.2.3 Duration of Credit Card Use

Duration of credit card use for half of the credit cardholders is more than five years. About 47% of the government employees, 45% of the private sector employees and 58% of the self-employed are using the credit card for more than five years. Similar results for a study done in Turkey shows that about 43% of the sample population were using the credit card for about five years (Celil Koparal & Nuri Çalik, 2014).

5.1.2.3.1 Credit Card Use since Demonetization

About 32% of cardholders using it for less than one year has started using it after demonetization.

5.1.2.4 Type of Cards

The type of card depends on their incomes most of the cardholders either have silver, gold or platinum cards. Silver and gold are considered basic card and with higher incomes, one can get platinum, titanium cards. Most of them had Platinum card (about 192) followed by Gold card (89), Titanium (56), then Silver card (36), International card (28). For Co-branded card there were only 3 responses. This shows that the concept of co-branded cards in our country is not that familiar as in case of the other countries. Among the self-employed using Platinum card is the highest with 74 responses, followed by private sector employees (67) and then government employees (51). Across all the types of employment, the type of card use shows a similar trend.

5.1.2.5 Card Payment Network

VISA has the highest number of responses of 243, followed by MasterCard (137). Only 19 response for American Express as this is mainly for the high end users. This is similar to the Nilson Report 2016 which shows that VISA has 50% market share in the world. Most of the countries VISA card network has captured the credit card market globally.

5.1.2.6 Credit Limit

About 138(43%) of the cardholders have credit limit in the range of Rs.50,000/- to 1,00,000/-. About 38(43%) of government employees, 52(45%) of private sector employees and 48(41%) of self-employed have credit limit in this range. About 112(35%) have a credit limit of Rs.1,00,000/- to Rs.5,00,000/-, followed by 52(16%) having less than Rs.50,000/- and only 18(6%) having a credit limit of more than Rs.5,00,000/-

Study done by Celil Koparal & Nuri Çalık, in 2014, about 29% of the cardholders in Turkey have credit limit less than Rs. 50,000/-.

According to China Payment System Development Report 2014, the average credit limit per card has increased by CNY 12 thousand, of which 42% is utilized.

5.1.2.7 Frequency of Credit Card Use in a Month

Maximum number of cardholders 113(35%) use their card about 3 to 5 times in a month. In this category, 39(44%) of the government employees, 33(29%) of private sector employees and 41(35%) of self-employed use credit card for 3 to 5 times in a month. Around 78(24%) use the card once or twice in a month whereas, 46(14%) use it occasionally. Most of the cardholders use the card maximum up to 5 times in a month.

5.1.2.8 Percentage of Credit Limit Used

Most of the cardholders 114(36%) use about 10 to 25% of their credit limit. In this group, among the government employees about 33(38%), private sector employees 43(37%) and self-employed 38(32%) use 10 to 25% of their credit limit. About 91(28%) use only less than 10% of their credit limit. Most of the self-employed 40(34%) is in this range, and among government and private sector employees are 22(25%) and 29(25%) respectively in this range. The data shows that the number of cardholders becomes less as the percentage of credit limit increases across all types of employees.

In this study it is found that most of the cardholders utilize up to 25% of their credit limit but studies done in USA reports that mostly half of the credit limit is used and in China about 42% of the credit limit is utilized. It means that in Pune city cardholders are cautious in using credit card.

5.1.2.9 Awareness of Reward Points

About 292(91%) cardholders are aware of the reward points that one gets when using a credit card. Only 28(9%) have said they did not know about reward points.

There is no difference between types of employees with regard to awareness of reward points.

5.1.2.9.1 Accumulate Reward Points

This factor of accumulating reward points facilitates consumption and hence expenditure increases. About 182(62%) accumulate reward points and 110(38%) don't accumulate reward points. It is the private sector employees 76(72%), who accumulate reward points mostly, followed by 54(67%) of government employees and only 52(49%) of the self-employed accumulate reward points.

Canadian consumers are more attracted to reward points and US & UK cardholders are also equally attracted towards reward points given for purchases through credit cards. But in China, it is reported that cardholders' awareness about reward points is very low and hence accumulation of reward point is low (Liu & Brock 2009). Indian cardholders are showing the features of cardholders from developed countries which may lead to consumerism as cardholders use the card just to get the benefit of reward points increase their credit card transactions.

5.1.2.10 Credit Card Use

Among the 320 credit cardholders, 316 (99%) use it for personal use and 41 (13%) for business use. Among those 41, about 38 use the card for both personal as well as business use and only 3 self-employed use it only for business purpose. There are 3(three) government employees and 9(nine) private sector employees who use the card for business purpose as well. Among the self-employed 26 responses for both purposes were recorded. The 3(three) response of self-employed for only business purpose included 2(two) businessmen and 1(one) chartered accountant.

5.1.2.11 Purpose of Credit Card Use

Credit card is used for paying the bills at restaurants/hotels by most of the cardholders 234(73%), this is followed by paying for petrol/diesel 227(71%). The number of responses for online shopping and use while travel is same 208(65%). The credit card is least used for education purpose 26(8%). Among the different types of employees, it is found that in each type of purpose of use it is the private sector employees who use them in highest number except in case for travel where it is self-employed who use is more often.

About 75(23%) of cardholders are using credit cards for withdrawing cash. The private sector employees 35(30%) use credit card for withdrawing cash the most. Then it is the self-employed 24(21%) and government employees 16(18%) who use credit card for cash withdrawal. It is found that across all the types of employed it is used rarely 53(17%) i.e. once in a year only the card is used for withdrawing cash.

As per this study 65% of the cardholders use credit card for online shopping. As per the study done by Asia Pacific Techno graphics Online Survey, Q3 2011, payment for online transactions in India was 44% by credit cards. In this study it is found that credit card is used mainly in restaurants, for purchasing petrol/diesel, online shopping and while travelling. An average American uses his credit card to purchase all types goods and services. According to Taiwan's national credit card centre, the top six credit card transactions by income group were almost identical -- food, transportation, department store/supermarket, education & entertainment, lodgings and clothing. Similar result is found for Turkey as well where most of them use the credit card for store purchases of food and small household appliances this is followed by purchasing clothes, shoes and accessories. Then is used while traveling and for entertainment. But the use of credit card for online shopping is less.

5.1.2.12 Cash Withdrawal using Credit Cards

5.1.2.12.1 Frequency of Cash withdrawal

About 75(23%) of cardholders are using credit cards for withdrawing cash.

The private sector employees 35(30%) use credit card for withdrawing cash mostly. Then it is the self-employed 24(21%) and government employees 16(18%) who use credit card for cash withdrawal. But it is found that all of them used the credit card

rarely 53(17%) i.e. once in a year only for withdrawing cash. There are 12(4%) cardholders frequently (at least once a month) use it and 10(3%) use it not-frequently i.e. only 2 to 4 times, in a year for withdrawing cash.

Among the government employees 2(2%) each use it frequently and not-frequently i.e. only 2 to 4 times in a year. About 12(14%) use the card rarely (once in a year or less) for cash withdrawal.

In case of private sector employees 6(5%) use it frequently, 5(4%) use it not-frequently and 24(21%) use it rarely for cash withdrawal.

Among the self-employed 4(3%) use it frequently, 3(3%) use it no-frequently and 17(15%) use it rarely for withdrawing cash.

5.1.2.12.2 Employment-wise distribution of credit Cardholders showing cash withdrawal

Among the permanent private sector employees, 3(3%) use the card frequently, 5(5%) use it not-frequently and 21(20%) use it rarely for withdrawing cash. Among the temporary private sector employees, 3(25%) use the card frequently and another 3(25%) use it rarely to withdraw cash.

Among the 203 salaried cardholders, 51(25%) are using the card to withdraw cash. It is the temporary employees who are mostly withdrawing cash using the credit card. Among the government temporary employees 5(42%) and private sector temporary employees 6(50%) use card for cash withdrawal.

In case of self-employed, the medical practitioners and chartered accountants are not using the card for cash withdrawal. Among the business-men 3(6%) each use card for cash withdrawal frequently and not frequently but 8(16%) use the card rarely for cash withdrawal. Among the lawyers, one each uses the card frequently and rarely. In case of consultants, one uses it not-frequently and 3(21%) use it rarely for cash withdrawal. Among the agents 6(67%) use the card rarely for withdrawing cash.

5.1.2.12.3 Monthly Income-wise distribution of Credit Cardholders who withdraw cash using credit card

5.1.2.12.3.1 Monthly Income-wise distribution of Salaried Employees

Among the 203 salaried cardholders in Pune city, 51(25%) use credit card for cash withdrawal.

- Among the government employees 16(18%) use the card for cash withdrawal. It is found that among the permanent government employees i.e. out of 76,

11(14%) and among temporary government employees, i.e. out of 12, 5(42%) withdraw cash using credit card.

- Among the private sector employees 35(30%) use the card for cash withdrawal. Out of 103 permanent private sector employees 29(28%) and out of 12 temporary private sector employees 6(50%) use the card for withdrawing cash.
- Among both government and private sector employees, most of the temporary employees use credit card for withdrawing cash.

Among the salaried employees those having monthly income between Rs.20,000/- to Rs.50,000/- are using card for withdrawing cash.

5.1.2.12.3.2 Monthly Income-wise distribution of the Self-employed cardholders withdrawing cash using credit card

Out of the 124 self-employed credit card users, 26(21%) use the card for withdrawing cash. From the table it can be seen that the doctors (medical practitioners) and chartered accountants (C.A.) are never using credit card for withdrawing cash. Among the agents, 6(67%) are using the card for cash withdrawal. Businessmen and consultants have equal percentage (29%) of them using the card for cash withdrawal and among lawyers out of 10, only 2(20%) use the card for withdrawing cash.

Most of the self-employed using card for cash withdrawal have income between Rs.20,000/- to Rs.50,000/-. Among the businessmen those having income between Rs. 50,000/- to Rs.1,00,000/- mostly use the card for cash withdrawal. In case of lawyers equal number of cardholders in the income group of Rs.20,000/- to Rs.50,000/- and Rs. 50,000/- to Rs.1,00,000/-. Among consultants there are equal number of cardholders using card for withdrawing cash from all the income groups except the monthly-income group of less than Rs.20,000/-. Among the agents mostly have monthly-income between Rs.20,000/- to Rs.50,000/-.

5.1.2.12.4 Monthly-expenditure wise frequency distribution of cardholders withdrawing cash using credit card

Those with monthly expenditure of less than 50% of their monthly income, 2(2%) of the government employees, 9(8%) of private sector employees and 3(3%) of the self-employed use credit card for withdrawing cash. In the monthly expenditure range of 50 to 60% of their monthly income, 8(9%) of the government employees, 14(12%) of

private sector employees and 6(5%) of the self-employed use credit card for withdrawing cash. Among the cardholders with monthly expenditure of 60 to 70% of their monthly income, 3(3%) of the government employees, 4(3%) of private sector employees and 8(7%) of the self-employed use credit card for withdrawing cash. In the monthly expenditure of 70 to 80% of their monthly income, 2(2%) of the government employees, 7(6%) of private sector employees and 5(4%) of the self-employed use credit card for withdrawing cash. In the monthly expenditure of more than 80% of their monthly income, only 1(1%) of the government employees, 1(1%) of private sector employees and 2(2%) of the self-employed use credit card for withdrawing cash. Around 28(37%) of those who use credit card for withdrawing cash have a monthly expenditure of 50 to 60% of their monthly income. This is true in case of government and private sector employees as most number of cardholders have expenditure in this group. But among the self-employed 8(7%) have monthly expenditure of 60 to 70% of their monthly income.

5.1.2.13 Cash Withdrawal as Percentage of Monthly Credit Card Transaction

About 56(75%) of the cardholders who use credit card for withdrawing cash, the cash withdrawal is less than 10% of the monthly credit card transaction. About 16(21%) have cash withdrawal of 10 to 25% of their monthly card transaction. Only 3(4%) have cash withdrawal of 25 to 50% of their monthly card transaction and no cardholder has cash withdrawal more than 50% of monthly card transaction.

Average of cash withdrawal as percentage of monthly card transaction is 8.33%.

5.1.2.14 Monthly Credit Card Transaction

The credit cardholders were asked an open ended question regarding their monthly credit card transaction. **The average monthly card transaction is Rs. 19,556/-.**

Among the cardholders, 110(34%) have a monthly credit card transaction in the range of Rs.10,000/- to Rs.20,000/- and 67(21%) have monthly card transaction in the range of Rs.20,000 – Rs.30,000/-. Around 54(17%) have monthly transaction in the range of Rs.5,000/- - Rs.10,000/-. Only 15(5%) cardholders have monthly transaction of less than Rs.5,000/- and 13 (4%) cardholders have monthly credit card transaction of more than Rs.50,000/-.

Among the government employees 34(39%) have monthly credit card transaction in the range of Rs.10000 to Rs.20000/- and 26(30%) are in the range of Rs.5000 to Rs.10000/- Another 14(16%) have monthly card transaction in between Rs.20000 to Rs.30000/-.

Among the private sector employees 30(26%) have monthly credit card transaction in the range of Rs.10000 to Rs.20000/- and 29(25%) are in the range of Rs.20000 to Rs.30000/-. Another 12(10%) have monthly card transaction in between of Rs.5000 to Rs.10000/-.

In case of self-employed 46(39%) have monthly credit card transaction in the range of Rs.10000 to Rs.20000/- and 24(21%) are in the range of Rs.20000 to Rs.30000/-. Another 16(14%) have monthly card transaction in between of Rs.5000 to Rs.10000/-.

In India as per the RBI bulletin of July 2018 the total value of credit card transaction was Rs. 4,626.33 billion in the year 2017-18. In the US, total value of transaction was \$5.98 trillion in 2016 as reported by the Federal Reserve Payment Annual Supplement 2017.

5.1.2.15 Increase in monthly credit card transaction due to demonetization

Among the government employees, 12(26%) feel that demonetization has increased their card transaction and 34(74%) does not feel so. In case of private sector employees, 12(28%) feel that demonetization has increased their card transaction and 31(72%) does not feel it increased the card transactions. Among the self-employed, 19(26%) feel that demonetization has increased their card transaction and 54(74%) does not feel demonetization increased the card transactions.

5.1.2.15.1 Percentage increase of monthly card transaction due to demonetization

Among those card-users who felt that their monthly credit card transaction has increased, 34(79%) felt the transaction increased by 25%, another 5(12%) card-users felt it increased by 50% and about 4(9%) cardholders said the transaction increased by 75% after demonetization.

Both the government and private sector employees have exactly similar opinion about increase in card transactions due to demonetization.

5.1.2.16 Monthly credit card bill payment

Those who make the payment in full every month are the convenience users. But those who do a part-payment or roll-over (only minimum balance is paid), then they have to pay interest on the whole transaction amount, they are the ones with outstanding balance. 250(78%) cardholders make their monthly credit card bill payment in full. About 53(17%) make par-payment and 17(5%) does roll-over. They only pay the minimum amount due which differs from bank to bank e.g. it may be 1%, 2% or 5% of

the bill amount. Once a roll-over is done interest is added on the whole transaction for the next bill as well. Hence when using credit card the user should try as far as possible not to roll-over or make a part-payment. Both if not checked would lead to debt trap.

There are 70(22%) who do not make full payment. The distribution of these are in the following way-

- **Government Employees – 18(20%)**
- **Private Sector Employees – 33(29%)**
- **Self-employed – 19(16%)**

From this it is inferred that **private sector employees** are more prone to fall into credit card **debt trap** in Pune.

In this study, it is found that 78% of cardholders are convenience users and hence they make payment in full. Exactly same finding is reported by a study done by TransUnion Cibil, which states that Indian credit card customers have improved their payment behaviour, with about 78 per cent of them paying off monthly bills fully, leading to an all-time low delinquency rate.

Among the three groups of cardholders in the study, only 18(20%) government employees do not make full payment. This is a similar case as in China where, those cardholders who work in government agency and the state run company may have less outstanding balances.

But this is not the case in US. According to Experian's annual study on credit and debt in the US, 43% Americans are revolvers and carry credit card balance for more than two years in mid-2017 (Jessica Dickler, CNBC, 2018).

5.1.2.16.1 Average interest paid

The mean interest paid by the cardholders is Rs.1071.43.

About 48(69%) cardholders pay less than Rs.1,000/- as interest; 9(13%) pay interest between Rs.1,000/- to Rs.2,000/-; 8(11%) pay between Rs.2,000/- to Rs.3,000/- as interest; and 5(7%) pay more than Rs.3,000/- as interest.

Among the government employees 12(67%) pay less than Rs.1,000/- as interest; 2(11%) pay interest between Rs.1,000/- to Rs.2,000/-; 3(17%) pay between Rs.2,000/- to Rs.3,000/- as interest; and 1(6%) pay more than Rs.3,000/- as interest.

Among the private sector employees 22(67%) pay less than Rs.1,000/- as interest; 5(12%) pay interest between Rs.1,000/- to Rs.2,000/-; 4(12%) pay between Rs.2,000/- to Rs.3,000/- as interest; and 2(6%) pay more than Rs.3,000/- as interest.

In case of self-employed, 14(74%) pay less than Rs.1,000/- as interest; 2(11%) pay interest between Rs.1,000/- to Rs.2,000/-; 1(5%) pay between Rs.2,000/- to Rs.3,000/- as interest; and 2(11%) pay more than Rs.3,000/- as interest.

5.1.2.16.2 Period of Payment of Outstanding Amount

Among the cardholders who do not make payment in full, 49(70%) repays the outstanding bill with 2 to 3 months. This category consists of 11(61%) of government employees, 26(79%) of private sector employees and 12(63%) of self-employed.

There are 15(21%) who repay the outstanding amount within 6 months to 1 year. This category has same consistency of 5 cardholders each across the three groups of cardholders. For this the percentage is 28% government employees, 15% private sector employees and 26% self-employed.

Those who take 1 year and more to repay the outstanding amount are 6(9%), 2 each in the three groups of cardholders. For this the percentage is 11% government employees, 6% private sector employees and 11% self-employed.

On an average the revolvers take 5 to 6 months to repay the credit card bill amount.

5.1.2.17 Awareness of CIBIL Credit Score

Among the cardholders, 219(68%) are aware of CIBIL credit score. Out of this 71(81%) government employees, 70(61%) private sector employees and 78(67%) self-employed are aware of this score.

About 101(32%) of the credit card users are not aware of the CIBIL credit score. Among these, 17(19%) government employees, 45(39%) private sector employees and 39(33%) self-employed are not aware of this score.

In the US, about 80% of the cardholders are aware of credit score as per Consumer Federation of America's Consumer survey 2016. According to MyCreditMonitor, 60% of consumers in UK though aware of credit score, do not know their credit score.

Credit Score is a three digit number ranging from 300 to 900 that shows the creditworthiness and ability to repay. A good credit score i.e. above 600 means a good chance of getting the loans sanctioned or will be able to get a credit card. Not knowing about credit score means it would be strenuous to get credit from the financial

institutions. This is because if the borrower is not aware of the importance of credit score he may end up having a bad credit score and the creditors may not give the credit.

5.1.2.18 Advantages of Credit Card Use

Cardholders feel convenience i.e. no need to carry cash and for emergency use, is the most advantageous thing while using credit card. There are 244(37%) and 242(36%) responses for these options of advantages respectively. There are 168(25%) responses for 'Buy now Pay later' facility and only 14(2%) responses for status symbol as an advantage.

5.1.2.19 Disadvantages of Credit Card Use

Most of the cardholders feel that impulsive buying and person falling in debt trap is the greatest disadvantage of using credit card. There are 177(35%) responses for impulsive buying and 208(42%) responses for person falling in debt trap. There are 51(10%) responses for 'not accepted everywhere' and 65(13%) response for 'increases the cost of the product/service.

5.1.2.20 Awareness of Cyber-crime

Among the cardholders, 167(97%) are aware of the cyber-crimes committed due to credit card use and 6(3%) are not aware of cyber-crimes.

162(97%) never had any bad experience of cyber-crimes due to the use of credit cards but 5(3%) cardholders did have bad experience.

Among the 5 cardholders who experienced cyber-crime 3 are self-employed and 1 each is a government employee and a private sector employee. Among them 4 are below 40years of age and 3 are females and 2 males. Regarding their educational qualifications it is found that all except one are post- graduate (professional).

A Credit Card fraud study shows that cardholders across the world have experienced cyber related crimes (Ben Knieff 2016). According to the study in Mexico 56%, US 47%, India 37%, UK 29%, and Indonesia 26% of the respondents had experienced card frauds. Increasing risky behaviour of the cardholders like using public computers for online shopping, careless approach of not using properly or locking the smartphones, makes the fraudsters play tricks and siphon off the victims money. Cards with embedded microprocessor EMV chips will help to reduce credit card frauds as this chip stores and protects the cardholder personal data in a better way than the magnetic stripe.

5.1.2.21 Credit Card Use Increases Spending (Expenditure) and Reduces Savings

As per the data for frequency of credit cardholders as per their opinion about use of credit card increasing the expenditure and reducing savings, 164(51%) cardholders are of the view that credit card use increases spending and reduces savings. Another 156(49%) feels it does not increase spending and adversely affect savings.

The cardholders' view on percentage of income they could have saved if they had not used credit cards. About 109(66%) feels they could have saved 10 to 20% of their income; 40(24%) feels they could have saved 20 to 30% of their income; 6(4%) feels they could have saved 30 to 40% of their income; 5(3%) feels they could have saved 40 to 50% of their income; 4(2%) feels they could have saved more than 50% of their income if they had not used credit card.

In France it is found that the cardholders' spending per year using the credit card is less and he saves over 10% of his income. But in case of USA the average cardholder's transaction is \$4,236 and saves only about 4% of the income.

5.2 CONCLUSIONS

A comparative study of spending and saving behavior pattern of credit cardholders working in government and private organizations and the self-employed in Pune city has found that there is difference among these groups of cardholders in their spending and saving behavior. The income, age, gender, education, marital status and the organization where the cardholder is employed, affects the spending behavior. There is difference in the monthly expenditure and saving pattern of the card-users and the non-users. The credit card usage pattern differs among the different groups of cardholders. It means the purpose, duration, and frequency of credit card use and the average amount of transaction per month differs among the cardholders. It is the payment practice i.e. whether the cardholders use the revolving line of credit facility i.e. whether they carry forward their payment to the next month and thereby have to pay interest, are they revolvers or are they convenience users, the amount of interest paid and the period of repayment that decides if they fall in debt trap.

As per this research work, only 48% of Pune's working population use credit cards and the rest 52% are not using credit cards. It is seen that among those who are using credit

card, 32% of them using the card for less than one year has started using it after demonetization. Among those not using credit cards at present, 18% had discontinued using the card because of increased spending and reduced savings. It reveals the fact that if the card is not used wisely it may adversely affect personal finance. Credit card use depends on various socio-economic parameters like age, gender, family-size, earning members, educational qualification, occupation and monthly income. It is younger cardholders in the age group of 30 to 40yrs, married males and with post graduates (professional) degrees, having a family size of 3 to 4 members and double income family who are using the credit card in the city. Higher incomes enables the individuals to get credit card easily and their repaying capacity is also more hence the credit card use is more among the higher income groups in the range of Rs.50,000/- to Rs.1,00,000/- in a month. The various sources of income also helps in using credit cards as the monthly income becomes more and the card issuers are comfortable in issuing the credit card. For the salaried i.e. those employed in government or private firms may have only salary as their source of income, few are earning professional charges like consultants or doctors who are also employed or the sales staff who get commission. Rent being to some extent a continuous additional source of income makes the people to use credit card.

But among the self-employed respondents having more than one source of income, more than half 24(62%) are using credit cards while the remaining 15(38%) are non-cardholders. Regarding monthly expenditure, it is seen that people with expenditure more than 60% of their monthly income are not using credit cards. In case of savings, it is seen that among the different types of savings i.e. PF, mutual funds, real estate or gold, the cardholders' savings are more than the non-cardholders. Only in case of bank deposits, number of cardholders is less compared to non-cardholders.

It is among the private sector employees who use credit card more compared to government employees or the self-employed. In the sample population, 60% of the private sector employees use credit cards whereas only 54% of government employees and 49% of the self-employed are using credit card in Pune city.

It is concluded that the use of credit card by the working population in the city, has affected their personal finances to some extent. The study finds that unlike the west, where credit card use has gone to such an extent that families become bankrupt, here mostly credit card is used prudently and it is found that in Pune city most of the cardholders (78%) are making full payment of the credit card bill. Only 22% do part-

payment/rollover and hence become revolvers. The average interest paid by the revolvers in the city, as per this study is Rs. 1071.43. On an average the revolvers take 5 to 6 months to repay the credit card bill amount. Among the cardholders 32% are not aware of CIBIL credit score. About 51% of the card-users are of the opinion that credit card use increases their expenses and reduces savings and among them 66% feels that they could have saved 10 to 20% of their monthly income, if they had not used credit cards. About 35% of cardholders are of the opinion that credit card use has the disadvantage of impulsive buying and 42% feel that person may fall into debt. Therefore there is a possibility that those who are revolvers might fall into debt trap. For them the use of credit card increases spending and adversely affects savings.

5.3 SUGGESTIONS

For the Credit Card Users:

- As credit card has become an easy and convenient mode of payment with additional purchasing power, consumption of variety of goods and services is possible. But this might lead to impulsive buying and hence consumerism increases if not used prudently. Thus, it is recommended that credit card should be used only for those purchases that are really required.
- Credit card use becomes gainful only if the card user is a convenient user and not a revolver. It means one should be always making payment in full and not do part-payment or roll-over (minimum amount is paid). The reason is that the interest charged on credit card is very high nearly 2.5 to 3% on the outstanding balance. This becomes 36 to 40% per annum. Repayment of the outstanding balance should be done within a month or two or else the outstanding amount increases to a huge amount and the person falls in debt.
- For accumulating reward points, purchases through credit card is increased. This may lead to unnecessary purchases. Hence should not make purchases just to get the benefit of reward points.
- Use the credit card especially in emergency.

For the Issuers/Bank:

- As credit card is one of the source of making profits, bankers can offer various kinds of cards depending on age, the nature of occupation, monthly income.

There is a scope for the bankers in Pune to increase their card market share as there are people about 18% of non-cardholders, who have never been approached by any bank.

- Banks should not issue credit cards to students as it is the practice in other parts of the world as this may lead to unnecessary financial burden on the family. Similarly, issuing it to those senior citizens who are not working, should be curbed as this may create financial problems if they are not able to do the payment in full.
- Credit cards should be issued to those customers with regular and high incomes. It should be made a policy that credit card is not issued to customers with monthly incomes below Rs.20,000/- and those who are on temporary positions.
- Interest rate levied on the credit card transactions, if the bill is not paid within the free period, should be reduced. It should be similar to that in other countries, like in USA, interest rate is only 1 to 1.5%.

Further research opportunities exists for examining the changes in turnover for merchant establishments and the issuing banks due to the use of credit card specially in situations arising out of government policy decisions like demonetization. Scope exists for further research in including credit card use in consumer behavior in the changing marketing scenario across the world with changing methods of payment systems.

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Annexure - I

QUESTIONNAIRE

SECTION I

(Personal Information)

Please put a tick (✓) for whichever is applicable:

1. *Name: Mr / Ms (____)_____

**** Title**

Contact Number: _____

2. Age:

Less than 30yrs	30 to 40 yrs.	40 to 50 yrs.	50 to 60 yrs.	More than 60 yrs.

3. Gender:

Male	Female

4. Education:

Non-Metric		
SSC		
HSC		
Graduate	Professional	
	Non-Professional	
Post Graduate	Professional	
	Non-Professional	
Doctorate		

5. Marital Status:

Unmarried	Married	Divorced/Separated

6. If Unmarried/Divorced/Separated:

Staying alone	
Staying with family	

7. If staying with family, the type of family:

Nuclear Family	Joint Family

***Name and Contact Number are optional**

****if applicable**

8. Size of Family / No. of Family Members:

2	3 to 4	5 or more

9. No. of Earning Members:

1	2	3 or more

SECTION II
(Economic Information)

1. Occupation:

Employed	Self Employed

2. If Employed:

	Permanent	Temporary
Govt./PSUs		
Semi/Quasi Govt.		
Private		

3. If Self Employed:

Business	
Medical Practitioner	
Lawyer	
Consultants	
Chartered Accountant	
Agents/Brokers	

4. Monthly Income:

Less than Rs. 10,000/-	
Rs.10,000 to Rs.20,000	
Rs.20,000 to Rs.50,000	
Rs.50,000 to Rs.1,00,000	
More than Rs.1,00,000	

5. Source of income (If more than one source please tick all):

Salary	Professional Charges	Profit	Commission	Rent	Other/s *

*Please specify, for e.g. interest/dividend, royalty, scholarship, fellowship, grant, pension etc.

6. Nature of Savings/Investment:

GPF/CPF/NPS	Bank Deposits/ Bonds	Shares/ Mutual Funds	Real Estate	Gold/Silver

7. If you have investment in real estate, then specify:

Self- Occupied House	House given on rent	House not occupied	Plot of land

8. Monthly Expenditure as percentage of monthly income (including EMIs):

Less than 50%	50 to 60%	60 to 70%	70 to 80%	More than 80%

SECTION III (Credit Card Usage Information)

1. Do you own a credit card?

Yes	
No	

If No:

Never owned	
Owned but discontinued	

2. If never owned a credit card:

Never approached by anyone	Not interested, consciously decided not to own credit card	Not affordable

3. If discontinued, please give reason/s:

Not useful	Cannot afford	Increase Spending	Reduce Savings	Bad experience*

(In case you are not using a Credit Card, following questions need not be answered)

If Yes:**4. How many credit card/s do you own?**

1	2 to 3	4 to 5	More than 5

If more than 5 please specify the number: _____

***Please specify/give details (in space provided Q. 30 on page 8)**

5. Do you have add-on card/s?

Yes	
No	

6. Since how long you have been using the credit card?

Less than 1 year	Two years	Two to five years	More than 5 years

In case you have been using since less than 1 year, whether you started using it:

Before Demonetization	
After Demonetization	

7. Which type of card do you use:

Silver	Gold/ Executive	Platinum	Titanium	Co-branded	International

8. The Credit Cards used are of which payment network:

VISA	MasterCard	American Express	Discover

9. What is the credit limit for your credit card?

Less than Rs.50,000/-	Rs.50,000 to 1,00,000/-	Rs.1,00,000 to 5,00,000/-	More than Rs.5,00,000/-

10. How frequently do you use the credit card in a month?

Occasionally	1 or 2 times	3 to 5 times	6 to 10 times	11 to 15 times	More than 15 times

11. What percent (%) of credit limit do you use?

Less than 10%	10 to 25%	25 to 50%	50 to 75%	75 to 100%	100%

12. Are you aware of the reward points?

Yes	
No	

If yes, have you tried to accumulate reward points?

Yes	
No	

13. You use credit card for:

Personal/Family needs	
Also for Business	

14. For what all-purpose you use credit card?

Grocery	
Textile	
Restaurants / Hotels	
Petrol / Diesel	
Garage	
Medical facilities / Chemist	
Phone Bill	
White goods/Domestic appliances	
Gift shops/ General stores	
Online Shopping	
Railway/ Airline bookings	
Travel	
Jewellery	
Educational purpose	
EMI	
Cash Withdrawal	

15. If you use credit card for cash withdrawal, how often you withdraw?

Frequently (at least once a month)	
Not frequently (2 to 4 times a year)	
Rarely (once in a year or less)	

16. Cash withdrawal/s as percentage of monthly credit card transaction:

Less than 10%	10-25%	25-50%	More than 50%

17. Please specify your average monthly transactions through credit card/s (purchases + cash withdrawals): Rs. _____

18. Do you think your monthly transactions through credit card increased after demonetization?

Yes	
No	

If yes, by how much it increased?

25%	
50%	
75%	
100%	

19. The monthly credit card bill payment is done:

In full	
Part-payment	
Roll-over (only minimum balance is paid)	

20. In case you do not make full payment,

[A] On an average how much interest you pay per month?

Less than Rs.1,000	Rs.1,000 to Rs.2,000	Rs.2,000 to Rs.3,000	More than Rs.3,000

[b] Within what period you make the payment?

Two to three months	Six months to 1 year	One year and more

(Questions 21, 22 & 23 are only for the temporarily employed)

21. If temporarily employed, were you out of job any time since you started using credit card?

Yes	
No	

22. If yes, were you still using the credit card?

Yes	
No	

23. If yes, how was the monthly credit card bill payment done when you were out of job?

In full	
Part-payment	
Roll-over (only minimum balance is paid)	

24. Are you aware of CIBIL credit score?

Yes	
No	

25. In your opinion what are the advantages of credit card use?

Convenience (no need to carry cash)	'Buy now pay later' facility	Emergency use	Status symbol	Any other, please specify

26. What in your opinion are the disadvantages of credit card use?

Not accepted everywhere	
Increases the cost of the product/service	
Impulsive buying	
Person may fall in debt trap	

27. Are you aware of cyber-crime due to credit card use?

Yes	
No	

If yes, did you have any bad experience of cyber-crime?

Yes	
No	

28. Do you think the use of credit card has increased your expenses and affected your savings adversely?

Yes	
No	

If yes, i.e. it affects your savings adversely, then approximately what percentage of your income you could have saved if credit card was not used?

10 to 20%	20 to 30%	30 to 40%	40 to 50%	More than 50%

29. Is there a need for financial literacy in the country regarding credit card use?

Yes	
No	

30. Any Comments:

***** THANKYOU *****

Annexure II

PUNE CITY MAP

