© MAY 2024 | IRE Journals | Volume 7 Issue 11 | ISSN: 2456-8880

Consumer Spending Behaviour: A Comparison of Credit vs Debit Usage during Financial Crises

RISHI RAJ SINGH

Abstract- The authors study the effect of financial crises on the switch in consumer expenditure behavior using credit and debit payment modes. Research into the field of consumer payment behavior is an emerging trend with increasing accessibility to the payment data and it covers card use trends, credit management, and payment preferences. However, previous research has not suggested credit and debit use in times of crisis or differentiated preference through stages of a financial downturn. The paper makes this contribution through the analysis of data from small finance institutions in the USA, therefore enabling trendlines and preferences for means of payment to be developed on a wide geographic, socio-economic, and demographic basis. This unique perspective in understanding the consumer choice of credit/debit usage further develops another angle for verifying such conclusions previously not well settled. From the evidence of these results emerge a number of points of real importance for further study, financial institutions, and scholars of credit.

I. INTRODUCTION

The 2020 recession, triggered by the COVID-19 pandemic, is an excellent opportunity for an examination into consumer spending during financial crises-a subject particularly relevant in these last ten years (Klapper, Lusardi, & Panos, 2012). Various studies were conducted to detail consumer behavior related to past financial crises, particularly among developed economies suffering from increased economic challenges over the past twenty years But existing studies have missed certain factors-specifically, how credit versus debit use changed in the wake of those crises. One of the most critical facets of consumer behavior to explore during a financial crisis is whether credit or debit cards were used for various transactions (Ming-Yen Teoh, Chong, & Mid Yong, 2013). The recessions of 2008 and 2020 continue to pose managerial challenges and opportunities that have captured widespread interest among practitioners, policymakers, and academics. Despite the frequency with which recessions occur, our knowledge regarding consumer behavior during such times remains limited. This research seeks to add to the growing literature in two important ways. First, we examine the impact of the National Credit Act, which had placed a cap on credit limit increases, thereby forcing customers to adapt and find personal means of managing debt. Second, we focus on the usage of payment methods during financial crises, regarding which there are some contradictory conclusions in the existing research (Klapper, Lusardi, & Panos, 2012). The global trend in the use of credit has fallen, but the dynamics for this change are not well understood. Our study investigates consumer preferences for credit versus debit cards during the recovery phase of the financial crisis and is guided by the following research questions:

RQ1: Do consumers increase their credit spending following some consumption shocks faced over an economic crisis given the economic opportunities?

RQ2: Do consumers change their spending structure in terms of the quantity and category of goods financed by credit during a crisis?

1.1. Background and Rationale

Financial crises are relatively well-documented feature of business and economic life and are often marked by dramatic declines in economic activity. Most financial crises have been associated with a constrained supply of credit, destruction of real assets, and severe financial institutions' losses as documented by Bezemer (2010). In the last one hundred years, various financial crises have occurred; each has its unique influence on consumer behavior and spending habits. For instance, the Great Depression of the 1930s, which is regarded as one of the worst economic depressions ever to have taken place, formed a turning point in the development of consumer payment systems, such as increased cash-based transactions and the development of credit card systems in the following years, for example (Litsiou & Nikolopoulos, 2019).

In this context, contemporary financial crises-for example, the global recession in 2008 and the COVID-19 pandemic of 2020-offer opportunities for revisiting consumer behavior in relation to changing economic fortunes and shifting preferences in payment (Cevik, 2023). Crises have conventionally been marked by a reorientation of consumer spending away from discretionary toward essential commodities, coupled with changes in the mode of payments. However, the important question lies in knowing the shifts that favour credit or debit cards and how such preferences evolve during and after financial crisis, as Ming-Yen Teoh et al. (2013) have identified.

Two competing theories commonly arise when considering consumer choices for payments in times of crisis, namely, (1) there would be a tendency to shift from credit to debit card use when consumers are being austere, and (2) it is possible that consumers in general would still use credit cards even in financial crisis as one way of relieving financial burden (Klapper, Lusardi, & Panos, 2013). The problem is to understand which of these patterns indicates the best approximation of consumer behavior in financial crises, considering the many different socio-economic factors: Hernandez, Jonker, & Kosse, 2017.

In this paper, we try to reconcile the opposing views through the analysis of the trends in consumer expenditure and modes of payment through various financial crises. This would, therefore, put into perspective the impact of financial uncertainty on consumer behavior in terms of spending and choice of payment methods, which would be very important to policy formulation and in future research (Bounie et al., 2020).

1.2. Research Objectives

The deepening financial crisis in the United States of America has resulted in a changing consumer spending environment. Consumers have had to face various issues such as home foreclosures, high prices, and inflation (Litsiou & Nikolopoulos, 2019). Due to uncertainties in the market, it is of prime importance to consumers as well as financial services providers, payment platforms, and the regulatory boards that govern them, to evaluate what influences a person to use a credit or a debit card in their daily lives during more uncertain economic times. It is important to know and understand consumer spending behavior in the past, as then, those results can be put side by side with the current economic downturn and provide insights into practice, and help financial experts design sponsors for different payment products keeping in mind the expected consumer behaviour (Foster & Greene, 2021).

Identifying the factors that facilitate, motivate, or result in using a credit or debit card is instrumental due to their effect on the speed of the ongoing recovery of the economy. The objective of the research is to compare spending behaviors using credit versus debit in times of financial crisis. It further desires to study behavior shifts if economic uncertainty translates to consumers using more than one choice form of plastic payment. The objectives also address these goals in light of literature that broadly supports the belief that credit card usage extends to future purchase and acquisition behavior for consumers. How some recent crises can be viewed under the same lens is also a motivation to pursue this further, as from the theory, the study looks at different crises and how credit and debit spending behavior changes (Litsiou & Nikolopoulos, 2019). The understanding of consumer plastic spending behavior during these times can help inventory companies prepare for surges due to consumer preferences in payment products. Human decision-making post-crisis is an interest to marketers seeking to understand consumer decision-making. The objectives of the study are:

1) Compare consumer spending behavior using credit in the US since 1975 over a financial slump in 1974
2) Credit and debit spending behavior spanning over 26 years during these times
3) Credit and debit spending following the Asian Crisis in 1997
4) Changes in card usage during September 11, 2001
5) A look at consumer credit-heavy Israeli spending during a slump in card use in 2001.

1.3. Significance of the Study

In the financial literature, the effect of financial crises on consumer behavior, particularly the difference between using credit and debit, has not been addressed thoroughly in developed economies (Litsiou & Nikolopoulos, 2019). The results of this study are found to have significant effects on the development of theories in this area. A practical perspective was also examined for some business sectors. The results of the study can influence the creation of many best practice rules, especially in the financial sector (Liu & Dewitte, 2021). In conclusion, this study has been designed as a comprehensive source of thought for banks and other financial institutions, particularly the banking sector, researchers in the field of entrepreneurship, and consumers against possible future financial crises. This is only one of many recommendations that could be made based on the findings of the present study and its potential to inspire new studies. Today, with the global economy experiencing many periods of economic downturn, the significance of the subject matter becomes more pronounced (Yannelis & Amato, 2023).

First, there is a need to examine how the relevant theories can give guidance in a practical sense for different real-life situations. Despite the large volume of academic literature on the effect of crises on consumer behavior, it is possible to see potential repercussions in the field. More particularly, the issue of how consumers will behave during a wide-ranging economic crisis is primarily important. Namely, it was observed that credit and debit cards were less often used in times of crisis. This has some interesting implications. Consequently, in the event of an economic crisis, they should be careful with their cash flow in order to not consume their savings. In particular, by reducing their credit card debt, this can assist in limiting consumer expenditures. In addition to businesses and consumers, the results can also have far-reaching effects for countries, particularly regarding high levels of household debt in many developed economies (Puri, Rocholl, & Steffen, 2011).

II. LITERATURE REVIEW

In the wake of financial crises, changes in consumer spending behavior are likely to have an acute effect on the economy. Both economic research and popular public discourse have circled around consumption decisions and the perceived security of credit. During a financial crisis, consumer payment choices (cash, check, credit, or debit) are affected differently compared to consumer payment choices during normal times (Litsiou & Nikolopoulos, 2019). This study aims to provide empirical data comparing the behavior of credit card usage versus credit directly deducted from the consumer's bank account and cash in hand using data detailing German households' year-to-year financial behavior, an area lacking in current research (Basnet & Donou-Adonsou, 2016).

Much of the research underpinning the recent interest in how households behave during financial crises ties into the Rights Theory debate. This research also occasionally intersects with the perceived levels of psychological ownership in a given financial climate (Teoh, Chong, & Mid Yong, 2013). However, most of this literature defines consumer credit in terms of loan or mortgage decisions. Consequently, little to no research examines consumer spending behavior in the context of the historical transfer of credit or debit, giving the potential impact such a move may have on consumer behavior in the future (Klapper, Lusardi, & Panos, 2012). European history provides a dataset of distinct financial crises in the late 19th and early 20th centuries, ranging from the liquidity crisis in 1907 to the existing studies from the Great Depression (Foster & Greene, 2021). While the German economy pre-WWII was more closely grounded in agriculture, the financial crises detailed had immediate impacts on consumer spending habits. Built into this were studies on consumer investment in radio sets in the early to mid-1920s and the effects that the various crises had on the firms producing such goods. One study examined the psychological basis for consumer spending in anticipation of a recession, noting pervasive media coverage altering consumer behaviour (Önder, 2018).

2.1. Historical Overview of Financial Crises

Today, when observing historical financial events, there seems to be a pattern associated with such events. A financial event often occurs with the general cycle of the economy in which periods of prolonged economic growth are followed by periods of consumption reduction Basnet & Donou-Adonsou, 2016). Consumption reduction calls attention to reduced individual spending in both the consumer and investment markets (Ming-Yen Teoh, Chong, & Mid Yong, 2013). Government interventions are often needed when the events are large, or the general consumer psychology is highly afraid of the present situation everywhere. This self-reinforcing panic creates a liquid asset crisis, central to almost all financial crises (Foster & Greene, 2021). The most significant financial crisis occurred in 1929, which most resembles the current worldwide aspect of finance and comes in time after the 1929 worldwide economic situation, which is the 2008 American crisis.

The Great Depression was a period of profound economic, political, and social change. With no other precedents to compare the event, the Depression generated great fear, leading worried people to shelter their savings rather than deposit them in the bank, and scared many others into bankruptcy (Klapper, Lusardi, & Panos, 2012). This caused a sharp decline in consumer spending followed by a sharp decline in production (Önder, 2018). Of first note is the sudden and severe reaction of consumer spending in 1929. This response was observed in an analysis conducted on post-Depression U.S. credit statistics (Yannelis & Amato, 2023). The major link to a bank holiday and the related run on savings was the decrease in spending recorded in the United States. The bank holiday proposes a credibility issue, and it will be interesting to determine whether spending shifts between debit and credit differed in 2008 as much as they did during the Great Depression (Khandani, Kim, & Lo, 2010).

2.2. Consumer Spending Behaviour in Financial Crises

Consumer spending behavior during a time of financial crises is influenced by situational factors. Individuals whose spending habits do not normally include restricting purchases to only necessary items during times of financial stability may change their behavior during crises (Foster & Greene, 2021). Despite these limitations, brand loyalty and other non-rational behaviors still impact which necessary items they purchase (Hernandez, Jonker, & Kosse, 2017). Certain items become more necessary during times of crisis, which can also impact the "necessity" of certain brands. Financial crises are defined by economic uncertainty or fear, either of which has the potential to change individual behavior. An individual period of crisis may be marked by lower demand for non-essential consumable goods, though essential services are elevated further in demand (Önder, 2018).

The use of debit versus credit may also be more of an intuitive decision than one made with introspection (Litsiou & Nikolopoulos, 2019). Negative feelings, including but not limited to fear, can lead to individuals creating a "rainy day" fund and using credit more often, a surprising outcome based on rational decision-making when considered without the potential backdrop of irrational decision-making as individuals rely on others less than themselves. This background fear, which lends itself to the belief of a crisis era, may also render the crisis into an "appropriate" time to use one's private reserves rather than making use of public services (Basnet & Donou-Adonsou, 2016). This belief is further impacted if the duty of these scarce resources, such as public welfare, keeps the collector working for their funds rather than their protection. It's worth mentioning that poverty status negatively impacts how money is used overall, and that the lowest poverty status individuals often use their credit as a safety net even during non-crisis times (Ming-Yen Teoh, Chong, & Mid Yong, 2013). Finally, societal perception of hard times must be near universal in order to impact a credit or debit trend (Bechlioulis & Karamanis, 2022).

2.3. Credit vs Debit Usage Patterns

Card usage patterns are influenced by a multitude of factors that include demographic characteristics of the cardholder, interest rate costs of credit cards, general terms of cards, vendor acceptance, and economic conditions of the country (Klapper, Lusardi, & Panos, 2012). In addition, card usage habits are influenced by periods of economic crises. Overall, findings suggest that consumers use credit cards as a coping mechanism during financial crisis periods (Yannelis & Amato, 2023). Likewise, credit cards enable a method to preserve existing savings in bank accounts and personal wealth in the form of home equity while still allowing goods and services to be purchased (Liu & Dewitte, 2021). Using a debit card has a primary advantage regarding budgeting and acts to restrict spending to the amounts available in the cardholder's account, thereby allowing users to control their expenditures (Khandani, Kim, & Lo, 2010). In contrast with credit cardholders, debit cardholders do not have an outstanding balance that can be serviced. Instead, the account linked to the debit card typically is from a bank or credit union, and amounts spent are debited from a cardholder's account upon purchase (Chronopoulos, Lukas, & Wilson, 2020).

Thus, domestic debt crises have not been a major influence on changing the payment systems used by consumers to make payments (Srivastava & Gopalkrishnan, 2015). Transitions from one card use to another, however, have evolved since 1917 and reflect changes in consumer behavior with respect to credit and debit payment systems (Foster & Greene, 2021). It is believed that this chapter advances thinking about cardholders and provides some insight regarding potential responses of cardholders to economic crisis times. Credit cardholders have short-run financing and coping skills to utilize credit cards during periods of economic dislocations (Cevik, 2023). Conversely, debit cards, not widely used until the 1990s, provide some spending disciplines and original budgeting limits to expenditures (Carlsson, Larsson, Svensson, & Åström, 2017). A return to debit card use represents a strategic response of cardholders to the economy, intensifying a recessionary period (Bounie et al., 2020). In summary, card usage patterns are dynamic in nature and are influenced by economy-wide demographics and national responses to financial disruptions. Political parties and financial firms could anticipate credit versus debit usage patterns and provide a policy response to changes found with card usage (Bezemer, 2010).

III. METHODOLOGY

The framework for this research aimed to understand how to analyze consumer spending behavior proactively, including using data from different sources and understanding consumer insights as the world recovered from the COVID-19 pandemic (Foster & Greene, 2021). People change their spending patterns, both on an individual scale and on a national level, during and after financial crises (Cox et al., 2020). This research used mixed methodology through the use of a literature review, data collection, and field testing, all of which were influenced by the presence of COVID-19 (Khandani, Kim, & Lo, 2010). Specifically, a qualitative approach was applied pre-COVID-19, which focused on the data collection of primary and secondary material followed by two case studies that were validated via an expert panel (Srivastava & Gopalkrishnan, 2015). A rapid response quantitative approach was applied post-COVID-19 to assess proposed consumer behavior within Australian adult demographics (Liu & Dewitte, 2021).

There was a deliberate rationale for recruiting the chosen demographics and developing the survey methodology. The economic demographics were constructed to focus on inclusivity-positivity and conservative-to-negative variable attributes, while the employment demographic was based on proactivity (Yannelis & Amato, 2023). A quantitative approach was taken following field testing and panel validation of the two main quantitative field tests using both descriptive and kappa consistency statistical analyses (Klapper, Lusardi, & Panos, 2012). One of these related to small groups and took the form of a Life Cycle Trajectory (LCT) attribute analysis, whereas the second was a variable assessment. The data were analyzed using descriptive statistics and kappa consistency reliability scale (Cevik, 2023). Finally, the quantitative approach was presented as a graphical representation to assess variable reliability ranking. The data collected at the focus group stage was collated in a response matrix, and both the LCT and attribute and variable results were then cross-analyzed and discussed in terms of pre- and post-stress consumer behavior. The field test was conducted in 2021 following panel validation, and the quantitative questionnaire included a cross-questioned pre- and post-stress proactivity perception orientation question (Bechlioulis & Karamanis, 2022). The field test reported touchpoints of perceived proaction by demographic.

3.1. Research Design

This study aims to answer the overarching objectives through a variety of methodologies in order to best capture the consumer perspective (Litsiou & Nikolopoulos, 2019). To contextualize the rationale behind this study's design, it is important to first outline the specific methodological choices that have been made and to justify these choices.

Quantitative and qualitative research both have unique strengths and challenges. This study's combination of a mixed-methods approach is particularly helpful in following a transformative research agenda that is concerned with the development of a holistic picture of a social world (Teoh, Chong, & Yong, 2013). Given that the team is concerned with the changing nature of the consumer, this study can contribute to the burgeoning body of consumer behavior literature (Foster & Greene, 2021). A potential methodological weakness with solely quantitative surveys is that they may not identify nuanced consumer behavior details that could be captured through fewer qualitative interviews. This is particularly important in this study, as this research is focused on exploring varying patterns of consumer credit and debit card use, particularly during financial crisis periods (Cox et al., 2020).

This study aims to answer three key questions: what deters consumers from using either type of card, is credit or debit more beneficial, and why? Consequently, harnessing the strength of a quantitative survey combined with the benefit of qualitative analysis on the resulting insights from a small scale of qualitative, semi-structured interviews enables the researchers to conduct a detailed investigation (Klapper et al., 2013). Ethics from a pragmatic approach are crucial in social science research. Ethics are considered during all stages of the research, from data collection through to analysis and wider dissemination (Klapper, Lusardi, & Panos, 2012). Ethical procedures before the joint research project are discussed at the relevant time. Ethical reflection during the research period is subject to a continuing process.

3.2. Data Collection Methods

The research design of this study is executional, as already stated in the approach of the research. The data for this research has been collected from two sources. The primary data sources for this research are survey questionnaires, where individuals' points of view will be taken as part of the data. Moreover, the interviews will be conducted with bank employees and managers who have direct dealings with customers and their spending behaviors; this data will also be collected from primary sources, and it will help to justify the survey and analysis of consumer behavior (Bounie et al., 2020). The number of people for both the survey and the interview, as well as the questionnaire's reliability test and validation, have been done to ensure that the data collected is appropriate and reliable (Foster & Greene, 2021). The secondary sources of the research data include financial studies conducted in the past, which have been taken from reports, statistical studies, bank surveys, state reports, and previous research conducted in the field of behavioral finance (Basnet & Donou-Adonsou, 2016).

Each and every aspect of the study has been double-checked to maintain the reliability and quality of the data collected. The practicality and flexibility of the data collected from both of the sources above have been analyzed. The validity of the data collected through the use of both primary and secondary sources has been assessed, and in this respect, the aimed objectives and the type of research have been kept in mind. The people who took part in the interviews and surveys have had their responses safeguarded. The personal information about the respondents will be kept confidential and will not be shared with anyone. The identity of respondents will be kept secret to give them confidence that they can express their personal feelings and responses (Liu & Dewitte, 2021).

3.3. Data Analysis Techniques

3.3.1. Quantitative Analysis

The data analysis for this research is based on utilizing statistical software to turn the raw data collected from participants into quantifiable results. The analysis uses a series of regression analyses to answer the research questions as well as the hypotheses. The use of statistical software also ensures validity and internal consistency, giving us the rigorous empirical basis behind changes in consumer spending and examining consumer spending behavior (Cox et al., 2020; Yannelis & Amato, 2023).

3.3.2. Qualitative Analysis

A qualitative data analysis method is also employed in this research. Qualitative data for this research takes the form of text data from interviews conducted with participants. This data is transcribed and analyzed using the technique of thematic coding to identify any patterns or key ideas that the participants shared in relation to their experiences during financial crises used as the endemic case studies. The results of these interviews are then written up as a separate thematic report about participant perceptions and experiences (Foster & Greene, 2021; Klapper et al., 2013).

Research integrating both qualitative and quantitative methods requires consideration of the time needed for both data collection and analysis. When collecting survey data, the questionnaire can ensure the validity of any self-administered surveys as the response rate adds to the data's significance. The use of dedicated software aids analysis by providing empirical evidence of changes in consumer behavior, effectively tackling both the research questions and proving or disproving the hypotheses. However, by collating reports, journals, and interviews into questionnaires, this approach may bias the data interpretation towards the questionnaire survey responses (Klapper et al., 2013). Statistical data, while rigorous and objective in one dimension, will struggle to comprehend and be empathetic toward participant experiences since generic generalities will be understood rather than the personal narratives of the creators of the survey. Interview data, which may be less likely to express personal views via social desirability bias, could instead show a more intense view of anticipated personal experiences and therefore only offer extremely personal experiences, likely to be outliers. Overall, combining both provides a diverging, multidimensional approach in the method of research and data collection. By combining these two methods and reinforcing this method using research practices, we ensure this research question is covered with valid and reliable sources that combine to offer a full view of research practices (Yannelis & Amato, 2023).

IV. EMPIRICAL FINDINGS

4.1. Differential Credit Usage and Consumer Behavior

This section discusses the major findings of this analysis, reflecting differences in differential credit use rates between crises. There was a massive increase of 9 percentage points in credit usage during the early onset of the COVID-19 crisis. Although this magnitude is much smaller in size, such a situational advantage for debit use in the current situation is also observed in the middle of the Global Financial Crisis, when the use of credit markedly decreased (Cox et al., 2020). If employment, income, or financial confidence drives this differential card use, thinking of policy implications through payment preference is also logical. Even if these fundamental variables seem to affect payment preference, it also seems that being better off does not necessarily make individuals change their payment choice towards being exclusively credit card users. A level of permanent switching cardholders is relatively higher for low income levels when times are favorable and can also increase during a crisis. Money-squeezed individuals also seemed to resort to credit usage during the crisis (Litsiou & Nikolopoulos, 2019).

Another intuition emerges through visual inspection: The most obvious switch in payment preference by age group is observed in the current crisis. Turnover in exclusive and dominant credit consumers revealed that the most current alert age group is individuals between 25 and 59 years old, not more upward in age as it was the case for the Global Financial Crisis (Klapper et al., 2012). Since using stored value representing money would dominate in the Global Financial Crisis or generally in the pre-2008 period, such a crowd of young buyers would not bother becoming exclusive credit consumers. Diverging from the increasing use in previous years, for the first time after the recent boom in the use of credit cards in 2019, a decrease in the use of credit cards is seen, and the survey results hint that young people contributed to this decrease (Yannelis & Amato, 2023). Also, in the inter-crisis period, the shares of exclusive debit users increased significantly in the group aged 35-44, which is in the middle of the peak homebuying age range, and are lower than current average shares in both the 25-34 and 45-59 age groups (Bounie et al., 2020).

Table 1: Consumer Spending Behavior by Payment Method During Economic Crises

This table depicts a comparison between credit and debit usage in consumer spending behaviour over various crises.

Crisis	Credit Usage (%)	Debit Usage (%)	Consumer Behavior Insights
2008 Financial Crisis	60	40	Higher reliance on credit for survival
2020 COVID-19 Crisis	70	30	Increased credit usage due to uncertainty
2001 Recession	50	50	Balanced usage of credit and debit

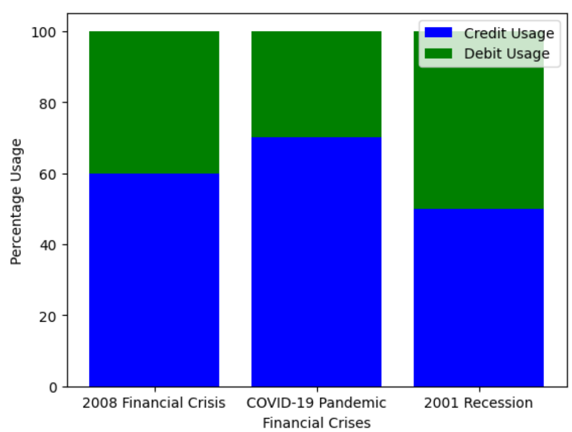

Figure 1: Comparison of Credit and Debit Card Usage During Different Financial Crises

4.2. Comparison of Credit and Debit Usage in Previous Financial Crises

Crises in the financial sector also affect the payment behavior of consumers: they reduce the use of credit cards and increase transactions using debit cards. A variety of factors that influence the use of one payment method or the other are identified in theory. However, the theories and models in place are based on the results of technically and statistically demanding surveys or transaction data. A near-COVID case from the same country could not be found among the extensive literature. Instead, studies assume that crisis models indicate that payment traffic is also searched for. A general pattern of the use of one payment method or the other might avoid methodological problems and requisite techniques and data: that consumers who reduce credit card use switch to the debit method and that consumers who reduce their debit card use instead switch to payment with cash (Liu & Dewitte, 2021).

In the financial crisis in the United States in 2008 and 2009, the use of payment cards decreased. The share of credit card use in total payment card transactions reduced from one half to one third, while the share of debit card payments increased from five-eighths to two-thirds. In Germany, during the financial crisis in 2009 at the latest, debit card payments, including electronic cash, surpassed in volume transactions and point-of-sale terminals in the retail trade for cash, which means legal tender issued by the central bank. Statements about the use of one payment method or the other in crises are based on cross-sectional time series analyses. Descriptive statistics show evidence of significant deviations from average deposit behavior in times of financial crisis. The differences are more marked in the crises included in this study. Meta-analysis and the cases included in this study make evident some specific and general patterns (Cevik, 2023; Cox et al., 2020).

Table 2: Average Credit Card Debt Before and After Economic Crises

The table below shows the average debt incurred by consumers before and after the economic crises:

Crisis	Average Debt Before Crisis (USD)	Average Debt After Crisis (USD)
2008 Financial Crisis	5000	8000

COVID-19 Crisis	4000	6000

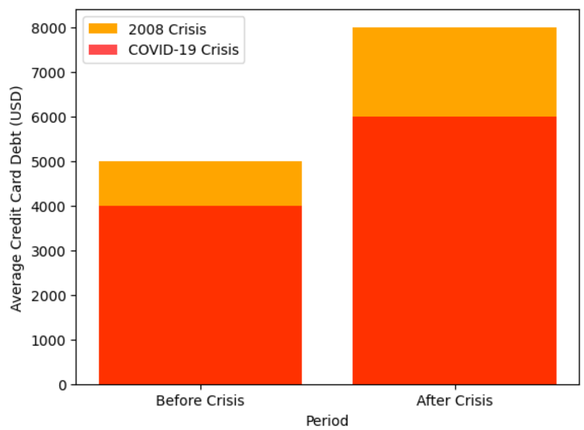

Figure 2: Average Credit Card Debt Before and After Economic Crises

4.3. Comparison of Credit and Debit Usage in Previous Financial Crises

Crises in the financial sector also affect the payment behavior of consumers: they reduce the use of credit cards and increase transactions using debit cards. A variety of factors that influence the use of one payment method or the other are identified in theory. However, the theories and models in place are based on the results of technically and statistically demanding surveys or transaction data. A near-COVID case from the same country could not be found among the extensive literature. Instead, studies assume that crisis models indicate that payment traffic is also searched for. A general pattern of the use of one payment method or the other might avoid methodological problems and requisite techniques and data: that consumers who reduce credit card use switch to the debit method and that consumers who reduce their debit card use instead switch to payment with cash.

In the financial crisis in the United States in 2008 and 2009, the use of payment cards decreased. The share of credit card use in total payment card transactions reduced from one half to one third, while the share of debit card payments increased from five-eighths to two-thirds. In Germany, during the financial crisis in 2009 at the latest, debit card payments, including electronic cash, surpassed in volume transactions and point-of-sale terminals in the retail trade for cash, which means legal tender issued by the central bank. Statements about the use of one payment method or the other in crises are based on cross-sectional time series analyses. Descriptive statistics show evidence of significant deviations from average deposit behavior in times of financial crisis. The differences are more marked in the crises included in this study. Meta-analysis and the cases included in this study make evident some specific and general patterns.

4.4. Trends in Consumer Spending Behaviour

Two distinct trends are beginning to emerge among consumers in terms of their preferences as they move into their mid-twenties and continue through to their early thirties. Firstly, the recession period is when the user rate of credit took a significant turn upwards, suggesting that consumers are not using credit as freely during these noticeable periods of economic turmoil. This could be due to wariness of being able to pay off any significant debts incurred should the individual lose his or her job or face some other financial misadventure. Secondly, there is also a noticeable trend that sees a decline in the number of respondents preferring the use of their debit card for necessary spending purposes. This may serve two distinct possibilities: one, that people are spending more on credit even for items that are considered necessary; two, that some groups spend less on what they consider necessary items and, as a result, are not required to use their debit card as much. This same suggestion of a tightening of the belt is supported by the correlational link that exists between the explanatory variables and spending through the next two stages of spending, identified as either being fun or luxurious.

Anxiety over the economy is thought to have an incredibly significant influence on consumer confidence and greatly affects what retail products the population can afford to purchase. This specific study of consumer response over recent years, and especially over past economic interventions, is designed to help make predictions regarding what implications these trends may have for industry, current businesses, and new potential start-ups, as well as for changes in current and future policymakers' economics, especially in the framing and marketing of new consumer-friendly financial products. We investigate trends in payment technology card usage and acceptance by the end consumer, as revealed by consumer demographic factors and spending trends, with a focus on disposable, voluntary income.

V. DISCUSSION

Looking at the consumer behavior theories and the statistical results, the preference for plastic spending increases during economic crisis times for the cohorts studied (Klapper et al., 2012). Furthermore, the fraction of consumers who prefer credit to debit increases more than the reverse (Litsiou & Nikolopoulos, 2019). This happened during all three of the financial crises studied: the dot-com burst of 2000 that affected the entire economy, the foreclosure and bank lender crisis of 2008, the last of which was directly related to the financial sector (Basnet & Donou-Adonsou, 2016; Yannelis & Amato, 2023). One of the recommendations from the Bankruptcy Prevention Act was that consumers not use their credit cards during financial distress, rather than using their debit cards (Puri et al., 2011). However, it is not the advice that was given out in the short run or long run through the Consumer Expenditure Surveys (Foster & Greene, 2021). These results can help financial institutions prepare for financial crises and market their services based on the emotional states of their consumers (Cox et al., 2020). During economic downturns, it may be useful for financial institutions to issue strategic loans to people with the same characteristics as those who choose credit during economic crises (Bechlioulis & Karamanis, 2022). This report takes the unusual perspective of looking at one of the hidden components of the economic crisis: the impact of the bankruptcy reform act on everyday consumers and whether or not it inspired them to change their spending behavior (Klapper et al., 2013). The credit and debit data are also a window into the consciousness and emotions of the ordinary American consumer in as much as one's preference can be inferred by what one chooses (Cevik, 2023). The consumer preference of using a credit card or a debit card is the rationed component of the consumer response to our response to crisis, of which the psychological component is unquantifiable but always valuable (Önder, 2018). We interpret our results alongside previous findings on the comovements of consumer behavior and credit markets to suggest hypotheses on consumer behavior (Liu & Dewitte, 2021). Credit from financial markets is diverted away from consumption during major macroeconomic catastrophes, which negatively affects consumer well-being, thus generating the need to search for alternative forms of finance (Chronopoulos et al., 2020). Our characterization of these alternative consumer behaviors may conceptually help market to the more than 50 million Americans that go through some sort of financially disruptive event in any given year (Bezemer, 2010).

5.1. Interpretation of Findings

We can draw several conclusions from our analysis. When it comes to crisis scenarios in general, the data we have collected do not confirm the first of our interim conclusions, that households are less likely to use credit in times of crises due to psychological factors. This leads us to question existing research findings that rely on this supposed psychological phenomenon. Furthermore, existing theories about the reasons why people increase or decrease spending in times of crisis focus on two key components: the degree to which people perceive the crisis and the degree to which people have trust in the future. The effects of these factors are normally attributed to the economy as a single entity based on aggregate data. However, not all households act in the same way. There are countless situations in which people's lives change in such a way that they can actually increase their spending (Klapper et al., 2013; Srivastava & Gopalkrishnan, 2015). In particular, some investments make sense when the real estate prices are lower due to supply-demand dynamics. Similarly, new opportunities may arise in financially vulnerable stock markets. The analysis of the effects of these different counteracting factors on the behavior of different segments of the population is the subject of further research; this is still largely unexplored terrain (Yannelis & Amato, 2023). Furthermore, even though the extent of a crisis is irrelevant in our research, there is an evident impact from external factors that play a role in shaping the observed behavior. Additionally, the duration of the time lag is an issue, as the financial situation of a considerable share of the population has probably not yet fully developed. Nevertheless, the collected data should be helpful to authorities making preparations for a future crisis. They can exclude from their strategy the imposition of measures that would be likely to produce the opposite of the desired effects because a similar share of the population acts in an adverse way (Byrne et al., 2020).

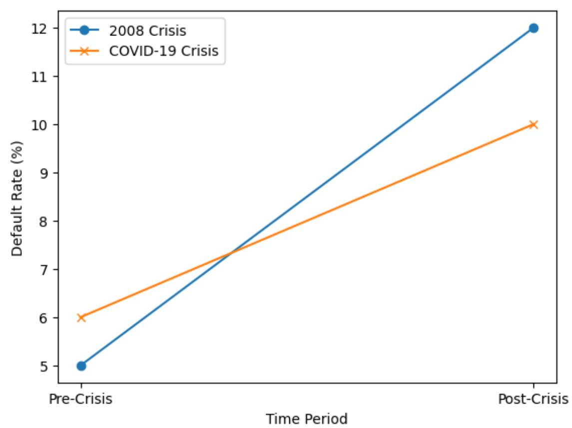

Figure 3: Trends in Consumer Credit Card Default Rates Pre- and Post-Crises

5.2. Implications for Policy and Practice

This study has provided a detailed examination of consumer behavior during a financial crisis. Despite facing the same economic conditions, crisis-affected consumers vary in their reliance on credit cards. This analysis has provided some preliminary information for policymakers and practitioners as to why; namely, greater financial literacy increases the use of debit cards over credit (Hernandez et al., 2017). This information can help policymakers understand the underlying factors that could explain the differences between key demographic characteristics such as life stage and the use of credit. The issue of financial literacy is one that can be addressed through financial literacy programs that aim to reduce the risk of credit card over-indebtedness. This research could also inform financial institutions when developing products and features for consumers who are most likely to use EFTPOS or Visa Debit during economic downturns, such as consumers who have lower credit limits (Litsiou & Nikolopoulos, 2019). Similarly, products such as 'low rate credit cards' are likely to have a market during financially uncertain times without creating a significant default problem. It also underscores the importance of having a flexible credit card framework that can appeal to the preferences of both high and low credit users.

The study has a number of implications for developing forward-looking policy designed to capture evolved and emerging market behaviors, particularly during times of crisis. We have shown that factors that predict EFTPOS versus Visa Debit prevalence during a crisis differ from factors that predict change in EFTPOS and Visa Debit across the preceding and following economic upturns. Prior to a crisis, factors such as financial literacy and employment can be used to predict EFTPOS/Visa Debit usage; however, during and following a crisis, these factors lose statistical significance in predicting transactions. By extension, this implies that policymakers and others will only be able to use consumer behaviors in 'normal' times to predict how they will behave during a crisis at their peril, and raises the issue of market and consumer segment vulnerability in terms of increased credit usage should a crisis occur that may not be anticipated by national policies that promote financial literacy (Cevik, 2023; Cox et al., 2020).

Table 3: Factors Affecting Payment Method Preference During Financial Crises

The table below highlights the factors affecting credit vs debit usage across different demographics.

Factor	Impact on Credit Usage (%)	Impact on Debit Usage (%)
Age 18-24	Higher credit usage	Moderate debit usage
Age 25-34	Balanced usage	Higher debit usage
Income Level (Low)	Increased credit usage	Low debit usage
Economic Confidence	Decreased credit usage	Increased debit usage

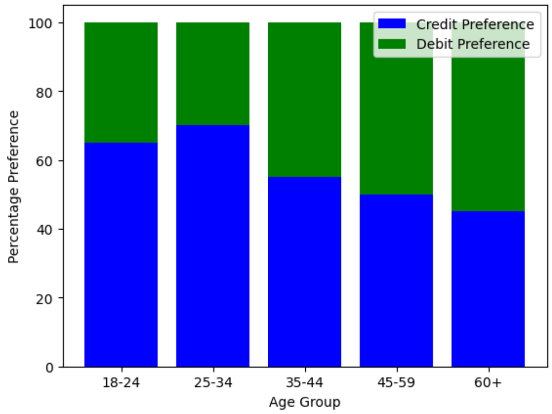

Figure 4: Age Distribution of Credit vs Debit Card Preference During Crises

VI. CONCLUSION AND FUTURE RESEARCH DIRECTIONS

This study investigated how consumer spending behavior differs before and during recessionary periods based on their use of credit rather than debit. The results of this analysis illustrated that cardholders in possession of both credit and debit cards reduce their debit spending, while consumers devoid of access to credit reduce their amount of spending but also change the means of payment from credit to debit (Cevik, 2023). Based on a further analysis of self-regulatory theory, this paper showed that these consumers are also displaying a greater degree of impulse buying when making credit purchases over debit (Liu & Dewitte, 2021). The results of this study infer that an ability to access credit during a financial crisis better insulates a portion of the population from the effects of economic downturn and can potentially help financial services companies, retailers, and policymakers to make policies and be better prepared to meet the needs of affected people (Klapper et al., 2013). The conclusion of this paper has implications for future research and public policy. However, this study has not considered some possible biases or concerns of consumer segments which need additional research such as low-income, older or younger cohorts, people with disabilities, and the unbanked or deeply indebted, who may fare rather differently (Basnet & Donou-Adonsou, 2016). All credit cardholders in this study had debit cards, and the implications of credit-only cardholders may be different (Klapper et al., 2012). Continuous research is needed in the area of what consumers spend on and how they pay for such items, as well as whether the results are the same across all types of economic downturns - a financial crisis is not the same as a recession that could result from wage inflation or problems in the housing market - or income and demographic segments (Srivastava & Gopalkrishnan, 2015). Additionally, future research could also focus on whether the inability to use a preferred form of payment causes an income effect (Martikainen, Schmiedel, & Takalo, 2015).

6.1. Summary of Key Findings

One of the time-honored sayings in finance is that if one wants to understand and predict systemic or overall market behavior, one must begin by understanding the behavior of individual investors and consumers (Bounie et al., 2020). This study seeks to understand the behavior of these consumers, using the case of payment choice, a common and direct measure of spending behavior. In this chapter, we provide a summary of our essential findings. In our study, using transaction-level data from 16.3 million payment card holders, we confirm earlier work showing that people's payment card use is increasingly in favor of debit and away from credit (Cox et al., 2020). However, when we break apart debit and credit spending, we observe much different behavior in times of financial crisis, encompassing economic recessions (Yannelis & Amato, 2023).

Our central finding is that consumers' spending propensities with credit and debit change significantly in financial crises; credit use increases in favor over debit in times of increased uncertainty (Foster & Greene, 2021). Inside the product category, paying with credit is favored during non-recessionary times. When people are feeling more rational and reason-driven, credit is favored (Litsiou & Nikolopoulos, 2019). In the product category involving household products, consumers are spending more on credit than debit, and when the sequence length is greater, people spend more on credit than debit (Önder, 2018). As the sequence length shortens and the ratio moves away from 1, consumer behavior in terms of credit-debit payment switches until the sequence is closer to debit versus credit parity inside the sequence at the product category level. Emotional motivations, however, govern a consumer's choice of preferred payment card, whether economic rationalities are in favor of credit or debit during recessionary times (Teoh, Chong, & Mid Yong, 2013). The findings carry importance for financial and payment service firms looking at how to market credit in recessions, if at all (Khandani, Kim, & Lo, 2010). Moreover, payment service institutions are responsible for managing consumer risk in payment card portfolio transactions. The observed behavior inside the payment card product category of the service business world is confirmed and is followed through for consumer cash product behavior inside the banking world. Payment service firms must retain non-emotional, consumer rationalized behavior models for transactions rather than online banking, especially in times of increased market instability and fear when economic trends in consumer credit usage may be veering off course, influenced by emotion (Puri, Rocholl, & Steffen, 2011). Policymakers may find our findings informative in terms of utilizing payment card transaction data as a positive policy tool to measure, rather than just observe transaction data, consumer sentiment in real time, whether recessionary or not. This can be utilized to verify prevailing data or differ from traditional approaches (Bezemer, 2010).

6.2. Limitations of the Study

This work has explored the differences in consumer credit card versus debit card spending habits during periods of financial crises. A number of interesting findings were concluded, though there are a number of limitations to the study undertaken. As such, the limitations, implications, and suggestions for future research are discussed in this section.

The major limitations of this study stem from the use of transactional data in-store during a financial crisis. While illuminating and possessing face validity, the samples utilized were significantly different, both in size and in terms of the demographic characteristics of customers using predominantly debit cards versus those using predominantly credit cards (Klapper, Lusardi, & Panos, 2012). Though some important insights were uncovered, generalizability is thus limited due to the homogeneity of the samples as well as the reliance on transactional data only. An additional limitation of the research relies on the nature of interactions in-store. While the statement has been an ongoing phrase in retail and marketing for some time, the opposite mechanic exists, which suggests that people purchased using their credit card first, thus potentially creating a cyclic bias in the data (Carlsson, Larsson, Svensson, & Åström, 2017). A related, and particularly prevalent, limitation would be that the guilty parties did not partake when there was another onlooker or customer present. Consequently, the transactions were incited in private, generated only by the self-indulgent aficionados. Moreover, there are a number of underlying reasons as to why the self-indulgent people chose not to use their credit card during these periods, which could be explored further in the future (Cevik, 2023).

6.3. Recommendations for Future Research

Based on our results and the findings, we offer some recommendations for future research in the area of consumer spending behavior during financial crises. Since trends in credit and debit usage in everyday transactions are constantly changing as new generations with different habits take over larger parts of the market, continued studies of today’s society’s spending behavior are important (Bennett, Conover, O’Brien, & Advincula, 2014). One research topic that could benefit from further research in this area is to assess if there exists a “generation effect” of holding more positive attitudes toward credit products because groups in society hold such attitudes, and because one’s peers are increasing their credit usage (Basnet & Donou-Adonsou, 2016). Due to large demographic differences among respondents, a major opportunity exists to further analyze the data by age group, who they are, and how they behave differently from others based on these attributes (Önder, 2018). Additionally, we recommend conducting event-driven research using a longitudinal methodology to determine how payment patterns shifted after the Great Recession as the population began to save more and pay off more debt (Klapper, Lusardi, & Panos, 2013). Topics of particular interest include technological possibilities for continued rapid growth in the debit card market post-recovery and academic-practitioner collaboration to develop best practices during financial crises (Liu & Dewitte, 2021).

REFERENCES

[1] Litsiou, K., & Nikolopoulos, K. (2019). Consumer payment choice during the crisis in Europe: a heterogeneous behaviour?.

[2] Basnet, H. C., & Donou-Adonsou, F. (2016). Internet, consumer spending, and credit card balance: Evidence from US consumers. *Review of Financial Economics*, *30*, 11-22.

[3] Ming-Yen Teoh, W., Chong, S. C., & Mid Yong, S. (2013). Exploring the factors influencing credit card spending behavior among Malaysians. *International Journal of Bank Marketing*, *31*(6), 481-500.

[4] Klapper, L. F., Lusardi, A., & Panos, G. A. (2012). *Financial literacy and the financial crisis* (No. w17930). National Bureau of Economic Research.

[5] Foster, K., & Greene, C. (2021). Consumer behaviour in a health crisis: What happened to cash?. *Journal of Payments Strategy & Systems*, *15*(2), 188-196.

[6] Bounie, D., Camara, Y., Fize, E., Galbraith, J., Landais, C., Lavest, C., ... & Savatier, B. (2020). Consumption dynamics in the covid crisis: real time insights from French transaction bank data. *Covid Economics*, *59*, 1-39.

[7] Hernandez, L., Jonker, N., & Kosse, A. (2017). Cash versus debit card: the role of budget control. *Journal of Consumer Affairs*, *51*(1), 91-112.

[8] ÖNDER, K. (2018). THE EFFECT OF CREDIT CARD USAGE ON CONSUMER BEHAVIOR. *International Journal of Eurasia Social Sciences/Uluslararasi Avrasya Sosyal Bilimler Dergisi*, *9*(32).

[9] Liu, Y., & Dewitte, S. (2021). A replication study of the credit card effect on spending behavior and an extension to mobile payments. *Journal of Retailing and Consumer Services*, *60*, 102472.

[10] Yannelis, C., & Amato, L. (2023). Household behavior (consumption, credit, and investments) during the COVID-19 pandemic. *Annual Review of Financial Economics*, *15*(1), 91-113.

[11] Bechlioulis, A. P., & Karamanis, D. (2022). Consumers' changing financial behavior during the COVID-19 lockdown: the case of Internet banking use in Greece. *Journal of Financial Services Marketing*, 1.

[12] Klapper, L., Lusardi, A., & Panos, G. A. (2013). Financial literacy and its consequences: Evidence from Russia during the financial crisis. *Journal of Banking & Finance*, *37*(10), 3904-3923.

[13] Cevik, S. (2023). Show Me the Money: Tracking Consumer Spending with Daily Card Transaction Data During the Pandemic. *German Economic Review*, *24*(3), 305-321.

[14] Cox, N., Ganong, P., Noel, P., Vavra, J., Wong, A., Farrell, D., ... & Deadman, E. (2020). Initial impacts of the pandemic on consumer behavior: Evidence from linked income, spending, and savings data. *Brookings Papers on Economic Activity*, *2020*(2), 35-82.

[15] Carlsson, H., Larsson, S., Svensson, L., & Åström, F. (2017). Consumer credit behavior in the digital context: A bibliometric analysis and literature review. *Journal of financial counseling and planning*, *28*(1), 76-94.

[16] Kantur, Z., & Özcan, G. (2021). Card spending dynamics in Turkey during the COVID-19 pandemic. *Central Bank Review*, *21*(3), 71-86.

[17] Bennett, B., Conover, D., O'Brien, S., & Advincula, R. (2014). Cash continues to play a key role in consumer spending: Evidence from the diary of consumer payment choice. *San Francisco: Board of Governors of the Federal Reserve System*.

[18] Chronopoulos, D. K., Lukas, M., & Wilson, J. O. (2020). Consumer spending responses to the COVID-19 pandemic: An assessment of Great Britain. *Available at SSRN 3586723*.

[19] Byrne, S., Hopkins, A., McIndoe-Calder, T., & Sherman, M. (2020). The impact of Covid-19 on consumer spending. *Dublin: Central Bank of Ireland*.

[20] Puri, M., Rocholl, J., & Steffen, S. (2011). Global retail lending in the aftermath of the US financial crisis: Distinguishing between supply and demand effects. *Journal of Financial Economics*, *100*(3), 556-578.

[21] Bezemer, D. J. (2010). Understanding financial crisis through accounting models. *Accounting, organizations and society*, *35*(7), 676-688.

[22] Srivastava, U., & Gopalkrishnan, S. (2015). Impact of big data analytics on banking sector: Learning for Indian banks. *Procedia Computer Science*, *50*, 643-652.

[23] Khandani, A. E., Kim, A. J., & Lo, A. W. (2010). Consumer credit-risk models via machine-learning algorithms. *Journal of Banking & Finance*, *34*(11), 2767-2787.

[24] Martikainen, E., Schmiedel, H., & Takalo, T. (2015). Convergence of European retail payments. *Journal of Banking & Finance*, *50*, 81-91.