Digitalization of convenience retail in Ireland

How Irish convenience retail companies adapt to changing market demands with aid of digital transformation.

Masters of Business Administration

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Abstract

Digitalization is becoming an extremely important element within any of the business industries. In order for businesses to survive in the digital era and stay competitive, they must be able to adapt. Research shows that convenience retail is much slower to progress with digital transformation. Irish convenience stores are very important to both local communities as well as the Irish economy, with industry annually generating €8.6BN in revenue. Despite the importance of digitalization, prior to the pandemic, as much as 46% of Irish Small and Medium Enterprises (SMEs) did not consider online platforms as a priority to them. But the influence of external factors, such as changing customer trends and demands, regulatory requirements and the COVID pandemic have driven the need for improved digitalization within the sector.

This research was carried out to explore how digitalization affects convenience retail in Ireland. The focus was on establishing whether convenience retail stores perceive digitalization as an important element of their business strategy and how they use technological advancements to improve levels of shopping experience. This was carried out through a qualitative study consisting of semi-structured interviews that were carried out with Irish convenience store owners, managers as well as a representative of a convenience Buying Group. It was found that a number of challenges currently present within industry that prevents digital transformation. Grounds for resistance to change have shown to have different reasoning to different business owners. Another obstacle to progression was brought by the COVID pandemic, as some businesses were seen to be affected financially and were reluctant to invest into technologies, as their business priority has shifted to a 'survival' rather than 'improvement' mode. Thematic analysis showed that whilst Irish convenience retail is much behind in terms of digitalization, it is clearly part of the future strategies. As digitalization in convenience retail sector is an evolving concept, the proposed research is of a great benefit, as limited literature exists on the topic and proposed research would provide basis for future research work.

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In a loving memory of my late grandfather, his drive and passion for learning and knowledge has always given me a power to concur new horizons in life.
Always by my side, in my heart!

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Glossary of Terms

AI - Artificial Intelligence

App – Application (mobile digital application)

AR - Augmented Reality

ATM - Automated Teller Machine

E-commerce - Electronic Commerce

GDP - Gross Domestic Product

IoT - Internet of Things

IT – Information Technology

R&D – Research and Development

ROI – Return on Investment

QR - Quick Response

SEL – Shelf Edge Label

SME – Small and Medium Enterprises

VP – Vice President

1. Introduction

The use of digital services, such as shopping online, is becoming a normal practice in our day and age especially with the COVID pandemic where many non-essential businesses were forced to be closed in 2020. Shoppers have moved viewing online buying as ‘convenient’ to considering it ‘essential’, and online sales in Ireland seen an increase of 17% (Whelan, 2020).

In the past decade the way in which businesses operate has changed, which is especially notable in the retail sector. Since the emergence of the internet, the implications for retail have been seen in terms of change in business models, business opportunities, forms of commerce, purchasing processes and transformation of local shops into global markets (Hagberg et al. 2016). Digitalization has been a part of the retail industry for a long time and is still increasing in different sectors (Levy et al. 2019). The effects of digitalization have become increasingly visible; they increase customer satisfaction and competitive advantage for the companies and create new opportunities (Hagberg et al. 2017). One example of this is the collaboration between Aldi and Deliveroo in order for Aldi to implement its online shopping feature.

Lately, the larger grocery supermarket chains have invested heavily in the digitalization of their services by offering options such as online shopping, click and collect in store and even Drone home delivery by Tesco (O’Brien, 2020). Convenience outlets are also following suit in order to remain competitive, but as mentioned by Hagberg et al. (2017), this is still in initial phases. Companies that enhance the power of shopping experience for their customers by means of adaptation of customer ‘wants’ into their business models, are the ones that are in the lead. This prompts retailers to use advanced technologies in order to reduce the difference between digital and physical environment. Whilst literature mainly focuses on incorporation of online aspects into retail business models, it is important to identify how combination of online as well as physical space can be used to create a seamless experience that customers expect in new technology driven era of retailing.

Despite the importance of digitalisation, Irish convenience sector has been very slow to adapt new technologies. When comparing to global convenience retail, which is seen to utilise new era technologies into their business models, Irish convenience retail market is lagging (Grewal et al. 2017). As digitalisation requires change and transformation process within the organisation, in order to identify why Irish convenience retail has not progressed at the same pace it is necessary to understand the reasons behind the resistance to change as well as obstacles that prevent digital transformation among Irish convenience retailers.

2. Literature review

Literature review for proposed dissertation has been focused on concept of digitalization and how organisations are adopting this element by means of digital transformation. As digitalization is about new things such as technologies, processes and innovations, it means that organisations will need to implement a change in order to adopt those new elements. Literature research has included review of aspects related to organisational change and what factors influence the resistance to change adaptation. The focus of literature review was based on digitalization in retail sector to define current practices in the market. The aspects related to Irish convenience retail sector were examined to identify how the sector was affected by the COVID pandemic and what challenges it encountered with regards to digitalization.

2.1. Irish convenience retail market

Convenience based retailers are by their nature are about the 'convenience' and allow customers to make smaller and more frequent, essential top-up purchases in smaller units close to their homes (Arrowsmith, 2020). Convenience stores in Ireland are a big part of society, as they not only offer groceries, but these stores offer a wide variety of other products and services such as freshly brewed coffee, deli counters with freshly made food, ready meals, bills payment, mobile top up and cash withdrawing facilities, to name a few. Whilst, most of Irish population have always relied on large supermarkets for their weekly grocery, convenience stores have remained the key destinations for top-up shopping among Irish consumers (O'Connor, 2019).

With 3.4M adult convenience shoppers, Irish consumers visit convenience stores at least twice a week spending on average €23 per visit, equating to 6.9M convenience store trips per year with total annual spend of €8.6BN (CPM, 2020; B&A, 2018). In 2019 Irish convenience retail equated to 3% of overall retail market, but the pandemic has given a major boost to the convenience store sector with sales now expected to grow by almost 8% in 2020 (Arrowsmith, 2020; KamCity, 2020). Irish customers were always about supporting local businesses, but with the pandemic and confinement to local areas, consumers are becoming more supportive of their local communities with a quarter more consumers shopping local (KamCity, 2020).

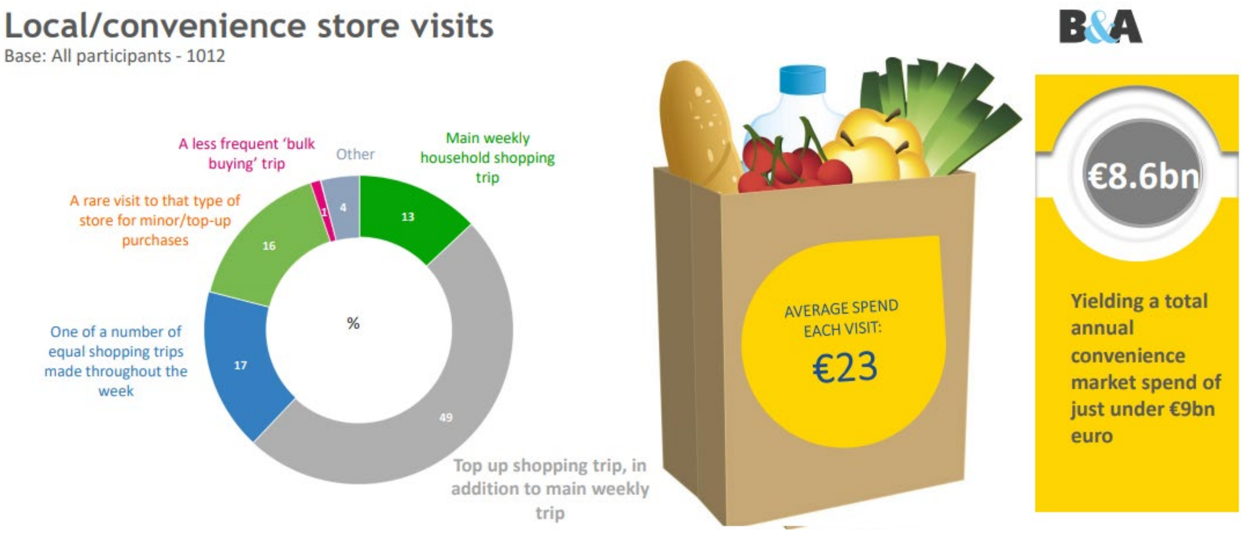

Figure 1: Irish Convenience Store Visits
(Source: B&A, 2018)

2.1.1. Irish convenience retail sector structure

In Ireland, Retail Grocery Diary and Allied Trades Association composed of family-owned grocery shops, convenience stores and supermarkets, was founded over 75 years ago and at present consists of over 4000 members (Molloy, 2018). Most convenience stores have joined together in Buying Groups due to economies of scales driven by competing large grocery stores such as Tesco, Aldi and Lidl who have huge buying power, with main convenience stores including Centra, Spar, Londis, Mace and Supervalu (Molloy, 2018). Ireland's biggest private-sector employer, Musgrave, owns several of these Buying Groups such as Supervalu, Centra, Mace and Daybreak, through which it partners with more than 1400 independent retailers. Other big players include Spar with 370 members trading under the Spar and Spar Express brands and BWG which owns Euro Spar brand and Gala which has almost 200 members (Molloy, 2018).

Buying Groups are very important within convenience retail market, as they work with convenience retailer owners to create high quality outlets that offer outstanding customer experiences. Buyer Groups enable retailers to tailor their shops to consumer needs and react quickly to changing market conditions to help grow their business. That means delivering a more customer-centric category management system, coupled with innovation and expansion.

2.2. Digitalization

Digitalization reflects the adoption of digital technologies in business and society as well as the associated changes in the connectivity of individuals, organizations, and objects (Gimpel, 2018). Schallmo et al. (2018) define digitization as digitally enabling analog or physical artifacts for the purpose of implementing those artifacts into business processes with the ultimate aim of acquiring newly formed knowledge and creating new value for the stakeholders. As stated by Orlikowski (2009), digitalization involves changes in organisational strategy, business processes, organisational learning and whole socio-technical system, which in turn impacts organisational performance.

At present, the digital wave is accelerating. Next-generation digital technologies represented by Big Data, Cloud computing, and Artificial Intelligence (AI) are constantly changing, giving birth to a new development form of digital economy (Tie, 2020). Organizations that aim to thrive in the digital age must unfold the potential of digital technologies, rethink their business models and transform themselves (Urbach et al. 2019). As mentioned by Weil et al. (2018) it is important to understand that digitalization is not only about using most advanced technologies; it is also about the change and transformation process that organisations need to embark in order to achieve the best outcome while digitalising their offerings. Digitization is not only a key technical support for optimizing enterprise production, but also a valuable tool to connect markets, meet consumer demand and better serve consumers (Tie, 2020).

Due to the use of digital technology, often in the form of mobile devices, customers have adopted new ways of searching for information, evaluating competing offerings, interacting with other customers, making purchases, and engaging with businesses (Hanninen et al. 2018). As stated by Roy et al. (2017) to address the adoption of digitalization service providers have started integrating digital in-store technologies into their physical servicescapes with the aim of offering new and improved service experiences. More and more users of digital technology of all age groups are constantly connected to a range of online activities, which provide opportunities for both users and service providers to satisfy individual needs (Reinecke et al. 2018).

The shift from ‘Desktop’ to mobile is well underway with mobile set to become the dominant platform for online shopping and interactions within the coming years (PWC, 2018). Introduction of smart phones have revolutionized shopping - from mobile digital applications to geo-fenced targeted offers, to constant access to the online environment, the advances in this realm have led to constantly changing consumer expectations and to retailers’ enhanced ability to connect with consumers (Grewal et al. 2017). Companies must take this opportunity and use mobile platforms to increase their customer base and revenues. Businesses need to invest in suitable social media strategies to drive customer engagement, as 62% of people of ages 25-34 and 92% of people of ages 18-24 find purchase inspiration through social media (PWC, 2018). The complexity of executing marketing operations increases significantly as the number of digital touch points and channels multiplies, and organisations may require separate staff and budget to deal with management of such operations (Wiefel, 2015).

2.2.1. Digital transformation

As previously mentioned, digitalization is not only about the technological advancements; it is about the change and transformation process. The path to digital transformation brings opportunities such as innovation, scalability and agility which in turn allow dealing with uncertainty and responding quickly to the changing environment (KPMG, 2017). Although, digital transformation is not only about involving new technology, but incorporating new ways of thinking and creating new strategies (Rogers, 2016).

It is evidential in the research literature that digital transformation touches many internal and external aspects within organisations, hence many experts agree that digital transformation needs to be integrated and be a part of overall business strategy (Garnter, 2016; Schallmo et al. 2018; Krasyuk et al. 2020). KPMG (2017) for instance define a four step process which can be used to guide digital transformation, each of which has potential to deliver value. In order to digitally transfer, organisations must understand industry specific opportunities that come from digitalization; they must create a strategy, articulate it throughout the enterprise and embed changes within the culture of organisation. Schallmo et al. (2018) underlines that in order to succeed in digital transformation, leading companies should focus on two complementary activities: reshaping customer value propositions and transforming their operations using digital technologies for greater customer interaction and collaboration.

2.2.2. Digital transformation domains

Digital transformation can also be viewed as a process of continuous accumulation and application of enterprise data asset (Tie, 2020). According to Rogers (2016) there are a number of domains that are affected by digital transformation, that include competition, data, innovation and value.

Data

As mentioned by Krasyuk (2020), the interconnection of both technology and data that comes with digitalization allows for organisations to remain in demand by customers, as now like never organisations can control the offerings that satisfy customers demands based on analysis of customer purchase trends and behaviours. Beforehand companies relied on things such as surveys or customer feedback forms to gain insights into customer preferences and market analysis, which was used for forecasting and decision making within the organisation. In the digital age however, all of the data from online interactions, actions and purchases is readily available and is utilised with various analytical tools to uncover deeper patterns within business activity as well as to define new sources of value creation and realisation (Rogers, 2016).

Competition

Competition is another aspect that is being changed by digitalization, where businesses shift their focus from competitors who are ‘similar’ to ‘asymmetric’ competitors who are outside of the industry but who offer a competitive value to the customer (Rogers, 2016). Digitalization is seen to diminish boundaries of standard competition and supply chains due to interdependent business models and mutual challenges coming from external to industry factors.

Innovation

Another aspect that digitalization has affect on is innovation. Traditionally innovation was based on intuition and analysis as market testing was very costly and difficult to carry out. In digital age with availability of different technologies innovation is based on continuous learning through rapid experimentation where assumptions are quickly tested and design solutions are made based on rapid feedback provided by the customer (Rogers, 2016). Krasyuk et al. (2020) highlights that 'innovation is the main source of profit for many organisations and that in current environment, the transition to an innovative development model is a necessary strategic choice, which in the medium term can contribute to the structural transformation of industry and the saturation of the market with competitive products.

Value

Value is another domain that is affected by digitalization. As demands and competition evolve rapidly during the digital age, businesses have to focus on updating their value proposition for the customer on ongoing basis in order to meet growing customer expectations and demands. Also as underlined by another industry expert, Gartner, digitalization can be used to create and deliver new value to customer, not just improve what is already being done or offered (Moore, 2015). Digital transformation of traditional industries still faces some difficulties and challenges are yet to be resolved. With most companies having a strong willingness to promote digital transformation, they lack clear strategic goals and practical paths (Tie, 2020).

2.3. Digitalization in retail sector

Digitalization in retail sector is not a new concept (Levy et al. 2019). Even before the COVID pandemic retail was in the midst of a digital transformation, but now the industry is 'in hyper-drive' to cater to new needs (Covino, 2020). Krasyuk et al. (2020) highlights that fundamental areas of digitalization that are specific to retail environment include collaboration and involvement of customer in value creation, ensuring operational effectiveness, control of IT infrastructure, logistics and control of product delivery. Grewal et al. (2017) on another hand defined five main elements of digitalization in modern retail space.

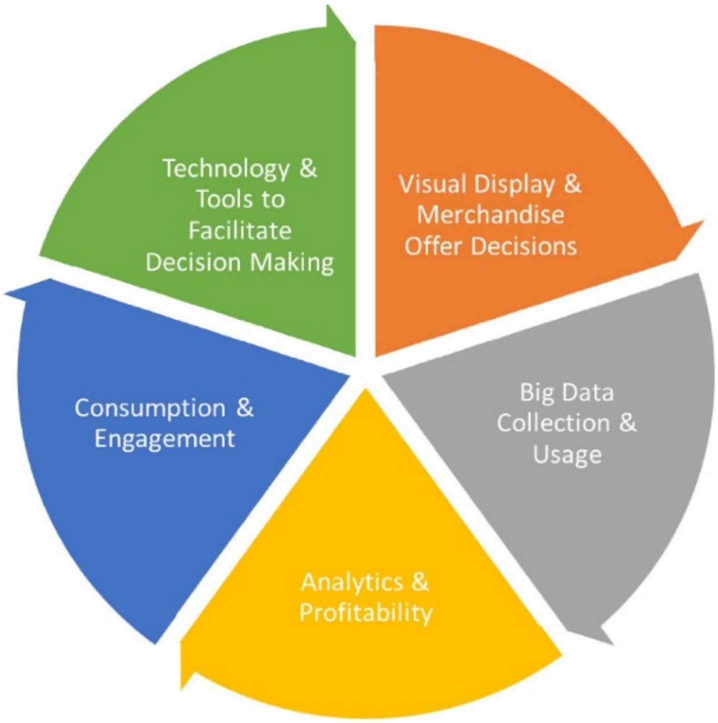

Figure 2: Key Areas of Digitalization in Retail
(Source: Grewal et al. 2017)

Technology

Previously, within retail sector the digitalization on the customer experience has typically been addressed in relation to e-commerce, however the consequences of digitalization extend far beyond e-commerce and include the transformation of physical products into digital services such as self-checkout desks, informational touch points, interactive displays, and applications for mobile devices (Nojd et al. 2020; Saha, 2019). Technological advancements continue to be a game changer for retailers that simultaneously benefits both retailers and consumers with emerging technologies such as the Internet of Things (IoT), Augmented Reality (AR) and AI are also starting to be applied in the field of retailing (Grewal et al. 2017).

Main factors that influence customers choice of convenience store relies on convenience factor, modernisation and advanced technology (Saha, 2019). Traditional retail currently is at the stage of evolution into a ‘smart retailing’, where interactions take place among customers, smart objects, product, brands, retailer and retail channel

(Roy, 2017). Retail technologies can provide customer with superior services and increase their sense of autonomy. Digital technology allows adding new layers of experiences related to entertainment and sociability to enhance customer experience while visiting the store (Nojd et al. 2020). This aspect is gaining huge importance as customers, especially millennial generation are seeking experiences and are more willing to spend on doing things, rather than buying a product (Morgan, 2019).

Use of modern technologies as well as in-depth analysis of the audience is an emerging trend in current retail environment. As mentioned by IBM's Vice President (VP), the technology in the store scales differently based on the behaviour of consumers and needs of the business (Kress, 2020). For instance use of self-service checkout terminals for faster simplified shopping experiences (Hagberg et al. 2017). Using this technology, grocery retailers have been able to reduced wait times from more than 4 min to less than 30 seconds, which in turn improves the customer experience through shorter wait times, and benefits organisation by taking pressure off the employees (Grewal, 2017). Another example of benefit of using technologies can be seen from currently growing across US trend of 'Buy Online Pick-Up in Store', which hugely benefits the retailers with limited physical space and storage facilities (Retail Times, 2019).

E-commerce

Many retailers have added e-commerce channel to their physical stores, which led to development of omni-cannel approach to retailing that focuses on creation of seamless experience between the physical retail space and the multitude of online channels, including web stores and social media, as well as an eclectic mix of technological devices (Steinhoff et al. 2019). While implementation of omni-channels is more widely used in general retail industry, it has limitations for convenience stores as their business mainly relies on the customers who physically visit the store. With a nature of the business and associated limitations of e-commerce channel usage for online shopping, the focus of digital transformation largely resides within the physical stores instead.

Physical Space

There is a substantial amount of research has been done on e-commerce for retail industry in past couple of years, however a number of researchers agree (Nojd et al. 2020; Alexander et al. 2012) that there is a lack of research that has been done regarding the impact of digitalization on value creation and delivery in physical retail space. Many researchers (Hogberg et al. 2019; Rosenbaum et al. 2017) agree that digitalization has changed how customers make purchases, evaluate competitive offerings, engage with service providers and how people orient themselves in physical retail space transforming it into a psychological place with a certain value attached to it.

Nowadays, customer experience is viewed in such way where customers co-create their experiences and participate in value co-creation (Jaakkola et al. 2015). As customer value not only limited to financial aspects, such as price of products, but to things such as convenience, many retailers shift their focus to the elements that will increase value for their offerings. And as mentioned by IBM's VP, changing how the store operates together with changing consumer needs has a real impact on what happens in the store itself (Kress, 2020). As noted by Saha et al. (2019) there are a number of features that retailers can provide their physical stores that online retailers cannot replicate. The examples of such in-store digitization technologies that retailers throughout the world are using to improve customer experiences include tablet devices, in-store touch screens, digital signage, interactive display signs, augmented reality, Quick Response(QR) codes, smart phone coded labels, outdoor and indoor location-based services.

Big Data

Retailers that can draw effective insights from Big Data in order to make better predictions about consumer behaviour, design more appealing offers, better target their customers, and develop tools that encourage consumers to make purchase decisions that favour their products (Grewal et al. 2017). As underlined by Hagberg et al. (2017) in order to engage customers and build an evolving relationship with them companies use tools such as social media as digital marketing tool, which allows for bi-directional communication with their customer, as well as giving the company a higher visibility, allowing organisations to targeted greater amount of potential customers through existing customer networks.

2.3.1. Global convenience retail sector

Digitalization in convenience retail worldwide is seen to progress quite rapidly within past year. For example, the opening of new Amazon Fresh store in UK which is fully supports contactless service through the use of mobile digital application. Store features no tills, it rather uses shelve sensors, cameras and other technology backed by AI to monitor individuals' movement around the store and the goods chosen. The bill is automatically charged to a customer's account when they leave the store (The Guardian, 2021). Another huge progress in retail digitalization was made by Russian X5 group, country's leading food retailer, who launched Facial Recognition Payments system in Russian market in 2021 (The Moscow Times, 2021). With 3000 stores across Russia are set to implement facial recognition payment systems by the end of 2021. With new, better technologies rolling out to the market, the digital world within retail is surely set to catch up with seamless services of online retailing.

2.3.2. Irish retail sector

The Irish retail sector accounts for 12% of national Gross Domestic Product (GDP); it pays €7 billion in tax revenue to the State and employs nearly 300,000 people across the country. Prior to the COVID pandemic the adaptation to digital was relatively slow, for instance in 2019 an estimated 22% of all Irish consumers used their mobile to make payments which is low when compared to the global figure of 35% or 50% in China (Woods et al. 2020). E-commerce plays a big part in Irish economy, with Central Bank estimating that Irish consumers and businesses spent €16 billion online in 2019 (IE Domain Registry, 2020). Despite that, the grocery online retail in Ireland is relatively low, with only an estimated 5% of total grocery purchases made online (Kennedy, 2020). This compares to an estimated 7.5% in the UK (PWC, 2018). This means that majority of Irish population physically visiting the stores to make grocery purchases.

The level of adaptation of technology among Irish retailers has been seen to be between two extremes, with one part of retailers being on cutting edge of technological adoptions whilst for others, technology seemed far away on the horizon (Woods et al. 2020). The low level of online shopping is also highly influenced by the fact that only a quarter of Irish SMEs can actually take sales orders or process transactions through their website. Only two-thirds of Irish retail and customer facing professional services SMEs have a website; however, most Irish SMEs stop their digital journey here. As much as 46% of Irish SMEs did not considered online platform as a priority to them. Even though online spending is the norm among Irish consumers, very few Irish SMEs actually sell to them (IE Domain Registry, 2020).

Most of Irish consumers on another hand desire omni-channel experience, where their shopping needs met by a seamless combination of traditional Main Street retail, online and e-commerce. The Irish government also supports and promotes digital transformation for SMEs, for example in form of Trading Online Voucher scheme that offers businesses vouchers of up to €2,500 to support digital enterprise (Curtin, 2020). Financial and technical supports, such as Local Enterprise Offices across the country are also available to help businesses to implement digital transformation. With over a third of retailers (36.67%) who are planning to significantly invest in technology over next one to two years, the Irish retail sector is set to progress with digitalization in upcoming future (Woods et al. 2020).

Buying Groups play an important role in regards to digitalization in convenience retail space in Ireland. They support digital transformation through collaboration with retail partners, which allows developing new products and services. Buying groups are often seen to introduce new technologies into the market. For example, SuperValu was the first retailer to introduce a fully transactional grocery App in Ireland (Molloy, 2018).

Despite many Irish SMEs not prioritising on e-commerce, for some retailers that wanted to keep trading during difficult period caused by the COVID pandemic, digital technology and online resources became a lifeline (Curtin, 2020). Some businesses, which previously had a very limited online presence, are now finally seizing the opportunity which can be seen from growth of new registrations of Irish '.ie' domains by 30% in 2020 (IE Domain Registry, 2020).

2.3.3. Impact of the COVID on convenience retail

The role of convenience stores in Ireland has become increasingly prominent, especially due to lockdowns imposed by government in dealing with the COVID pandemic with convenience retail stores seeing 30.5% in spending growth after lockdown measures were introduced (Arrowsmith, 2020). As highlighted by Covino (2020), the increase in such is also seen due to the pandemic related reasons, as shoppers became concerned about over-crowded large grocery shops and moved their custom to convenience stores instead.

Changes that came with the COVID pandemic are certainly most substantial external drivers for rapid internal changes within organisations in many sectors, as well as physical retail stores. While many non-essential stores remained closed during pandemic, grocery and convenience stores have remained in operational mode. Food retailers had to re-think their store layouts, number of employees and customers allowed in the store at one time as well to help customers to safely navigate the space. As mentioned by Covino (2020), mobile wallets and contactless payments have gained huge popularity within convenience retail space, which was driven by health and safety concerns of handling physical currency. The use of digital payments also aids to solve an incurred problem of coin shortages that occurred due to the pandemic (Kress, 2020). Although there is still some disconnect between digital payments and in-store point-of-sale at many retailers, this will likely be increased at much faster rate as retailers start to emerge from the crisis.

Traditional focus on customer services and convenience by retailers has shifted during the pandemic to include safety and regulatory aspects, which in turn prompted retailers to offer new services such as home delivery or 'click and collect' (Kress, 2020). As underlined by Kobie's VP, Greenberg, convenience stores must invest in bringing hands-free digital elements in store to maintain their convenient edge in the new economy and focus on digital transformation from customer experience to their supply chain operations (Covino, 2020).

The emphases for technological improvements that are driven by pandemic are also driven due to the labour shortages (Kress, 2020). Retailers have struggled to find staff to work on the shop floor, hence some retailers like Tesco and Mark and Spencer were seen to change their usual staff serviced tills to fully automated self check-out pay points. The COVID pandemic has not only brought many challenges into grocery retail market, but it also brought a lot of opportunities. Prior to pandemic convenience stores were slow to react to digital changes, but in order for their business to succeed they were seen to promptly leverage their operations (Dannenberg et al. 2020). Many convenience store retailers have put technology initiatives high in their agenda in 2020 in order to grapple with pandemic (Kress, 2020).

2.3.4. Convenience retail digital transformation challenges

Digitization is not only a technological update, but also a comprehensive change to business philosophy, strategy, organization, and operation, which requires overall planning (Tie, 2020). As digitalization is an emerging concept being adapted by many businesses, some organisations lack the adequate understanding, clear strategic goals, practical paths and methodology needed to successfully transit with digitalization. As mentioned by Tie (2020), most companies lack system design and organizational restructuring, clear responsibilities, effective supportive systems and incentives needed to perform successful digital transformation within the organization.

Organisational Elements

Retailers acknowledge that organisational culture plays a fundamental role in the successful implementation and scaling of new technologies. They also define that the success of technological initiatives depend on continually evaluating their organisational values, assumptions, belief, policies, procedures, controls, rewards, rituals, routines, and power structures (Woods et al. 2020). Digital transformation poses additional challenges for retail shops that were established in the market prior to digital age, meaning that companies must now learn to adapt to current changes (Sebastian et al. 2017). This presents a challenge for many of Irish stores, as majority of convenience stores were established before the digital age, meaning that companies need to adapt in order to stay in business (Kress, 2020). Physical store owners need to focus into improving customers shopping experience in order to attract and retain customers in highly competitive grocery retail market. As underlined by Wiefel (2015), letting go of notation that a store is a mechanism to deliver goods from buyer to seller allows to use physical space to create a journey into the brand's universe.

Data

Another challenge is the correct utilisation of gathered data by the companies. Companies gather the data within different systems throughout enterprise without further integration of data into a big structure, which in turn results for decisions to be made by focusing on limited scenarios reducing full value realisation from available data (Kress, 2020; Tie, 2020). Another issue with data is that consumers may not be comfortable to provide or agree for company to use their data due to the lack of trust and safety concerns on data integrity (Seethamraju, 2019; PWC, 2018). In convenience retail issue related to data is sometimes is in the lack of actual data due to limited use of tools that collect the information from customer or unavailability of analytical tools at their disposal to understand customer movement at the level needed to deliver a tailored, personal shopping experience (Wiefel, 2015). For instance, 84% of retailers reported that a lack of available data experts makes it difficult to fulfil their organisation's potential in relation to data usage (Woods et al. 2020).

Technology

As each business is unique in its offering, the available technologies on the market may not meet the specific needs of the organisation, prompting for costly solutions to be custom built, which can be a deciding factor on how far the company can implement digital transformation. In fact, 61.70% of Irish retailers identified cost to be one of the biggest barriers to investing in the technology (Woods et al. 2020). Another concern with technological advancements is underlined by Yusif et al (2016), whose research showed that effective use of technologies by customer can be jeopardised by age specific barriers. Also as mentioned by IBM's VP, other challenges from a technology perspective include physical store limitations, the layout of the store, deployment of staff within the store and movement of inventory (Kress, 2020). Organisations may also not have necessary Information Technology (IT) expertise, lack of internal resources, aging software and budgeting issues, which may prevent technological improvements within their stores. In fact, 30% of retailers identified a lack of talent as a key barrier preventing them from investing in new technologies (Woods et al. 2020).

Change Resistance

Lorente-Martinez et al. (2020) have established in their research that person's attitude towards the technology is the strongest predictor of intention to adapt the technology. In order for digitalization to successfully take place, convenience store managers must understand the importance, impact and benefits that come from this change, otherwise their resistance to change will see their business to deteriorate. The example of such can be seen from the fact that almost a third of Irish SMEs do not have a website and 60% of them do not promote their business online in any way, despite the fact that 63% of Irish consumers consider business 'outdated' if it does not have a website (Irish Tech News, 2019). Nearly a third (28%) of Irish SMEs says that a lack of time is a major barrier to doing more online. Saha (2019) also defines that one of the main implications is for retailers is to adapt and build new business models that take digitization challenges and opportunities into account as the transition will affect retail skills, the need to improve the digital literacy process and theme of the workforce.

2.4. Change management in organisation

Although digital transformation is enabled by technology, its success is about taking on enterprise-wide change to evolve an organization's business and operating models, as well as the way its people work – across the front, middle and back offices (KPMG, 2017). Organizational change can be viewed as an adoption of a new idea or behaviour or a way in which an organization altered its existing structure to increase effectiveness or achieve set objectives (Sengupta et al. 2006). Change management is a process of continually renewing an organization's direction, structure, and capabilities to serve the ever-changing needs of external and internal customers (Moran et al. 2001). As mentioned by Alas et al. (2006) organization needs to modify itself in order to ensure stability and predictability, either by restructuring itself to reduce the variation of possibilities and/or by focusing on necessary actions that will lead to change.

Two major factors that influence change in organisational settings include organisational culture and structure (Smith et al. 2014). Organisational culture is about values, beliefs and norms that drive actions of enterprise (IIBA, 2015). In order for change to be successfully implemented, culture within the organisation must be aligned with new goals. Organisational structure on another hand is about roles, responsibilities, working relationships and reporting structures within the organisation (IIBA, 2015). The hierarchical structure of organisation can make the change more difficult due to the fact that managers at different levels may want to have 'their say on it' (Smith et al. 2014).

Changes within organisation can come from 'top' of organisational hierarchy, such as senior management and then be implemented within the organisation. The difficulty with top-down changes is in the ability to gain a 'buy-in' and support for the change throughout the enterprise (IIBA, 2015). Changes can also be initiated from the 'bottom' level, although they can get lost before reaching the top level within the organisation, where higher management can support and empower the change (Heyden et al. 2017). Changes can also come from external drivers such as customer demands, competition and technological advancements (IIBA, 2015).

As mentioned by Beer et al. (2000) in order to improve the odds of success and to reduce the human carnage, it is imperative that leaders understand the nature and process of corporate change. Yukl (2012) highlights that leading the change is one of the most important and difficult leadership responsibilities and effective leadership is needed to revitalize an organization and facilitate adaptation to a changing environment. In order to facilitate changes within organisation, leaders within it must act as change agents by managing complexity, uncertainty and ambiguity and by demonstrating courage. For employees to view the change as positive, they need leaders who can drive this by demonstrating courage, articulating the values that promote change and adaptability and who have a vision (Yukl, 2012). Organisational change sometimes occurs as a planned change, which is a deliberate attempt of change within organisation; and sometimes changes can come unforeseen, such as the COVID pandemic. Hence a good leader must be able to handle either change well to ensure followers will follow by example (Yukl, 2012).

2.4.1. Change management models

There are a number of models exists that can be used for managing a process of change within the organisation. For instance, Kurt Lewin identified a three stage model that shows how collective mindsets are broken down to enable the change (Smith et al. 2014). Lewin's model decomposes change process into Unfreezing, Change and Refreezing states. During Unfreezing, the existing habits and mindsets are broken down. In order to successfully 'unfreeze', a person or organisation must be able to clearly define the current situation or environment, create a vision of desired end state and identify forces that will help to drive the change. During Change state of Lewin's model, plan to implement the change is carried out. After change is implemented, the new work practices become new work habits and leaders must ensure that employees do not go back to the 'old way' of doing things (Smith et al. 2014).

In 1995 Kotter identified an eight-stage model, which offers a roadmap for undertaking major organisational change (Kotter, 2012). Similarly, Kotter's model defines steps that are needed in order to create a climate within organisation for adopting the change, to enable organisation to implement intended change and finally the steps needed to sustain the change in the organisation. Main focus in Kotter's model is on the role of effective leadership which aids to successful change implementation (Smith et al. 2014).

Figure 3: Kotter's Change Model
(Source: www.dr-glennhole.org/how-we-used-kotters-eight-step-model-for-change-and-succeed-within-a-turnaround-case-of-a-nordic-bpo-suppliers/)

Another example of model that can be used for handling organisational change was introduced by McKinsey. This model consists of seven elements and has a holistic approach that combines both – the ingredients of organisational theory as well as aspects associated with organisational culture and behaviour (Grant, 2008). The approach proposed by McKinsey allows for direct comparison between envisioned and existing state of affairs, allowing managers and leaders to understand where the difference lies and to work out how to smooth the transaction.

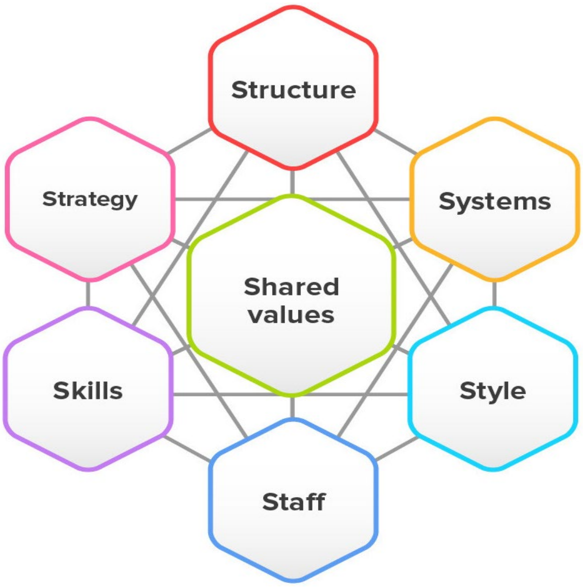

Figure 4: McKinsey's Change Model
(Source: www.calltheone.com/en/consultants/7s-model)

2.4.2. Resistance to change

Changing the way things are done within organisation, whether implementing new technology or redesigning business processes may result it total failure if organisation is resistant to that change. Resistance to change is natural reaction by people who want to protect their self-interests and sense of self determination (Yukl, 2012). As mentioned by Smith et al. (2014) resistance to change can take many forms. Objections to proposed change may be very vocal and explicit or may be expressed in silent truculence and dissent. Symptoms may range from reluctance and underperformance, through to industrial conflict or even sabotage. Connor (1995) defined the most common reasons of why people resist change, which include:

- **Lack of Trust**. Lack of trust can be one of the main sources of resistance. Even without an obvious threat, a change may be resisted if people imagine hidden implications.
- **Belief that change is not necessary**. This usually is the case if 'usual way' of doing things is viewed successful.

- **Belief that the change is not feasible**. Proposed change may be seen as not feasible and that it is unlikely to succeed.
- **Economical threats**. Threats such as loss of income or job security, especially from the changes that involves replacing people with technology or improving processes to make them more efficient, can see employees to be discourage in change participation.
- **Relative high cost.** If costs of implementing the change are assumed to be greater than benefits that will be realised by implementing the change.
- **Fear of Personal Failure.** People who lack self-confidence or relevant knowledge may be threatened by proposed change.
- **Loss of status and power.** Changes within organisations may result in shift of power and status of individuals or working units.
- **Threat to values and ideals.** Change that appears to be inconsistent with values and ideals will be resisted.
- **Resentment of interference.** Some people resist change because they do not want to be controlled by others.

Rather for organisation to view resistance as just another obstacle to concur, it is helpful to view it as energy that can be redirected to improve the change (Yukl, 2012).

It is evident that many factors present both opportunities and barriers to digitalization. Resistance to change can be based on variety of underlying reasons. The literature review suggests that convenience retail has been slow with uptake of digitalization in their businesses despite benefits it can bring, as well as growing expectations of consumers. With increasing pressures from external drivers such as the COVID pandemic, competitors, technological advancements and staff shortages it seems inevitable that convenience retail can survive without substantially progressing with digital transformation. Changes introduced by digitisation may not only transform retailing in several ways, but also have consequences for the role of retailers in society. Properly equipped to meet customer demand SMEs can play a major role in reigniting Ireland's post pandemic economy. And while an integrated, omni-channel business model must become an elevated priority in order to offset the threat of a leak in spend to international businesses; further efforts will have to be made to bridge the digital divide (IE Domain Registry, 2020).

3. Research aim and objectives

The problems reviewed in this Dissertation were based on existing literature on digital transformation, change management as well as digitalization in retail industry. The main aim of the research is to establish how Irish convenience stores are affected by increased digitalization within the retail. As mentioned by Krasyuk et al. (2020) a modern stage of economic and social development is characterized by the rapidly growing importance of the latest information and technologies. Businesses must seek ways to adapt digital change in order to stay competitive and retain their place in the market. Although convenience retail digitalization started to happen many years ago, the progress has been relatively slow prior to the pandemic. This aims current research to investigate how Irish convenience grocery stores digitalize customer experience in order to stay in line with current growing expectations of shoppers as well as the changes grocery retail market is experiencing at present due to the COVID pandemic. The research aimed to measure effects of digitalization on the physical shops, business overall and to define how digitalization is perceived within convenience stores in Ireland. To reach the aim set for the Dissertation, it will answer the following questions:

1. **How is digitalization perceived by convenience stores in Ireland?**

In order for digital transformation to take place and be successful, it is important for organisation to be ready to adapt the change in first place. IIBA (2015) defines that in order to successfully adapt any change, organisation must be ready to accept and sustain it in the future while maintaining current state operations. To identify organisational readiness it is important to establish how stakeholders perceive current state, if they view it as sufficient and whether they anticipate that changes are needed. As Irish retailers were seen to be on a slower pace in digital adaptation than countries like US and Europe, it is important to determine their perception of importance of imbedding digitalization into their physical stores. It was also crucial to understand the reasons behind why convenience market was lagging; hence identification of reasons behind resistance to change was an important element for this research.

2. How is digitalization implemented in convenience stores in Ireland?

It is important for businesses to align both online and physical store environments to provide seamless service to the customer. As convenience retail stores rely on people visiting physical stores and lack 'online' shopping facilities, they require to find the ways to balance technology usage in order to enclose the gap of lack of data from e-commerce usage as well as to find ways of how to engage customers with their business. Hence it was vital to establish how Irish convenience stores use technological advancements to improve levels of shopping experience and add value to their offerings. It was important to establish and benchmark current convenience retail practices to other Irish retail businesses to define how it compares to general retail practices and customer expectations in Irish market. Also as part of the current global environment, it was important to define if the progress to digital transformation was impacted in light with the COVID pandemic and regulatory measures that came with it.

3. What is the future of digitalization in Irish convenience retail sector?

Increased use of technologies defines current global markets and seen as an important component by technological era consumers, it is important for Irish businesses to be properly equipped in order to meet both market and customer demands. SMEs can play a major role in reigniting Ireland's post pandemic economy, hence it was important to identify what the future holds for Irish convenience retailers in terms to progression with digitalization to meet those growing needs. As readiness of businesses to promptly integrate new technological aspects can serve as an indicator for readiness to adapt changes.

4. Methodology

Research can be identified as something that people undertake to find out things in systematic way, thereby increasing their knowledge (Saunders et al. 2016). Organisation of this research was based on Saunders et al. (2016) research model that represents six stages involved in implementation of the research, which include research philosophy, approaches, strategies, time horizons, techniques and procedures. This model gives a more detailed description of the stages of a research process and provides an effective progression through which a research methodology can be designed (Bryman, 2012). The usage of this model ensured that logical structure for the appropriate strategies that were used to address questions set to be answered by this research. This section reviews different philosophies, approaches and methodologies that can be utilised to conduct the research, as well as the reasons behind selection of particular ones for conducting this Dissertation. The instrument of data collection as well as how participant sample was selected and recruited is also discussed alongside the risks and limitations that were identified in conducting this research.

4.1. Research philosophy

According to Saunders et al. (2016) research philosophy can be defined as system of beliefs and assumptions about the knowledge development. There exist two major philosophies, which include Positivism and Interpretivism. Interpretivism is built on the belief that life is subjective and constructed by humans in their role as a social actor (Saunders et al. 2012). Positivism is built on the belief that reality is external, objective and built upon observations developed with certainty (Bryman et al. 2015). Quinlan (2011) highlights that Interpretive philosophy is associated with qualitative methods, while Positivism philosophy is associated with quantitative methods. Saunders et al. (2016) indicate that as organisations are complex entities that operate within specific context, Interpretivism philosophy is most effective as it allows interpreting the experiences and perspective of individuals, as well as the meaning created by these individuals. As the aim of this research involves understanding people's perceptions, in-depth assessment of words, behaviours and meanings, it was found that Interpretivism is the most appropriate philosophy.

4.2. Research approach

There exist two categories of approaches that can be utilised for implementing the research – Inductive and Deductive. With Deductive approach researcher, on the basis of what is known about a particular domain and of theoretical considerations in relation to that domain, deduces a hypothesis that must then be subjected to empirical scrutiny (Bryman et al. 2018). While an Inductive approach is intended to allow meanings to emerge from collected data that in order to identify useful patterns (Saunders et al. 2016). Inductive approach focused on gaining an understanding of the research phenomenon within its context; hence it adopts a more flexible structure to investigation (Ragab et al. 2017). Deductive approach on another hand follows a structured methodology. As purpose of this research is to allow for meanings to emerge from collected data in order to understand the phenomena, an Inductive approach was considered to be more appropriate.

4.3. Research methodology

Research methods include techniques that are used for conduction of research including data collection and analysis tools (Kothari, 2004). As defined by Ragab et al. (2017) research methods are generally categorised as having either a quantitative or qualitative nature. Quantitative method explores phenomena through the collection of quantifiable data in numerical form and applies mathematical models and statistical techniques for data analysis (Creswell, 2002). Qualitative research depends on words and meanings rather than numbers, and can be generally described as research the findings of which are not produced by means of quantification (Strauss et al. 1990). Due to the disadvantage of quantitative research design of inability to uncover underlying meanings of social phenomena, particularly when depth is required in studies of humanistic variables such as sociological and physiological factors (Ragab et al. 2017), this method was not appropriate for this research. Information that was required for this research was quite detailed in nature, meaning it was drawn from words and images with emphasis on exploring and understanding, hence qualitative method was utilised (Saunders et al. 2016; Creswell, 2014). Qualitative method was also chosen for the research as it is dynamic and flexible, and allows asking additional questions and clarifying any queries the researcher had, which would not have been possible by using quantitative approach.

4.3.1. Interviews

The qualitative study was implemented via semi-structured interviews. Semi-structured interviews were based on predetermined list of themes in order to guide the conduct of each interview (Saunders, 2019). Interviews allowed for the experts in convenience retail market to share their views, knowledge and perspectives on digitalization within the industry. It also allowed gaining an understanding of digitalisation in Irish convenience retail sector from Buying Group perspective and the means by which Buying Groups influence digital transformation within the sector. As noted from the literature review, that previous research in the field also used qualitative methods in their primary research, often with semi-structured interviews as means of data collection (Hagberg et al. 2017; Nojd et al. 2020; Rybaczewska et al. 2020).

Open ended questions were used to carry out the interviews, as they allow freedom of expression in conveying views and exploration of the research area, although they carry a risk of misinterpretation of information (Adams, 2014). These types of questions allowed author to go off the topic and to probe new ideas based on the course of conversation. Convenience store participants' interview questions were focused on digitalisation within their own businesses, while Buying Group interview questions where focused on overall Irish convenience retail scene in terms of digitalisation. Interviewing these groups of participants allowed gaining a complete and integrated overview of convenience sector in Ireland. Predefined set of questions for the interviews were based on secondary research and allowed for a dialogue about current practices, recent advancements and influences that affect store operation and level of service (Appendices A and B). Although questions used were an open-ended style, the same questions were asked to different participants in order to ensure that comparison of answers is possible to be made.

To ensure correctness and suitability of questions content, a pilot interview was carried out. This ensured that questions allowed eliciting appropriate responses or relevant information needed to obtain necessary data to answer the questions that were set in this research (Malmqvist, 2019). As interviews are time consuming activity, the focus was to carry out in-depth interviews with smaller amount participants. Due to current circumstances with the COVID Pandemic, interviews were carried out both in person and over the phone. All of the interviews were recorded and transcripts created and verified by author for inconsistencies or omissions.

4.4. Recruitment and sampling

As Irish convenience retail market consists of four major Buying Groups and over 1700 retail convenience stores (Molloy, 2018), it would have been not possible in timeframe given to complete this research to collect in depth information from all participants, the sampling technique was utilised. Sampling refers to the study of a small group of cases that represent the larger population and is used for the research because resource constraints often make it unfeasible for the researcher to collect data from the entire population (Ragab et al. 2017; Saunders et al. 2016).

For this research one representative from Convenience Retail Buying Group was selected in order to understand how Buying Group perceives and enables digitalization in Irish retail convenience market and identify how it supports convenience retail owners in their journey to digital transformation. Also six convenience retail store owners or managers were selected to understand their perspectives on the topic at hand. As stated by Bryman et.al (2011), selecting a sample of participants who are likely to be able to add value to the topic and can contribute positively to the research is an important issue in terms of sampling in qualitative research. Participants that were selected for sampling had an extensive experience within convenience retail sector, with all of participants being involved in the industry for at least 8 past years. Also, as it was necessary to understand issues that come from top level of organisations, participants were selected on basis of control and decision making power within the organisations. This prompted store owners or managers to be selected for this research. In total, two convenience store owners and four convenience store managers have been selected. As convenience retail is dominated by male gender, only one of participating store managers was a female, with rest of participants being male. Participating convenience stores were located throughout Ireland, both in rural as well as central locations. This helped to ensure an even distribution of experiences in order to represent overall Irish population sample.

The author had connections to Irish convenience retail through the personal networks, which in turn allowed for prompt organisation of participants for the research. Participants were approached via the phone in order to explain the process, what is required of them, to answer any questions, gain consensus and buy-in for participation in the research.

4.5. Thematic analysis

Once data was collected via semi-structured interviews, transcribed and verified for any omissions, the analysis took place. Thematic analysis was used for this Dissertation, which allowed identifying, analyzing and reporting useful themes and patterns in collected data and summarising those (Braun et al. 2006). One of the advantages of thematic analysis is that it presents a useful framework when the researcher is unaware of the patterns within the data set. It also was chosen for its flexibility, as it is more suitable for explorative study of this nature and for its relative ease to adopt (Maguire et al. 2017; Robson, 2011).

Thematic Analysis can be implemented by using two different approaches. One approach is to develop the codes based on literature review. With this approach however, Braun et al. (2006) mentions that in the absence of a universally accepted method to data coding, using themes that are pre□determined can influence the researcher’s assessment of the data and as a result may fail to discover or realise some valuable insights as part of the analysis. Hence author’s focus was to examine the sentences and expressions from the participant’s replies in order to identify significant experiences and statements as well as to identify any cohesive responses across the interviews (Creswell, 2007). The researcher had closely examined the data and generated an analysis of current practices and their effectiveness. The progress and advancements from identified practices by convenience stores were compared to practices identified by secondary research in order to establish whether recent developments in the market have solved previously identified issues.

To perform the analysis, the transcribed interviews were examined so that the expressions and sentences from the participants' responses could be analysed to identify important statements and experiences and to identify and understand the nuances in the language and commonalities across interviews (Creswell, 2007). The key responses helped in creating themes by utilising Microsoft Excel to map interview questions against key response and link them to the relevant theme as per Creswell (2007).

4.6. Ethical considerations

There are a number of ethical components that were considered for the research. The main key ethical aspect within the research was not to endanger participants, and to help with this an informed consent was necessary (Adams, 2014). With this in mind, each of interviews was recorded with a permission of interviewee (as per Research Consent Form in Appendix D) and then the transcripts of interviews created. Prior to interviews, all participants were provided with information regarding to interview and what was expected from them, as per Interview Sheet (Appendix C). Participation was on full voluntary basis and participants wad a right to withdraw from participation at any time. Participants had a right to request a copy of data relating to them at any time and were notified of the fact that their personal details as well as the company name is made anonymous for the research in order to ensure the integrity. Recordings and transcripts were kept as password protected and safely stored on author's computer at their home, with very limited access by third parties. All of the data was only kept for needed period of time and safely disposed thereafter as per Adams (2014).

4.7. Risks and limitations

As with any other initiatives, the proposed research had its own risks and limitations. First of all, due to the COVID pandemic situation, it was not possible to conduct majority of interviews face-to-face. In doing this the author have miss out on personal interactions with participants and may have got less personal insights. To reduce this, author had prepared the participants for the interview by sending out information sheet and interview questions in advance, so that the participants knew what was expected of them. Due to pandemic restrictions and other circumstances it was a risk that some of the participants may refuse to participate. To overcome this, the author ensured a buy-in from the interviewees in early stages of research (IIBA, 2015). As interview requires participation, some of interviewees may have been resistant to answer the questions during interview due to things like resistance to talk about mistakes or be resistant to participate due to time constraints or lack of interest. In order to deal with the risks associated with carrying out the propped research, a schedule contingency reserve time was allocated within overall schedule for this research (PMI, 2017).

5. Findings

Primary research focused on collecting information on the current perceptions of digitalization within the convenience retail sector in Ireland. Interviewing participants that are directly involved in the sector allowed identifying what exactly drives the progression of digitalization in their stores and what are the main challenges that prevent convenience retailers to progress with digital transformation. Participants included four managers and two convenience store owners who have been involved in convenience retail for a number of years and who have expertise and decision making power in their organisations. Their stores were located throughout Ireland, including both central and rural locations. In addition to that, a representative from convenience Buying Group was also included in primary research.

As Buying Groups have shown to influence the digitalization progress within the market, it was important to get their perspective on the problem at hand. Although slightly different interview questions were used for convenience retail representatives and Buying Group, the results from both participants groups were incorporated into overall findings in order to define an integrated picture of Irish convenience retail market.

Primary research helped to establish if digitalisation is currently viewed as an important element within convenience retail. It also helped to establish the means by which convenience businesses digitalize at present. Obstacles and barrier that prevented digitalization were identified in order to establish whether resistance to change plays a major factor in progression with digital transformation. Interview findings aided to understand whether the COVID pandemic had an effect on convenience retailers in terms of adapting new technologies to deal with changing regulatory and customer demands driven by the pandemic. And finally, findings allowed defining how digitalization will be implemented and which direction it will progress within Irish convenience retail stores in the future. The research further reviews the findings from semi-structured interviews based on the elements discussed above, placing them into a thematic perspective.

5.1. Importance of digitalization in convenience retail

All of the participants considered digitalization as an important aspect in their businesses. For some of interviewees, digitalization in store was linked to the ability to produce greater convenience for their customers, while for others it was about automating their services. All of the participants noted that they presently see digitalization as being of big importance and that it will have an even bigger presence in the future. One of retail store owners noted that:

'Digitalization is important, because it is the way forward. It is the way the next generation of consumers shop. Digitalization definitely is going to happen. It is already here. And it is not going to go away; it is only going to get stronger'.

This belief was shared among all of the interviewed participants. Another store owner concluded that '*with technologies and equipment - most parts of our lives are digitalized'*, which connects to what was identified that digitalization is in our everyday life. It was also stated by a number of interviewees that '*it is very important for retail convenience stores to have the latest technology to keep up with the trends of the business',* meaning that businesses must constantly invest in the newer technologies on the market in order to remain on trend, be current and be competitive. This indicates that digitalization is perceived as an ongoing element, which requires an ongoing attention.

Convenience retailers agreed that digitalization brings many benefits and opportunities for their physical stores. Having technologies ensures that stores not only look modern, but also as mentioned by one participant it makes the store '*more live and interactive'*. It was evident that digitalization is about making things easier. All of participants have indicated that they view customers' convenience as one of the main drivers behind digitalization within the stores, with one of the store managers stating that '*technology increases convenience levels by allowing card payments or click and collect orders'*. Things such as speed of service becomes of high importance to the consumers, especially to busy office workers, hence the focus is placed on the consumers journeys and how they were supported by technology within the physical stores. As stated by one convenience retail manager:

'Things such as card payments make a big difference for the queuing, as waiting times are reduced dramatically. Many customers are not willing to wait in queue because they are all busy'.

Retailers showed an understanding that using digitalization within their stores is very important element for their customers. As the consumer is a primary focus for convenience businesses, the need to satisfy customer requirements and expectations played an important role for digitalization within the store. Interviewees have indicated that they must be progressive as their consumers expect stores to be in hand with times, with one of store owners indicating that:

'We move with the times, because that is what the consumer wants, it is not about the retailer… So it is important to adapt your business, and the successful retailers are innovative, and they are progressive, and they move on'.

Another aspect that digitalization supports within stores is regulatory and legal compliance on elements such as pricing display, by linking Shelf Edge Label (SEL) to correct pricing at the till, the full compliance is attained. Having technology like SEL allows for greater accuracy, which in turn ensures greater confidence for consumers as well as increased brand loyalty. Digitalization allows convenience stores to get the message across to their customers and serves as a marketing tool allowing for a greater collaboration with consumers. For instance, the use of electronic screens allows for a greater advertisement and aids to drive the sales up, as stated by one store manager:

'My store has digital screens ... which we use for promotions within the Deli and the shop floor, they change every three weeks with promotion cycle that we have in store. We also use the screens for the COVID messaging'.

Having this kind of technologies allows stores to be innovative and creative, allowing businesses to differentiate themselves in highly competitive retail market. Digitalization also empowers convenience retailers to leverage their offering in order to improve their business. It allows retailers to implement innovative solutions, which in turn makes company's processes more effective and efficient. As noted by one store owner:

‘Having digitalization allows manipulating what you are trying to sell better, instantly with digitalization. Let’s see, for argument's sake, on your fresh food counter you have your 20 products left, and your volume narrowed to sell them. With digitalization you can instantly just reduce the price and display it to the customer’.

On top of listed benefits and opportunities, digitalization also allows solving current issues related to things such as staff shortages as ‘*technologies such as self service reduce need for staff, because it is hard to get the employees now’.* Automating some of the services in the stores also means that businesses can save money by replacing the human labour with technologies. And finally, digitalization opens the opportunities for businesses to enter the new markets, for instance online orders and deliveries, which aids to expand the market share as well as customer base.

5.2. Digitalization in Irish convenience retail

All of participated convenience retailers had some form of digitalization implemented within their stores. Things such as electronic tills, card payments systems and Automated Teller Machines (ATMs) were widely used in the stores for a last number of years. As indicated by one store manager, at present ‘*credit card systems empowering our shops. Obviously, as we move on to contactless payments, everyone is paying with cards or Revolut cards’*. Some of participating stores were more progressive with things such as digital screens, self checkout counters and digital shelf labels.

When comparing convenience retail to other retail groups in Irish market, participants’ opinions were divided. While some could compare the level of digitalization within convenience retail to be similar to other retail businesses with one of the store owners stating:

‘*I think it is up there with the big retail groups, and there is not much difference between a convenience store and larger stores, because the convenience stores now … are moving with [similar]that kind of technology’.*

Others thought that convenience retail was behind in comparison to other retailers, who had progressed at much faster pace with digitalization, with one store manager stating:

'I would say progression is slower. It is because many retailers rely on online sales… majority of superstores are more progressive ... they use self service checkouts. This [self service checkouts technology] is only a new thing coming in'.

Participants underlined that some of digitalization technologies are only starting to emerge in the Irish market, whether they existed and were deployed in other countries around the world for a number of years already. As highlighted by one of the convenience store owners:

'I have seen Self Pay App over four years ago in the UK ... I [have] also seen that about four years ago when I was in Hong Kong… I have seen it in the States, so it is everywhere. It just, we are just not there'.

While all of the participating convenience retailers' focus was placed on digitalising within the physical store, the aspects related to online presence had been given much less attention. Integration between online and physical worlds was seen to be limited. Use of online channels was not seen as major part of overall digitalization strategy. Most of utilised social media platforms were limited to one or two. One store manager stated that '*we are not using Instagram at the moment; we only use Facebook'* and another that '*we do not use social media ... we only use Google for providing store information and images'.* Although the use of social media to collaborate with the customers was not on everyone's agenda, it was established that businesses are slowly moving to adapt this communication channel into their business strategies. As stated by one store manager:

'I think retailers [are] getting better with social media. The negatives of the social media are putting them off using this channel. But they are getting stronger; you can see it on Facebook and Instagram, that there are a lot more retailer users, especially around the offers and deals'.

Digitalization within Irish convenience retail was also seen to be driven by Buying Groups who provide technologies, equipment and support to convenience retailers in terms of digitalization. Each Buying Groups *'has a technology section and IT section that are looking at new trends and new ways to bring to the businesses'*. Buying Groups influence digital transformation in the market through the terms of franchise contract that enforces the adaptation of certain digital aspects. As underlined by Buying Group representative:

'In the newer stores and in stores that have been revamped in the last probably year, two years, all those stores now would have, for example, digital SEL as a part of the upgrade package'.

Buying Groups serve as innovators of technological advancements by brining new technologies into the Irish market through partnerships with different technological companies, meaning that they serve as driver of digital transformation within Irish convenience market.

5.3. Digitalization obstacles

To understand the rationale behind the reasons why progression with digitalization has been slow among Irish convenience retail, participants were asked to identify the main reasons and obstacles for such. A number of factors have been underlined such as the lack of understanding of benefits that digitalization delivers - *'not understanding the benefits to the business and the impact that it could have on stock loss and not embracing change'*. While a number of participants identified simple resistance to change to be an obstacle, with one store owner stating that:

'I think move towards technology, while it is beneficial, it can have some negative effects with some people, and certain people will not like to use new things, as they just don not like change'.

Some people may not like new technologies and may have negative associations with using it. And as need for technological change often comes from 'top' of organisation, the resistance of technological advancements by store owners may lead their stores losing the competitive advantage. In some instances, shop owners simply did not see digitalization as an important element for their business due to the fact that their stores have been able to operate without being highly digitalized, as highlighted by one of store owners *'well, it is like everything else in life, is when you're doing something for so long and it has worked for you. So, the old saying if it is not broke, do not fix it'.*

Other obvious reasons, which were agreed by majority of the participants, included the initial investment, the associated costs and time. Whilst larger convenience stores were able to invest large sums of money into progressing with digital transformation, for some it simply will not be feasible until prices for technologies become much more affordable.

Another cost related aspect that served as a barrier to digitalization, is the inability to quantify the Return on Investment (ROI) associated with digitalization due to the fact the benefits that it brings are intangible in most of cases. As stated by Buying Group representative '*it's not that clear, what your return on investment will be and what perceived savings will be'.* Also, as technological world is not static, with evolving technological advancements some of retailers were left faced with a choice of which technologies to progress with, halting the progress to digital transformation altogether. One store manager noted that:

'There are so many technologies, you do not even know what to choose, which to choose and what is the best. I would rather to see more technologies coming out and then to choose'.

Whilst the progress to digital transformation in many cases was halted due to internal factors within the company, it was also seen that availability of technologies within Ireland to date has remained relatively low. This was due to the fact that majority of multinational technological companies do not see Ireland as huge potential for their sales, due to the country's size and relatively small population, as noted by Buying Group representative *'the population of Greater Manchester is bigger than the population of Ireland'*. Lack of companies in Irish market not only reduced the availability of digital tools and technologies, but lack of competitors in this space drives the prices up, which in turn halts the progression. The Buying Group representative has also indicated whilst new digital era technologies were previously considered for deployment within the sector, at the time the technologies that utilised things such as predictive algorithms were not reliable due to the lack of available data required for accurate predictions.

5.4. The COVID pandemic's effects on digitalization

The biggest change that was seen with the COVID pandemic within convenience retail is the progression with domination of card payments due to the risks associated with cash handling. Many of convenience retailers indicating that card payments will overtake cash in the future in a progress to cashless society, with one retail store owner indicating:

'It has gone probably to 90% credit card … that is not going to change ... I envisage in the next 5 to 10 years, cash will be a thing of the past in our business'.

While for many retailers the COVID pandemic has dramatically influenced the progress with digitalization, a different story was noted within Irish convenience retail sector. Majority of participants have indicated that the COVID pandemic actually made progress to digital transformation much slower. It was seen that some of convenience retailers were struggling during the pandemic due to the lack of business. This was especially noticeable in the stores that heavily relied on tourists and office workers custom, with one store manager stating that '*there are not enough customers for the stores ... retailers, they struggle a lot … there is not much money left for new technologies, because retailers just are struggling to keep open day by day'*.

Having unstable environment made convenience retailers to focus on the survival rather then focusing on other aspects. As explained by one of the stores owner:

'When the COVID stroke … you change your priorities to be about survival … if you have an outlay of 20,000 euros for digitalization, you are going to park that until things come back to normalization, then you are going to use it … but up until then that 20,000 could be used to pay your bills, which are more important'.

Similarly, other participants have indicated that whilst they had plans in place to progress with digital transformation prior to the pandemic, they had to be aborted when the COVID stroke, with one store owner stating that *'I had three shops marked to go live [with self scanning checkouts] last February, February 2020. And we just pulled the plans for self checkouts due to the COVID'.* And whilst it was identified that most of participants have not invested in digital aspects since the COVID pandemic started, for some it have served as trigger to start utilising new technologies, with one store manager highlighting that:

'*I do think having a Facebook page, especially with people sitting at home now, who are on social media a lot more allows to catch the audience more then pre the COVID'.*

5.5. Digitalization future

Irish convenience retailers have indicated that whilst at present digitalization is important; in the future it will become much bigger element for their businesses. With all of the current external factors, pressures and expectations faced by convenience retailers, they all identified that in the future they will focus towards a greater digitalization in order to succeed. One of store owners highlighted that:

'You want a future proof your business, the digitalization is part of that future proofing ... you constantly have to reinvent yourself, reinvest and reinvent your business ... We are opening a new store ... we will emphasize digitalization in our POS and our shelf electronic labels'.

Some participants noted that new technologies are being constantly developed and introduced to the market, which also aids to drive the prices down, meaning that new technologies such as SEL *'would be rolled out across stores within the next couple of years, and it was thought that this was never going to happen because of the cost years ago'*. It was also defined that in near term future the usage of mobile digital applications to carry out and pay for the purchases within the store will become a next step in digital evolution in Irish convenience market.

It is not only the ways by which people prefer shopping is changing, but having the technology in people's daily life also alters the perception of what convenience means for each customer. As mentioned by one of the store managers:

'Some people do not want to talk to other people anymore, they want to come in and scan their card and go. Whether it is time or whether it is the generation of people who do not have the social skills that we have'.

Younger generation heavily rely on technology and as underlined by one participant that is *'much more tech savvy'* with progression to things such as *'Apple Pay, paying with their watch ... consumers do not carry their wallet'.* Growing demands of new era consumers driven by things such as social media where '*any younger customer expects from walking past the likes of Brown Thomas [high luxury retail store] their phone to ping and say, that Gucci shoes are 10% off in Brown Thomas. They expect the analytics to be working'* drives the need of incorporation of new technologies in convenience retail future.

The use of new digital era driven technologies, such as AI and Big Data utilisation whilst wasn't used at present in Irish convenience retail, but as indicated by Buying Group representative, is at the state of being reviewed for future implementation. It was also mentioned that convenience retail future is about '*analytics, analyzing customer flow, customer spend, customer choice, customer data, and harvesting information*'. Another direction associated with new era technologies, as stated by Buying Group representative, was indicated to be a self ordering system that orders stock for the store based on stores sales and consumer shopping behaviours automatically without a need of human interaction.

Seeing new entries in to the convenience retail market by competitors such as Amazon, who are superior in online sales, have triggered the need '*to be well in the game technology wise to combat this potential influx of new players in the game'.* As indicated by Buying Group representative, Ireland is seen to be moving to a cashless and contactless society, and with time '*we will have stores that do not have any staff in them'.* This model was indicated to exist and successfully utilised in progressive countries such a Japan, where convenience stores are re-stocked throughout the day by delivery couriers, making them staff-less. Although this model is '*not driven by* *digitalization, rather lack of space and cost cutting*' in Japan, nonetheless it has proven to be an effective solution to deal with pressures of external demands.

Conducted interviews have indicated that Irish convenience retail is clearly behind other industries and countries. Nonetheless, all of the retailers understood that going forward they must be more progressive towards digitalization, and not only for the convenience of the customer, but because without deploying technologies they may simply will not be able to compete and survive in current technology dominated market.

6. Discussion

This section contextualises the findings with existing literature. Analysis is presented in similar themes as empirical data section so that the analysis can follow the same logic and is easier to follow. The analysis of gathered data helped to identify the current state of convenience retail market in Ireland, establish organisational readiness to accept the change and to identify how current internal as well as external drivers will influence the transition to future state.

6.1. Convenience retail digitalization perception

After reviewing existing literature on topic of digitalization, it emerged that digitalization is an important aspect for convenience retail, but despite that it was evident that some people may resist the digital evolution as they may not perceive it as an important element for their business (Lorente-Martinez et al. 2020). However, after interviews with participants were carried out, it was seen that digitalization is perceived as an important component within Irish convenience retail.

The empirical data showed that digitalization elements are already present within physical convenience stores across the country, although the level of digitalization varied from store to store. Each participant however had digitalization within the store linked to different values. For instance, the ability to produce greater convenience for their customers was a main driver for one retailer, where another retailer perceived digitalization important in order to aid with current issues of employee shortages. Having different perceptions and views with regards to underlying need for digitalization means that the perception will have an affect on how digitalization within the organisation be adapted and managed.

Digitalization serves as enabler for many opportunities, for instance entering new market segments. Findings identify that technology within physical stores allows leveraging business, based on internal as well external drivers, in order to adapt promptly to changing needs of customer, business and marketplace. Similarly to literature research (KPMG, 2017), it was identified that digitalization served as a path to agility, which allows responding promptly to changes within the environment.

Readiness of business to adapt digitalization is heavily influenced by external as well as internal factors. As underlined by IIBA (2015), in order to implement any change within the organisation, the degree of organisational readiness must be taken into account and store owners must understand why digitalization is vital for their business. Interviewed participants seemed to be highly aware of the benefits that digitalization brings for their business, with some viewing it as a big part of their strategy. Empirical data supports literature research on that digitalization plays a very valuable tool to connect markets, meet consumer demand and better serve consumers (Tie, 2020). It was evident from both the primary and secondary research that digital transformation brings opportunities for innovation and scalability within the convenience retail.

It was also evident that convenience retailers base their decisions around the customers' readiness to adapt to change, as highlighted by all of the participants it is the consumers who generate the revenue for the stores. Customers' expectations of innovative, speedy and seamless service serve as a driver for adapting digitalization into the business strategy. And as digitalization tools and technology evolve and improve on continuous basis, new opportunities will continue to arise for businesses to improve their performance on continuous basis alongside that evolution.

6.2. Digitalization in Irish convenience retail

To understand the level of digitalization throughout Irish convenience retail, primary research was used to identify which technologies are currently utilised within the stores. All of the stores had most common technologies in place, such as digital tills, ATMs and card payment systems. As similarly identified by Roy et al. (2017), it was noticeable that digital in-store technologies are becoming a norm in physical stores. Some stores were seen to be more progressive than other, with presence of newer technologies as self checkout counters and digital shelve signs.

Another aspect to technological advancements that was noticeable from empirical data is that technologies that were only emerging in Ireland have been widely deployed in different countries of the world for past number of years. This finding corresponds to literature research by Whelan (2020), and suggests that progress to digital transformation is very much behind the times in Ireland. Although different technologies were predominating convenience stores, next generation technologies, such as Big Data and Artificial Intelligence as discussed in literature (Tie, 2020) were not utilised in any of the stores.

As defined by IIBA (2015), in order to be able to adapt the change, businesses must understand that the change is actually needed in the first place. With this in mind and to further understand the level of digitalization in convenience retail, current practices of convenience retail were benchmarked to other types of retailers. Participants' opinions were divided, which was based comparing their store(s) current practices and the technologies they currently utilise within the store. From the empirical data it can be concluded that whilst level of digitalization in convenience retail stores may have not reached the same levels as some other retail businesses have, but it was certainly moving in the similar direction.

It is interesting to note that different elements of digitalization had different level of importance to convenient store owners. While in-store digitalization was given a high priority, focus on things such as social media and online presence was not seen as priority among the majority of participants. Despite the importance of using social media channels to collaborate with consumers, as highlighted by many researchers (PWC, 2018; Steinhoff et al. 2019; Wiefel, 2015) this channel was ignored by many to be of a big importance. Perhaps, as convenience retail has always relied more on direct interaction with their consumers in a physical space, business owners did not see necessity of using tools such as social media as a direct need either for their business or consumers. It seemed that once the problem was visible in physical store space, such as long queue of consumers, this have triggered a response by business owners. But while online presence is something that was not previously widely deployed by convenience stores, it seemed to be much harder for business owners to understand the importance and benefits behind this channel. And while there are no obvious triggers that would prompt business owners to focus on this element, it remained to be on a lower priority.

Literature highlights significant importance in use of channels such as social media for marketing purposes (PWC, 2018). As highlighted by Hagberg et al. (2017), inability to utilise these channels leads to loss of opportunity for bi-directional communication with customers, loss of powerful digital marketing tool as well the ability to target specific customer segments. And while not like years ago where advertisement and marketing had huge cost implications, this relatively minimal cost, highly influential channel remains poorly utilised among Irish convenience retailers. And despite the fact that most of Irish consumers seek seamless omni-channel experience, elements of this omni-channel are not complete in current environment; hence that seamless overall experience may not be achievable.

6.3. Resistance to change

One of the research aims was to define the reasons behind the slow rate of digital transformation in Irish convenience retail. It was identified that a combination of factors has influenced the progression. While majority consumers were seen to be ready to embrace the change, the resistance in big part came from the store owners. Nonetheless, it is incorrect to say that it was resistance to all of the digitalization; merely it was based on excluding some elements that were deemed to be of a less importance.

As identified in the literature research, change management is a process of continually renewing an organization's direction (Moran et al. 2001). Lack of progress with digitalization indicates that modification of business direction has been insufficient, which in turn prevented further progression. From empirical data it could be seen that convenience retailers were resistant to the change based on most common reasons, as similarly defined by Connor (1995). From not understanding the need for change and benefits the technologies can bring for the business, to lack of knowledge in which technologies to invest, to lack of time or high costs associated with digitalization, to a simple resistance to change or progressing with something new. While resistance to change is a natural thing and comes from different perspectives, it can be seen that different external elements put pressure on businesses to progress, forcing convenience retail owners to accept the change.

Sometimes in order to see the need for change, a specific trigger must happen. Participants have indicated as food business is very dynamic, they are used to react to highly visible triggers very promptly. It was noticed that convenience retailers rely on things such as actions of competitors, which also had a huge influence on the slow progression of digitalization within the market. By benchmarking own digitalization levels to the similar competitors in convenience retail, which are also behind it terms of digitalisation, who in turn also relied on similar benchmarking, it can be said that the whole market was rather lagging.

6.4. Effects of the COVID pandemic on digitalization progress

Despite the reported figures of convenience retail sector spending increase in Ireland in 2020 (Arrowsmith, 2020) in reality the affects of the COVID pandemic were not that positive for some of retail convenience stores. While for the convenience stores that were located within highly populated residential areas, business was performing much better, other retailers were seen to be in financial struggle. Huge number of surrounding alternative shops and not enough customers has forced businesses to cut their costs to deal with lack of sales.

Empirical data has shown that for most of convenience retail owners pandemic have shifted their business strategy and priority to survival mode. It was indicated by a number of participants that they were forced to abandon their plans to progress with digitalization for unforeseen future until the environment and their business stabilise. And although all participants have indicated that COVID has halted the progress to digital transformation, for some it was a trigger to understanding the importance and need to digitalize more in the future.

6.5. Future of digitalization in Irish convenience retail

The future of convenience retail clearly heavily relies on adaptation of digital aspects with futuristic highly digitalized retail convenience stores such as Amazon Fresh starting to emerge (The Guardian, 2021). Empirical data have clearly shown that all participants consider digitalization as a major part of their future. All of convenience retail owners have indicated that they will invest more in digitalization, as all of them understood the importance behind the need to change. Similarly, as existing literature indicates that (Urbach et al. 2019), participants have agreed that businesses must unfold the potential of digital technologies, rethink their business models and transform them in order to survive.

Researchers like Hanninen et al. (2018) mention that people's lives have been predominantly overtaken by mobile devices, and similarly this technology is slowly overtaking the convenience retail space in Ireland. Upcoming rollout of mobile digital application for fully 'contactless' or 'person-less' shopping experience can serve as a step towards integration of online channel into the physical servicescapes. Use of new generation technologies such as AI or Big Data was also lacking among Irish convenience retail sector. But with plans of introducing things such as mobile digital applications will hopefully focus retailers on collection and usage of data about customer shopping behaviours, in turn opening the door to Big Data utilisation. This will also aid improving business efficiently, allowing for greater agility and adaptability to support promptly changing internal and external demands.

While it may be difficult to progress with digital transformation, convenience retail owners do have a support from their Buying Groups, who are seen to invest in Research and Development (R&D) in regards to digitalization aspect and offer different tools and technologies to aid retailers on their path to digital evolution. And that support can be seen to serve as a step towards digitalization for many convenience retailers.

The analysis of the current state and definition of future state of convenience retail in Ireland helped to identify that while the market has fallen dramatically behind, in comparison to global level in terms of digitalization, business owners are aware of the need and importance to digitalize in order to survive in the future. Despite that, current level of importance of different digitalization aspects by business owners creates incomplete omni-channels, which in turn prevents full utilisation of opportunities and benefits, as well as serves as a barrier to seamless integrated service that new generation of customers expects.

7. Conclusions

At present convenience retail is evolving worldwide at very fast rate, driven by rapidly changing external factors such as technological advancements, the COVID pandemic, evolving customer needs and behaviours as well as increasing competition. Retailers must be more agile in their response to changes in order to stay competitive. Organisations must understand the impact of new technologies and how they can utilise them to keep customers engaged and improve their own revenues.

Digitalization affects many different aspects within the organisation, from business strategy to customer convenience. Use of technologies not only helps to improve organisational performance, but also can be used to solve other issues such as lack of personnel or storage facilities. Usage of social media and e-commerce unlocks huge marketing possibilities, which were not widely accessible previously. Despite potential benefits of digital transformation, Irish convenience retail sector was very slow to adopt those technologies. As defined by KPMG (2017), in order to drive digitalization organisations must understand industry specific opportunities that come from digitalization. Lack of utilisation of channels such as online and social media demonstrates that those specific opportunities are missed, meaning retailers remain a step further in aligning physical store with online presence. Similarly, as highlighted by Schallmo et al. (2018), an opportunity to create a greater customer interaction and collaboration, is wasted.

The research has shown that Irish Convenience retailers perceive the need for digitalization progression as important part for their business success. Despite that, it was identified both from researchers and well as empirical data that Irish convenience retailers are lagging in digitalization aspect when comparing to other countries or markets. It was also noted that emphasis of digitalization is focused on physical stores by Irish retailers, as this is the main touch point with consumers. Consumers were identified to be not only the most important element for convenience retail, but were also seen to be one of the main external drivers that influence the need for digitalization.

Digitalisation poses an additional challenge for physical store owners, as now they not only need to compete with rivals, but also need to compete in performance and match the expectations of customers who are used to do their shopping online and gain seamless online experiences. As identified from literature research, driven by current trends of online shopping, Irish consumers are seeking a full omni-channel experience. This clearly poses challenges, as convenience market is limited for e-commerce due to the nature of their business. With this in mind, the usage of online channel, which also plays a big part in creation of omni-channel experience, was found to be ignored or given much less importance by convenience retailers. This was seen to be caused by retailers' reliance on their physical stores as communication channel with their consumers. And while in physical store space some elements have triggered the need to progress with digitalization, no visible trigger existed in regards to 'online' element aspect.

This may not have a great consequence for convenience retail at present, but with competitors such as Amazon, who come from highly technology influenced world of online selling are set to enter brick-and-mortar space in upcoming future, it will be difficult for existing convenience retailers to compete unless they shift their focus to use of greater digitalization channels. Also, utilisation of new era technologies by new competitors means that Irish retailers are set to have a tough competition in upcoming future. Empirical findings showed that those new technologies are not utilised within the convenience retail at present, and are only in initial phases of development in Irish market, despite being utilised by convenience retailers worldwide.

While digitalization in convenience retail has been slowly progressing, with the COVID pandemic situation however, convenience stores were forced to further withhold on the progress with digital transformation due to financial and marketplace stability concerns. This serves as a major concern for stores ability to catch up with level of digitalization driven by current market and global environment. At present all of Irish convenience stores have some form of digitalization within their businesses, but while utilisation of all digitalization channels and elements is not present across the convenience stores in Ireland, it will not be possible to create an intended omni-channel experience for the consumers.

Nonetheless, the use of emerging technologies such as self checkout counters and mobile digital application have seen to make the service in physical stores a step closer to seamless service for the customer.

Further adaptation of technological elements as well as increasing customer demands and pressure from competitors is set to trigger a further need for digitalization, forcing convenience owners to overcome the resistance to change, in order to survive in current technology driven era. Hopefully, past pandemic, retailers will be prompt in adopting digitalization element, as properly equipped to meet customer demand retailers can play a major role in reigniting Ireland's post pandemic economy.

7.1. Research implications

First of all, this Dissertation has contributed to extending the limited literature existed to date on aspect of digitalization in convenience retail. As existing literature more focused on e-commerce aspect of digitalization, it was important to understand how physical store environment and nature of business affects digitalization related aspects. The existing literature more emphasised around other industries, hence this research was able to contribute to creating a perspective regarding to convenience retail industry.

Second, this research can serve as a trigger for convenience retail business owners, which may help them to emphasise on importance of addressing digitalization gaps within their current settings. It can aid them to get a better view on digitalization aspect and provide a ground for comparing their practices to the rest of the market. This research can be also viewed beneficial, as it can be concluded that Irish convenience retail is as the initial phases to digital transformation, which will continue to progress at a greater pace due to promptly changing external factors and demands. So this research can serve as a benchmark for measuring the progress with respect to digitalization in the future in Irish convenience retail market.

7.2. Limitations

A number of limitations to this research have been identified. First of all, the amount of time available to conduct the research was limited. A study was implemented in rather short period of time, hence creating limitations to cover a greater sample of experts and knowledge within the given industry. Unfortunately some of invited participants have declined to participate in the study due to other commitments, which also posed a limitation for the research. As time was restricted and it would be difficult for busy retailers to find time for long interview, this created a limitation of the number of questions that could be covered by interview in a shorter period of time. This in turn had reduced the depth of empirical data. Also, as gathered data was limited to Irish market, the effects of insights may vary within different country or market.

7.3. Future research

This research was able to produce an overview of digitalization within Irish convenience market. While conducting the research a number of elements were identified, which might be of interest for future investigation. As digitalization in convenience retail is not developed and is in evolving phase, a future research will be of benefit to identify further developments with regards to digitalization over time. Another aspect that will be interesting for future research is utilisation of Big Data and AI within convenience retail. At present, this is only an emerging concept for the particular market, so it would be of interest to establish the opportunities which those technologies can bring for convenience retail businesses. Also, as convenience retail seen much lower utilisation of online and social media channels, it would be of benefit to carry out research on impact of using the channels and benefits they bring to convenience retailers who utilise these tools as part of their business strategy. This can aid to define an impact of utilising full omni-channel in convenience retail. Lastly, as consumers are the end users of digitalization elements, it would be of a great significance to conduct similar research but from consumer point of view. This would help to identify consumer insights on the need for utilising particular digitalization channels and tools.

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Appendix A – Questionnaire Buying Group

1. Do you perceive digitalization as an important element for convenience stores?
2. Compared to general retail as well as food retail, how has convenience retail progressed in terms of digitalization?
3. What are main drivers for convenience stores owners to digitalize?
4. Does having a greater digitalization within the store affect sales levels?
5. What are the main reasons/obstacles for not progressing with digitalization?
6. What technology, support or products do you offer to retail stores to enable digitalization?
7. How has the COVID pandemic affected progress of digitalization in convenience stores?
    - Does uptake of digital tools changed since the pandemic started?
8. Where do you think digitalization in convenience retail is heading in Ireland?

Appendix B – Questionnaire Convenience Stores

1. Do you perceive digitalization as important element for you store(s)?
2. Compared to general retail as well as food retail, how has convenience retail progressed in terms of digitalization?
3. What are main drivers for convenience stores to digitalize?
4. Does having a greater digitalization within the store affect sales levels?
5. What are the main reasons/obstacles for not progressing with digitalization?
6. Are digitalization tools, software, products are widely available?
   - Support available if you would like to digitalize?
7. Which of the technologies you use to enable digitalization within the store?
   - Website, Social Media?
   - AI, Big Data, sales predictions/analysis?
8. Do you think the COVID affected progress of digitalization in convenience stores?
   - Have you invested in digitalization since the pandemic started?
9. Are you planning to digitalize more in upcoming future?

Appendix C – Information Sheet

Information Sheet for Research Participants

Research Topic

Digitalization of convenience retail in Ireland

How Irish convenience retail companies adapt to changing market demands with aid of digital transformation.

Researcher: Taya Polyaninova
Institution: National College of Ireland

Purpose. The research is undertaken for a Masters in Business Administration dissertation at the National College of Ireland. The objective of the research is to establish whether digitalization is perceived as an important component within Irish Convenience Retail and how convenience stores embed digitalization in their practices.

Why you have been invited. Participants for research have been chosen based on their knowledge and expertise in the area of convenience retail in the Irish Market, or due to their involvement in that particular market segment.

Participation. Participation in the research is voluntary, and participants are free to withdraw at any given time up until the point of publication of the thesis. Participation involves an interview which will last up to an hour. While an in-person interview would be desirable, this can be conducted as a phone or video call, based on your preference.

Confidentiality. All of the information collected during the interview will be kept confidential and all identifying elements such as names of people, businesses and organisations will be anonymised.

Data Storage. All collected data will be transcribed and stored on a password protected laptop which will be stored in a secure location. Collected data will only be stored for a period of time required completing the dissertation research, and will be safely disposed straight after.

Contact Information. If you have any other questions, please do not hesitate to contact me at XXX. You may also contact my supervisor Dr. Mira Dobutowitsch (XXX) if you have further questions or concerns.

Thank you for taking time reading this information sheet.

If you are happy to participate in the research, please complete and sign attached Research Participants Consent Form and return it back to the researcher.

Appendix D – Consent Form

Research Consent Form

I confirm that I have read and understood the information provided about the study and I have been given the opportunity to ask questions. By signing below, I confirm that:

- I am over 18 years of age
- I agree that my interview will be audio recorded
- I am aware that I am free to withdraw at any point without giving a reason
- I understand that information that I provide will be treated in confidence by the researcher and that my and my organisation's identity will be protected in the publications of the research findings, and that data will be collected and processed in accordance with General Data Protection Regulation 2016.

Name:

Signature:

Date:

If you have a concern about any aspect of your participation or any other queries, please raise this with researcher.

Researcher: Taya Polyaninova