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Spanish SMEs’ digitalization enablers: E-Receipt applications to the offline retail market

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ABSTRACT

The brick-and-mortar retail SMEs (Small and Medium Enterprises) market is confronted with unprecedented challenges: digitization procurement in a company not prepared for a digitalized business model, and the actual digitalization process of the business model, which not only changes the business rules but disrupts them with new possibilities.

Despite Industry 4.0 transforming manufacturing in terms of the way of producing and distributing goods by means of process digitization, the offline retail SMEs market is struggling to satisfy customers' shopping expectations due to two direct constraints: existing offline competitors operating under a narrowing market share, and online retail competitors increasing market share due to their better positioned eCommerce IT platforms.

The purpose of this work is to study the potential effect of digitalization on SMEs, focusing on businesses operating in the offline retail market, by means of provisioning cloud solutions supporting the business digitization process.

The study is based on data collected from a wide range of official sources in conjunction with extensive research work reviewing technologies applicable to these kinds of businesses. The validation is performed through the Focus Group methodology between the months of June to October 2019, with 20 participants from the Henares Corridor, Madrid (Spain) area, considering them as a relevant sample of offline retail SMEs in Spain.

The value proposition of this study can help offline retail SMEs understand the difference between digitization and digitalization, the necessity of digitalization in their businesses, the existence of accelerators such as e-Receipt cloud solutions, and the disruptive potential of digitalization to their business models on long-term survival regarding competitors and raising the circular economy.

1. Introduction

The brick-and-mortar retail SMEs (Small and Medium Enterprises) market is confronted with unprecedented challenges (MINCOTUR, 2020): digitization procurement in a company not prepared for a digitalized business model, and the actual digitalization process of the business model, which not only changes the business rules but disrupts them with new possibilities (Fitzgerald et al., 2014; Gartner 2020a); all within the background of a deep crisis triggered by online eCommerce competitors, which forces offline retail SMEs to digitalize or die due to the continuously changing market (Safari et al., 2015). However, recently an additional issue has gained popularity: the COVID-19 pandemic which has taken all society, business and industry by surprise and will most probably lead to a major domestic and global economic recession (Carlsson-Szlezak et al., 2020; Wren-Lewis, 2020); unfortunately with the current available data it is still too soon to assess its entire economic impact.

The investigation of the literature and secondary sources has been focused on the most tangible elements affecting the day-to-day aspects of SMEs regarding digitization (PriceWaterhouseCoopers, 2016) and the ability to create new added value for customers (Chung et al., 2016). This research illustrates these fundamental concerns from a business perspective: customers, competitors and technological barriers while describing the inter-dimensional dynamics between all subjects and trying to outline a potential solution to overcome SMEs’ market shortcomings (FAEDPYME, 2018; ONTSI, 2018).

An extensive analysis regarding the status of offline retail SMEs in comparison with their market position, their direct competitors, the
eCommerce online competitors and their technological barriers that stop them becoming digitalized, has been done, where the study explores the context of the Industry 4.0 pressure on companies (MINCOTUR, 2020), as well as analyzing the concepts applicable regarding digitization and digital transformation of offline retail SMEs within the ever-changing market trends and demands (Gartner 2020a), linking the market requirements to the growing challenges of multi-channel customer communication, such as SMS (McCorke et al., 2013; Guberti, 2015), e-mail (Hartemo, 2016; Reimers et al., 2016), instant messaging mobile applications (Amirkhanpour et al., 2014) and social networks (Brown, 2015).

At the same time, the research examines some of the reasons why social networks have increased in popularity (Guberti, 2019), as well as the reasons why they have transformed the business-customer interaction relationship (Camarero Izquierdo, Gutiérrez Cillán and San Martín Gutiérrez, 2005), where customers have increased the demand to know exactly what is being delivered to them from the source of the raw materials up to the manufacturing process (Oh and Teo, 2010). This demand is also taking on customization, where companies are expected to adapt to new market trends and ways of utilizing the product (Palmer and Ponsonby, 2002; Charlesworth, 2014), such as the shared economy or the collaborative economy, where clients are not only expecting but demanding a particular solution, while also requiring personalization in shape, color, or timing, which shifts the entire way companies deliver and do business challenging them from the manufacturing process to the intermediaries and shipping agents (Haas et al., 2015). Retail SMEs are transforming into small value-added aggregators that are expected to respond to customer needs, all under the umbrella of unstoppable pressure for environmental protection and efforts to reduce waste management within daily operations (Haansaa, 2007).

Given the aforementioned scenario, the research inevitably addresses the comparison with regards online retail SMEs, which from a technological point of view are far better positioned as they can acquire more in-depth knowledge regarding their customers based on the way the eCommerce platform is developed (Safari et al., 2015). In contrast with offline retail SMEs, they obtain selling patterns and conversion paths (San-Martín and Jiménez, 2017) allowing them to take quick decisions based on real time data (Devaraj et al., 2002). On the other hand, offline retail SMEs lack that body of information and rely only on basic sales information from ERP (Enterprise Resource Planning), whereas the use of CRM (Customer Relationship Management) is missing (FAEDPYME, 2018) and the technological barriers prevent them from digitalizing (MINCOTUR, 2020).

The Methodology section describes how the study has been developed in a multi-step process relying on the initial identification of the SME gaps contrasting extensive literature research from derived studied and official data sources, summarizing the outcomes regarding the applications to SMEs. Based on the identified gaps, an e-Receipt conceptual model has been postulated regarding technological aspects that an e-Receipt platform should envision as a digital enabler for the transformation of offline retail SMEs, trying to anticipate the possible issues and converging solutions, such as technological barriers (FAEDPYME, 2018; ONTSI, 2018) or delivery of the actual digital receipt functionality (Berson et al., 2000; Safari et al., 2015).

The hypothesis of the e-Receipt as digital enabler has been contrasted on the basis of an empirical research of a focus group methodology, between the months of June to October 2019, involving the participation of 20 offline SME retailers from the Henares Corridor, Madrid (Spain) area, segregated into a first set of 11 participants following an evaluation questionnaire answered based on their hands-on business experience regarding the relevance of the e-Receipt within the participating retail companies and about how the envisioned e-Receipt solution could fit into their daily operations; together with a second set of nine participants while writing the article in order to fine-tune the first set focus group outcomes.

Extensive research was carried out in order to draw the e-Receipt conceptual model guidelines used during the focus group activity, from the point of the components and the subsequent interactions between the companies which implement it and their customers. Each module describes the necessary steps required for a successful iteration and the impact that could have on the SMEs if implemented (Mijanur Rahman and Ripon, 2013). The modules describe in detail the customer perspective within the e-Receipt ecosystem, as well as what tangible value is created and distributed among all involved actors. The implementation outlines the offline SME-related aspects from the point of view of the technological barriers, the tight integration of the e-Receipt within business activity, the multi-channel distribution as well as all the new interactions generated with the client in a simple format easily exploitable and deployable (Fundación Telefónica and Red.es, 2015; ONTSI, 2019). This involves customers within the daily business activity and obtains information regarding their preferences so that SMEs can create new sorts of products or services that satisfy both the requirements and personalization level demanded by them (Devaraj et al., 2002).

The Results section focuses on the outcomes of applying the e-Receipt platform as a digitalization enabler to offline retail SMEs and how this could help them to accelerate towards digital transformation of their business model and new business opportunities – as far as the digital transformation of the paper receipt is concerned – reducing the technological barriers (ONTSI, 2018) especially with regard the integration of Software-as-a-Service cloud services, the multi-channel communication with their clients, the possible analytics and insights provided by the e-Receipt platform to assure customer satisfaction and loyalty (Fundación Telefónica and Red.es, 2015; ONTSI, 2019). The other outstanding items addressed in this research are the environmental aspects demanded by both customers and companies to fight the generated waste due to business activity (MINECO and Corrales, 2011), but also the issues most underestimated by companies, such as Cybersecurity (INCIBE 2018b) that are becoming more relevant and impacting on society every day, as well as the regulations related to privacy that allow customers to take control and action regarding their personal data (INCIBE, 2017).

Finally, the Conclusions section synthesizes the offline retail SME market demand for digital enablers and the hypothesis of e-Receipt as an accelerator could lead to a tangible impact on both businesses and society in terms of possible solutions to technological barriers and the requirements of multi-channel customer interactions, together with their corresponding practical and theoretical implications. As the research field focuses on only particular aspects, as described under the Limitations section, the investigation offers many possible lines of future work, such as the internationalization of the research to other markets, their possible technological implications or further discussion regarding customers’ behavior and patterns.

2. Theoretical framework and literature review

What is known: Offline retail SMEs struggle as the lack of digitalization creates a technological gap in data collection and analytics (FAEDPYME, 2018; ONTSI, 2019), leading to decisions based on intuition due to lack of supporting data, slow reaction time based on observed occurring trends, reactive business actions, under-utilized or non-existent customer behavior information or lack of customer behavior analysis tools (MINCOTUR, 2019). Therefore, in order for offline retail SMEs to remain competitive, they have to make the appropriate investment in technology (MINCOTUR, 2020), but this is not an easy task for all SMEs, as it implies
procurement, training, hardware and software compatibility, maintenance or dedicated IT staff (Safari et al., 2015).

These aspects also affect the personalization and customization of the offered products and services, where customers are left only to the provided number of choices without the possibility of making additional changes. Customers expect and demand a product or service that fits their needs and not the needs of the retailer or the manufacturer (Oh and Teo, 2010), where shared economy and circular economy require the retailers to customize their products to the new consumer habits (Haas et al., 2015).

Therefore, the authors have established extensive bibliographic research covering both international and national references, organized in five main areas (Table 1) considered as high potential impact on offline retail SMEs that could explain the contextual SMEs situation.

| Table 1 | Theoretical framework model and main contributions. Own elaboration. |
|---------|---------------------------------------------------------------|
| Reference | Source | Main Contribution |
| 1. Industry 4.0 Context, Digitization and Digitalization | (Arnold et al., 2016) | Research | Industry 4.0 digital enablers transform companies’ business model and internal organization, together with the relationship between partners and customers, under a cost-efficient paradigm. |
| (Fitzgerald et al., 2014) | Research | Digital transformation success is strongly linked with the technological dissemination, organizational aspects and leadership qualities. |
| (Davenport and Prusak, 1998; Porter and Heppelmann, 2015) | Research | The transition from data to information and knowledge sets the baseline for the digital transformation; and information as a key asset that feeds the internal IT systems to support business operations and continuity. |
| (Delgado et al., 2015; Autio et al., 2018) | Research | Entrepreneurship and start-up success is connected to its technological foundation and its capacity to transform data into knowledge. |
| 2. Changing Communication Channels | (McCorke et al., 2013; Guberti, 2015) | Research | Factors such as technological availability, ease of interaction, openness to advertisement, personalization and incentives aspects, have evolved the SMS from a personal communication function to a key marketing tool. |
| (Hartemo, 2016; Reimers et al., 2016) | Research | Equivalent to SMS, permission-based e-mail marketing provides potential for greater customer involvement and engagement, while empowering their decisions (opt-in / opt-out). |
| (Church and de Oliveira, 2013; Modak and Mambo, 2014) | Research | Mobile chatting applications provide companies with a cost effective (compared to SMS) and more interactive (compared to e-mail) alternative channel. |
| (Al-Suwaidi, 2013) | Research | Social networks have changed customer behavior and privacy concerns favoring a more connected and exposed personal life in terms of opinions, brands or product preferences. |
| 3. Changing Customers’ Habits, Personalization and Customization | (Dholakia et al., 2004) | Research | Social network community groups can bias customers’ shopping preferences due to the group belonging and bonding feeling, as well as to social behavior pattern of “influencers and followers”. |
| (Palmer and Ponsonby, 2002) | Research | “Prosumers” (users that consume and generate their own social content) show a positive outcome regarding the effects of the social network to indirectly promote and advertise brands or products. |
| (Oh and Teo, 2010) | Research | Hybrid online and offline selling channel approaches demonstrate positive effect on the overall personalized customer experience (integrated product and price information), as well as an increase in the perceived service quality. |
| (Haas et al., 2015) | Research | The circular economy is considered an actionable way for companies (generating new business models and opportunities) and consumers (more conscious behavior and personalization) to reduce the waste generated and pollution. |
| (Chung et al., 2016) | Research | Social networks’ pattern-based recommendation algorithms may provide customers with a more accurate product personalization than the actual self-customization approach. |
| 4. Technological Barriers | (Safari et al., 2015) | Research | Companies relying on Software-as-a-Service or cloud-based solutions provide substantial opportunities for the business operations, such as cost reduction, agile decision making and scalability. |
| (Devaraj et al., 2002) | Research | Customers choose to buy from the online or offline channel based on platform familiarity, cost and service quality criteria. |
| (Kim et al., 2003) | Research | The CRM software success is linked to a customer-oriented model fed by continuous data sources, such as offline sales data, online sales data, online customer interactions, inventories and existing products. |
| (Berson et al., 2000) | Book | General ERP and CRM software provides SMEs with cross-correlation of sales and customer data functionality to obtain information regarding SMEs’ customer habits. |
| 5. Environmental Constraints on the Business Activity | (Haanpää, 2007) | Research | There is a global consumer pressure on SMEs for a circular economy and a greener business activity footprint. |
| (Herbig and Milewicz, 1995; Karoosmanoglu and Melewar, 2006) | Research | In addition to regulations, companies must adapt to the consumers’ demands as they require to publicly express a waste reduction commitment through Corporate Social Responsibility (CSR) and actual facts. |
| References Specific to Spanish environment | (MINCOTUR, 2020) | Website | Governments can have a strong positive impact on the local business ecosystem by providing companies with access to Industry 4.0 information, technologies and financial credit facilities. |
| (MINCOTUR, 2019) | Report | Spanish Government report pointing out that online commerce has been cannibalizing offline market share and that future investment in business digitization is essential. |
| (ONTSI, 2018, ONTSI, 2019) | Report | Spanish Government report pointing to the barriers of SMEs towards digitalization and the related business issues derived from the lack of appropriate ICTs. |
| (FAEDPYME, 2018) | Report | Report on Spanish SMEs’ digitalization achievement, Corporate Social Responsibility (CSR) and Environmental Management, as well as the investment situation in ICTs. |
| (San-Martin and Jiménez, 2017) | Research | The m-commerce-based strategy is found to provide Spanish SMEs with a direct selling channel where the customer obtains a personalized value proposition, under a cost-efficient paradigm. |
| (Cid, 2012; Casas, 2020) | Articles | More restrictive regulations against mass texting and associated costs push Spanish companies to explore new channels, such as mobile marketing or social networks. |
| (INCIBE, 2017, 2018a) | Report | Spanish Government report regarding SMEs’ cybersecurity threats, vulnerabilities and investments in ICTs. |
| (INCIBE, 2018a) | Report | Spanish Government report regarding SMEs’ and customers’ privacy adherence to GDPR regulation. |
from the point of view of digitalization, communication, customer habits, technological barriers and environmental constraints, which later on will act as a baseline for the e-Receipt model validation.

**What is new:** The novelty of this research is to validate the feasibility of the e-Receipt conceptual model as an actual digitalization enabler along with its suitability aspects within the offline retail SME environment.

**Hypothesis:** Suitability of e-Receipt as a Digitalization Enabler to Offline Retail SMEs.

### 2.1. Industry 4.0 context, digitization and digitalization

The Industry 4.0 transformation provides more customer personalization options, as well as a streamlined production process, either for service or product, which all companies, regardless of whether they are a manufacturer or an intermediate (Arnold et al., 2016), can take advantage of to generate and create new business opportunities (Fitzgerald et al., 2014). The Industry 4.0 model is of great interest as Governments and International Institutions pursue its implementation (MINCOTUR, 2020) in society, both customers and businesses, by providing financial stimulus for SMEs to digitalize and improve their business models to be more competitive on national and international markets (Auto et al., 2018).

**Digitization as Digital Procurement:** According to Gartner (Gartner 2020b), the digitization process can be considered as the internal process companies execute in order to purchase equipment, either new or refurbished, with digital capabilities such as sensors, connectivity or advanced information processing, which replaces existing obsolete or near end-of-lifecycle equipment. As the purchase of equipment is considered as a major investment, the companies are usually motivated to buy new hardware in two situations: (1) maintenance costs of existing equipment are higher than the cost of new equipment; or (2) to support the company strategy, such as creation of new products or increase of business capacity (Porter and Heppelmann, 2015).

Despite the equipment upgrade, the digitization process does not necessarily imply a change of the business model (PriceWaterhouseCoopers, 2016), it only increases the company's automation capacity and control over production. Operations, interactions and activities involving customers or providers remain unaltered.

**Digitalization as Business Model Transformation:** On the other hand, following Gartner (Gartner 2020a), the digitalization process can be considered as the internal process that companies execute in order to transform their existing business model into a digitally-based business model where the ICT (Information and Communications Technology) is located at the core of the daily operations involving customers and providers into the business activity (PriceWaterhouseCoopers, 2016). The basis of the company's digitalization process is the actual digitization plan to acquire the necessary ICTs: on-premises equipment or equivalent cloud services subscriptions. Without it, the digital transformation process cannot take place as the company lacks the necessary data inputs, processing capacity and data exchange mechanisms.

As the digitalization process involves customers and providers, the company can take advantage of new business opportunities that were not previously explored due to their lack of feasibility (Porter and Heppelmann, 2015): (1) interact with the customer, by means of social networks, websites, trends or direct communication channels to obtain data that can be further transformed into information (Davenport and Prusak, 1998) regarding habits and personalization preferences (Chung et al., 2016); (2) apply this information to products or services to personalize or to create new ones that adapt to the customers' needs and formats (Safari et al., 2015), such as cloud PaaS (Product-as-a-Service) or SaaS (Software-as-a-Service) based; and (3) integrate with providers (Delgado et al., 2010) to automate orders of goods, such as the drop-shipping model, or different shipping options, such as bike-riders or future drone-based methods.

### 2.2. SMEs’ communication channels

**SMS for Business:** SMS remains an underexploited solution for business activities (McCorke et al., 2013; Gaberti, 2015), especially due to the price (Cid, 2012) and local regulations (Casas, 2020). Offline retail SMEs: (1) normally do not send any confirmation messages, such as shipping delivery notices, pick-up confirmations; or (2) use them to interact with the customers, such as chat bots already being employed by other sectors; or (3) for marketing actions, such as periodic delivery of promotional brochures or coupon codes. Unfortunately, sometimes SMS is also used for unsolicited communication (SPAM) (Casas, 2020) or illicit scams targeted to obtain an economic benefit.

**E-Mail for Commercial Actions:** With the extensive use of the Internet, e-mail has become one of the most exploited business communication channels (Hartemo, 2016; Reimers et al., 2016), and SMEs do at least one business activity by e-mail: invoices, quotations, support and helpdesk activities, advertisement, club membership, government paperwork, etc., at virtually no cost as compared to the SMS or paper-based alternatives. As this is one of the most used communication channels around the world, it also becomes a target of unsolicited mass SPAM messages that the account owner never signed up to receive (Karwal, 2015), or even criminal actions such as targeted scams to obtain an economic benefit. E-mail service providers and government regulations try to fight and protect consumers from these kinds of actions.

**Instant Messaging Mobile Applications for Business:** Instant Messaging (IM) applications can be considered as one of the most popular mobile applications categories and have completely surpassed SMS in terms of exchanged messages figures (Church and de Oliveira, 2013). Some SMEs have adopted the IM mobile channel with relative success (Amirkhanpour et al., 2014), but with some limitations as the actual applications are designed for personal communication rather than business purposes.

Nowadays, IM applications try to replicate the same personal communication success story, but in a B2C (Business to Consumer) communication context (Modak and Mambo, 2014), where the business owners can interact with their customers in an easy and convenient way by making use of existing IM applications (Jubin, 2015; Katre, 2016). These new IMs’ features for business are expected to include business information, business hours schedules, automated chat bots that reply to customers’ requests or CRM (Customer Relationship Management) integration.

**Social Networks for Business:** The power of social networks has changed social habits (Brown, 2015). Social networks connect millions of users together, which opens new marketing opportunities for any kind of business activity, including the social network itself, a major part of whose income comes from advertisement services (Charlesworth, 2014). The first social networks were merely closed groups of friends that shared specific content and were very concerned about privacy; as opposed to the new generation, the so-called digital natives, who have overcome the fear of privacy (Al-Suwaidi, 2013) and not only publish, but expose their personal life in the role of “influencers” of other users.

This shift of habits affects marketing campaigns, as today’s social network users demand experiences, want to know more about products or services and their added value (Gaberti, 2019), care about the environment and demand a personalized service; whereas most SMEs do not even own a social network account (ONTSI, 2019). However, customers also criticize errors and mistakes (Charlesworth, 2014), therefore, companies are forced to keep up with reputation indexes and develop comprehensive marketing strategies (Camarero Izquierdo, Gutiérrez Cillán and San Martín Gutiérrez, 2005) leading to new business models and new job titles, such as Community Manager. Large companies have noticed that corporate website use has fallen in favor of social networks, therefore in order to preserve contact with their customers, some have developed chat bots that automatically reply to users’ enquiries by means of Direct Messages chats.
2.3. Change in customer’s habits: demanding customer experience, personalization and customization

**Demanding Experiences:** The retail consumer’s buying patterns have shifted from simple economic transactions to experiential transactions (Dholakia et al., 2004). The latest generations, from millennials onwards, changed their consumption habits, preferring to rent or pay per use; and they demand information regarding the production and origins of the raw materials. As social networks have a tremendous impact, companies now create special online customer experiences to enhance the brand or product awareness (Aaker, 2011), where top influencers evangelize how the customer experience should be, promoting the experience of shopping for that brand or the use of the product, instead of the traditional “buy this product” advertisements (Palmer and Ponsonby, 2002; Charlesworth, 2014). Social network channels promote a differentiation strategy by creating a story behind the product or brand, making them unique (Evans, 2010); and positive feedback, such as like or love buttons, as well as posting comments or retweets, increasing the customer interaction and impact of the product or brand (Kerpen, 2011). eCommerce websites provide automated product recommendations following customers preferences, using a clean and straightforward user interface with outstanding “buy” and “check-out” buttons, as well as a rating score, such as stars or similar shape, based on previous published customers’ feedback (Amirkhanpour et al., 2014), delivering a very lean customer experience where the buying process is simplified and, together with virtual money wallets, reduces the stress of paying: customers obtain the product they were looking for and achieve the satisfaction of a good investment based on the positive reviews in a hassle-free transaction process.

**Personalization and Customization:** Customers expect and demand a product or service that fits their needs and not the retailer’s or the manufacturer’s needs (Oh and Teo, 2010), where shared economy and circular economy require retailers to customize their products to the new consumer habits (Haas et al., 2015). Many online retailers complain and criticize how their customers stopped buying specific goods and tend to rent or to share them as a service: the tendency is that the shared-economy model is changing the whole society, including businesses. Customers are not only expecting a personalized product or service according to their needs, but also customized in shape, color, format or delivery options (Chung et al., 2016); companies must adapt themselves to the new business models of shared economy and circular economy, otherwise they will struggle to meet the market’s needs and expectations (Charlesworth, 2014).

2.4. Retail SMEs: Offline vs. online

Despite Industry 4.0 (MINCOTUR, 2020) transforming goods production and distribution by means of process digitization (Arnold et al., 2016), the offline retail SME market is struggling to satisfy customers’ shopping expectations due to two direct constraints: existing offline competitors operating under a narrowing market share; and online retail competitors increasing market share due to their better positioned eCommerce IT platforms (Safari et al., 2015). Technologically, all online-based SMEs acknowledge the fact that online commerce has been cannibalizing offline market share and that future investments in business digitization are essential (MINCOTUR, 2019). Table 2 depicts the position of non-IT platform-based offline retailers as compared to IT platform-based online retailers.

IT platform-based online retail businesses, as opposed to non-IT platform-based offline retail businesses, where business decisions are usually based on intuition due to lack of supporting data, have a deeper understanding of their customers regarding demand forecasting and shopping experience customization (San-Martín and Jiménez, 2017), as they continuously collect behavioral information across the whole shopping process (Turban et al., 2009): (1) shopping patterns and conversion paths; (2) cross-sale information and trending sale information; (3) customer segmentation, micro-segmentation, conversion and retention rate; (4) customer targeted promotions based on historical transactions; and (5) cross-channel performance measured by inbound traffic on social networks.

2.5. Offline retail SMEs’ barriers to new technology

Average offline SME retailers, with the exception of medium to large enterprises that allocate specific budget for business digitization to achieve digitalization (FAEDPYME, 2018; ONTSI, 2018), lack the appropriate instruments to collect customer behavior data or to elaborate adequate insights (ONTSI, 2019): (1) existing software mainly focusing on accounting and ERP (Enterprise Resource Planning) aspects; (2) under-utilized or non-existent CRM (Customer Relationship Management) software; (3) non-existent customer or sales analytics tools as they are perceived as high complexity and time-consuming tasks to be done by the business owners; (4) new software is normally not in the scope of the annual budget and bears an investment risk with an associated ROI (Return On Investment) assumption; (5) new software is perceived as time consuming as it requires support, training and optionally new hardware installation; and (6) new software is perceived as providing too many features not required for the daily business activities or not completely fitting the business model.

2.6. Under-exploited information from ERP and CRM

In general, offline SME retailers focus on sales figures and reports (FAEDPYME, 2018), but they do not correlate that data into a CRM system, thus they cannot extract information regarding customer habits (Berson et al., 2000). One of the most valuable types of data a retailer possesses is sales data, as it provides traceability to each and every transaction executed in the business activity. But this data is not relevant in itself unless it is correlated with customers. Some businesses implement this correlation by means of Member Club cards, where a customer provides the member card in order to get a benefit such as a discount or personalized promotion. The strategy behind this is to correlate the invoices to a specific member who previously provided some personal information in order to join the Club; this way the company can compile statistics and extract patterns from invoices, and provide personalization based on consumers’ habits and preferences. Due to the nature of the eCommerce, where everything is digital, all transactions are conveniently stored in the ERP database ready for CRM analytics (Devaraj et al., 2002). In addition to the sales data, different aspects of user website behavior can be added, such as: (1) reference to how the user arrived on the webpage; (2) historically what products user has been looking for; (3) interest, in the number of times the product was displayed; (4) urgency, as the time duration buying the product. Combining all this information, eCommerce can then adjust the 4 Ps marketing theory: product reviews, placement and recommended products, price adjustments and promotion on the landing page.

On the other hand, for an offline retailer this normally stays only at transactional level, without exploitation of the CRM information (Kim et al., 2003), with the retail manager in charge of the 4Ps: product review and quality check, placement on the shop floor, price adjustments based on intuition and promotion based on traditional advertising formats; relying on personal experience and empirical experiments. Based on these facts, there seems to be an important gap between online and offline retail segments, where offline faces multiple difficulties in identifying and attending to customers’ needs.

2.7. Environmental constraints on business activity

There is global demand from consumers for a circular economy and waste management (Haanpää, 2007), as well as a number of regulations aiming to reduce the footprint of business activity on the environment.
From the point of view of the environment, the society as a whole is increasing awareness regarding the human activities generating waste and how these actions negatively impact on nature (Aaker, 2011). Business activities, by means of SRB/SCR (Social Responsibility of Business/ Social Corporate Responsibility) commitment (Herbig and Milewicz, 1993; FAEDPYME, 2018) regarding green initiatives and reducing waste as part of the daily activity, are expected to be as environmentally friendly as possible, at the same time lowering their environmental footprint (Karaoğlanoglu and Melewar, 2006).

2.8. Cybersecurity and data privacy regulation aspects

Cybersecurity is one of the major concerns worldwide and stands as one of the most important topics within companies’ digitization and digital transformation, as illicit hacking actions are expected to become more and more frequent (INCIBE 2018b; ONTSI, 2019). On the other hand, privacy is another top priority item as Spanish LOPD (Organic Law on Data Protection) and international GDPR (General Data Protection Regulation) regulations are constantly evolving (INCIBE 2018a) while customers are becoming more conscious of their digital fingerprint, where failing to comply with the standards on data collection and data processing could lead to substantial fines for SMEs.

3. Research methodology

The study is based on data collected from a wide range of official sources in conjunction with extensive international and Spanish research specifically identifying and describing the SME offline retail market status in terms of multiple aspects, such as digitalization, communication channels, customer habits, technological barriers and environment, selected by the authors as fundamental to understand and place companies in their exact technological position with regards to the market status and their competitors from both offline retail and online retail-based companies, as well examining the applicable technologies for this SME segment.

Based on the identified literature and market gaps, a conceptual model regarding e-Receipts as Digital Enablers covering its technological components, user interaction flow and analytics within the offline retail SME transformation context has been elaborated to be further validated within focus group activity, consisting of approximately 30 min (excluding wrap-up and clean-up steps) of semi-structured, face-to-face interview sessions with different offline retail SME management-related key personnel who agreed to participate in the research.

3.1. Data collection and sample characteristics

The Henares Corridor, Madrid (Spain) area has been considered as highly relevant for this study as it overlaps offline and online retail SMEs as well as major e-Commerce logistic centers, such as Amazon. Initially, a total of 95 local offline retail SMEs were contacted by e-mail during the months of June and July 2019, asking whether they were willing to participate anonymously in an economics research project involving a face-to-face, short discussion session (Table 3) after or before the close of business hours with someone who had a role related to management functions. From the total number of contacted companies, only 11 replied to schedule a date for the interview, while an additional nine delayed replies were received between September and October 2019.

3.2. Data analysis

Therefore, the hypothesis of the e-Receipt as a digital enabler has been contrasted on the basis of an empirical research study of a focus group methodology involving the participation of a total of 20 offline SME retailers who were presented with the e-Receipt conceptual model, segregated into a first set of 11 participants following a semi-structured evaluation questionnaire answered based on their hands-on business experience regarding the relevance of the e-Receipt within the participating retail companies and about how the envisioned e-Receipt solution could fit into their daily operations; together with a second set of nine participants while writing the article in order to fine-tune the first set of focus group outcomes.

3.3. Proposed conceptual model: e-Receipt as digital enabler

3.3.1. Technological components

Retail companies could provide invoices using both paper support and digital support in order to accommodate each customer’s preferences. By providing an electronic receipt or e-Receipt, the companies could associate the invoice with a customer and could analyze that information (Berson et al., 2000) in an anonymous way or in a personalized way, if the customers have previously provided their consent and personal information. The e-Receipt solution (Fig. 1) could be developed by third-party cloud-based technology companies and provided to companies following a SaaS (Software-as-a-Service) model (Safari et al., 2015), on a monthly subscription plan to mitigate the financial impact on the business activity. The next section describes one
of the many possible e-Receipt models, following a holistic analysis regarding the most relevant modules, expected functionalities and conceptual user interface. Nevertheless, the authors must state that the hypothesis of the e-Receipt has been formulated independently of any possible resemblance of existing patents or existing solutions.

3.3.2. Connector

The e-Receipt could be implemented as a third-party service on a cloud platform (Fig. 1-1.1), where retailers could integrate their POS (Point-Of-Sale) software (Mijanur Rahman and Ripon, 2013) by means of a dedicated desktop connector installed on the company's premises. This simple connector would act as an interface between the sales software database and the e-Receipt database. Each time a transaction is done, the connector would synchronize the database information and would generate a new digital receipt entry.

3.3.3. Synchronization

Every time a transaction is done, the cashier would ask the customer the preferred receipt format: paper-based or e-Receipt. If the customer wants a digital receipt, the cashier would ask for the preferred communication channel and input that information, such as e-mail address, social network profile, via the connector's virtual keyboard or phone number using the numeric keypad, and finally would press the send button. Any information is optional as the customer can easily provide it within the URL access link. The e-Receipt desktop connector would synchronize (Fig. 1-1.2) with the e-Receipt cloud platform exchanging the sales information and associating the transaction with the provided customer identification data. After the information is uploaded on the cloud platform, it would be automatically processed, and the digital receipt would be sent to the customer phone through the appropriate communication channel.

3.3.4. Cloud-based platform, software-as-a-service and subscription model

The e-Receipt platform (Fig. 1-1.3) would not only be a cloud-based solution that would avoid the ownership of on-premises hardware, software licenses or associated costs of support and maintenance, but would also be deployed as a SaaS (Software-as-a-Service) distribution model where the e-Receipt solution would be provided as a pay-per-use application service where companies would only pay for a monthly subscription fee including all associated hardware, software licenses, support and maintenance costs and would only need to subscribe the capacities required for their operations, eliminating any technological entry-barriers. From the financial point of view, the SaaS model would avoid companies making any kind of up-front investment in elements not considered part of the business core; and from the accounting point of view, companies would consider the monthly fee as part of the daily activity. The e-Receipt cloud platform (Fig. 1-1.3) would be in charge of: (1) permanently storing all the received transactions and cross-checking them with the customer identifier; (2) distribution of the e-Receipt information according to the communication channel provided; (3) providing a permanent URL database for e-Receipt retrieval together with the e-Receipt information upon retrieval request; (4) advertisement display management together with digital data treatment management (opt-out and opt-in of customers in compliance with privacy regulations); and (5) analytics services.

3.3.5. Multi-channel distribution

Upon receiving a transaction from the company's POS e-Receipt plug-in connector, the e-Receipt cloud platform would automatically distribute it (Fig. 1-1.4) virtually on any kind of communication channel as preferred by the customer. From the technical point of view, the e-Receipt could be implemented on any communication platform, potentiating the customer's communication relationship and multi-channel presence such as SMS, e-mail, social networks or even IM mobile applications. Companies could hold multiple communication strategies such as providing an SMS-only option as a fallback for older people or for non-social network users, and an e-mail or social network channel for other interested customers. The customers would receive a notification message via their preferred communication channel containing brief information regarding the company, such as name and store location, sending the notification as well as an online short URL (Uniform Resource Locator) unique access code to retrieve the e-Receipt.

3.3.6. Retrieval and responsive user interface

The customer could retrieve (Fig. 1-1.5) the e-Receipt at any time by opening the provided URL unique access code that would open a web browser to access the e-Receipt Responsive Front-end UI regardless of the accessing device, such as computer, tablet or mobile. Customer could share the URL with any other person or third-party applications, such as house accounting or digital notebooks for their own record. The e-Receipt Responsive Front-end UI elements could take into consideration the following minimum items (Fig. 1): (2.1) advertisement banner, that could be based on the advertisement display system as part of the e-Receipt platform analytics feature; (2.2) legal information area, mandatory as per paper-based receipt related regulations; (2.3) transaction information area, mandatory as it describes the transaction status; (2.4) barcode area, mandatory for barcode scanner; (2.5) QR code area, which could be used for sharing the e-Receipt; (2.6) social network area, which could be used for sharing or storing the e-Receipt within social networks accounts; and (2.7) an unsubscribe URL, that could be used for adjusting the privacy configuration, such as how data is collected and processed, within the e-Receipt platform.

3.3.7. Analytics

Finally, the e-Receipt platform would provide analytics (Fig. 1-1.6) to the retailers regarding their customers' activity, where the e-Receipt Dashboard could be considered as its core and would provide meaningful information regarding the most important aspects of the sales activities: (1) Sales Analytics insights: the sales dashboard could contain the daily, weekly and monthly sales reports to be compared for performance and to support the business decisions; and the products performance dashboard could provide insights of top selling products as well as top margin leading products; (2) Advanced Analytics module insights: the cross-sales dashboard could provide the most relevant product pairing that could fit other customers based on sales data; automatic reports could contain customized reports that could be triggered upon specific conditions, such as “lower than X amount sales” figures, and could be sent automatically to the specified e-mail addresses; periodic reports could contain customized reports that could be scheduled or sent periodically, such as “weekly average sales on X product category”, to the specified e-mail addresses; and the multi-stores benchmark could be a specific feature for businesses that operate more than one store and might want to compare sales performances between them; and (3) Customers performance insights: the visit counter could display how many times a customer is visiting the store and historical transactions record; the loyalty index could be an automated index rate based on the historical transaction record, including return rate of products and digital tickets number of visits; and targeted campaigns could propose advertisement actions based on the sales analytics data to engage the customers in a personalized shopping experience.

4. Results

By reviewing the extensive available international and domestic literature, by designing the e-Receipt conceptual model and by validating it using a focus group methodology, as described under their corresponding sections, the potential of e-Receipt as a digitalization enabler has been positively concluded, together with a relevant number of outcomes (Table 4) regarding the applicability dimension of e-Receipt within offline retail SMEs.
Local regulations require offline retail SMEs to provide a printed receipt to their customers upon the execution of any kind of commercial transaction; without any added value to customers or the company itself. On the other hand, thanks to companies’ digitization (Gartner 2020b), such as the procurement of new software or cloud subscriptions, companies can take advantage of these digital enablers and take the opportunity to pivot the paper-based receipt towards a digital accelerator in the form of an electronic receipt or e-Receipt. This approximation can be considered as an example of business digitalization (Gartner 2020a) or “digital transformation”, as the receipt is not only being digitized from paper format, but its final use and purpose is repositioned to generate new value propositions and business opportunities (FAEDPYME, 2018) in the offline retail market: where customers benefit from a digital e-Receipt copy for permanent storage while reducing paper waste; and companies enhance customer fidelity based on sale analytics data never before exploited in the offline retail channel.

4.1. Reducing SMEs’ technological barriers

SMEs’ digitization process is generating new market needs (FAEDPYME, 2018), where software providers take advantage of the potential gaps and develop cloud services based on the subscription model, such as SaaS (Software-as-a-Service) (Safari et al., 2015), allowing them to reach more companies than before, as due to the cloud-based architecture the platform is scalable in performance, accessible online from any place, and the subscription-based costs are no longer an entry barrier. Consequently, SMEs are adapting to these market changes (Fig. 2): companies have stopped buying complete in-house software solutions and consider contracting them as an external service based on a monthly rate while reducing expenses and lowering the investment risk (ONTSI, 2018).

Therefore, the existing SMEs technological barriers disappear in favor of new business opportunities (ONTSI, 2019): (1) upgrading to new features or web-based functionalities ERP (Seethamraju, 2015); (2) integration of simple and efficient sales analytics tools within the web ERP plug-ins database; (3) deployment of simple and efficient web-based CRM software (Berson et al., 2000); (4) simple to calculate software ownership costs together with a clear monthly fee accounted for as a cost part of the daily activities rather than an investment; (5) reduced investment risk: if the software does not fit the purpose it can be simply canceled without any penalties or depreciation of the hardware or software, as the whole platform is external and located on the cloud platform; (6) SaaS reduces the required support needs as all the technical maintenance is done by the provider, while the company can focus on the training and how to get the most out of the product; (7) SaaS products provide subscription plans based on the requirements of each company so it can select the plan that fits best; and (8) providing the latest version and updates of the platform, therefore reducing the risk and need of buying additional software or periodic upgrades, that not only cost money, but can also break feature compatibility with older versions or other companies’ software.

4.2. Multi-Channel communication importance

As the e-Receipt provides a deeper understanding of the customers based on the collected analytics, habits and preferences, companies can interact following the most adequate communication channel or mix of channels, as best considered (Fundación Telefónica and Red.es, 2015; ONTSI, 2019): (1) SMS channel: in addition to the integration with the e-Receipt for URL distribution, can be used for basic information such as confirmation messages, delivery notice, pick-up confirmation, interact with the customers by means of chat, or for marketing actions such as periodic delivery of promotional brochures or coupon codes with unique reference number for further analytics purposes. Nevertheless, the cost of the SMS will always limit the scope of action; (2) e-mail channel: to be exploited as a cost-effective alternative to SMS for e-Receipt platform in combination with e-mail marketing campaigns regarding promotions and new products, as well as to act as a bridge towards social networks interaction; (3) Instant Messaging for business: companies can replicate the e-Receipt interactions from SMS and e-mail channels virtually at almost no cost, while including business information, business hours schedules, automated chat bots that reply to customer requests, and CRM integration; and (4) Social Networks: can provide a private e-Receipt interaction by means of direct messages features, or create shopping experiences as the customers want to know more about the product or services, their added value, their impact on the environment and what kind of personalization is provided.

4.3. Offline retail analytics regarding shopping patterns

The e-Receipt platform helps companies grow their business by transforming the traditional retail approach into a digitalized hybrid solution (FAEDPYME, 2018; ONTSI, 2019) based on sales information not fully exploited before: (1) improved market response: by knowing the sales trend, the customer can anticipate to the next super-sale product or to the next sale-season demands; (2) improved customer reaction time: insights providing deep information regarding the customer lifecycle, empowering companies to take marketing actions that pursue ever-changing customer preferences; (3) improved proactive actions: on the floor store operations, such as pricing and promotion, can be done based on real store metrics just when they occur; (4) improved data collection: providing additional sources of information, such as number of accesses to the platform, customer interest index, returning customers, return product rate, among others, that provide companies with new perspective regarding the customer segmentation; (5) Template-
based scenarios: intuitive and easy to use platforms facilitate companies in the creation of their own reports and access to meaningful insights without the need of expensive training or third-party applications; and (6) Faster results and communication: the customers can target marketing campaigns in real time and establish direct communication faster than any other paper-based, radio or television channel.

4.4. Customized and personalized shopping experience

Despite social network campaigns targeting the most demanded products or services, they should not be limited only to those, as the CRM and e-Receipt can provide cross-sales information (Berson et al., 2000), the companies can focus on the rest of the sales drivers, differentiating themselves from their competitors and engaging with their customers in a more personal approach providing not just a product (Chung et al., 2016), but a complete solution, such as a complete outfit for a target occasion. Based on the information collected, they can adapt the tone and messages expected by their customers (Devaraj et al., 2002), and can segment based on the specific URL reference used to access the publication, according to the origin of the actions, such as SMS, social network or IM. As an underlying conclusion, SMEs must improve their social network strategy as today there is a major gap between business activity and the customers (ONTSI, 2019).

When customers turn to the offline retail channel, they expect and demand a similar process, however there are different human aspects not taken into consideration that can negatively affect the customer experience: (1) the retailer might not have enough time, motivation or knowledge to assess the customer’s questions. The customer is required to search online for the technical questions or comparison, and probably will end the transaction online on a competitor’s website rather than in an offline store; (2) prejudice regarding the retailer, such as physical look or behavior, may encourage or discourage the transaction, as opposed to eCommerce where there is no human contact. The retailer may try to bias the customer, such as promoting a specific brand or not. From the customer point of view, a big advantage over the paper-based version is that the digital receipt does not deteriorate and is always available in a convenient format. Consequently, customers only have to access the permanent URL to access the full information and cross-check the transaction details. On the other hand, the business only needs the unique receipt reference to get access to the transaction elements for any modification.

4.5. New marketing campaigns opportunities

The paper-based commercial advertisement is based on generic promotions to call customers’ attention and pursue them to finalize an economical transaction. However, those promotions target many segments and they are required to run for a large amount of time, such as on a monthly or weekly basis.

The e-Receipt advertisement feature is highly appreciated by offline retail SMEs as it provides an additional mechanism to reach customers and engage them in the shopping process (Fundación Telefónica and Red.es, 2015). Companies can use make of the self-service e-Receipt platform to create their advertisement campaigns based on their own designs or on existing templates without the need of external help. The e-Receipt platform by cross-referencing the sales patterns and customers’ information has the potential to transform advertisements and discounts into a personalized shopping experience (Camarero Izquierdo, Gutiérrez Cillán and San Martín Gutiérrez, 2005), while establishing a continuous communication channel with the digital subscriber customers (Chung et al., 2016) where they receive promotions based on their real interests, which compared with the paper-based version would require a lot of resources, such as printing and distribution, and generate a lot of paper waste. Those promotions could be accessed in real time by means of the multiple available channels such as SMS, e-mail, IM or social networks, and they could have a limited duration based on the retailer’s needs.

4.6. SRB/SCR and environmental aspects

The deployment of an e-Receipt solution is found to create a positive impact on the society by reducing the environmentally-generated paper waste in an actionable way (Anderson and Cunningham, 1972). Offline retail SMEs perceive it as a tangible and economical approach to reducing their waste footprint, especially when they are receiving a lot of pressure from the SRB/SCR (Social Responsibility of Business/ Social Corporate Responsibility) intentions that are more and more demanded by the society (FAEDPYME, 2018): (1) Reduce paper waste: By means of using a digital copy, the paper version is not needed anymore. The impact can be then measured in economic terms such as cost of the paper rolls or in number of saved trees; (2) Go green initiative: As the whole society is targeting being greener (MINECO and Corrales, 2011), both companies and customers can participate in this aim by choosing a digital copy instead of the paper versions. Companies, despite their good will and good intentions of going green, need to evaluate the real cost involving this action (MINCOTUR, 2019), and here the e-Receipt solution based on cloud and Software-as-a-Service leverages the risks, which instead of requiring a big investment works seamlessly with the current platform at a very low monthly rate; and (3) Stop losing tickets: From the customer point of view, a big advantage over the paper-based version is that the digital receipt does not deteriorate and is always available in a convenient format. Consequently, customers only have to access the permanent URL to access the full information and cross-check the transaction details. On the other hand, the business only needs the unique receipt reference to get access to the transaction elements for any modification.

4.7. Cybersecurity and data privacy regulation aspects

From customers’ IT security perspective, they seem more likely to use dedicated cloud-based e-Receipt services rather than on-premises solutions that may not protect their privacy and data. Similarly, companies are found to be keener on storing e-Receipts on a cloud solution rather than storing them on site (INCIBE 2018b). This is due to the fact the cloud solutions are perceived as more secure as the cloud datacenters have dedicated cybersecurity teams, more advanced than any other solution a retail SME could deploy; but also due to technical reasons such as maintenance, uptime or backups that are normally performed by cloud datacenters experts, more skilled and reliable than SME office-level IT employees.

The e-Receipt solution is found to help improve customers’ privacy, as they would be empowered to decide what commercial actions, such as analytics, advertisements, and third-party information sharing, are subject to the data they generate, by means of automated and confidential opt-in and opt-out selection built within the platform (INCIBE, 2017). Without technological automation, these processes would take very large amount of time and resources affecting both business activity and customers’ privacy.

5. Conclusions

5.1. Discussions

As highlighted from the researched literature, offline retail SMEs are
urged to position themselves and embrace the digitization and digital transformation of their processes in order to pivot their business model towards a customer-centric approach involving suppliers, providers, manufacturers, shipping companies, multi-channel communication, product or service customization and personalization; all within the context of the ever-growing circular and sharing economy. SMEs are forced to adapt to the ever-changing market rules and trends in order to remain competitive, not only on the Spanish market but also at the European and international level, where the offline retailers are expected to transform themselves into value-added aggregators to differentiate themselves from the better prepared online eCommerce platforms as well as other offline retailers, as opposed to being mere intermediaries.

Fortunately, the digital barriers due to the technological platforms’ complexity are now leveraged due to the third-party software providers developing Software-as-a-Service cloud solutions, which bring SMEs affordable and customized solutions without the software and hardware maintenance inconveniences. More than ever, SMEs need these digital enablers to help them accelerate their business transformation: (1) to integrate with third-party partners participating in the delivery of the products or services; (2) to collect data during the whole transaction process; (3) to collect data regarding customers on all multi-channel dimensions; (4) to analyze and process that data to extract information regarding the next advertisement steps together with personalization and customization strategies; and (5) to comply with cybersecurity, customer privacy and environmental concerns.

In an effort to assist and accelerate that digital transformation, the research has constructed a hypothetical e-Receipt technological scenario, describing the platform components regarding possible cloud-based synchronization, multi-channel delivery, optimized user interface, advanced advertisement and analytics functionalities, among other aspects, which address the identified SMEs’ shortcomings, such as Industry 4.0 deployment, customers’ ever-changing habits, technological barriers, narrowing market due to eCommerce and other offline competitors, as well as strong environmental pressure; and providing an achievable and easy-to-adopt digital enabler within the business activity while delivering tangible value for both customers and companies.

**Practical implications:** The research, the process of which has focused on offline retailers and has evaluated comprehensive literature material together with an extensive source of secondary information, envisioning an e-Receipt conceptual model for offline retail SMEs while empirically contrasting and fine-tuning the outcomes within with a focus group of 20 Spanish offline retailers, as described within the Methodology section, points to the fact that the provision of certain cloud solutions associated with e-Receipts, such as GDPR compliant electronic receipts sent to personal e-mail addresses or by SMS to mobile phones, offered as a value-added service enabler to their customers, could facilitate Spanish offline retail SMEs in both digitization and digitalization processes:

- Customers benefit from e-Receipt for permanent storage while reducing paper waste to the environment;
- SMEs benefit from a tangible SBR/SCR (Social Responsibility of Business/ Social Corporate Responsibility) commitment regarding go green initiatives and reducing paper waste as part of the business activity;
- SMEs benefit from a proper instrument that collects shopping behavior data not exploited before and analyses that data to get internal insights aimed to personalize customers’ shopping experience. Training remains mandatory to properly operate the platform;
- SMEs benefit from an automated cloud platform with no on-premises hardware, based on a periodic subscription model without any initial upfront investment needs;
- SMEs’ business model pivots from a generic and static approach to a hybrid online-offline and personalized customer experience approach;
- SMEs’ business model pivots from a product-centric to a solution-centric model, driven by collected customer behavior information and product lifecycle information; and
- SMEs’ business model, as part of the customer product customization, can easily expand and integrate circular economy business model principles, such as collaborative sharing, product-as-a-service options, refurbishing or taking care of the end of the product lifecycle, to expand income sources as well as to cover unattended market segments.

**Theoretical implications:** However, the underlying objective of the e-Receipt hypothesis as a digital enabler is to provide SMEs, independently from their market segment, with a comprehensive understanding regarding the challenges associated with the digital transformation process by starting from conceptualizing a more theoretical model up to the actual integration of it as part of day-to-day business activities, supporting and extending the theoretical baseline of the research.

- Digitization: this can be considered as the procurement process by which companies purchase new equipment that converts analog parts of the company’s processes into digital (Gartner 2020b). Despite the equipment upgrade, the digitization process does not necessarily imply a change of the business model; it only increases the company’s capacity of production automation and control over it. The company operations, interactions and activities with customers or providers remain unaltered;
- Digitalization: this is considered as the internal process that companies execute in order to transform their existing business model into a digital-based business model where the ICT (Information and Communications Technology) is located at the core of the daily operations involving customers and providers to the business activity (Gartner 2020a);
- The necessity of digitalization in their businesses: as opposed to eCommerce, the offline retail SMEs market is struggling to satisfy customers’ shopping expectations due to two direct constraints: the existing offline competitors operating under a narrowing market share, and the online retail competitors increasing market share due to their better positioned eCommerce IT platforms (ONTSI, 2018). Technologically, all offline-based SMEs acknowledge the fact that online commerce has been cannibalizing offline market share and that future investments in business digitization are essential (FAE-DPYME, 2018);
- Multi-channel communication for customer experience and customization: based on the information collected companies can adapt the tone and messages expected by their customers (Hartemo, 2016; Reimers et al., 2016). The e-Receipt platform could provide multiple URL reference numbers according to the origin of the actions, such as SMS, social network or IM (Amirkhanpour et al., 2014);
- The existence of accelerators such as e-Receipts cloud solutions: this not only provides a digitized version, but its final use and purpose is repositioned to generate new value propositions and business opportunities in the offline retail market, where customers benefit from a digital e-Receipt copy for permanent storage while reducing paper waste; and companies enhance the customer fidelity based on sale analytics data never before exploited in the offline retail channel;
- SaaS delivery as a solution to technological barriers: software providers take advantage of the potential gaps and develop cloud services based on a subscription model, such as SaaS (Safari et al., 2015), allowing them to reach more companies than before, as due to cloud-based architecture the platform is scalable in performance, accessible online from anywhere and the subscription-based costs are no longer an entry barrier;
- The disruptive potential of digitalization to their business models on long-term survival regarding competitors and raising the circular
Table 2
Position of non-IT platform-based offline retailers as compared to IT platform-based online retailers. Own elaboration.

| Business Aspects          | Non-IT Platform-Based Offline Retail | IT Platform-Based Online Retail |
|---------------------------|--------------------------------------|---------------------------------|
| Data Support Trends       | Decisions based on intuition due to lack of supporting data. | Data-driven decisions supported by business data. |
| Decision Making           | Slow reaction time based on observed occurring trends. | Fast reaction time based on early detection of trend patterns. |
| Customer Behavior Analytics Tools | Under-utilized or non-existent customer behavior information. | Continuous customer behavior information collection. |
|                           | Lack of customer behavior analysis tools. | Dashboards providing historical patterns and behavior analytics. |

Table 3
Semi-structured questionnaire used during the face-to-face focus group activity. Own elaboration.

| Focus area                        | e-Receipt discussion aspects                                                                 |
|----------------------------------|-----------------------------------------------------------------------------------------------|
| Industry 4.0 Context             | How do SMEs deal with the new technologies?                                                    |
| Changing Communication Channels  | Can SMEs apply digital enablers to their business activity? Are there other relevant aspects? |
| Change in Customers’ Habits      | How do businesses get in touch or communicate with their customers?                           |
| Technological barriers           | Can SMEs keep up with the evolutions of these channels? Are there other relevant aspects?     |
| Environmental barriers           | How to customize and personalize the shopping experience? How to involve consumers and influencers? |
| Open discussion                  | What are customers expecting from the business? Are there other relevant aspects?             |
|                                  | Are SMEs prepared for being environmentally friendly?                                         |
|                                  | What do customers expect in terms of environmental responsibility? Are there other relevant aspects? |
|                                  | Are there other relevant aspects?                                                              |

5.2. Limitations

As in any investigation, there are some limitations of this study. Despite the positive outcomes regarding the e-Receipt as a digital enabler application to SMEs, the authors have identified some specific areas that should be taken into consideration regarding the interpretation of the results and future works related to this study.

(1) Market limitations: One limitation is the actual analyzed market segments, where the study was focused specifically on offline retail, leaving room for further analysis regarding additional segments where e-Receipt could also be considered as fit for purpose;

(2) Geographical limitations: as the study was conducted in the Spanish environment, there is an option that not all outcomes could be extrapolated to other international markets, hence the requirement of further investigation regarding the applicability of e-Receipt to more widely international SMEs;

(3) Methodology limitation: as the focus group methodology could provide biased outcomes due to the discussion context and qualitative aspects, as compared to a survey-based approach which could provide quantitative comparable results; and

(4) Some theoretical framework-related limitations: despite multiple software patents available in the market, there is a lack of specialized literature regarding e-Receipt applications and how SMEs could practically adopt these improvements, consequently limiting the overall applicability of the identified study outcomes.

5.3. Lines to follow

Although the scope of the paper is limited to the above-mentioned conclusions, the following section outlines several possible lines of action to guide future investigations regarding this subject matter:

(1) International market research: Inevitably, research should be expanded to benchmark against other European or other international markets and how they might behave against similar technological circumstances. One possible example would be United States SMEs, which are showing a considerable propensity not only to embrace new technologies but also to lead in the creation of new business solutions through Silicon Valley and other start-up ecosystems;

(2) E-Receipt KPI and user behavior analysis: This line of research may focus on the identification of KPI and relevant user behavior analysis within the offline retail SME environment; together with the know-how to capture and extract such information in order to be able to take the appropriate decisions;

(3) Investigate other e-Receipt solutions and implementations: Another area of opportunity is to research the technological components and platform solutions that could improve the application of e-Receipt in SMEs. This line could describe the interaction between the modules and the ICT requirements regarding the cloud platform, delivery, synchronization and retrieval of receipts; and

(4) How e-Receipt empowers customers’ privacy: This approach could evaluate the psychological and social consequences regarding customers’ privacy in a digital context where all the information is publicly exposed, and how the e-Receipt platform could empower customers privacy in providing opt-in and opt-out features regarding the treatment of their data.

Finally, this paper tries to envision the future of the offline SMEs but does not intend to limit itself only to the aspects described herein and invites future researchers to take the initiative on the results of this research and further develop them, extracting new knowledge regarding SMEs’ digital transformation. Table 2.
Table 4
eReceipt digital enabler outcomes within the offline retail SMEs dimension. Own elaboration.

| Discussion area | eReceipt as Digitalization Enabler |
|-----------------|-----------------------------------|
| **Reducing SMEs’ Technological Barriers** | Due to the use of Software-as-a-Service (SaaS) and cloud technologies-based eReceipt model, leading to new business opportunities, upgrades to new features, integration of sales analytics tools with less hardware and software maintenance. |
| **Multi-Channel Communication Importance** | Due to a deeper understanding of the customers based on the eReceipt collected analytics, habits and preferences, the companies can develop the most adequate communication channel or a mix of multiple channels, as best considered, creating shopping experiences regarding products or services, their added value, their impact on the environment and what kind of personalization is provided. |
| **Offline Retail Analytics Regarding Shopping Patterns** | As the eReceipt could provide an overall improvement of the market response, customer reaction time, stimulating proactive decision-making, within an improved data collection and detailed reporting process. |
| **Customized and Personalized Shopping Experience** | Due to the integration of customer analytics information from CRM and the eReceipt platform in their business models, customers could obtain a more personalized product or service according to their needs, together with customized shape, color, format or delivery options. |
| **New Marketing Campaigns Opportunities** | Due to the creation of an additional mechanism to reach customers and engage them into the shopping process, such as eReceipt advertisement features where customers could receive promotions based on their real interests, which compared with the paper-based version would require a lot of resources, such as printing and distribution, and generate a lot of paper waste. |
| **Environmental Aspects** | As a tangible and economical approach to reduce business-activity-generated waste footprint, by means of using eReceipt digital copy the paper version is no longer needed, where the impact can be measured in economic terms using the cost of the paper as a reference.
| **Cybersecurity and Data Privacy Aspects** | Cybersecurity stands as one of the most important topics within companies’ digitization and digital transformation, where eReceipt cloud-based solutions are perceived as secure due to the datacenters’ advanced cybersecurity resilience. On the other hand, the eReceipt solution is found to help improve customers’ privacy, as they would be empowered to decide what commercial actions, such as analytics, advertisements, third-party information sharing, are subject to the data they generate, by means of automated and confidential opt-in and opt-out selection built within the platform. |

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