

CARD PAYMENTS WITHIN IRELAND: A  
SMALL TO MEDIUM ENTERPRISE  
PERSPECTIVE

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## Abstract

This research aimed to investigate how small businesses within Ireland are adapting to modern payment methods such as card and mobile phone payments. Much of the literature reviewed within this work is consumer focused as consumers drive the success of a business. As a result, this work followed a similar philosophy but with a focus on an Irish context, which has not been covered significantly from an academic standpoint. The research conducted included a quantitative survey of 153 participants and two qualitative semi-structured interviews with small business owners. Once data had been gathered, analysis was conducted, and the final determination found that consumers are moving at a significant speed to digital payments. Use of cash among consumers is retracting to the point of choosing not to do visit a cash-only business if an alternative business is available. As a result, this research found that businesses should adapt and promote modern payment methods to their customer base.

## Submission of Thesis and Dissertation

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## Abbreviations

ATM	Automated Teller Machine
CSO	Central Statistics Office
DBEI	Department of Business, Enterprise and Innovation
EMV	Europay, Mastercard, and Visa
PIN	Personal Identification Number
SME	Small and Medium-sized Enterprise

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# 1 INTRODUCTION

## 1.1 BACKGROUND AND CONTEXT

Traditionally, lower cost purchases are paid for in cash as opposed to credit or debit card which was previously used predominately for high value transactions in developed cities (Arango, Bouhdaoui, Bounie, Eschelbach, Herrnndez, 2014). With the widespread adoption of card and contactless payments in recent times (Banka, 2017), this research aims to examine how this new technology has changed the way SMEs manage the payment stage of a transaction and furthermore, if SMEs find card payments to be more beneficial or detrimental to their business as consumer behaviour evolves.

Previously cash was a faster payment method over card, meaning reduced wait times for consumers and a better customer experience (Arango *et al.*, 2014). However, with the introduction of contactless enabled cards, along with mobile payment methods such as Google Pay and Apple Pay, this level of convenience has mitigated the wait times of traditional Chip & PIN purchases. As consumers choose to move to these payment methods autonomously, how do SMEs manage this change when they otherwise may prefer cash?

Merchant fees for card transactions are charges that small businesses must pay when they accept a card payment from a consumer. The European Commission has argued against Visa and Mastercard due to their conclusion that these companies have set their rates too high (Wright, 2004). SMEs must

take on this fee in order to offer card payments compared to a cash payment which has no fees.

While SMEs can operate without accepting card, Lim, Tuli and Grewal (2020) have hypothesised that offering multiple payment options at point-of-sale leads to higher customer satisfaction. With this consideration, how do small businesses, who work on tight margins, decide whether to offer card payments?

While much literature on the topic points towards a growing move away from cash, this is not definitive. There are concerns regarding the slow initial adoption of contactless payments among new consumers (Trütsch, 2020) and this could be an indication that too much emphasis is put on the speed at which this migration is happening. This research is contrasting and directly opposes the view of fast migration to card. This affirms that this area of research is valuable as contrasting findings in existing literature when choosing a research topic identifies an area that requires further clarification through new work (France, 2019).

## 1.2 MOTIVATION FOR RESEARCH

With Ireland seeing the introduction of its first ever cashless store in Dublin City (O'Connor, 2019)<sup>1</sup>, this research looked at whether businesses in Ireland benefit by encouraging a move away from cash at the payment stage due to the perceived business benefits. The research also examined whether these benefits materialise after card adoption given the perceived negatives that

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<sup>1</sup> Coffee shop in Dublin 2 called Bear Market began trading in April 2019.

come with accepting cards such as merchant fees (Hayashi and Keeton, 2012).

A significant motivator behind this research is a lack of geographical specific work done in this area. Given Ireland's geographical diversity, a research aim of this work was to identify if any correlation exists between the various age groups of Irish consumers. For example, this research looked at card adoption of consumers at different age bands. Prensky (2001) looked at the nuanced comparison of younger people who grow up surrounded by technology and older people who need to retrospectively adapt. This topic was intriguing and can be applied to a payment specific context, which has not been done before.

Research suggests card adoption is more prevalent in metropolitan areas within Ireland (Ahern, 2020) and this geographical element was analysed within this work. Does income level of consumers affect card usage? If so, how do rural Ireland SMEs encourage card payments at payment stage when consumers are likely to have lower income to that of consumers in more urban settings, meaning they would likely prefer to pay using cash.

In order to obtain original data for this research, both quantitative and qualitative research was undertaken. A quantitative survey was distributed to Irish consumers. To complement this, two qualitative semi-structured interviews were conducted with small business owners. The survey results were cleaned and sorted for analysis. Once cleaned, the data was used to identify trends and correlations among the categories analysed.

This topic is something that was worthy of research due to the shift towards digital payments among society (Hayashi and Keeton, 2012). Contactless was

introduced to reinforce convenience at the payment stage of a transaction, helping to mitigate the use of cash at lower value payments, while Chip & PIN remained the preferred method of payment during high value transactions (Arango *et al.*, 2014). None of this existing research was Irish specific and either focused on different economies or included economies other than Ireland. This work focused specifically on Ireland to identify if the hypothesis proven in other work can be considered the same when an Irish specific context is applied to the work.

### 1.3 RESEARCH STRUCTURE

This work was broken into 7 chapters that followed a logical flow in order to find the research gap, determine a research philosophy, find original data to help fill this gap, and come to a valuable and original conclusion.

The introduction section provides an overview of the research problem along with context around previous literature.

This is followed by the literature review, which explored several past literature topics within the general area of cash and card payments. The literature review was required to gain a thorough understanding of the topic and assist with identifying a research gap (Saunders *et al.*, 2009).

This is followed by the research aims section, which discusses what this work hoped to achieve and identifies the research gap by formulating the research question.

The fourth chapter of this work looks at research methodology and the approach the researcher took to collect and analyse data.

The fifth chapter looks at the findings from the research. This included correlating different data points in order to identify trends to assist with answering the research question.

The fourth chapter is the discussion chapter, which tied this original research back to existing literature originally explored in the literature review. The researcher compared multiple data points and identified where it supported or contrasted with this existing literature.

Finally, a conclusion section allowed the researcher to present an answer for the research question identified using the original findings to support the hypothesis, identify any limitations and outline areas of further research.

## 2 LITERATURE REVIEW

### 2.1 INTRODUCTION

The move from cash to card payments has received substantial attention from academics. As well as research in this specific area, academics have considered the future of cash, where trends seem to suggest a move towards a cashless society. The broad thrust of general research has looked at many aspects of the transition. From a consumer context, existing literature explores consumer attitude to cash and digital payments as well as their preferences for each. This is examined on a demographic level, with considerations for geographical and economic standpoints of various consumer groups. From a business perspective, research has looked at the positives and negatives of small business owners adapting to modern payment methods compared to traditional cash transactions.

These themes are well researched in an international context; however, this research focused on these topics in an Irish context. Within this literature review, these various sources were critically analysed and assessed with the goal of understanding where there are gaps that have failed to be examined. These gaps formed the basis for the direction that this research took and helped to form the research question that this work attempted to answer through original research.

In order to identify gaps, the topics covered within the literature review include card payment growth among consumers as well as the ongoing prevalence of cash as a payment option. An area looked at is hygiene and this literature review explored how dirty physical money is and if there is a correlation with

how modern consumers perceive cash hygiene. This is particularly relevant due to the current COVID-19 pandemic at the time of writing.

As small businesses are a cornerstone of this research, existing literature relating to SMEs both within Ireland and beyond are explored. The research examined is then correlated with consumer research to explore the relationship that consumers have with small businesses.

With these topics explored and critically analysed, a research gap was then identified that assisted in determining the research area of this work.

## 2.2 GROWTH WITHIN CARD PAYMENTS

The growth of card payments has been led by the introduction of new payment technology to the general population, along with the increasing speed of a transaction through contactless enabled terminals. Chen, Huynh and Shy, (2019) argue that, from a cash perspective, consumers find it inconvenient to carry coins on their person, making card payments a more appealing alternative. This consumer preference has forced businesses to change their approach at the payment stage. This article goes on to suggest that elements such as investment in new technology to accommodate modern payment methods can lead to expenses that SMEs may find hard to justify financially. However, Chen *et al.* (2019) has insubstantial research regarding socioeconomic class as a factor for preference for notes and coins. On top of this, very little attention is applied to elderly consumers, which is an important aspect as detailed by Fabris (2019). As a result, the sample set used by Chen *et al.* (2019) would seem imbalanced in favour of younger consumers in an environment where card payments are prevalent to begin with.



However, from a detail perspective, the analysis conducted by Chen *et al.* (2019) regarding specific, nuanced scenarios lead to a granular study that is useful when looking at this research area. For example, Chen *et al.* (2019) look at how consumers respond negatively to coins depending on how many are returned to them during a transaction. These findings indicate that intolerance for coins increases as more coins are returned. This insight is useful compared to most other studies, who give a binary view of whether consumers are in favour or not in favour of coins. This research highlights that perception of coins among consumers is a spectrum that can be viewed in multiple ways.

Beatty (2017) argues that businesses benefit from going digital at the payment stage due to customer satisfaction. The author goes on to state that giving consumers the option to have their receipt emailed leads to a better customer experience. Expanding on this, it is argued that consumers prefer proof of purchase and having a paper trail outside of receipts; this streamlined method is easily implemented with the acceptance of card payments. The work of Lundberg, Öhman and Sjödin (2014) supports these claims and goes on to present data to indicate that some consumers will choose to visit a different business if their original choice did not offer card payments.

Beatty (2017) fails to expand on the detriments to SMEs when accepting card payments. This element could have been covered to help balance the consumer and business elements of a transaction given the report focuses specifically on the SME context. The lack of discussion in this area would assume there are few negative elements for SMEs in accepting card payments.

As a contrast to this approach, Davidson and Turmel (2017) argue that small businesses face difficulty when it comes to increased card usage. Their findings show that only 31% of retailers had chip compliant machines in the run up to the 2017 Europay, Mastercard, and Visa (EMV)<sup>2</sup> compliance deadline. Even more notable is that only 29% planned to upgrade their terminals to accommodate this card growth. This will lead to an inability to accept contactless and digital payments. However, Davidson and Turmel's (2017) study does not research the reasons for this lack of enthusiasm among small businesses. This remains an issue as small businesses could be failing to anticipate the growth of contactless payments.

When exploring the benefits of more modern payment methods, the work of Jocevski, Ghezzi and Arvidsson (2019) looks at mobile payments, where transactions can be conducted using a consumer's mobile phone or wearable device. The work finds that mass adoption can be achieved if approached properly. Once achieved, the consumer perception of convenience can lead to negative attitudes towards businesses that do not accommodate such payment methods.

Taking a consumer perspective, Yawe (2018) argues that card payments – specifically that of contactless – provide many benefits to those in financially unstable positions. Some pillars of the argument revolve around cash being difficult to save and retain due to the lack of safety in areas where low income consumers live. On top of this, an argument is made about removing physical cash and plastic card completely, relying solely on that of a mobile device,

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<sup>2</sup> EMV is a card-based payment method using Chip & PIN based on technical standard set out for cards and card machines.

which offers a secure environment for their assets due to the increased security. Many devices require fingerprints or long, multicharacter passwords which enables a greater level of security than that provided by physical currency or a four-digit PIN. This research is unique in a landscape where many academics argue that cash is the preferred method for the less wealthy consumers. An example argument is that of Fabris (2019), which argues the opposite – fewer wealthy people prefer cash due to an inherent distrust of large financial institutions. The area of trust is further examined by Goczek (2015), who concludes that trust diminishes alongside income, agreeing with the hypothesis of Fabris (2019).

Although Yawe (2018) has comprehensively covered a specific area on the wider spectrum of income, an element that would have complemented this research would be to use this income band as a control when discussing other demographics to give the base research a further level of validation.

From a macroeconomic standpoint, research demonstrates that countries benefit from a move to card payments. The maintenance of a card payment system at national level is lowered by the introduction of digital based payment methods. This is a result of lower maintenance costs of digital systems as they are passed to payment processors (Humphry, Pulley and Vesala, 1996).

### 2.3 CASH AS A MAINSTAY

Given consumer response towards digital payment methods is positive (Boden, Maier and Wilken, 2020), this would indicate that a cashless society – and therefore a card only consumer environment – is a realistic concept. Economic policy, however, will prevent this trend from pressing ahead as

quickly as public opinion would like. Fabris (2019) argues that central banks in various markets would need to develop and implement a new set of regulations to meet the requirements of a cashless society. As history would suggest, it would be hard to achieve this in any timely fashion, leaving cash to play an important role for the foreseeable future.

Another aspect to support the resilience of cash in an increasingly digital world is the varying demographics. Fabris (2019) goes into detail regarding the elderly and poor of the world. The author discusses people who find card payments confusing alongside people who have little income, leading to cash being the least complicated option for their needs. There are still 11% of people who do not use the internet in the United States (Mercadante, 2019) and it is unlikely to convince this large cohort that a cashless society is the way forward.

However, Fabris (2019) fails to look at the more simplistic nature of newer technology such as contactless, and the ability to pay using wearable devices – many of which are specifically targeted at the elderly due to their health features. This would have been an interesting avenue to cover as part of the main element of the analysis.

Goczek (2015) explores the slow adoption of card among less wealthy consumers and concludes that trust is an issue within this demographic. The author hypothesises that paying with cash is transparent from a consumer perspective as they can see both stakeholders in the transaction (the merchant and themselves). When card payments are used, the payment processor becomes an unseen third party, leading to issues around trust as to where

their money may go. Goczek (2015) concludes that this becomes less of an issue as income levels increase.

Venkatesh *et al.* (2003) explores various demographical elements when it comes to adoption of new technology and the work finds that age plays a large role in the adoption of new technology such as digital payments. Using multiple samples across various types of technologies, the work found that elderly people were most resistant to adopt new technology. This includes digital payments. In support of this work, Prensky (2001) looks at the challenges faced with the idea of older people having to retrospectively familiarise themselves with digital concepts that they were previously unaware of. Older people will be less likely to accept and adapt to new technologies due to their unwillingness to replace a current system with one they deem to have no added benefits.

If cash is to remain a prominent payment method, this will support small businesses who wish to preserve this payment method to avoid transaction fees on low value sales where margins are already tight. This is a major point of concern for many SMEs (Wright, 2004) and they could leverage the solid foundation of cash as a payment to resist a change to a cashless society. Wright (2004) argues that merchants can choose to accept only certain cards, depending on merchant fees. The observations by Wright (2004) are reiterated by Shy and Wang (2011), who conclude that fees and other overheads relating to card payments affect can give SMEs a negative perception of card payments. This observation seems unlikely to be effective given competition from rivals who offer wider payment options and will ultimately expand their customer base due to ease of payment. This article is well balanced regarding

acknowledging that most merchants will accept all widely available card options regardless of fees due to their desire to offer consumers a similar range of payment options as their competition. However, both Wright (2004) and Shy and Wang (2011) fail to look at geographical elements as an area of interest, specifically that of cities compared to rural settings. It would be valuable to see their conclusions based on this demographical distinction.

## 2.4 CASH AND HYGIENE

Society is becoming more aware of hygiene among cash to the point where, if cash is unavoidable, they would rather newer notes (Lin, Lin and Hsin, 2018). This level of awareness regarding hygiene is likely to affect cash consumption and has led to an increase in card payments across the US according to Lin *et al.* (2018). To contrast this conclusion, Salmony (2011) argues that the social movement away from cash will not happen as quickly as people expect. Salmony (2011) concedes that most US notes are contaminated with cocaine due to direct use or spread within ATM machines. On top of this, they have observed that 94% of US bills are dirtier than an average household toilet. With this observation acknowledged, Salmony (2011) hypothesises that consumer concern regarding hygiene is weak.

Given that the primary basis of this research is to dispute the growth of card, it is disappointing to observe that Salmony (2011) fails to investigate the negative effects of hygiene when looking at the persistence of cash. Given the time it likely took the author to find and verify claims regarding the lack of cleanliness with cash, they remain entirely isolated within the conclusion, with little exploration of the topic documented within the main body of the work. It

appears the arguments for cash persistence were favoured throughout the paper, with a lack of balance regarding the focus areas of the paper.

In recent times, due to the COVID-19 pandemic, consumers have migrated to card payments – and specifically to contactless technology - to complete purchases when shopping in store. With €600 million worth of transaction completed by contactless payment in Ireland in May 2020 (Heffernan, 2020), this is an interesting area for research, but little has been done regarding cash hygiene and public perception to the health element. None, to date, in Ireland, from a peer reviewed academic standpoint.

## 2.5 CARD PAYMENTS IN AN IRISH CONTEXT

Ahern (2020) reports on a study from the Dublin Mint Office regarding consumer preference when it comes to payment methods. They found that 59% of respondents preferred cashless payments over traditional coins and notes. Only 15% of respondents confirmed that they do not use cashless options at the payment stage. While this study goes into detail regarding geographical elements – where more rural areas favour cash – it does not take into consideration respondent age. This is detailed by (Russell, 2017), in which Age Action Ireland argued against Bank of Ireland's plans to turn 100 branches into cashless operations, further reinforcing a correlation between payment preference and age.

While most literature argues a progressive standpoint to the benefits of card for consumers, this is not always the case. In context, this can have adverse effects. Kelly and Reilly (2005) look at credit card debt within Ireland and they thoroughly examine the area, looking at the introduction, along with the

positive and negative effects, of credit cards. The trends that they uncover show Irish household debt increases as credit cards became easily accessible in the country. While most academic literature around negative effects of card growth focus solely on the SME context, the authors explore the financial downsides that Irish households may face when in possession of a high limit credit cards. While the paper does look at both of these areas, it is skewed towards household credit cards and leaves the area of business credit cards largely unexplored, which could be a valuable area for exploration due to SME's reliance on credit during recessionary times (Angori, Aristei and Gallo, 2020).

## 2.6 DEFINING THE SMALL TO MEDIUM ENTERPRISE

There are several different ways to measure the size of a business entity. This can range from length since inception, amount of revenue, and number of physical addresses among other elements. One method of definition is that of the European Commission, which looks at employment figures alongside turnover as a basis for determining the size of an organisation. In this case, a business is determined to be an SME if their workforce does not exceed 250 employees and their turnover is a value up to that of €50 million or their balance sheet does not exceed €43 million annually. Any reference to SMEs within this research used this definition when contrasting between SMEs and large organisations. (European Commission, 2012)

## 2.7 THE IMPORTANCE OF SMALL BUSINESS

With small to medium enterprises employing more than 68% of the workforce within Ireland (Central Statistics Office (CSO), 2020), the ecosystem of these



businesses plays a pivotal role within Ireland in respect to both the economy and personal lives of those employed in the sector. White (1982) makes observations regarding SMEs and their workforce. The main area of analysis is around workforce skills. This research has shown that the level of unskilled workers within the SME ecosystem is much higher than that of large organisations. These are vital jobs given a large percentage of Irish population in full time employment are that of unskilled workers (CSO, 2016). With SMEs being particularly vulnerable to changes such as card adoption, this in turn puts this employee ecosystem in a vulnerable position, which could negatively affect the Irish economy. Due to the knock-on effect, we should not just look at the survival of the SME – but the survival of vital jobs, which make up most of the Irish workforce.

Small businesses within Ireland play an important role in securing credit. As Lawless, McCann and McIndoe (2014) detail, in some sectors, SMEs dominate in some industries when looking at who is applying for credit. At the time of the publishing of this journal paper, 61% of outstanding credit belongs to SMEs. This highlights the importance of SMEs to the Irish economy. Their survival is key to help boost the Irish economy. Lawless *et al.* (2014) go into much more detail regarding the figures and therefore provides a well-rounded view of SMEs within the Irish credit ecosystem. This is particularly valuable in an area where Irish-specific research is sparse.

## 2.8 SMEs DURING ECONOMIC CRISIS

The COVID-19 crisis has left the world in facing economic uncertainty and has led to economic devastation worldwide. This has been experienced in Ireland,

which saw many people lose their jobs. EY Ireland (2020) has predicted a potential loss of 318,000 jobs within Ireland dependent on the timeframe of disruption caused by the virus. The economic downturn due to this pandemic is predicted to affect small and large businesses alike. With this considered, small businesses traditionally find it difficult to weather a financial storm compared to its large counterparts (Bourletidis and Triantafyllopoulos, 2014). Due to a lower level of technological and human capabilities within SMEs make it harder to overcome financial struggles during a recession due to their lack of ability to adapt internally. A negative regarding this paper is their lack of detail regarding specific geographic locations but given the similarities of SME structure across diverse geographies, the validity of this research may be strong in an Irish context.

Due to an SME having less access to credit from bank institutions (Angori, Aristei and Gallo, 2020), cashflow then becomes an issue as these businesses rely on capital that comes directly from customers. Given a consumer move towards card payments that require clearing before arriving in the merchant account, this adds a gap to cashflow that could prove vital.

## 2.9 THE SURVIVAL OF SMALL BUSINESSES

SMEs face a harder struggle to retain staff during economic crisis compared to their larger counterparts (Eggers, 2020). During the economic downturn of 2008, SMEs lost staff at a much higher rate to large organisations. On top of this, it takes SMEs longer to rehire staff compared to large enterprises. With these considerations, it can be concluded that SMEs are more susceptible to economic downturns than their larger counterparts (Price, Rae and Cini,

2013). Fraser (2014) observes that small businesses are more likely to rely on credit from banks in order to maintain operations. This reliance on credit would indicate a lack of cash reserves for expenditure outside of expected daily expenses.

McFarland and McConnell (2012) also looks at the reliance of small businesses on credit during recessionary times and concedes that this is a vital element to survival, where a single day of negative cashflow can have negative effect to the business. With this in mind, the idea of cash as a form of payment is incredibly important as it provides instant access to physical money. However, after observing this importance, McFarland and McConnell (2012) provide an excellent contrast regarding that of government support programmes that mitigate this risk. Given Ireland's support for small businesses during this recent pandemic (Department of Business, Enterprise and Innovation (DBEI), 2020), this would leave McFarland and McConnell's (2012) argument open to multiple interpretations specifically in an Irish analysis. Can the risk of a lack of cash be mitigated by a government initiative to support these businesses as consumers move toward convenient methods that do not also provide convenience for the businesses themselves? The various viewpoints focused on by McFarland and McConnell (2012) make it a pertinent work when looking at the current pandemic and the fast-changing payments ecosystem.

## 2.10 CONCLUSION

The findings from the literature review offer various insights into the general trends within payment methods from both consumer-focused research and

SME focused research. With regards to the various elements outside of specific payments, this literature review offers value in other areas, such as statistics by demographic, which are valuable areas to consider.

Chen *et al.* (2019) have summarised in good detail the inconvenience factor that determines whether consumers want to carry cash, finding that there is a strong move towards cashless convenience. An important element of the research within this paper is the approach the authors took when looking at how inconvenience levels change as the number of coins increase. This level of detail gave a good understanding that it is not as binary as cash versus card – there is a spectrum. The research does lack comprehensive analysis across different factors such as socioeconomic class, age etc. but this paper was useful to read as an examination of societal trends.

Davidson and Turmel (2017)'s work complements the research of Chen *et al.* (2019). While the latter did look at consumer perspective, Davidson and Turmel (2017) took the same analysis of trends and applied it directly to the viewpoint of the small business owners. This comparative provided an end-to-end view of the current outlook that this thesis aims to look at. While they both lack a geographical focus on Ireland, this analysis was still valuable when applied it to an Irish context in this paper.

One focus during this literature review has been to examine where cash has a stronghold against the move from card. Fabris (2019) provided high quality research across multiple arguments to support the resilience of cash. First and foremost, the paper detailed the lack of regulation around a cashless society by comparing the creation of this legislation with other similar modernisation

projects. A financial seismic move such as a cashless society would take a long time as a result.

An element that this paper looks at – that others do not put much focus on – is socioeconomic class and how people with less money tend to prefer cash. This element of research pertinent and one that will be looked at in the original research of this thesis.

An area of research that has become increasingly relevant during the undertaking of this research has been around hygiene and a business entities' ability to adapt as consumers become conscious of the potential health risks associated with cash. While research around public perception in response to COVID-19 is yet to be published – and this is an area covered in the original research of this thesis - recent papers could already display a shift towards consumer perception. Lin *et al.* (2018) found that consumers prefer newer cash notes in a situation where cash is unavoidable. This work also shows an increase in card payments in the United States directly related to cash hygiene.

Salmony (2011) disagrees with the momentum behind a cashless society as a result of hygiene concerns, arguing it will be slower than anticipated. However, given the nature of the COVID-19 pandemic and the age of this journal article, it is interesting to question whether the author would come to another conclusion if the topic was explored in a more recent setting.

### 2.10.1 RESEARCH GAP

The area of hygiene became an important aspect to this thesis based on current events at the time of writing but also due to a lack of research compared to other areas that have been explored in this literature review.

This literature review has highlighted the lack of research within this area specific to the Irish market. This is underscored as important because other articles examined that looked at geographical elements showed that this area can affect the outcome of a study. As a result, general research cannot be transferred directly to an Irish context in an accurate sense. Given the literature has shown the importance of local research and, in turn, a lack of Irish specific research, it has shown there is a direct gap for this thesis to help answer a question that is so far not answered from an academic standpoint.

Regardless of the global move towards a cashless society, it must not be forgotten that there are elderly people or people in socioeconomic situations that skew them in favour of cash. There is also a societal move to card due to hygiene concerns. Having covered the existing literature extensively, this research will focus on the same areas but with a focus on an Irish specific context as well as exploring the growing importance of hygiene for Irish consumers and businesses.

### 3 RESEARCH AIMS AND QUESTION

#### 3.1 RESEARCH PROBLEM

Given the analysis and critical evaluation of the existing literature, this paper focused on the Irish context of a move towards cashless payment methods. There was little academic research carried out to date within this area. A survey presented by Ahern (2019) indicated a fast adoption of new payment technology among Irish consumers. As a result of this, an analysis of these trends is a valuable area from a specifically academic standpoint.

Along with looking at this move in an Irish context this research looked at both sides of this trend – not exclusively at consumer adoption – but also the response from SMEs. Given physical cash is familiar due to its longevity, do card payments – which come with terminal and transaction fees - help or hinder small business who work on tight margins? Wright (2004) discusses merchant fees in detail and concludes that fees charged to merchants are non-trivial if the business is small – they will opt to accept cash or offer limited option for digital payments due to the fees associated with accepting card payments.

Wright's (2004) study looks at these fees in a US based environment, while this research looked at similar trends within Ireland as SMEs are pressured by social trends to move towards card payments.

#### 3.2 AIMS OF RESEARCH

As a result of the above research problems, this specific work looked to elaborate on and analyse various topics.

Firstly, how is Ireland as a country adapting to the societal move towards a cashless society from both a consumer and small business perspective. An area that offered value in exploring was whether consumers within Ireland are enthusiastic about the perceived benefits of card payments across various demographics. Are small businesses also enthusiastic about a progressive move to a cashless society? By qualitative and quantitative data gathering, followed by analysis of this data, this allowed the researcher to assist with exploring these topics and contribute to answering the research question.

### 3.3 RESEARCH QUESTION

Given the aims outlined, the main question this research attempted to examine is how consumers view a move to card payments and how beneficial it is for SMEs to adapt and support these new methods of payments.



## 4 RESEARCH METHODOLOGY

### 4.1 INTRODUCTION

In order to answer the research question posed, research and data collection was required in order to assist with coming to a comprehensive conclusion. Research conclusions are enhanced by high quality original data. In order to achieve such quality within this work, it was imperative to explore different research methodologies and philosophies before conducting data collection (Wynn and Borrie, 2020). By analysing the various avenues of research approach, the researcher gained an overview of many different approaches. This allowed the researcher to align the overall goal with the optimal research approach.

### 4.2 RESEARCH STRATEGY

Saunders *et al.* (2009) outlines the “research onion”, which helps break down research methodology into consecutive areas (see figure 1 below). By using the “research onion”, the researcher can deduce an optimised methodology across all layers of research. This will lead to a more accurate level of research and provide a more comprehensive answer to the research question. This model of data collection helps organise techniques and methods into individual sections. Each of these sections are completed in a consecutive sense and not concurrently. In theory, it is argued that this model is a balanced way to conduct data collection from both qualitative and quantitative methods. This is due to the theory that questionnaires and studies belong in the middle of this onion, with thought given to research philosophies and various approaches to

answering your research question before attempting to collect data (Saunders *et al.*, 2009).

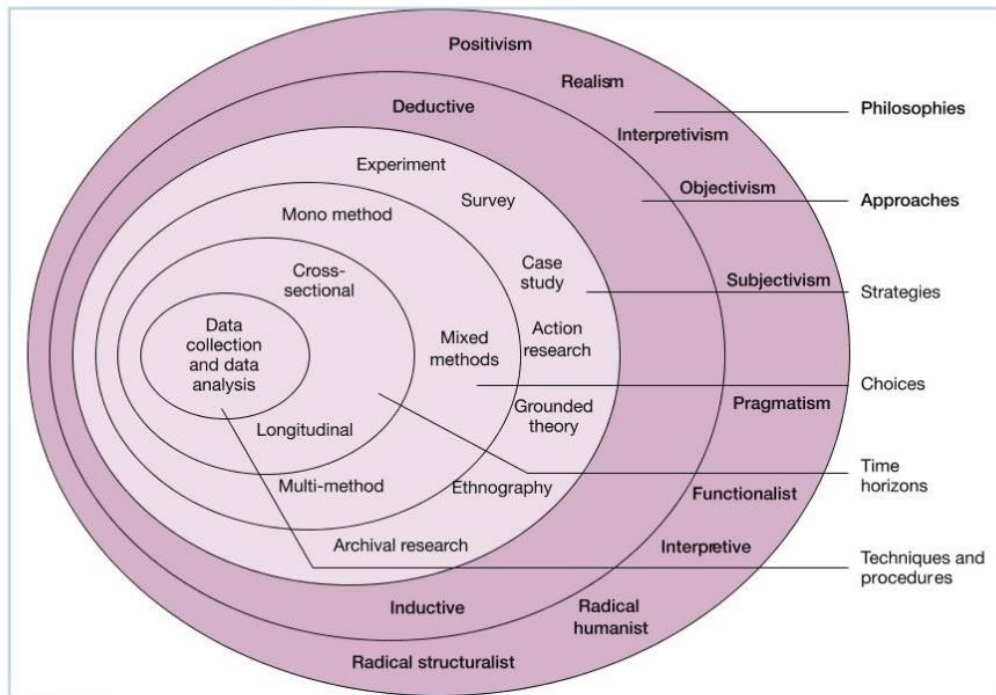


FIGURE 1: THE RESEARCH 'ONION' (SAUNDERS ET AL., 2009, P. 108).

#### 4.3 PHILOSOPHY AND APPROACH

By starting research with philosophy and approach, it will help to form high quality data collection at later points (Wynn and Borrie, 2020).

Saunders *et al.* (2009) outlines 2 factors when deducing the research philosophy best suited for an area of work. The approach the researcher takes is affected by the philosophy chosen. The two philosophies outlined by Saunders *et al.* (2009) that are considered here are:

- Ontology: *“the researcher’s view of the nature of reality or being.”*
- Epistemology: *“the researcher’s view regarding what constitutes acceptable knowledge”*

The ontological approach for this research took the position that there is a single consistent reality within the area research relating to societal perceptions of payment methods. This position was chosen based on the objectives of this work and the area in which this research is conducted within. From an epistemological standpoint, this research focused on a survey and interviews to gather independent data separate to the opinion of the researcher. From a quantitative approach, the research philosophy this work will apply is a positivism approach. Another approach that will be used in relation to the semi-structured interview research is subjectivism, as the interviewee opinions will be used to conclude viewpoints that will then be compared against the quantitative data that the surveys will provide.

Philosophy focuses on the researcher's specific view of the world and will shape how they view their research topic. This first step is to become aware of this fact. After this point, (Saunders, Lewis and Thornhill, 2009) argue that approach becomes an important element to consider. It is pertinent to consider and examine a wide breadth of methodologies when choosing how to conduct the research (Bryman and Bell 2015). Dobson (2002) holds the position that a wide analysis of research methodology options gives the researcher a logical flow throughout the work and positions the author for a strong defence of their findings.

Given the theory this research was based off, the question that was asked was whether this research will focus on:

- deductive research – using existing theory and testing a hypothesis against this to revise the theory. (Greener, 2008)

- inductive research – collecting and analysing data to formulate a theory at the end of research. (Greener, 2008)

Given this work included quantitative and qualitative research methods concurrently, both inductive and deductive research methods were applied when analysing the data collected. Woo, O'Boyle and Spector (2017) have observed that inductive research “identifies new areas we do not know much or sufficiently about” (p. 259). This observation is highlighted by Woiceshyn and Daellenbach (2018) who go on to state that inductive research is important in the process of developing new theories within a subject area. Due to the overall goal of answering the research question required a quantitative survey alongside qualitative, semi-structured interviews, it was logical to apply both inductive and deductive research approaches for these different methods.

#### 4.4 RESEARCH STRATEGIES

Bryman and Bell (2015) underscore the importance of evaluating every research methodology possible before deciding what approach the researcher plans to take. This early stage work builds the foundations of focused research that best fits the study at hand. As a result, substantial time was spent looking at the various avenues available when looking at the question this thesis is attempting to answer. This included focusing on the research methodologies chosen by articles within the literature review.

During analysis of the literature available on the topic of cash and card payments, the authors use predominately quantitative analysis (Chen *et al.*, 2019; Yawe, 2018; Beatty, 2017; Davidson and Turmel, 2017). This is a sensible approach as the authors attempted to prove or disprove a trend from

cash to cashless to society. Saunders *et al.* (2009) details how quantitative analysis is best suited when analysing a potential trend or similarity of two variables. As this research looked to do similar analysis to the work above with different focus points and a geographic limitation, it made logical sense to apply this philosophy when deciding to offer a questionnaire as a source of data collection.

On top of analysing the work of other researchers within the literature review, focus was spent on textbook work in order to gain an understanding of varying methodologies, but in an isolated setting, where the information was not in support of direct research but presented in a general manner.

The research strategy proposed as part of data collection was a predominately quantitative with supporting qualitative research – data collection through a questionnaire was a primary source of data to contrast against existing research done within a non-Irish context.

#### 4.4.1 RESEARCH SURVEY

A questionnaire was designed and distributed to adult consumers within Ireland in order to gain data to assist in answering the research question. The content of the questionnaire was influenced by the various readings within the literature review. When critiquing existing work, it was useful to analyse the pros and cons in order to determine how to increase the value of the data gathered. As a result, considerable time was spent on the design and framing of the questions – this is to maximise the value of responses. Saunders *et al.* (2009) outlines that “the design of your questionnaire will affect the response rate and the reliability and validity of the data you collect” (p. 362). Therefore,

the design of the questionnaire was an iterative process. Sharing the draft of the survey with peers/supervisor and ultimately perfecting it through a continuous feedback loop will help maximise the quality of the questions before being distributed.

On top of this, Bell (2005) highlights the benefit of sending a questionnaire to a pilot group of eligible participants who could then provide feedback on their experience with the survey. Using this recommendation, 10 eligible participants were sent a draft of the survey and this acted as a final stage of incrementation. The main issues identified were a lack of understanding of some definitions within the questions; some pilot participants also found difficulty in choosing a single answer due to ambiguity among potential answers available to the participant. With feedback gained, the survey was amended and the participants in this pilot were asked not to complete the final survey in order to avoid bias.

The questionnaire was targeted at consumers within Ireland. While the research question is predominately focused on SMEs, consumer choice determines the avenue businesses take in their strategy. Starting at this point with data collection will help visualise a business entities' strategy, as small businesses increasingly rely on strategic change in order to maintain customer satisfaction and retention (Nouicer, Zaim and Abdallah, 2017).

To compliment the nuanced design of questions, distribution was a key area of focus in order to maximise the number of responses. Quinlan (2011) discusses the importance of response levels, detailing how fewer responses will degrade the researcher's ability to be confident in the responses received.

The survey remained live for three weeks, at which point it was distributed across multiple online avenues. Multifaceted distribution of the survey was important in order to differentiate responses based on various elements such as geolocation, income band and age. The motivation behind this was due to a lack of demographic level study being a key criticism of much of the papers within the literature review. As a result, distribution was conducted across many avenues, such as social media, email, and word of mouth among others to gain a rich and diversified response.

The survey remained open for three weeks and the response numbers were 153.

#### 4.4.2 SEMI-STRUCTURED INTERVIEWS

Semi-structured interviews with two SME owners, with a predefined list of questions that can evolve depending on answers, were conducted in order to gain an insight into their outlook on payment options from a business owner's perspective. This data helped contrast against the consumer data gained through the survey. By using interviews, main concerns in the conversation of this research topic were identified – this was a manual method of quality assurance with respondents. This led to high quality response and as a result, was beneficial to the overall findings.

Quinlan (2011) details how one-to-one interviews are especially beneficial due to the ability of probing the respondent for more information. This was especially useful when a response contrasts from that of the survey findings and helped to further answer the question posed. The use of semi-structured interviews with predefined questions offers the above benefits, but Bell (2005)

observes that there is potential for low quality answers due to the inability to predict where the interviewee may go with their line of answers and their lack of expertise on a predefined question that has been asked. While these concerns were unavoidable, attention was given to identify where these occurrences could have happened in the question list, and to have a line of questioning prepared to help clarify any unclear answers given.

The objective of the semi-structured interviews was to gain insights into the experiences of business owners as they deal with consumers. As a result of this observation, a phenomenological approach was taken during the semi-structured interviews. This was based on the findings of Creswell (2013), who indicates a focus on lived experiences within interview to gain insights into areas the interviewee otherwise would not elaborate on.

#### 4.4.3 ANALYSIS

Once data collection had concluded, this data required minimal cleaning. This was due to the rigid design of the survey. Mandatory questions regarding age and location prohibited ineligible participants from submitting a response. Most question combinations would result in a valid survey response. In one scenario, a participant could indicate that they own no debit or credit cards, and do not use mobile devices, but could then claim to use card/digital payments currently. Due to this being an invalid response, any entries using this combination needed to be removed from the dataset. To achieve this, the R programming language<sup>3</sup> was used, with the following code snippet pinpointing the specific entries in the dataset that met the intelligibility criteria:

---

<sup>3</sup> A programming language used to clean and analyse datasets to identify patterns within the data.



```
surveyResponses<-subset(responses, numOfCards == 0 & useVirtualCards  
== "No" & cardUsage != "Less than 20%")
```

*“If number of cards = 0 and use of virtual cards is false and card usage is More than 20% this is an ineligible response.”*

This resulted in 3 ineligible entries, and when removed, left 150 valid responses in the dataset. This data was then used to cross-compare against various statistics within the dataset in order to identify findings that were useful in supporting the work of answering the research question. Attention was paid to areas referenced by interviewees in the semi-structured interviews. This was done to identify if discrepancies could be found in their answers compared to the quantitative statistics extracted from the survey.

#### 4.4.4 DATA QUALITY

Effort was made by the researcher to ensure a high quality of data among survey responses and interview answers. This effort included offering a wide suite of answers to the survey questions. While a heavy emphasis was placed on quantitative data that could be numerically analysed, survey respondents were given multiple opportunities within the survey to type a unique answer to some questions. This allowed respondents to highlight issues that the researcher may not have considered.

From an interview perspective, both interviewees were furnished with general topics before the interview. The researcher conducted the interview with multiple potential follow-up questions planned in a situation where an anticipated answer was given by an interviewee. These precautions were

added by the researcher in order to maximise the quality of information provided by the interviewees.

By implementing quality controls during data collection stage, this will reinforce the quality of the overall research given the original data provides the basis for the conclusion drawn within this work.

#### 4.5 CONSIDERATIONS REGARDING ETHICS

When designing the survey, it was imperative to keep the identity of the participants anonymous. Some of the questions within the survey related to potentially sensitive issues and having the participant identities known added no value to the research. By collecting anonymous data, it also requires less overhead in relation to Irish data protection relating to the collection, processing, and destruction of data.

At the beginning of the survey, participants were given an outline of their eligibility as well as an outline of what the submitted data would be used for. Any participants who disagreed with the nature of the survey would not be able to continue as confirmation of agreement was required in order to continue to the survey.

Regarding interviews with businesses, measures were taken to protect the participating business and the integrity of the data. All questions asked were asked with the intention of keeping the business stakeholder and the business itself anonymous. The interviewee was given clear guidance of the nature of the interview and how it would proceed. All interview questions were asked in an unbiased sense in order to avoid encouraging the interviewee to answer in

a specific way. This was done to protect the integrity of the data for use in the findings.

#### 4.6 BLENDING QUANTITATIVE AND QUALITATIVE RESEARCH METHODS

In order to answer the research question, this research needed input from the consumer and business sectors. As they are both stakeholders in a traditional transaction, both parties required attention. The research methodology for both is different. The consumer element is quantitative, while the SME element is qualitative. This mix of methodologies - often referred to as a convergent methodology (Campbell and Fiske, 1959), or more commonly known as “triangulation” (Denzin, 1978) – offers benefits in increasing the quality of the findings. Given that researchers can sometimes view both methodologies as competing, this is not always the case. As Webb *et al.* (1966) discusses, a blend of both quantitative and qualitative research complements the work by offering different styles of output.

Jick (1979) goes into specific detail using a case study of a previous journal article by the same author that implemented triangulation in order to gather new data to support the work. The author observed many benefits to the method as opposed to using one methodology. These benefits included identification of deviant elements, opportunity for data synthesis otherwise not possible with a single method and the ability to identify elements of importance that would be difficult to acknowledge by using one methodology.

The triangulation does have downsides, as specified by Jick (1979). It is more time consuming to conduct research across multiple methodologies. Researches must implement strong time management to make sure enough

time is allocated for analysis of the data. There are also issues around discrepancies within results that are harder to resolve when the discrepancy in question is across both methodologies.

Triangulation, however, provides more enriched data among the positives and this thesis has implemented both quantitative and qualitative research for these reasons.

#### 4.7 EFFECTS OF COVID-19 ON RESEARCH

The COVID-19 pandemic has affected the process of research for this work. Given the societal uncertainty during the research phase of this work, some elements of data collection were delayed. The survey aspect was almost completely online, which led to minimal impact. All invitations were distributed online, and any interested participants still had the ability to complete the survey with no health risks. However, COVID-19 did influence the level of response diversity among the age demographic. A group of people were asked to assist elderly relatives to complete the survey. A number of these participants did not feel comfortable with this as they would need to be in proximity with the elderly person, who was not in their household. This led to several declines that otherwise would not have happened in an environment before COVID-19.

From an interview perspective, both business interviewees chose an in-person interview when offered between this and a video call. When COVID-19 happened, this was no longer feasible. Unfortunately, the interviewees did not want to change circumstances. This led to a delay in interviews taking place until government guidelines allowed people within the same household to

meet indoors. This delay would not have happened had it not been for COVID-19.

## 5 RESEARCH FINDINGS

### 5.1 INTRODUCTION

Having applied the research methodologies outlined in the previous chapter, this section focuses on the data collection process. This is followed by an analysis of the data based on demographics and societal changes. This quantitative analysis is directly compared to answers given by interviewees within the qualitative semi-structured interviews.

### 5.2 BACKGROUND

The survey was designed using Google Forms<sup>4</sup>. In order to access this form, users must click on the link and they can proceed to complete the survey if they wished. The invitation to complete the survey was distributed through three means. An email was sent to 103 people with the invitation and subsequent link. The survey was also distributed on two social media websites – Instagram and Facebook. Due to the limitation of these websites regarding analytics, it is unknown the overall reach of these invitations.

Within the invitation, a note was included encouraging readers to complete the survey with elderly relatives who may not have internet access. The note also requested a reply confirming an elderly person had been assisted with their submission. Three replies were recorded indicating age-related assisted submissions were made.

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<sup>4</sup> A commercially available form creation tool by Google that allows creators to build forms and export data from collected responses.

Due to the possibility of non-eligible participants being exposed to the invitation, all participants were made aware of the requirements and were obliged to tick a box confirming their eligibility. Participants could not proceed to make a submission without this confirmation.

The survey remained open for 21 days and received 153 responses. Of these, three were deemed invalid responses and were removed, leaving a total of 150 valid responses.

### 5.3 SURVEY ANALYSIS

#### 5.3.1 DEMOGRAPHICS

##### 5.3.1.1 *CONSUMER GENDER*

The gender breakdown of respondents was 64% female and 36% male, with 96 and 54 submissions respectively (see Figure 2). An option to refrain from specifying one's gender was an option, but no participants chose this option. Given the limited amount of information available regarding the reach of the survey invitation, it is hard to gauge the response rate breakdown per gender.

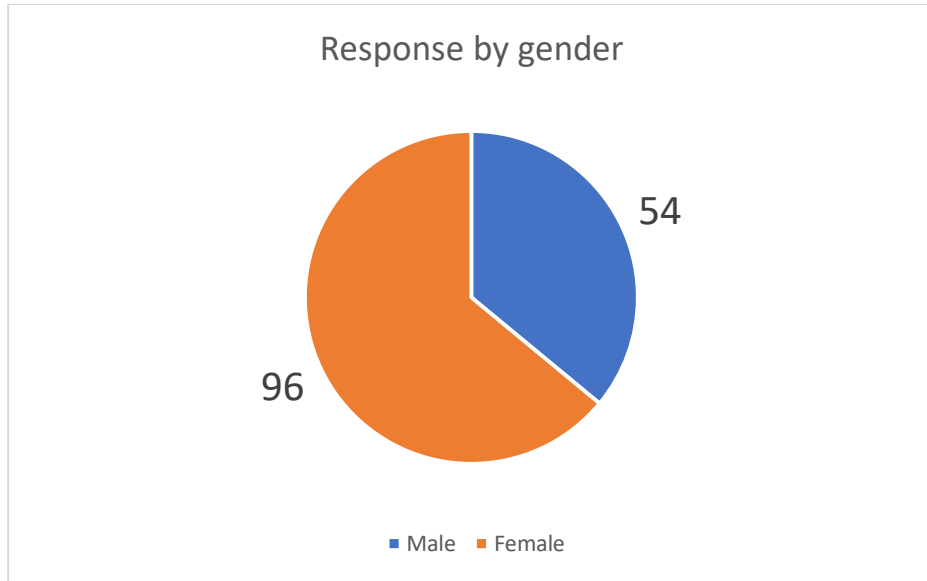


FIGURE 2: SURVEY RESPONSES BY GENDER

5.3.1.2 CONSUMER AGE

Regarding age ranges, Figure 3 visualises the various age breakdowns across all participants. 6% of participants make up the extreme ends of the age bands (1% were between the ages of 18 – 22 and 5% of participants was 61 or above).

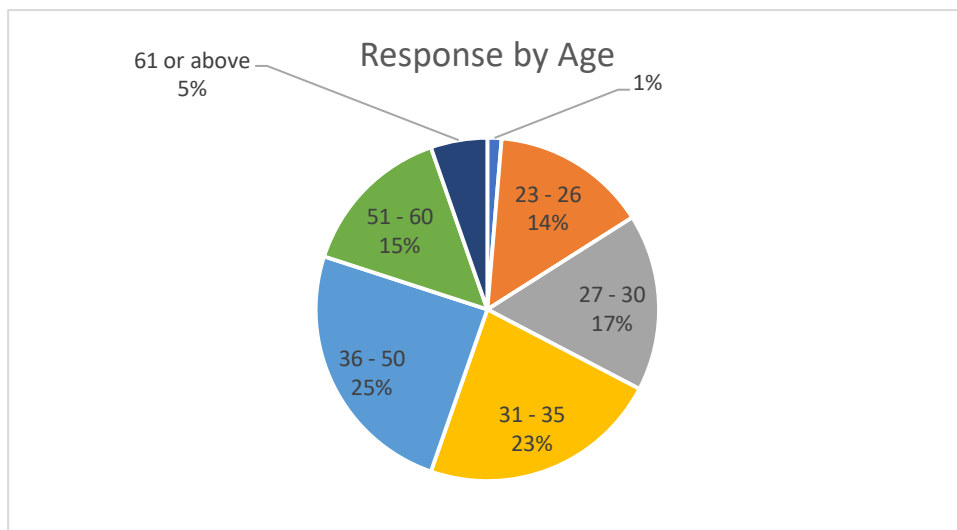


FIGURE 3: SURVEY RESPONSES BY AGE



### 5.3.1.3 CONSUMER LOCATION

Most participants that were emailed a survey invitation were based in Dublin. As a result, effort was made during social media coverage to include Irish people residing outside of Dublin. While effort was made to reach all 26 counties in the Republic of Ireland, responses across 10 counties were recorded and are displayed in Figure 4.

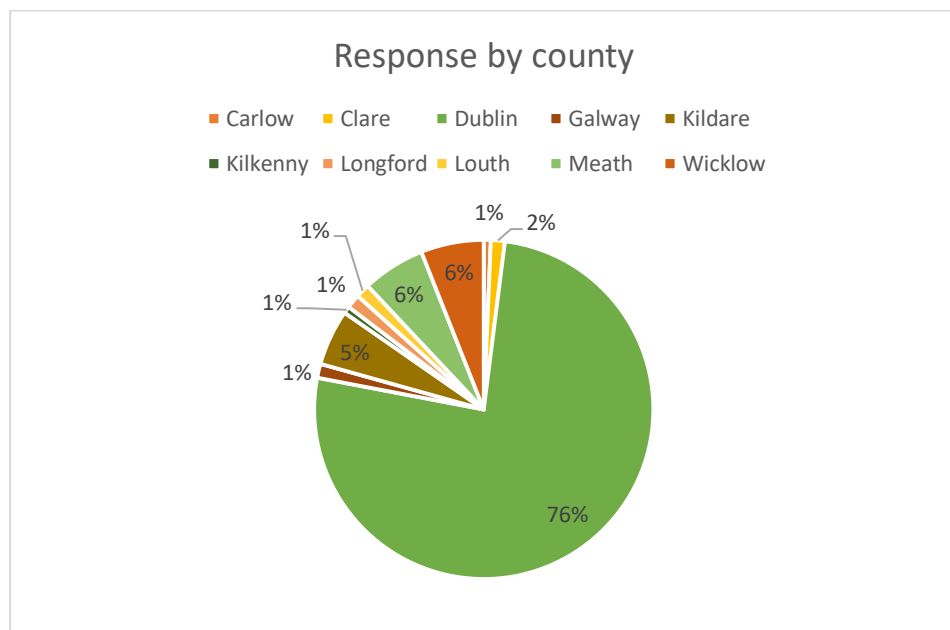


FIGURE 4: RESPONSES BY COUNTY

With 24% of participants outside of Dublin, this will give some scope to examine how trends change when you compare consumers from urban and rural locations within Ireland.

### 5.3.1.4 CONSUMER INCOME

An important element to the research is to explore income bands and how they correlate to card usage among consumers. There were eight bands to choose from and this remained an optional question. Out of the 150 participants, 2

responses chose not to anonymously disclose income. The data is visualised in Figure 5.

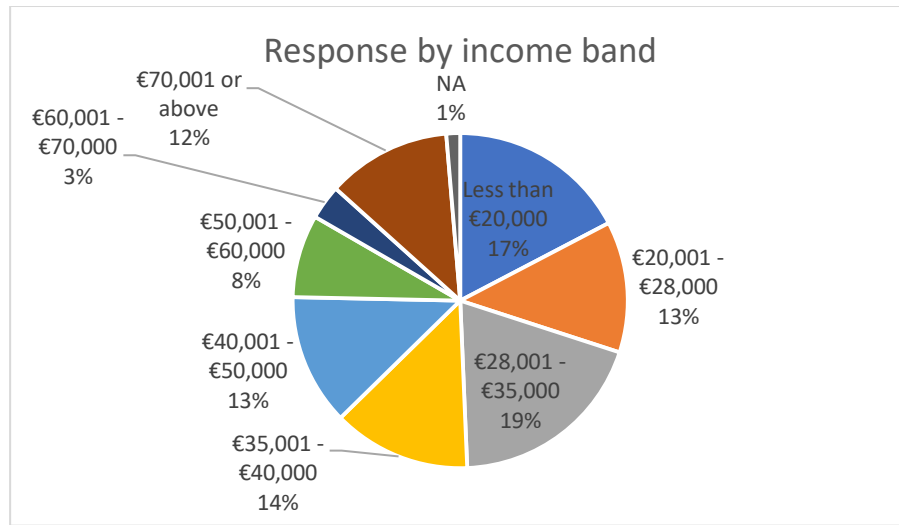


FIGURE 5: RESPONSE BY INCOME BAND

This level of diversity will prove useful during analysis as it offers a varied result set to compare against other elements within the wider dataset.

### 5.3.2 CARD USAGE ANALYSIS

#### 5.3.2.1 USAGE BY AGE

One element that existing literature discusses is card usage regarding age. With many academic papers looking at age as an argument for the retention of cash (Fabris, 2019). In reference to Figure 6, we can see a trend regarding card usage dependent on age.

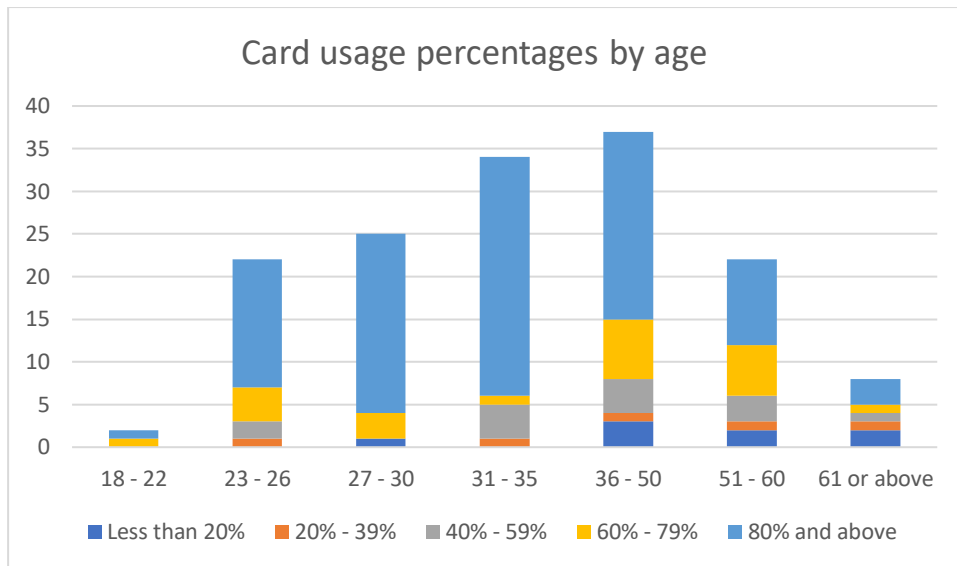


FIGURE 6: CARD USAGE PERCENTAGES BY AGE

While card usage is prominent across all age bands, cash becomes more prominent as the graph moves into older age groups. With approximately only 30% of participants in the *61 or above* range using card 80% or more, there is a reliance on cash. The most popular selection within this group is *20% or below* regarding usage. This would indicate a lack of flexibility within older age bands, who have chosen cash or card as a main choice and tend to stick with this familiarity. Within the *51 – 60* age band, the usage choice of *80% or more* is 45%, the only other band that has this choice as a non-majority.

This level of skew towards cash cannot be seen elsewhere in other age bands. In the most receptive age group, *36 – 50*, over half use card 80% or more. The results then logically flow, as the following two usage choices, *60% - 79%* and *50 – 49%*, are the following most popular choices respectively. This domination regarding card use continues down, as the *80% or more* usage choice is prominent in the *31 – 35* age band, where over 80% of respondents have chosen the highest frequency available for card use.

This indicates that within Ireland, age does play a role in card usage. While the more elderly members among society are adopting to card, it is not to the same limit as those of a younger age and this trend will likely continue as cash is phased out societally as a primary choice of payment.

### 5.3.2.2 USAGE BY INCOME

An area that is important to research is how income levels can play a role in payment method choices. This has been visualised in Figure 7 and shows that people of low income are more likely to use cash.

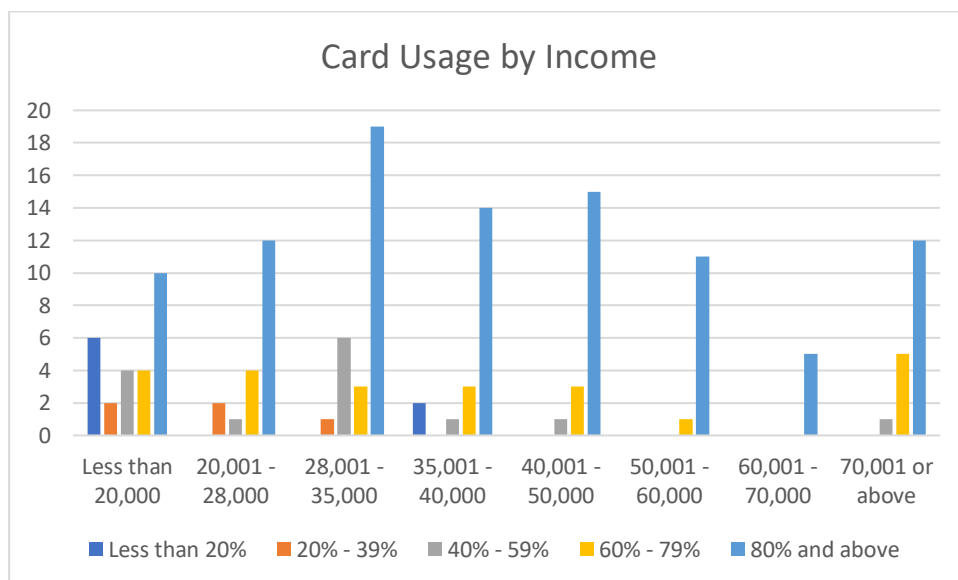


FIGURE 7: CARD USAGE BY INCOME

Within the income band of *Less than 20,000*, all frequencies of card payments are present, with *80% and above* and *Less than 20%* making up the most prominent choices. Only 38% of respondents within this group chose *80% or above* when choosing their card usage level. This is a low number compared to the overall participant average of 66%. This trend continues with a steady increase, to the point where 66% participants in the income band *70,001 or*

above chose that their use of card was in the 80% or above range. Correlating income with age, 100% of respondents in the 70,001 or above income band who were under 36 years of age, chose 80% or above for their card usage. This indicates that age and income level combined can affect card usage, with wealthy young people predominately using card.

### 5.3.3 PAYMENT OPTIONS WITHIN A BUSINESS

#### 5.3.3.1 CONSUMER LOYALTY TO THE BUSINESS

The following mandatory question was included in the survey: “*Would a business’s lack of acceptance of card payments cause you to choose a competitor?*”. The results of this question are visualised in Figure 8.

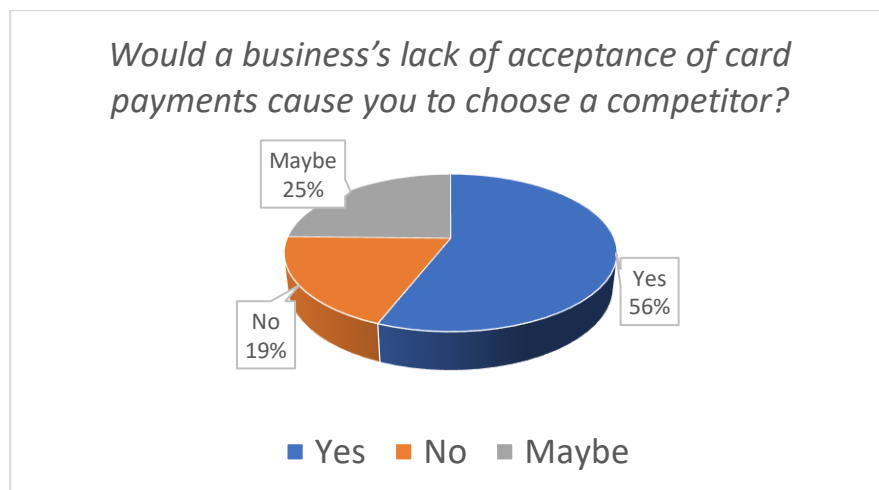


FIGURE 8: BUSINESS CARD ACCEPTANCE IMPORTANCE

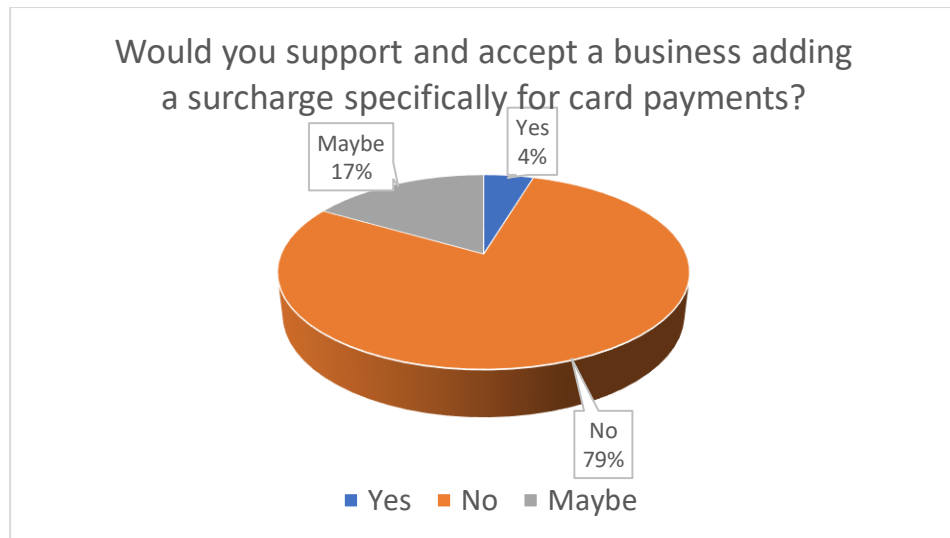
These results would indicate that consumers do care about card acceptance and would choose to visit a business that accepts card over one that does, with only 19% of respondents saying this is an irrelevant factor when determining where they would choose to shop.

When breaking down responses to this question by age, it shows little difference. When looking at those aged 18 – 35, the Yes responses made up

63% of responses, with minor differences within the No and Maybe options. Of respondents over 35 years old, the Yes vote decreases to 48% of people who would consider competitors due to lack of card acceptance. Only 22% of this age group are a definite No. This is still a high figure and would indicate that although there are minor differences when age is considered, this is a consistent thought across Irish consumers when choosing where to spend their money and should be at the forefront of management within consumer facing Irish SMEs.

#### *5.3.3.2 CONSUMER RESPONSE CARD SURCHARGE*

Respondents were asked about whether they would support a business adding a surcharge specifically for card purchases, and the response from participants was largely negative, with 79% across all submissions disagreeing with businesses implementing this charge. With only 4% agreeing directly with this idea, consumers want to pay by card without the added charges that are sometimes attached to this method of payment. This is visualised in Figure 9.



**FIGURE 9: SUPPORT FOR CARD SURCHARGE**

When compared to the analysis above regarding consumers choosing a competitor based on their lack of card acceptance, many small businesses that are currently cash only would need to move to a model of card payments without passing the added cost of this onto the consumer in order to win consumer support over their competitors.

Similarly, to the responses to the question regarding choosing a card-accepting competitor, this question also had consistently similar responses across all age groups, with very little acceptance of this idea from young and old alike.

#### 5.3.4 HYGIENE AND CARD USAGE

##### 5.3.4.1 INCREASED CARD USAGE

Given the recent COVID-19 pandemic, the survey covered areas around health and hygiene, with the inclusion of the following mandatory question: “Has the COVID-19 pandemic made you rethink your use of cash?” This question had three options: an intent to increase card usage, an intent to

increase cash usage, or an intent to not change behaviour at all. The results are visualised in Figure 10.

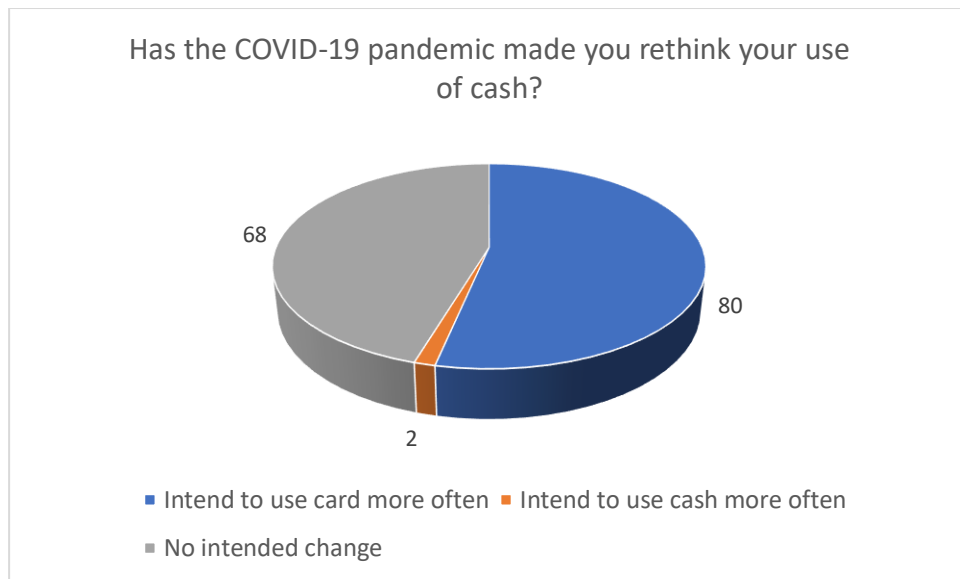


FIGURE 10: COVID-19 AND BEHAVIOUR CHANGE

This data indicates that consumers within Ireland are likely to move further to card purchases as a result of the COVID-19 pandemic, with 53% of respondents indicating hygiene as a factor for a further move to card. With only 1% of respondents indicating a move to cash, this pandemic is helping push Ireland to a cash-only society.

This ties into another mandatory question within the survey, which asked participants *“Has your use of card payments increased over the past 3 years?”*, of which 81% of respondents have claimed that their card usage has increased – this trend is likely to be pushed further with the COVID-19 pandemic as cash hygiene becomes an issue for consumers.



### 5.3.5 CASH ACQUISITION

#### 5.3.5.1 ATM USAGE ANALYSIS

Given the majority of people are now paid directly into bank accounts, how these people access their cash is an important viewpoint, and with many Irish bank branches only offering ATMs for cash withdrawal, the survey was designed specifically to focus on this method, with the mandatory question: “How many monthly visits do you make to an ATM machine for cash?” with the options of ‘I don’t currently use ATM machines’, 1, 2, 3, 4, or 5. The results of this question along with a comparison against age, is visualised in Figure 11.

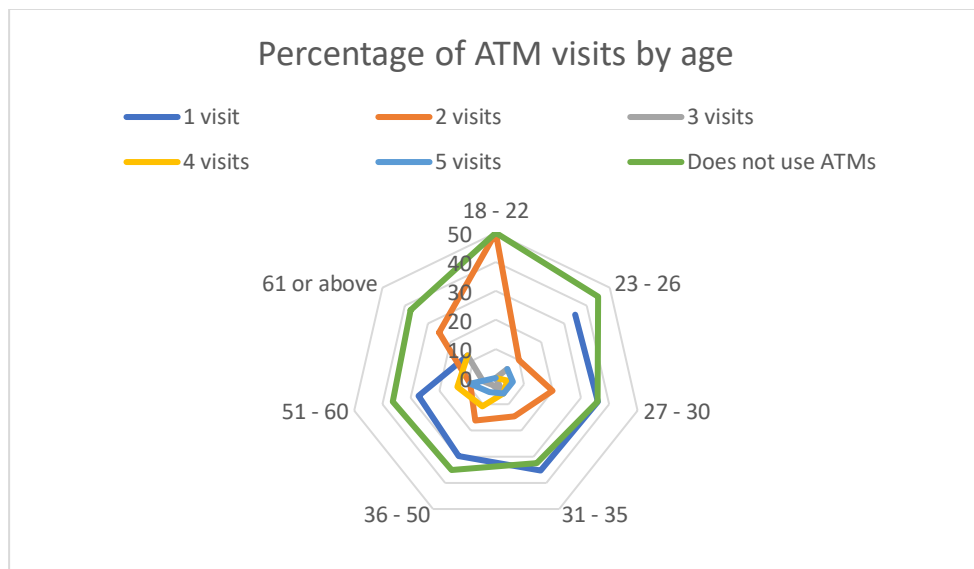


FIGURE 11: PERCENTAGE OF ATM VISITS BY AGE

The response to this question would indicate that people of an older age are likely to visit ATMs more often with the two youngest age groups (18 – 26 inclusive) are heavily skewed towards sparse ATM usage, with almost half of respondents within this age group claiming to not use ATMs at all. The lack of ATM usage is prevalent across all demographics, however. This statistic is useful in gaining an idea of short term cash usage – we cannot assume that

participants do not withdraw large sums of cash that can last weeks before another visit – as a result, it is important not to correlate this with a cash and card analysis – it is specifically related to ATM usage, and should be considered as so.

#### 5.4 INTERVIEW ANALYSIS

Two interviews were conducted with small businesses in order to gauge their outlook and the current landscape of payment options within SMEs. Both interviewees were asked similar questions in order to gain consistency across the analysis. Business A is a small pub that has recently implemented card payments in response to the COVID-19 pandemic. Business B is a hair salon who does not accept card payments currently. Interviews were conducted in a face-to-face setting with audio recorded to assist with transcription. Both interviewees were made aware of the intent to record and gave permission for this. Among the topics explored were reasoning for favouring cash, opinion on the general societal move towards card and customer demographics among other topics. Valuable data was gathered that gives the opportunity to compare against survey data from consumers.

##### 5.4.1 BEING A CASH-ONLY BUSINESS

Business A has implemented a card payment option, but at the time of the interview remained closed due to an Irish government directive on pubs and has not yet reopened. Business B has reopened but remains a cash only business. Both interviewees preferred cash, but for different reasons due to the different nature of the business. Business A, as a pub, preferred cash as the interviewee states it leads to a faster transaction than card. This is

pertinent in the high-speed environment of a busy pub according to the interviewee. The interviewee concedes that contactless is likely faster, but that many high value payments would not meet the criteria and intoxicated people take a long time to pay by card machine.

Business B, as a hair salon, prefers cash due to the monetary aspect. As a two-person business, card machine setup and monthly costs add to tight margins for customers who are happy to pay cash according to the interviewee. The interviewee also states it adds complexity to their clientele, who are happy to pay with cash.

When asked if the costs of a card machine contributed to their decision to remain cash-only, both interviewees surmised it did. However, Interviewee A claimed that it was negligible and was based more on the principle of not giving a third-party money when a cash transaction does not have such a requirement.

Interviewee B felt that the monthly costs were too high. They also mentioned setup costs and the cost per transaction that would leave them with less margin per transaction. They concluded their answer by saying it would be foolish to implement card as a payment method. Following on this answer, Interviewee B was asked if adding a surcharge onto payments would help with the cost, Interviewee B agreed that it could be an option to pass the fee onto the consumer as they are the beneficiary of card payments within the transaction.

Regarding these questions, Interviewee A seems to take a lighter approach to the answers, having already conceded a card machine would be present when

their business reopens. Their reasonings seem firm but the interviewee does not seem passionate. Interviewee B, on the other hand, appears to dislike the idea of accepting card payments and goes as far as to consider the idea foolish from a financial standpoint.

#### 5.4.2 CASH AND CUSTOMER SATISFACTION

Both interviewees were asked the same questions regarding customer satisfaction relating to payment methods that both businesses offered. Asked directly if they had encountered customer dissatisfaction by being cash-only, Interviewee A said they did. However, they then clarified that negative reactions come from non-regular customers. Interviewee A says how, as a pub, regular customers are priority and new customer satisfaction is not their top priority. Interviewee A goes on to say that employees will always direct customers to a local ATM machine if the customer does not have cash on their person. Interviewee A confirms that customers in this situation rarely return after visiting the ATM.

Interviewee A then clarifies that sometimes customers are happy with the idea of a traditional Irish business remaining cash-only. Interviewee A claims it has a charm that customers like. They claim that when customers return upon opening, some will be sad to see a card machine on the premises.

Interviewee B, who runs a business that relies heavily on customer relationships, says they always inform potential bookings of their cash-only policy. This does lead to clients occasionally choosing not to proceed with their booking, but not enough to be a cause for concern. Interviewee B claims it is an issue with no-shows. The business regularly gets bookings who then do

not show up for their appointment. When called and asked the reason for not being present, Interviewee B says many will say they did not get a chance to get cash – this is the main issue the business faces as a cash-only operation, says Interviewee B.

#### 5.4.3 CASH AND HYGIENE

Given the current COVID-19 pandemic, where card is recommended to consumers where possible, both interviewees were asked about the effect this will have on the popularity of cash among consumers. Interviewee A is of the opinion that more consumers will have preference for card payments on the back of the COVID-19 pandemic. This is the main motivation for getting a card machine, Interviewee A states. The interviewee goes on to state that a large majority of their customer base is in the older category and for that reason, cash will still be accepted.

Interviewee B disagrees that this will drive customers more towards card and seems unconvinced whether the use of card has an impact on improving public health. The interviewee states that most of their payments are over the contactless threshold, therefore clients will have to touch the machine that others have touched to enter their PIN, meaning clients will not care about the hygiene effects of cash. In the survey findings, 53% of respondents confirmed that COVID-19 has made them rethink their use of cash. The interviewee does not acknowledge that best practices indicate regular cleaning of such surfaces. When reminded, the interviewee says it is “not a fool proof method”. The interviewee concludes their answer by stating customers will still return and payments methods do not sway where a customer chooses to spend their money.

This final opinion conveyed by Interviewee B is a contrast from the results of the survey, which found only 19% of consumers did not consider payment methods an important aspect when choosing where to spend their money.

## 6 DISCUSSION

The decision on the type of data to collect as part of the original research of this work was made by examining the literature review. Some of the work within the literature review lacked comprehensive analysis or looked at common areas that could also be examined differently, and if this research could look at closely related areas, the findings can be compared directly to the work within the literature review.

As a result of this, much of the themes explored within the Findings section has commonalities with the areas analysed within the literature review. In contrast, there are findings discovered in the original research that does not correlate to the work within the literature review. This chapter will explore these commonalities and differences.

### 6.1 CARD USAGE AND DEMOGRAPHICS

Categorised consumer usage of card payment methods is an area explored in the literature review. During this exploration, existing literature supported a hypothesis that these demographics can determine the level of card usage among consumers. This is a hypothesis this research wanted to explore within the Irish market to determine if the results correlate with the data found in the literature review findings.

#### 6.1.1 CONSUMER INCOME

Consumer income can dictate the chosen payment methods by consumers, with higher wealth consumers being early adopters to new payment methods (Daria, 2017). Fabris (2019) discusses this topic and found that low income

consumers choose cash as their primary source of payment due to a distrust of financial institutions. Yawe (2018) disagrees with this hypothesis, arguing that lower income people live in less affluent areas and prefer not to keep cash for fear of theft. Due to these contrasting views, this area was an important aspect to explore in original research. In the survey, participants were asked for both their income and their card usage. These two metrics can be drawn to determine a correlation between income level and card usage. While card usage was still popular among low income participants, the lowest income group (less than €20,000 annual income) was the only group to include *Less than 20% card usage* as a prominent answer among the statistics.

When exploring income bands and card usage, the original research would correlate with Fabris (2019) and Daria (2017), both of whom hypothesise that card usage increases along with income.

#### 6.1.2 CONSUMER AGE

Work within the literature review hypothesised that age played a factor in the level of adoption for card payments among consumers. One example is the work of Fabris (2019), which examined how elderly people struggled with digital payments. The author also observed these struggles would not be as prevalent in younger society. The author states that the root cause of this struggle is a high level of confusion for elderly consumers. This acts as a barrier to entry to the card payment ecosystem.

Venkatesh *et al.* (2003) agrees with this hypothesis, agreeing that confusion is an issue for elderly people who are less familiar with modern technology solutions. While researching this within an Irish context, this work looked



directly at card usage compared to cash across all age bands of participants. The survey responses correlated directly with the existing literature, which showed low levels of card activity compared to younger participants. A correlation can be identified with the survey results when compared to the work of Prensky (2001) around lack of digital adoption by older people. Prensky (2001) argues that younger people, who are surrounded by technology for a longer time, are more likely to use technology.

During the interviews within this research, Interviewee A seemed to naturally agree with this evidence, as they outlined how many of their customers are older and therefore rely on cash as a payment method, further proving the hypothesis of previous research that card is not enthusiastically adopted by older consumers compared to their younger counterparts.

The work by Chen *et al.* (2019) was a basis for looking at what options younger consumers are choosing when at the payment stage of a transaction. The work looked at the level of inconvenience a consumer feels regarding coins dependent on age. This work found that younger consumers dislike the act of carrying notes and coins. To mirror this type of research in this work, participants were asked questions in the survey regarding why they choose to pay by card. This was a multi-choice question, with the options of *Convenience, Hygiene, Ease of Record Keeping* and *Lack of cash on your person*.

The largest response to this question was *Convenience* with 85% of participants choosing this option. This option was particularly popular with younger participants, with less participants in older age brackets choosing

*Convenience* as a primary motivator. This directly correlates with existing research that consumers are choosing quicker and less complicated ways to pay given the introduction of Contactless and other digital payments.

During interviews, Interviewee A stated faster transaction times with cash than card. Given the older clientele of the business, Interviewee A conceded that this is likely the main reason cash is faster. While Interviewee A agrees their main clientele is older, they go on to assert their customer base varies across all ages. At this point, Interviewee A agreed card is a faster option for younger consumers, supporting the hypothesis that older customers are less familiar with card payments than cash.

## 6.2 CARD USAGE AND HYGIENE

Consumer perceptions of hygiene has become a major element in how people have chosen to pay as of recently (Ahern, 2020). At the time of writing, the COVID-19 pandemic is affecting many economies, including Ireland, and is affecting how people choose to pay due to hygiene. The work of Lin *et al.* (2018) looks at the growth of card payments in correlation with consumer perception of hygiene. This was an important hypothesis to attempt to prove from an Irish context due to the work of Salmony (2011), whose research accepts that cash is inherently dirty but concludes that consumers do not find this to be a major issue when choosing payment methods.

As part of the research for this work, survey participants were asked if COVID-19 had made them reconsider their use of cash. This was then followed by an optional text box asking the participants to expand.

Most participants felt COVID-19 had made them rethink their use of cash. 74 participants chose to elaborate and 54 of these answers detailed hygiene and the current COVID-19 pandemic. This research would more closely align with hypothesis of Lin *et al.* (2018). While there are differences in circumstances and contexts, this research directly contrasts with Salmony (2011) and the author's hypothesis that consumers consider cash hygiene to be unimportant.

During interviews, Interviewee A stated that they believe hygiene is a major concern for consumers and went on to say that hygiene was the primary motivator for their business setting up a card machine. This train of thought directly correlates with the conclusions drawn by existing literature, as well as the research conducted for this work.

### 6.3 PAYMENT METHODS AND CONSUMER CHOICE

The overall emphasis of this work is primarily looking at how an SME can respond to consumer changes regarding their payment choices and if it is in an SME's best interests to adopt new payment methods in a shift towards digital payment methods. An area explored in the literature review looked at where consumers chose to do business based on payment methods. Beatty (2017) asserted that a wider array of payment options led to higher customer satisfaction. In turn, customer satisfaction at the payment stage directly affects where a customer chooses to spend their money (Lundberg *et al.*, 2014). Given these assertions, participants within the survey for this work were asked about payment methods and how it affects their choices on where to spend their money.

Asked “*Would a business’s lack of acceptance of card payments cause you to choose a competitor?*” 56% of respondents said that it would cause them to choose a competitor. This was followed by 24.7% of respondents who responded “*Maybe*”. Only 19.3% of respondents said a lack of card acceptance would not make them choose a competitor.

This response would confirm the hypothesis put forward by Beatty (2017) and Lundberg *et al.* (2014) that payment choice directly affects consumer decisions when choosing where they wish to purchase goods and services. Irish consumers are very much card heavy according to this research and this research hypothesises that less than one fifth of Irish consumers are unconcerned with a lack of card payment options within Irish SMEs.

However, Interviewee B in the semi-structured interviews argued that consumers are indifferent to payment options when choosing a business to purchase their goods and services. This directly opposes the findings of Beatty (2017) and Lundberg *et al.* (2014) as well as the original findings in this work.

#### 6.4 PAYMENT METHODS AND SME PERSPECTIVES

Both interviewees held a pessimistic view of a cashless society. Interviewee B believed the accepting card payments was an expense that the business did not need from a financial or customer retention perspectives. Interviewee A shared similar views regarding card machine and transaction costs and appeared indifferent to customer retention issues by not accepting card. This correlates with the hypothesis of Shy and Wang (2011), who found that businesses are unenthusiastic of taking card payments due to the high merchant and transaction fees associated. Interviewee B agreed that an

option would be to offset the cost onto the consumer by including a surcharge for card transactions. This idea was explored in the survey. Participants were asked “*Would you support and accept a business adding a surcharge specifically for card payments?*” and 78.7% of respondents said they disagreed with this idea. 16.7% were undecided, with only 4.7% of respondents agreeing with the idea of adding a surcharge for payments by card. This response, along with the response to whether payment options affect where respondents choose to consume would indicate the best option for SMEs would be to offer card payments exclusive of surcharges. Given the cost of card transactions will be a financial responsibility of the SME, this is unlikely to be an option considered by Interviewee B.

Wright (2012) hypothesises that surcharging is detrimental to businesses due to consumer choice to go elsewhere, directly agreeing with the hypothesis in previous work and acts as a contrast to the thoughts of Interviewee B.

## 7 CONCLUSION

### 7.1 INTRODUCTION

This research can conclude that many elements of consumer behaviour regarding payment choices – and the effects it can have to SMEs - can be applied to an Irish context. From quantitative research analysis, it can be concluded that most Irish consumers prefer card payments. As this analysis is looked at from a demographic perspective, trends can be identified across the survey respondents.

Fabris (2019) put emphasis on demographic trends among payment methods. These trends correlate with this work. The analysis showed that the age and income level of a consumer affects their payment method choice, with younger and wealthier consumers choosing digital payments over cash. This is a contrast to older and less wealthier consumers whose main payment method remains as cash due to a level of confusion and less money to spend.

A growing point of concern among consumers uncovered during the research of this work is the importance of hygiene. As the COVID-19 pandemic continues at the time of writing, a large majority of survey respondents were concerned about hygiene regarding cash and conveyed a clear preference for digital payments.

From a consumer choice element, the research found that most consumers consider payment options to be integral to what businesses they choose to frequent. With more than half of respondents agreeing that a lack of digital

payment options would make them choose a competitor, which reiterates the point that payments are not a minor concern for consumers.

With quantitative research around consumer behaviour completed, it became clear that it would benefit SMEs to adapt to this behaviour and accommodate new payment methods where possible. This is due to growing consumer concern around hygiene and their choice of choosing other businesses where their primary choice is a cash-only business.

## 7.2 LIMITATIONS TO THE RESEARCH

A main limitation to this research was the sample size of the survey questionnaire. A large effort was made to ensure sample diversity. During survey distribution, attention was paid to demographics by attempting to gain responses from as many different demographics such as age, gender, income, and geographical. While the responses were diverse, a main issue was age. Many elderly people would be unable to complete the online survey unassisted and this survey was distributed during a time where many were isolating alone. This limited the number of responses from consumers in older age ranges.

As the number of responses grow, so do the accuracy of the overall dataset (Groves *et al.*, 2009). As a result, had the sample size for the survey been larger, it would have led to a more accurate dataset to work with when analysing the responses.

Doing more than two semi-structured interviews in-person would have benefitted this research as it would have led to a more diverse range of opinions from SME owners. This was difficult to achieve due to a lack Irish government directives to not meet with people outside of your own household.

This directive was in place for a majority the research time and as a result led to a short timeframe for these interviews to take place, leading to only two interviews.

### 7.3 AREAS FOR FUTURE RESEARCH

While this research looks at digital payments as a blanket term, there are many branches to this category of payment. These include traditional card payment, payments through mobile devices such as Apple Pay, digital banking options such as Revolut, wearable payment methods such as smart watches etc. There is little research regarding a comparative analysis of specific digital payments methods in an Irish context and this would be a valuable extension to this work.



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## APPENDIX

### Appendix A – Survey Questions

1. What age group do you fall into?
  - a. 18 – 22
  - b. 23 – 26
  - c. 27 – 30
  - d. 31 – 35
  - e. 35 – 50
  - f. 51 – 60
  - g. 61 or above
2. What gender do you identify as?
  - a. Male
  - b. Female
  - c. Other
  - d. Prefer not to say
3. What is your current main location?
  - a. Dropdown of 26 Republic of Ireland counties
4. What is your current yearly income?
  - a. Less than €20,000
  - b. €20,001 - €28,000
  - c. €28,001 - €35,000
  - d. €35,001 - €40,000
  - e. €40,001 - €50,000
  - f. €50,001 - €60,000
  - g. €60,001 - €70,000
  - h. €70,001 or above
5. How many active debit and credit cards do you currently own?
  - a. 0
  - b. 1
  - c. 2
  - d. 3
  - e. 4 or above
6. Have you ever used cards to pay for goods at point-of-sale?

- a. Yes
  - b. No
7. If yes, what are your motivations? Choose all that apply.
- a. Convenience
  - b. Hygiene
  - c. Ease of record keeping
  - d. Lack of cash on your person
8. Approximately, what percentage of your purchases are card based?
- a. Less than 20%
  - b. 20% - 39%
  - c. 40% - 59%
  - d. 60% - 79%
  - e. 80% and above
9. In general, how would you pay for low value (less than €100) purchases?
- a. Card with Contactless
  - b. Card with Chip & PIN
  - c. Cash
10. In general, how would you pay for high value (€100 and above) purchases?
- a. Card with Chip & PIN
  - b. Cash
11. Are you supportive of the increase of contactless payment ceiling from €30 to €50?
- a. Yes
  - b. No
  - c. Indifferent
12. Has your use of card payments increased over the past 3 years?
- a. Yes
  - b. No
  - c. It has remained the same
13. Would a business's lack of acceptance of card payments cause you to choose a competitor?
- a. Yes

- b. No
  - c. Maybe
14. Would you support and accept a business adding a surcharge specifically for card payments? For example, an additional 50c if paying by card?
- a. Yes
  - b. No
  - c. Maybe
15. How many monthly visits do you make to an ATM machine for cash?
- a. I don't currently use ATM machines
  - b. 1 visit per month
  - c. 2 visits per month
  - d. 3 visits per month
  - e. 4 visits per month
  - f. 5 or more visits per month
16. What is your main way of splitting or transferring money between friends?
- a. Cash
  - b. Bank transfer
  - c. Online bank options (Revolut, N26 etc)
  - d. I don't transfer money between friends currently
17. If you currently use online banking solutions (Revolut, N26 etc.), do you use these accounts more often for daily purchases than your traditional bank account?
- a. Yes, I use online banking solutions more for daily use
  - b. No, I use traditional banking more for daily use
  - c. I don't use online banking solutions
18. Do you currently use digital methods (Apple Pay, Android Pay etc.) at point of sale?
- a. Yes
  - b. No
19. If yes, choose options below (choose all that apply):
- a. Apple Pay on iPhone
  - b. Apple Pay on Apple Watch

- c. Google Pay on Android Phone
  - d. Google Pay on Android Wearable
  - e. Garmin Pay on Garmin Wearable
20. Has the COVID-19 pandemic made you rethink your use of cash?
- a. Yes, it makes me want to card more often
  - b. Yes, it makes me want to use cash more often
  - c. No, it hasn't made me rethink my use of cash
21. If yes to one of the above options, please elaborate:
22. Do you see a trend in your use of card payments over the next 3 years?
- a. Yes, I see myself using card payments more often.
  - b. Yes, I see myself using card payments less often.
  - c. No, I see my usage of card payments remaining the same.

## Appendix B – Survey Invitation

Hi All,

As you may be aware, I am currently completing my MSc in Management and am currently working on data collection for my thesis. The topic is on card payments within small businesses in Ireland. If you are a consumer within Ireland, you are eligible to partake in this research.

If you would like to participate, you can click the link below, which will take you to a survey, which will take approximately five minutes to complete. This is completely voluntary, and you can choose not to partake. Please note there are no identifying questions on the survey and all anonymous data will be stored securely.

<https://docs.google.com/forms/d/e/1FAIpQLSfDNXQ-TPEsxNtjm2DxV6oNneICdGi0yshhYa0UkaewPdu5Q/viewform>

Regards,

Robert

## Appendix C – Interview Invitation

Hi [name],

My name is Robert Dillon and I am a student in National College of Ireland currently completing my MSc in Management. This includes completing a thesis on payment methods in small businesses. As part of this research, I am hoping to interview business owners regarding their attitudes to payment methods.

If this is something you would like to be a part of, I would be delighted to send on more information or have a conversation. All data will be anonymised so your business will not be identified in the work. Thank you for taking the time to read and let me know if you have any questions.

Kind Regards,

Robert Dillon