Journal of
Theoretical and Applied Electronic Commerce Research

MDPI

Article

SMEs Must Go Online—E-Commerce as an Escape Hatch for Resilience and Survivability

Joana Costa [1,2,3,*] and Rafael Castro [1,2]

[1] DEGEIT—Department of Economics, Management, Industrial Engineering and Tourism, University of Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro, Portugal; rafaelluiscastro@ua.pt
[2] GOVCOPP—Research Unit on Governance, Competitiveness and Public Policies, University of Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro, Portugal
[3] INESCTEC—Institute for Systems and Computer Engineering, Technology and Science, Campus da Faculdade de Engenharia da Universidade do Porto, Rua Dr. Roberto Frias, 4200-465 Porto, Portugal
* Correspondence: joanacosta@ua.pt

Abstract: The recent emergence of e-commerce has brought a shifting paradigm into global markets. This revolutionary framework relying upon technological progress has conveyed a new era of commerce. More than ever, businesses are using digital marketplaces to stay relevant and competitive. Suddenly, buying online has become part of their daily routines. Accessibility, flexibility, and convenience make the internet the ideal platform for modern age consumers. Small and medium enterprises predominate in almost every industry generating employment, income, and sustainability. Nonetheless, e-commerce adoption among these organizations is yet to be widely undertaken. This article has a twofold objective: first, it gathers data regarding the emergence of e-commerce adoption by SMEs through a systematic literature review encompassing 32 indexed articles (published between 2003 and 2021). Secondly, it provides a quantitative and qualitative analysis identifying strategic options and guidelines for a smooth digital transition among these players. Lastly, some recommendations to policy makers were clipped to work as facilitators, given SMEs specificities. The future is digital and the struggle for e-commerce adoption and exploitation among these organizations is at the top of the agenda. It is central in maintaining the vibrancy of the business ecosystem, and is therefore a turnkey for economic recovery.

Keywords: SMEs; e-commerce; e-business; survivability; digitalization; resilience

Citation: Costa, J.; Castro, R. SMEs Must Go Online—E-Commerce as an Escape Hatch for Resilience and Survivability. *J. Theor. Appl. Electron. Commer. Res.* **2021**, *16*, 3043–3062. https://doi.org/10.3390/jtaer16070166

Academic Editor: Eduardo Álvarez-Miranda

Received: 17 September 2021
Accepted: 2 November 2021
Published: 5 November 2021

1. Introduction

Ever since the introduction of the internet, the world has never been so close to our fingertips. Within reach of a click, we can find, locate, and purchase goods and services from all around the world. The widespread use of information and communication technologies has brought new challenges to commerce. More and more, physical commerce venues are being replaced by the digital [1]. This shifting scenario led to the dominance of companies such as Alibaba, eBay, Amazon, among others, in the global economy.

According to Turban et al. [2], e-commerce (hereafter EC) can be defined as the process of buying and selling products or services electronically. Scholars have been closely analyzing the evolution and adoption of EC in recent years [3,4]. Nonetheless, EC dates back to the 1970s where large organizations used to trade among themselves using electronic fund transfer systems [5]. The sophistication of EC can be credited to multiple technological innovations, such as the development of information and communication technologies [5] and the emergence of the World Wide Web (in the early 1990s), both leading to an increase in the number of users on these platforms as well as the encouragement of the use of media to satisfy shopping habits [4].

Small and medium-sized enterprises (hereafter SMEs) are present in all economic sectors and economies, representing an important share of the entrepreneurial fabric, being

critical to regional development and sustainability [6,7]. According to the latest report of the European Commission [8], there are 25 million SMEs in Europe responsible for nearly a half of the European GDP.

The literature states that EC is not only an opportunity to large companies, providing the same potential benefits to SMEs and therefore symmetrizing competition [9]. According to Tan and Toe [10], businesses are also inclined to adopt the internet and convey extensive information access to customer in order to grasp a higher market reach through web presence [11]. Hence, EC can be considered as a ground-breaking framework to improve global competitiveness and promote firm scaling [12,13]. Moreover, it can help businesses bridging the distance to consumers, saving time and costs and thus raising profits [14,15]. Consequently, EC has growingly become an universal marketplace for businesses [16]; digital platforms provide unprecedented opportunities, reduced fixed costs, higher competitive advantages, broader product placement, and enlarged potential markets [16].

The literature often describes SMEs as being innovative and entrepreneurial [17] with a great sense of survival. Nonetheless, they also have embedded a high-risk aversion and limited access to capital resources [9,18] which has been associated with lower levels of EC adoption [19].

The barriers of EC adoption among SMEs can be broken down into two main vectors: internal factors and external factors. The first are deeply associated with the lack of awareness and digital literacy among owners and managers towards technological implementation [20], labeled in the literature as eAwareness [21]. Managerial experience of the owners/managers is positively associated with the degree of EC adoption, as found in the study of Chuang et al. [11]. Thus, it is expected that firms with higher a degree of technological experience will have a higher level of EC adoption [11]. Nonetheless, according to Wojkowski and Hardesty [22] managers/owners must have the knowledge of the new technology and perceive the change within the organization in order to apply it successfully.

Technological implementation can be a costly process and can thus be a hindering factor for SME adoption due to their limited resources [23]. As a consequence, the availability of resources is a crucial factor for technology adoption among these institutions [6]. Often, they do not have the opportunity to invest internal resources in recent technology, negatively impacting the adoption and application of EC [24].

Scholars have long regarded SMEs' technological readiness as a limiting factor for EC adoption [7,19]. Tan and Tyler [25] found that most of the problems in EC adoption among Chinese SMEs lie in technological readiness as well as the allocation of human and capital resources. The absence of technical knowledge is also a prevalent barrier among these organizations. Moreover, technology adoption requires skilled human capital to explore it [26]. Also, SMEs are not seldom characterized by having low endowments of human and financial resources and are thus less prone to adopt organizational changes [27].

The shift from traditional commerce venues towards digital ones represents an important challenge for SMEs [28] as the digital environment has fiercer competition due to its globalized nature, which makes it a more aggressive setting compared to the conventional counterpoint [29]. Consequently, the reluctance of SMEs to take this challenge can lead them to resist being online [30].

Concerning external factors, one of the main determinants of EC adoption is the business environment [30] which, given its centrality, should trigger off policy measures and regulations encompassing SMEs' singularities. As found in the study of Han [12], policy measures can have a drastic effect on EC adoption by SMEs. Moreover, the author found that unstable policies lead to an increase in operating costs, diminishing the likelihood of these firms to shift towards digital environments.

Trust is also considered being crucial in EC [31]. Moreover, its absence can drive out businesses and consumers from digital environments [32]. The literature reaffirms that consumers are less likely to engage on-line commerce when fearing security and trust

in the transaction [32–34]. According to Shouk and Eraqi [30], lower levels of trust and satisfaction in EC hinder this transition in SMEs.

To achieve long-term success, businesses must be able to be innovative and adapt to constant market volatility [35]. SMEs are not seldom more innovative than their larger counterparts, conveying them longer survivability [36]. Nonetheless, while innovation provides competitiveness, many firms strive to survive [37].

The extant literature regarding SMEs and their digital shift to EC has been increasingly growing over the last decades [6,19,30,32], nonetheless these organizations are far from being homogenous, consequently presenting an important challenge for scholars to address their strategies and anticipate successful paths as well as accurate policy actions.

Technology enables an ever-closer relationship between consumer and organization, allowing for more efficient supply-chains, cost reduction, and mobility. In recent years, global markets have witnessed a paradigm shift with the introduction of digital technologies, putting businesses, industries, and consumers in unexpected settings. Thus, to survive and remain competitive, businesses need to readjust their strategies to meet the new demand in digital marketplaces [38]. While some studies regard the adoption of digital platforms as part of the innovation strategies, given the present context, it seems that this step forward is a vital element towards SME resilience and survivability in the future.

Consumers who were unacquainted with online shopping have become more familiar with the experience as time evolves, leading to the creation of new businesses models that have emerged with the increasingly popularity of digital platforms in this new economic transformation. The year 2020 has become a turning point in the world economy; the COVID-19 pandemic has ignited among consumers and organizations the usage of EC on a daily basis, leading to a gradual replacement of traditional business models. According to the latest data from Statista [39], EC retail sales surpassed more than 4.2 trillion U.S dollars across the world in 2020 with a growth of more than 25 percent in relation to the previous year. Consumers are more than ever relying on their mobile devices to fulfil their shopping habits. This evolution and change of consumer behavior has been closely tied with the surge of new disruptive business models such as last-mile delivery, which relies on rapid delivery of goods in under an hour. As mentioned in the World Economic Forum's report [40], the high demand for faster delivery methods has been credited in the rise of a second-wave of EC, the quick commerce (hereafter q-commerce). The rise of q-commerce can disrupt established business models with the ever-growing demand of consumers for faster and more convenient business models. Companies such as UBER and GLOVO are capitalizing their business strategy in this shift towards fast-moving consumer demand. As such, we argue that SMEs must hurdle the past and begin to perceive the benefits of technology implementation and adoption in their future.

The present article aims, on the one hand, to analyze the state of art of the literature evidencing the strategies adopted by SME managers and owners in their pursuit of EC and, on the other hand and based on the evidence of past studies, to discuss the desirability of its adoption. Furthermore, in a digital era, this shift will generate competitive advantages and make them stay relevant, constituting a hatch for their survivability. Finally, the article proposes some guidelines towards pursuing and embracing digital marketplaces (and more specifically EC). It becomes evident that managerial awareness, technological readiness, financial struggles, and business environments are crucial determinants for the digital transition among these companies, which can be further reinforced with the intervention of the public authorities.

The present study is organized as follows. Section 2 describes the employed methodology and research pathway. The following Section 3 describes the accurate scrutiny of the research outcomes, considering journal distribution, country of analysis, and time period, providing a solid description of the body of literature regarding SMEs transition to digital venues of commerce, organization characteristics impacting EC adoption, and the role of

organizational characteristics in EC pursuit. Section 4 sheds light to the discussion. Lastly, Section 5 summarizes the main conclusions and provides suggestions for future research.

2. Method

2.1. Conceptualization

The rapid growth of EC has become a pivotal point of research within the literature in recent years, leading to the inception of several empirical and theoretical studies. Although the literature highlights larger firms as being more aware of the benefits in these digital frameworks, the importance and advantages of its adoption in SMEs can help them raise their survivability and gain the required competitive edge in this digitalization transformation. However, EC adoption among SMEs is still to be widely perceived.

At present, SMEs are facing serious challenges amidst the post-pandemic aftermath. These institutions are more vulnerable to crisis shocks due to their resource constrains, and are 8 percent more likely to shut down their operation in contrast to larger firms [41]. A key premise for SMEs in a post-pandemic scenario lies in whether these organization can adapt and adopt to new business models [41]. SMEs must embrace in their core new digital technologies in order to convey them the needed competitive advantages to stay relevant in this paradigm shift. Nonetheless, the low financial capacity of SMEs and lack of digital awareness can be a critical determinant in this adoption. As such, we argue that public initiatives and policy measures can be a crucial resource in guiding them in this new economic revolution. As present in the latest OECD report [42], policymakers must ensure that SMEs can access core digital tools in this digital transition by setting up a supportive long-term strategic framework, creating governance arrangements in emerging policy areas, and setting advisory and consultative groups at national and subnational levels [42]. The unprecedented wave of EC users has led organization to reap the rewards of moving their strategy to online platforms. EC has become a growth element not only for retailers but to the global economy; embracing these new digital frameworks can help SMEs to grow in the future by further connecting them to their audiences [43].

The overall premise of the current study is to understand and identify the strategic options of EC adoption among SMEs, while providing guidelines for a smoother and more efficient digital transition. We seek to gather lessons from the past by the means of a systematic literature review (hereafter SLR) research method. This method allows one to consolidate previous findings and identify future avenues of research. As such, we believe that providing a comprehensive overview of the studies on EC adoption in SMEs can deliver not only the basis for future empirical studies but also can serve as a guideline for SMEs managers/owners in their quest to digitalization that must rely on past examples to avoid mistakes and better develop their future strategic decisions.

2.2. Methodology

The present article aims to address the research question by means of a SLR. According to Tranfield et al. [44], this methodology aims to identify, evaluate, and synthesize the extant literature. Moreover, it must be carried out to provide a rigorous and reproducible scientific investigation of the literature on the research topic [44].

The analysis was carried forward into two parts, namely the quantitative and the qualitative. In doing do, the present research grasps a broader scope of the literature and provides a deeper understanding of the research subject. In this vein, the quantitative analysis was conducted, focusing on the analysis of the studies collected using the search criteria. Henceforth, we proceed to the qualitative/content analysis in which a discussion about EC adoption among SMEs is built as well as some guidance towards owners/managers and their immersion in virtual marketplaces.

SLR are crucial in understanding limitations in the literature, gaps of knowledge, and addressing problems that should be amended in future studies [45]. Nonetheless, as pointed by Page et al. [46], some SLR are not correctly reported and conducted. The Preferred Reporting Items for Systematic reviews and Meta-Analyses (hereafter PRISMA),

consists of 27 guidelines that encourage and ensure an accurate and transparent report [47]. Nonetheless, the PRISMA statement and its extensions must not be regarded as a methodological design. Instead, it must be employed as reporting guideline that encourages and promotes trustworthiness reporting in SLR [47]. Accordingly, the present study was guided by the standards of PRISMA, thus offering a valuable contribution to the literature, with an accurate, transparent, and complete assessment of the research in EC adoption in SMEs.

To achieve the research goals, the material collection used the Scopus database in June of 2021. Not seldom, SLR studies combine several databases to provide a broader range of articles. Nonetheless, we opted for a deeper analysis of this database as it is, in our perspective, the wider and more eclectic source of articles in the fields of business and management area and its subject categories including: management information systems, management of technology and innovation, and business and international management. Moreover, this straightforward choice provides an easy replication of the method for future researchers to pursue research concerning the topic.

The search string used encompassed two criteria. Firstly, all articles needed to contain in the title or abstract "SME" to guarantee that these were focused on the target organizations, as well as the title or abstract also needed to contain "e-commerce" or "e-business". This led to an initial set of 248 articles (Table 1). The following filtering process consisted in restricting the search to English written articles published in journals in the topic business, management, and accounting due to purpose of the present analysis. Conference papers and book reviews were excluded, producing a final set of 32 articles. These documents were analyzed in detail, and the covered timestamp is between 2003 and 2021 (see Appendix A for detailed list). Articles were grouped and revised to identify the country of analysis, the journal's impact factor, year of publication, research objective, research design, predominant strategies, policy recommendations, and main conclusions.

Table 1. Search methodology.

Criteria	Search String	Number of Articles
Restrictions	Title, Keywords, Abstract	
Keywords	"SME" AND "ecommerce" OR "e-business"	248
Language	English	243
Document Type	Articles	63
Source Type	Journals	58
Subject Area	Business, Management, and Accounting	32

3. Results

3.1. Quantitative Results

Scientific articles regarding SMEs and digital marketplaces encompassing the search criteria have been sporadically published over time without any concrete trend. Our sample of 32 articles is distributed between 2003 and 2021, making an average of two articles per year and the time frame depicts a smooth interest among researchers around the topic. This distribution is quite surprising as there was a previous expectation that digital marketplace transition would grasp increasing interest among academics as virtual communities and social networks gained momentum over the last decade. This reinforces the argument that the topic is still overlooked and needs urgent attention due to sustainability and economic recovery challenges.

Scholars have closely analyzed SMEs and their business strategies across almost infinite angles. These organizations are considered as pillars in the global economic sector [48]. Thus, studying their transition to digital platforms has become an increasingly important research area. The time frame between 2011 and 2013 registers the highest number of published articles in the Scopus database (nine articles, followed by 2003–2007 with six articles). Nonetheless, ever since the introduction of digital platforms, scholars have been trying to fully understand the impact of these in organizations and consumer behaviors [27,49]. We believe that following the events of the COVID-19 pandemic crisis,

adding to the natural and progressive digital transition taking place among SMEs will accelerate EC adoption. Therefore, we identify the topic as emergent in following years given its importance to provide insights to managers, practitioners, and policy makers to minimize the adversities of the digital shift. It is therefore predictable that there will be an increase of publications on this subject.

Then the content of the publications in the selected sample was analyzed. In terms of expectable impact, the analysis was performed relying upon the Scimago Journal Rank. This indicator allows measuring the scientific influence and the journal's recognition among the scientific community. Some articles of the sample were published in highly prestigious journals with great impact factor (e.g., [50]). This finding further reinforces the relevance and significance of studying SMEs in what concerns their presence in digital markets.

There is another perspective of appraisal related to the countries being analyzed in the sampled papers; the country with the most publications is the United Kingdom, four articles (Figure 1). According to the UK Small Business Statistics [51], there are 5.9 million SMEs in the country. Moreover, these institutions are responsible for three-fifths of employment in the private sector. This indicator reaffirms the significance and importance of these institutions in the economy. Consequently, governments and policymakers must perceive the unique nature of SMEs to promote their growth and survivability, namely in their transition to digital markets. As Ha [12] mentioned, EC adoption requires investment and infrastructures; nonetheless, many SMEs cannot adopt EC due to these barriers. The author also highlights policy and governmental support as fundamental to overcome existing barriers easing the transition into digital marketplaces.

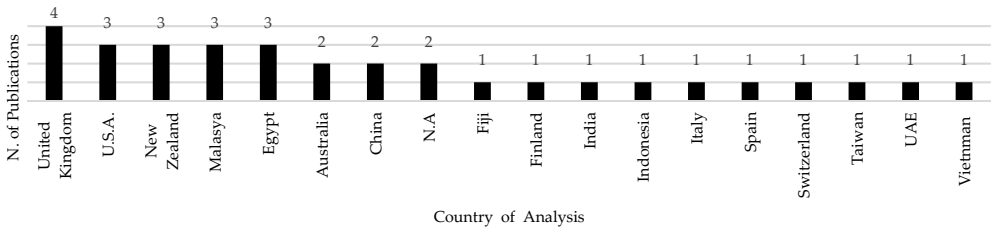

Figure 1. Number of publications by country.

3.2. Qualitative/Content Results

In the following section, we will proceed to summarize and examine the main theoretical contributions found in the selected articles. We acknowledge three main aspects recurrently explored regarding SMEs and EC adoption: (1) transitions towards digital commerce venues; (2) the role of organizational characteristics in EC pursuit; and (3) policymakers and governmental support in EC adoption.

3.2.1. Transition towards Digital Venues of Commerce

SMEs are profoundly embedded into the entrepreneurial fabric of the world economy [48]. They represent a crucial source of employment, sustainability, and economic development [52]. According to the latest European Commission report on SMEs [8], only 17% of European SMEs have integrated digital technologies, while 54% of the larger firms have already integrated digital technology. This leads us to assume that although these institutions are crucial for national economies, the transition to EC has not been widely accepted.

Accessibility, flexibility, and convenience make EC the perfect platform for businesses and consumers in the modern age. Although EC research is still in its early stages most of the studies highlight the benefits associated with embracing this revolutionary advancement in global commerce (e.g., [25,38,53–56]). Nonetheless, a great percentage of SMEs are still trying to find their place into this new context.

As found in the study of Al-Qirim [15], SMEs do not have a proactive attitude towards EC adoption, while larger firms are already strategically placed in digital marketplaces.

According to Tan and Teo [10], human and capital resources are a valuable determinant for technological adoption. Consequently, larger firms with more financial and human capital will have more technological readiness than SMEs [57].

According to the study of Levy and Powell [58], SMEs are unable to fully redesign their transition to digital commerce. The authors found that these institutions are more prone to adopt digital commerce in a lesser degree such as web presence and use of a website [58]. This finding is common across the literature; as found in Singh et al. [59], SMEs do not perceive the benefits of adopting and implementing EC. Moreover, the authors also found in their sample that these organizations have a slow pace attitude towards change, leading them to miss marketing and business opportunities [59].

The implementation and transition to new technology and its maintenance are always associated with high investments and an uncertainty on its economic return, especially in SMEs due to their financial nature and organization structure [60].

Nonetheless, one of the main barriers in EC adoption is the owner/manager perception. According to Grandón and Pearson [9], the perception value of EC in SMEs managers can be characterized in three major factors: (1) operational support; (2) managerial productivity; and (3) strategic decision aids. The factor of operational support measures the perceive benefits regarding the reduction of costs, improved customer services and distribution channels [9]. The managerial productivity factor relates to the benefit of EC in expanding access to information and improving managers productivity [9]. The strategic decision aids factor portrays how EC can help managers to improve their strategic choices and the gain access to networks and partners [9].

In contrast to traditional commerce, EC can provide businesses multiple advantages such as reducing distribution channels, lowering costs, more strategic flexibility, and a broader presence in international markets (e.g., [25,32,61,62]. Nonetheless, as stated by Levy and Powell [58], SMEs often focus on their local markets and do not have the ambition to further expand due to the required organizational changes and financial investment.

Although EC adoption barriers such as knowledge and awareness, available resources, resistance to change, risk-taking, technological readiness, skilled personnel, and business environment create a hinder effect towards the adoption and implementation of EC [7,24,30,63], SMEs must regard the benefits of this new mean in order to capitalize new business ventures and promote their sustainability.

The world has been rapidly changing towards digitalization. Consumers more than ever use online platforms to satisfy their personal needs and their shopping desires [49,64]. Recent advances in technology with the introduction of smartphones and social media platforms allow consumers to experience new forms of shopping experience [38]. Thus, businesses must capitalize on these new trends and take their strategies to digital marketplaces, thus boosting their competitive advantages.

In Table 2, the articles regarding the dimension of transition towards digital venues of commerce in our sample can be observed.

Table 2. Articles regarding the dimension of transition towards EC.

Author	Title	Journal	Objective
Tan and Manica, 2007	"Business-to-business adoption of eCommerce in China"	Information and Management	To analyze EC adoption by businesses from internal, external and contextual perspectives and organizational determinants affecting B2B EC adoption in China.
Al-Qirim, 2007	"The adoption of eCommerce communications and applications technologies in small businesses in New Zealand"	Electronic Commerce Research and Applications	To investigate the factors impacting the adoption of different EC communications and applications in New-Zealand SMEs.

Table 2. *Cont.*

Author	Title	Journal	Objective
Wymer and Regan, 2011	"Influential factors in the adoption and use of E-Business and E-commerce Information technology (EEIT) by small & medium businesses"	Journal of Electronic Commerce in Organizations	To study the adoption and use of EC information technology in SMEs.
Agag, 2019	"E-commerce Ethics and Its Impact on Buyer Repurchase Intentions and Loyalty: An Empirical Study of Small and Medium Egyptian Businesses"	Journal of Business Ethics	To develop a framework explaining impact of SMEs B2B EC ethics on buyer repurchase intentions and loyalty.
Levy and Powell, 2008	"Small firm transformation through IS"	International Journal of Technology Management	To study small firms digital and EC transformation through the use of information systems.
Wang et al., 2011	"Modeling the success of small and medium sized online vendors in business to business electronic marketplaces in china: A motivation—Capability framework"	Journal of Global Information Management	To explore the performance of Chinese SMEs on Business-to-Business electronic marketplaces.
Singh et al., 2013	"Challenges of using marketing information system (MkIS) by SMEs in Fiji"	International Journal of Entrepreneurship and Small Business	To examine the factors impacting SMEs EC adoption and the challenges of using marketing information system in Fiji.
Harland et al., 2007	"Barriers to supply chain information integration: SMEs adrift of eLands"	Journal of Operations Management	To examine the barriers to adoption of eBusiness technologies and therefore to achievement of integrated information in supply chains.
Sila and Dobni, 2012	"Patterns of B2B e-commerce usage in SMEs"	Industrial Management and Data Systems	To identify the B2B EC usage patterns of North American SMEs in their supply chains and the contextual factors that influence usage patterns.
Hafeez et al., 2010	"E-supply chain operational and behavioural perspectives: An empirical study of Malaysian SMEs"	International Journal of Production Research	To examine the impact of organisational and owner's characteristics on the extent of EC adoption in SMEs
Chuang et al., 2007	"Examining the impact of organisational and owner's characteristics on the extent of e-commerce adoption in SMEs"	International Journal of Business and Systems Research	To examine the impact of organisational and owner's characteristics on the extent of e-commerce adoption in SMEs.
Chua et al., 2009	"Exploring the types of smes which could use blogs as a marketing tool: A proposed future research agenda"	Journal of Information Systems and Small Business	To demonstrate how the heterogeneity of SMEs and their specific business uses of eBusiness technology such as blogs can form the central plank of a future research agenda.
Ghandour, 2018	"FAHP-based to-do-list for eCommerce websites the case of SMEs in Abu Dhabi"	International Journal of Economics and Business Research	To provide a guideline for SMEs owners/managers in their website development.

3.2.2. The Role of Organizational Characteristics in Pursuing EC

Despite the recognizable benefits of EC, SMEs are still reluctant to transition towards this new paradigm shift in global markets. According to Kartiwi and MacGregor [60], SMEs are hesitant to adopt EC mainly due to technological and organizational barriers.

Many scholars have addressed the adoption and transition to EC according to the technology acceptance model [65] and Roger´s diffusion innovation model [66]. The technology acceptance model [65] states that institutions implement IT according to the perceived benefits and perceived ease of use [24,65]. Another theoretical framework presents in the sample is Roger´s diffusion innovation model [66]. This model proposes that the innovation acceptance process is implemented in five different stages: (1) the knowledge stage; (2) persuasion stage; (3) decision phase; (4) implementation stage; and (5) confirmation Stage [24,66]. Both models have been widely used in the literature. Nonetheless, these are rooted in the behavioral characteristics of the decision maker [24]. According to the study of Wymer and Regan [53], both models fail to fully explain the patterns of EC adoption in SMEs.

Expanding on the model proposed by the study of Akkeren and Cavaye [63], the implementation and adoption of EC in SMEs can be determined in four dimensions: (1) owner/manager characteristics; (2) return of investment; (3) firm characteristics; and (4) external pressure.

The first dimension considers the owners/managers' individualities that can constrain or enable technology adoption [63]. According to some scholars, a lack of awareness can lead owners/managers not to perceive the associated benefits in adopting EC [30,54]. Furthermore, if the owners/managers have a higher level of technology illiteracy, it is very unlike to change their business towards digital platforms [67]. Moreover, Qubtan et al. [54] conducted a study to find that awareness towards risk management is very high. This finding is a common theme in the literature because SMEs are reluctant to take risk in their business strategies [68], consequently hindering adopting and implementing EC [69].

The second dimension is centered on the economic return of the investment in adopting EC [63]. SMEs have less access to capital than larger firms [24]. Consequently, finance inadequacy is a significant determinant in technology adoption [30,70].

The final dimension takes into account the firm's characteristics [63]. According to the study of McCole and Ramsey [55], SMEs that are more sensitive regarding the changes in the customer/competitor environment have a higher tendency to adopt EC. The linkage between the firm and its environment is a reoccurring theme throughout our sample (e.g., [25,28,63,70]).

External factors such as external pressure [9,71], social factors [72], and competitors [73] are often seen as a significant determinant in adopting EC. Found in the study Akkeren and Cavaye [63], business environments significantly impact the adopted technology; additionally, if competitors or partners adopt a specific technology, these firms will be more influenced and inclined to adopt [24,55].

Markets with greater competition and demand are expected to be more innovative driven and thus creating higher technological implementation within the firms [55,66].

Innovation can be perceived as the main force to improve the firms' competitive advantage by creating new products, services, and methods [74–76]. The literature reveals that SMEs have a remarkable ability to be innovative [77,78]. According to Terziovski [79], innovative SMEs usually try mirroring strategies applied in larger companies. Thus, they perceive innovation as being a profitable strategy and a means to their development and sustainability. Nonetheless, the linkage between innovation and SMEs competitive advantages might vary by industry [36,80]. Therefore, digital platforms can provide SMEs with competitive advantages by strengthen their innovative behavior [36].

According to Thompson et al. [36] the implementation of the internet in SMEs can act as a source of innovation, enabling firms to decrease traditional transaction costs. Hence, EC can provide multiple benefits for SMEs such as an increase of effectiveness, reduction of

costs, operational efficiency, international market access, and increased innovative behavior (e.g., [7,24,36,53–56]).

As it can be observed in Table 3, we present the articles in our sample relating to the dimension of organizational characteristics in EC pursuit.

Table 3. Articles regarding the dimension of organizational characteristics in EC pursuit.

Author	Title	Journal	Objective
Wang and Ahmed, 2009	"The moderating effect of the business strategic orientation on eCommerce adoption: Evidence from UK family run SMEs"	Journal of Strategic Information Systems	To investigate EC adoption and implementation in family run SMEs.
McCole and Ramsey, 2005	"A Profile of Adopters and Non-adopters of eCommerce in SME Professional Service Firms"	Australasian Marketing Journal	To report the differences between adopters and non-adopters of EC in SME professional service firms in New Zealand.
Abou-Shouk et al., 2016	"Using competing models to evaluate the role of environmental pressures in ecommerce adoption by small and medium sized travel agents in a developing country"	Tourism Management	To investigate the factors that influence e-commerce adoption in SME travel agents in a developing country.
Thompson et al., 2013	"Are UK SMEs with active web sites more likely to achieve both innovation and growth?"	Journal of Small Business and Enterprise Development	To examine the impact of developing more active web sites and increasing EC on the relationship between innovation and growth performance in SMEs.
Van Akkeren and Harker, 2003	"The Mobile Internet and Small Business: An Exploratory Study of Needs, Uses and Adoption with Full-Adopters of Technology"	Journal of Research and Practice in Information Technology	To investigate the perceived barriers to EC adoption in Egyptian travel agents.
Vrček and Magdalenić, 2011	"Methodology and software components for e-business development and implementation: Case of introducing e-invoice in public sector and SMEs"	Journal of Cases on Information Technology	To describe the adoption of e-business in public sectors and SMEs by using an integrated open source approach called e-modules.
Balocco et al., 2008	"eBusiness applications in SMEs of Italian industrial districts: The textile and wood/furniture cases"	Service Business	To study the adoption of eBusiness in two Italian industrial districts: the textile district in Como and the wood/furniture district.
Qubtan et al., 2021	"Practical Risk Management Approaches among Small and Medium Enterprises"	TEM Journal	To study the risk management practices and the status of awareness.
Mäki and Toivola, 2021	"Global market entry for finnish SME ecommerce companies"	Technology Innovation Management Review	To study the expansion of EC by SMES in global markets.

3.2.3. Policymakers and Governmental Support in EC Adoption

In recent years there has been a growing awareness towards the significance of SMEs in the economy [81]. These institutions have a crucial role in increasing job creation, innovation, and regional and national development [82]. Several studies in the literature have highlighted the financial struggles present in SMEs (e.g., [78,83]).

At the present moment, SMEs are facing difficult challenges amidst the COVID-19 pandemic [84]. EC is on the rise with a growth of 17% in the year of 2020 [85]. This shift of consumers towards digital platforms have made global trade more competitive than ever.

Hence, there is a critical need for policymakers and governments to implement initiatives with the goal of helping these organizations to adapt and survive in this transition to digital marketplaces [30].

The role of policymakers and governments is a common theme throughout our sample, emphasizing the role of public policies in EC adoption. According to the study of Ha [12], SMEs must be ready to transition to EC, suggesting that policymakers must provide financial support in the transition to digital marketplaces. The study of Wymer and Regan [53] suggest that larger firms are the ones who benefited the most in the transition towards EC. Thus, the authors recommend that public and governmental entities must create supportive policies towards SMEs.

The comprehensive study of Zakaria and Janom [86] found that poor national legal frameworks, lack of appropriate EC infrastructure, national procedures, and policy guidelines are a great barrier towards business-to-business EC adoption in SMEs. The authors state that governments need to provide technological infrastructures, financial support, and other initiatives [86].

Nevertheless, as present in the study of Fan [87], some governmental institutions are taking into account the significance of adopting EC. For example the Chinese government has acknowledge the role of EC in their national development, leading them to the creation of new policies and laws to facilitate cross border EC [87]. Similarly, as mentioned by Gavrila et al. [88], the Spanish government has also recognize that future investments in digitalization is a crucial step towards future survivability in SMEs.

Government rules and laws can be a barrier for SMEs [25]. Consequently, to promote EC in these institutions, public policies must be designed according to the unique nature of SMEs [30,53]. Additionally, according to the latest report of the European Union on the potential of European SMEs [8], the commission will provide up to €300 million to encourage digitalization and innovation breakthroughs. This finding further reinforces the importance given to SMEs and their digital transition.

As it can be observed in Table 4, we present the articles in our sample relating to the dimension of policymakers and governmental support in EC adoption.

Table 4. Articles regarding the dimension of policymakers and governmental support in EC adoption.

Author	Title	Journal	Objective
Parker et al., 2011	"How do australian small and medium enterprises communicate their environmental improvement activities online?"	Australasian Journal of Information Systems	To study how australian SMEs communicate their environmental improvement activities in their online
Zakaria and Janom, 2011	"Developing and validating readiness measures of inter-organizational e-commerce on SMEs"	Journal of Internet Banking and Commerce	To explore the contributions of inter-organizational or B2B EC readiness model for SMEs. The articles focus specifically on the validation process of e-readiness assessment indicators.
Gavrila et al., 2021	"Spanish SMEs' digitalization enablers: E-Receipt appications to the offline retail market"	Technological Forecasting and Social Change	To study the potential effect of digitalization on Spanish SMEs, by means of provisioning cloud solutions supporting the business digitization process.

Table 4. *Cont.*

Author	Title	Journal	Objective
Fan, 2019	"An exploratory study of cross border E-commerce (CBEC) in China: Opportunities and challenges for small to medium size enterprises (SMEs)"	International Journal of E-Entrepreneurship and Innovation	To explore the opportunities and challenges for SMEs to leverage the China´s CBEC and develop new customers in markets outside their domestic ones.
Ha, 2020	"Enhancing the e-commerce application in SMEs"	Management Science Letters	To study the determinants in the process of adoption and implementation EC in Vietnamese.
Shouk and Eraqi, 2015	"Perceived barriers to e-commerce adoption in SMEs in developing countries: The case of travel agents in Egypt"	International Journal of Services and Operations Management	To investigate if SMEs achieve business transformation and EC transformations through ICT.
Retnaningdiah et al., 2020	"Incorporating intellectual property rights and e-commerce: Supply chain strategy to strengthen the competitiveness of SMEs"	International Journal of Supply Chain Management	To analyze the use of EC and intellectual property rights in the supply chain strategy for SMEs in order to gain competitiveness.

4. Discussion

Larger firms belonging to more technological industries are naturally more inclined to adopt and implement digital platforms such as EC [70]. The literature proves that adopting EC can bridge the gap between larger firms and SMEs competitive advantages [9]. A dynamic implementation of EC will provide firms an enhanced connection with partners and customers, larger market placement, reduction of costs, organizational efficiency, and innovative orientation.

We observed in the sampled articles two main vectors of influence impacting SMEs' EC adoption: (1) external determinants; and (2) organizational determinants (Figure 2 below).

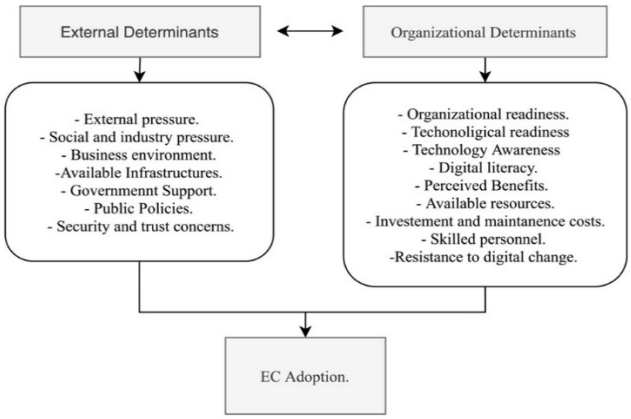

Figure 2. Determinants of EC adoption in SMEs.

First, we believe that the success of implementing and adopting EC relies mainly on the combination and the awareness of internal and external determinants. Pursuing EC adoption and implementation have become core elements of competitive advantage and are crucial for the survival of SMEs. Although these institutions are faced with great financial struggles, we believe that the presence of specialized and qualified personnel/managers can help them close the gap between larger firms and bring more specific knowledge into

the firm. Further avenues of research can provide more conclusive findings in the inclusion of specialized personnel/managers in adoption of EC in SMEs.

Second, we argue that policymakers and governments must act upon the struggles of these institutions in transitioning to digital marketplaces. Although there has been a growing awareness from governments and public entities towards the survival of SMEs, we believe that further research can provide more inclusive and comprehensive results. Moreover, we argue that governments can play a crucial role in the earlier stages of EC adoption with the creation of alliances between companies and provide educational resources for owners/managers with lower levels of technology literacy. Although some articles in the literature have already mentioned educational courses as being a valuable tool for owners/managers (e.g., [12,25,53,89]), we further reinforce the need for future research in these field.

The effects of the COVID-19 pandemic in global markets have led to a surge of users in digital platforms. More than ever the society is relying on digital marketplaces for their shopping needs. This shift from traditional venues towards digital-based ones has a brought a vigorous change in global markets. Nonetheless, the effect of this paradigm shift towards EC is still to be fully comprehended.

The literature proves that SMEs must change their business strategies towards EC if they want to survive. The transition to digital can be perceived as being an escape-hatch towards survivability in SMEs. We argue that transitioning to digital platforms does not imply taking the human element out of the organization, we believe that digital platforms such as EC, are a valuable tool not only for maximizing productivity inside organization but as a sustainable practice for the future.

Over the last decades urban populations and cities have been rapidly growing [90]. According to the European Commission Future of Cities report [90], there must be an essential rethink on how space is used. We believe that EC has the potential to change the way people behave in their shopping habits and thus changing land-use structures improving sustainable urbanism [91]. Moreover, an increase use of digital marketplaces can reset how shopping locations are distributed [92].

According to Pettersson et al. [91], space and place are slowly becoming insignificant in this transition to digital marketplaces, the authors further reinforce the concept of end of physical geography. The rise of this new digitalize era and the potential for working remotely, mobility, and EC accessibility can change the concept of retailers in physical spaces [91,93]. We believe that the emergent field between EC and sustainable urbanism is of most importance in present days. Nonetheless, few studies have focused on these two dimensions. Thus, we propose that further research in this subject can provide more all-encompassing results that can change the perceived notion and impact of EC in our society and livelihood.

5. Conclusions

This study offers a synthesis of the literature on SMEs and EC through a SLR. Our goals were threefold: examine the transition from tradition commerce to EC; analyze the role of organizational characteristics in EC pursuit; observe the support of policymakers and governmental in EC adoption.

The main contribution of this study is the identification of the main determinants affecting EC adoption in SMEs. We highlighted the most important findings in the literature that affect SMEs in their transition to EC. We believe this study is of most important relevance in today's scenario. As such, we hope that it serves as a foundation for future research and as a guideline for SMEs owners/managers.

We recognized the importance of embracing digital platforms as a survivability and resilience instrument in SMEs; moreover, we also acknowledged the role of policymakers and government in helping these institutions in their transition to EC.

In a similar vein to all SLR, the present study has its limitations. Although some SLR use multiple databases in order to provide the highest number of articles, we only selected

a single database. The choice to use a single database was deeply rooted on the concept of easy replication and transparency of our method. Thus, providing a clearer picture of the research subject and directions towards future research.

6. Future Perspectives and Recommendations

Recent events in worldwide markets have accelerated digital transitions, not only connected to ecological sustainability but also with comfort and proximity to an apolitical market with no boundaries or constraints. Modern consumers claim for smart time managements in a busy urban environment full of digital windows. Conventional internationalization strategies demand for mass consumption and large-scale production to thin fixed costs related to the settlement of subsidiaries.

According to the world economic forum [87] there is an increased concern about the economic paradigm in the COVID aftermath. The transition to digital media has brought with it important challenges, as there are doubts on the survival of traditional globalization and world trade. These include multinational giants falling off and global value chains fraying. There seems to be a natural trend towards reverse globalization, and EC may play a central role in combining inward and outward presence in the markets avoiding superfluous costs [94].

Consumers are being forced towards more spartan consumption habits, and the supply needs to adjust and become resilient. Additionally, there is an urgent demand for economic recovery encompassing waste minimization with job creation.

The future is digital, and the transition to this framework will grant survivability to the SMEs, allowing them to face the global competition in a fairer arena. Being present in a virtual marketplace will naturally raise potential opportunities. Policy makers as well as managers cannot neglect this transition as it is happening, and the firms can only decide to be in or out. However, the latter can still represent closure.

The importance of the organizational readiness is undeniable to minimize the costs and risks inherent to the transition. Once more, the ecosystem will play a determinant role in promoting success as the availability of the proper mechanisms will simplify the process and encourage the establishment of digital value chains and trustable markets. Policy actions need to provide the means but also the regulations to promote trust and simplify the bureaucratic procedures to adopt new business models as well as digital operation.

As markets to work require the commitment of the demand and the supply forces, policy makers need to play an active multidimensional role. At first, they can swell the ranks of electronic consumers by means of public procurement. Secondly, throughout consistently publicizing the reliability of these markets and reinforcing the trust mechanisms in the system. Conventional policy instruments such as subsidization or fiscal incentives could also leverage the adoption of these practices among SMEs and families. The centrality of the topic forces the recommendation of deeper analyses of the good practices of the digitalized sectors to be spread to the entire entrepreneurial fabric.

The global challenges presently put to entrepreneurs and firm managers forces these organizations to be present in the digital markets disregarding their size. This transition is, for certain, an opportunity not to be missed be SMEs to grant resilience and survivability.

Author Contributions: Conceptualization, J.C.; methodology, R.C. and J.C.; software R.C.; validation, J.C. and R.C.; formal analysis, J.C. and R.C.; writing R.C. and J.C. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Table A1. Journal distribution.

		Distribution of Publication Per Time Period							
Journal	**Quartile HFactor**	**2003–2007**	**2008–2010**	**2011–2013**	**2014–2016**	**2017–2019**	**2020–2021**	**Total**	**Citations**
Australasian Journal of Information Systems	Q2 | 18	1		1				2	37
Electronic Commerce Research and Applications	Q1 | 74	1						1	158
Industrial Management and Data Systems	Q1 | 103			1				1	35
Information and Management	Q1 | 162	1						1	189
International Journal of Business and Systems Research	Q3 | 15	1						1	30
International Journal of E-Entrepreneurship and Innovation	Q3 | 24					1		1	3
International Journal of Economics and Business Research	Q3 | 7					1		1	2
International Journal of Entrepreneurship and Small Business	Q2 | 33			1				1	1
Int.Journal of Networking and Virtual Organisations	Q4 | 19					1		1	2
International Journal of Production Research	Q1 | 142		1					1	33
Int. Journal of Services and Operations Management	Q3 | 27				1			1	7
International Journal of Supply Chain Management	n.a						1	1	1
International Journal of Technology Management	Q2 | 57		1					1	6
Journal of Business Ethics	Q1 | 187					1		1	16
Journal of Cases on Information Technology	Q3 | 14			1				1	4
Journal of Electronic Commerce in Organizations	Q4 | 22			1				1	17
Journal of Global Information Management	Q2 | 41			2				2	22
Journal of Information Systems and Small Business	n.a			1				1	22
Journal of Internet Banking and Commerce	n.a				1			1	5
Journal of Operations Management	Q1 | 191	1						1	157
Journal of Research and Practice in Information Technology	n.a	1						1	8
Journal of Small Business and Enterprise Development	Q1 | 67			1				1	8

Table A1. *Cont.*

		Distribution of Publication Per Time Period							
Journal	**Quartile HFactor**	**2003–2007**	**2008–2010**	**2011–2013**	**2014–2016**	**2017–2019**	**2020–2021**	**Total**	**Citations**
Journal of Strategic Information Systems			1					1	68
Management Science Letters	Q2 | 13						1	1	1
Prabandhan: Indian Journal of Management	Q1 | 88				1			1	3
Service Business	Q1 | 32		1					1	4
Technological Forecasting and Social Change	Q1 | 117						1	1	1
Technology Innovation Management Review	Q4 | 2						1	1	1
TEM Journal	n.a						1	1	n.a
Tourism Management	Q1 | 199				1			1	33
Total		6	4	9	4	4	5	32	

References

1. John, H. The Reality of E-Commerce with Developing Countries. *Int. J. Inf. Eng. Electron. Bus.* **2003**, *4*, 12–76.
2. Turban, E.; McLean, E.; Wetherbe, J. *Information Technology for Management: Transforming Organizations in the Digital Economy*; Wiley: New York, NY, USA, 2000; Volume 2, ISBN 978-0-471-22967-4.
3. Akram, U.; Safia, A.; Frimpong, A.N.K.; Chai, J. The Impact of Social Media Characteristics on E-Commerce Use Behaviour among Youth in Developing Countries. *Int. J. Inf. Syst. Chang. Manag.* **2019**, *11*, 188. [CrossRef]
4. The Evolution and Development of E-Commerce Market and E-Cash. In Proceedings of the International Conference on Measurement and Control Engineering 2nd (ICMCE 2011), Puerto Ric, USA, 21 October 2011; ASME Press: New York, NY, USA, 2011; pp. 245–252.
5. dos Santos, V.F.; Sabino, L.R.; Morais, G.M.; Goncalves, C.A. E-Commerce: A Short History Follow-up on Possible Trends. *IJBA* **2017**, *8*, 130. [CrossRef]
6. Abebe, M. Electronic Commerce Adoption, Entrepreneurial Orientation and Small- and Medium-Sized Enterprise (SME) Performance. *J. Small Bus. Enterp. Dev.* **2014**, *21*, 100–116. [CrossRef]
7. Abou-Shouk, M.A.; Lim, W.M.; Megicks, P. Using Competing Models to Evaluate the Role of Environmental Pressures in Ecommerce Adoption by Small and Medium Sized Travel Agents in a Developing Country. *Tour. Manag.* **2016**, *52*, 327–339. [CrossRef]
8. European Comission. *Unleashing the Full Potential of European SMEs*; European Union: Brussels, Belgium, 2020.
9. Grandon, E.E.; Pearson, J.M. Electronic Commerce Adoption: An Empirical Study of Small and Medium US Businesses. *Inf. Manag.* **2004**, *42*, 197–216. [CrossRef]
10. Tan, M.; Teo, T.S.H. Factors Influencing the Adoption of the Internet. *Int. J. Electron. Commer.* **1998**, *2*, 5–18. [CrossRef]
11. Chuang, T.T.; Nakatani, K.; Chen, J.C.H.; Huang, I.L. Examining the Impact of Organisational and Owner's Characteristics on the Extent of e-Commerce Adoption in SMEs. *Int. J. Bus. Syst. Res.* **2007**, *1*, 61. [CrossRef]
12. Ha, V.D. Enhancing the E-Commerce Application in SMEs. *Manag. Sci. Lett.* **2020**, 2821–2828. [CrossRef]
13. Susanty, A.; Handoko, A.; Puspitasari, N.B. Push-Pull-Mooring Framework for e-Commerce Adoption in Small and Medium Enterprises. *J. Enterp. Inf. Manag.* **2020**, *33*, 381–406. [CrossRef]
14. Saridakis, G.; Idris, B.; Hansen, J.M.; Dana, L.P. SMEs' Internationalisation: When Does Innovation Matter? *J. Bus. Res.* **2019**, *96*, 250–263. [CrossRef]
15. Al-Qirim, N. The Adoption of ECommerce Communications and Applications Technologies in Small Businesses in New Zealand. *Electron. Commer. Res. Appl.* **2007**, *6*, 462–473. [CrossRef]
16. Lefebvre, L.-A.; Lefebvre, É.; Elia, E.; Boeck, H. Exploring B-to-B e-Commerce Adoption Trajectories in Manufacturing SMEs. *Technovation* **2005**, *25*, 1443–1456. [CrossRef]
17. De Massis, A.; Audretsch, D.; Uhlaner, L.; Kammerlande, N. Innovation with Limited Resources: Management Lessons from the German Mittelstand. *J. Prod. Innov. Manag.* **2018**. [CrossRef]
18. D'Angelo, A.; Majocchi, A.; Buck, T. External Managers, Family Ownership and the Scope of SME Internationalization. *J. World Bus.* **2016**, *51*, 534–547. [CrossRef]
19. Alam, S.S.; Ali, M.Y.; Jani, M.F.M. An Empirical Study of Factors Affecting Electronic Commerce Adoption among SMEs in Malaysia. *J. Bus. Econ. Manag.* **2011**, *12*, 375–399. [CrossRef]
20. Cragg, P.; King, M.; Hussin, H. IT Alignment and Firm Performance in Small Manufacturing Firms. *J. Strateg. Inf. Syst.* **2002**, *11*, 109–132. [CrossRef]
21. Zheng, J.; Caldwell, N.; Harland, C.; Powell, P.; Woerndl, M.; Xu, S. Small Firms and E-Business: Cautiousness, Contingency and Cost-Benefit. *J. Purch. Supply Manag.* **2004**, *10*, 27–39. [CrossRef]
22. Wojtkowski, W.; Craig Hardesty, J. Reality of Use and Nature of Change in Small Business. *J. Cases Inf. Technol.* **2001**, *3*, 217–225.
23. Scupola, A. SMEs' E-commerce Adoption: Perspectives from Denmark and Australia. *J. Ent. Inf. Manag.* **2009**, *22*, 152–166. [CrossRef]
24. Van Akkeren, J.; Harker, D. The Mobile Internet and Small Business: An Exploratory Study of Needs, Uses and Adoption with Full-Adopters of Technology. *J. Res. Pract. Inf. Technol.* **2003**, *35*, 205–220.
25. Tan, J.; Tyler, K.; Manica, A. Business-to-Business Adoption of ECommerce in China. *Inf. Manag.* **2007**, *44*, 332–351. [CrossRef]
26. Simmons, G.; Armstrong, G.A.; Durkin, M.G. A Conceptualization of the Determinants of Small Business Website Adoption: Setting the Research Agenda. *Int. Small Bus. J.* **2008**, *26*, 351–389. [CrossRef]
27. Mustafa, N.; Nakov, L.; Islami, X. The Impact of Organizational Changes on Increasing SMEs Competitiveness. *SSRN J.* **2019**. [CrossRef]
28. Wang, S.; Hong, Y.; Archer, N.; Wang, Y. Modeling the Success of Small and Medium Sized Online Vendors in Business to Business Electronic Marketplaces in China: A Motivation—Capability Framework. *J. Glob. Inf. Manag.* **2011**, *19*, 45–75. [CrossRef]
29. Zhu, K. The Complementarity of Information Technology Infrastructure and E-Commerce Capability: A Resource-Based Assessment of Their Business Value. *J. Manag. Inf. Syst.* **2004**, *21*, 167–202. [CrossRef]
30. Shouk, M.A.; Eraqi, M.I. Perceived Barriers to E-Commerce Adoption in SMEs in Developing Countries: The Case of Travel Agents in Egypt. *Int. J. Serv. Oper. Manag.* **2015**, *21*, 332. [CrossRef]

31. Bock, G.-W.; Lee, J.; Kuan, H.-H.; Kim, J.-H. The Progression of Online Trust in the Multi-Channel Retailer Context and the Role of Product Uncertainty. *Decis. Support. Syst.* **2012**, *53*, 97–107. [CrossRef]
32. Lin, X.; Wang, X.; Hajli, N. Building E-Commerce Satisfaction and Boosting Sales: The Role of Social Commerce Trust and Its Antecedents. *Int. J. Electron. Commer.* **2019**, *23*, 328–363. [CrossRef]
33. Hong, I.B.; Cha, H.S. The Mediating Role of Consumer Trust in an Online Merchant in Predicting Purchase Intention. *Int. J. Inf. Manag.* **2013**, *33*, 927–939. [CrossRef]
34. Jahankhani, H. The Behaviour and Perceptions of On-Line Consumers: Risk, Risk Perception and Trust. *Int. J. Inf. Sci. Manag.* **2009**, *7*, 79–90.
35. Golovko, E.; Valentini, G. Exploring the Complementarity between Innovation and Export for SMEs Growth. *J. Int. Bus. Stud.* **2011**, *42*, 362–380. [CrossRef]
36. Thompson, P.; Williams, R.; Thomas, B. Are UK SMEs with Active Web Sites More Likely to Achieve Both Innovation and Growth? *J. Small Bus. Enterp. Dev.* **2013**, *20*, 934–965. [CrossRef]
37. Storey, D.J. *Understanding The Small Business Sector*, 1st ed.; Routledge: London, UK, 1994; ISBN 978-1-315-54433-5.
38. Bilgihan, A.; Kandampully, J.; Zhang, T. Towards a Unified Customer Experience in Online Shopping Environments: Antecedents and Outcomes. *Int. J. Qual. Serv. Sci.* **2016**, *8*, 102–119. [CrossRef]
39. Coppola, D. E-Commerce Worldwide—Statistics & Facts 2021. Available online: https://www.statista.com/topics/871/online-shopping/ (accessed on 10 September 2021).
40. World Economic Forum. The Future of the Last-Mile Ecosystem—Transition Roadmaps for Public- and Private-Sector Players 2020. Available online: https://www.c40knowledgehub.org/s/article/The-Future-of-the-Last-Mile-Ecosystem-Transition-roadmaps-for-public-and-private-sector-players?language=en_US (accessed on 10 June 2021).
41. Ikmal, A.; Djeneba, D.; Gregory, N.; Alexandros, R.; Aarti, R.; Timmis, J. *Small and Medium Enterprises in the Pandemic: Impact, Responses and the Role of Development Finance*; Policy Research Working Papers; World Bank Group: Washington, DC, USA, 2020.
42. OECD. *The Digital Transformation of SMEs*; OECD Studies on SMEs and Entrepreneurship; OECD: Paris, France, 2021; ISBN 978-92-64-39245-8.
43. Montenegro, L.; Forbes Agency Council. The Importance Of E-Commerce For Small Businesses. 2021. Available online: https://www.forbes.com/sites/forbesagencycouncil/2021/01/04/the-importance-of-e-commerce-for-small-businesses/?sh=2e5c381a2312 (accessed on 13 June 2021).
44. Tranfield, D.; Denyer, D.; Smart, P. Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review. *Br. J. Manag.* **2003**, *14*, 207–222. [CrossRef]
45. Page, M.J.; McKenzie, J.E.; Bossuyt, P.M.; Boutron, I.; Hoffmann, T.C.; Mulrow, C.D.; Shamseer, L.; Tetzlaff, J.M.; Akl, E.A.; Brennan, S.E.; et al. The PRISMA 2020 Statement: An Updated Guideline for Reporting Systematic Reviews. *BMJ* **2021**, *372*, n71. [CrossRef]
46. Page, M.J.; Shamseer, L.; Altman, D.G.; Tetzlaff, J.; Sampson, M.; Tricco, A.C.; Catalá-López, F.; Li, L.; Reid, E.K.; Sarkis-Onofre, R.; et al. Epidemiology and Reporting Characteristics of Systematic Reviews of Biomedical Research: A Cross-Sectional Study. *PLoS Med.* **2016**, *13*, e1002028. [CrossRef]
47. Sarkis-Onofre, R.; Catalá-López, F.; Aromataris, E.; Lockwood, C. How to Properly Use the PRISMA Statement. *Syst. Rev.* **2021**, *10*, 117. [CrossRef]
48. Dabić, M.; Maley, J.; Dana, L.P.; Novak, I.; Pellegrini, M.M.; Caputo, A. Pathways of SME Internationalization: A Bibliometric and Systematic Review. *Small Bus. Econ.* **2020**, *55*, 705–725. [CrossRef]
49. Zhang, K.Z.K.; Benyoucef, M. Consumer Behavior in Social Commerce: A Literature Review. *Decis. Support. Syst.* **2016**, *86*, 95–108. [CrossRef]
50. Elsevier. Journal of Information Systems Theories and Applications. Available online: www.elsevier.com/locate/im (accessed on 15 June 2021).
51. UK Small Business Statistics. Business Population Estimates for the UK and Regions in 2020. Available online: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/923565/2020_Business_Population_Estimates_for_the_UK_and_regions_Statistical_Release.pdf (accessed on 20 June 2021).
52. Child, J.; Hsieh, L.; Elbanna, S.; Karmowska, J.; Marinova, S.; Puthusserry, P.; Tsai, T.; Narooz, R.; Zhang, Y. SME International Business Models: The Role of Context and Experience. *J. World Bus.* **2017**, *52*, 664–679. [CrossRef]
53. Wymer, S.; Regan, E.A. Influential Factors in the Adoption and Use of E-Business and E-Commerce Information Technology (EEIT) by Small & Medium Businesses. *J. Electron. Commer. Organ.* **2011**, *9*, 56–82. [CrossRef]
54. Al Qubtan, T.R.; Gan, P.-T.; Hadi, F.S.A.; Abdul Jalil, N.; Rambeli, N. Practical Risk Management Approaches among Small and Medium Enterprises. *TEM J.* **2021**, 996–1004. [CrossRef]
55. McCole, P.; Ramsey, E. A Profile of Adopters and Non-Adopters of Ecommerce in SME Professional Service Firms. *Australas. Mark. J.* **2005**, *13*, 36–48. [CrossRef]
56. Mäki, M.; Toivola, T. Global Market Entry for Finnish SME ECommerce Companies. *Technol. Innov. Manag. Rev.* **2021**, *11*, 11–21. [CrossRef]
57. Rana, N.P.; Barnard, D.J.; Baabdullah, A.M.A.; Rees, D.; Roderick, S. Exploring Barriers of M-Commerce Adoption in SMEs in the UK: Developing a Framework Using ISM. *Int. J. Inf. Manag.* **2019**, *44*, 141–153. [CrossRef]
58. Levy, M.; Powell, P. Small Firm Transformation through IS. *Int. J. Technol. Manag.* **2008**, *43*, 123. [CrossRef]

59. Singh, G.; Naz, R.; Devi, K. Challenges of Using Marketing Information System (MkIS) by SMEs in Fiji. *Int. J. Entrep. Small Bus.* **2013**, *19*, 379. [CrossRef]
60. Kartiwi, M.; MacGregor, R.C. Electronic Commerce Adoption Barriers in Small to Medium-Sized Enterprises (SMEs) in Developed and Developing Countries: A Cross-Country Comparison. *J. Electron. Commer. Organ.* **2007**, *5*, 35–51. [CrossRef]
61. Retnaningdiah, D.; Resmi, S.; Kurniawati, I.; Winarso, B.S. Incorporating Intellectual Property Rights and E-Commerce: Supply Chain Strategy to Strengthen the Competitiveness of SMEs. *Int. J. Supply Chain. Manag.* **2020**, *9*, 649–655.
62. Agag, G. E-Commerce Ethics and Its Impact on Buyer Repurchase Intentions and Loyalty: An Empirical Study of Small and Medium Egyptian Businesses. *J. Bus. Ethics* **2019**, *154*, 389–410. [CrossRef]
63. van Akkeren, J.K.; Cavaye, A.L.M. Factors Affecting Entry-level Internet Technology Adoption by Small Business in Australia—Evidence from Three Cases. *J. Syst. Inf. Technol.* **1999**, *3*, 33–48. [CrossRef]
64. Cummins, S.; Peltier, J.W.; Schibrowsky, J.A.; Nill, A. Consumer Behavior in the Online Context. *J. Res. Interact. Mark.* **2014**, *8*, 169–202. [CrossRef]
65. Davis, F.D. Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Q.* **1989**, *13*, 319. [CrossRef]
66. Rogers, E.M. Diffusion of Innovations: Modifications of a Model for Telecommunications. In *Die Diffusion von Innovationen in der Telekommunikation*; Stoetzer, M.-W., Mahler, A., Eds.; Springer: Berlin/Heidelberg, Germany, 1995; pp. 25–38, ISBN 978-3-540-60002-2.
67. Thong, J.Y.L.; Yap, C.S. CEO Characteristics, Organizational Characteristics and Information Technology Adoption in Small Businesses. *Omega* **1995**, *23*, 429–442. [CrossRef]
68. Crick, D.; Chaudhry, S.; Crick, J.M. Risks/Rewards and an Evolving Business Model: A Case Study of a Small Lifestyle Business in the UK Tourism Sector. *Qual. Mark. Res.* **2018**, *21*, 143–165. [CrossRef]
69. Balocco, R.; Conforti Andreoni, M.; Rangone, A. EBusiness Applications in SMEs of Italian Industrial Districts: The Textile and Wood/Furniture Cases. *Serv. Bus.* **2008**, *2*, 303–319. [CrossRef]
70. Wang, Y.; Ahmed, P.K. The Moderating Effect of the Business Strategic Orientation on ECommerce Adoption: Evidence from UK Family Run SMEs. *J. Strateg. Inf. Syst.* **2009**, *18*, 16–30. [CrossRef]
71. Iacovou, C.L.; Benbasat, I.; Dexter, A.S. Electronic Data Interchange and Small Organizations: Adoption and Impact of Technology. *MIS Q.* **1995**, *19*, 465. [CrossRef]
72. Kuan, K.K.Y.; Chau, P.Y.K. A Perception-Based Model for EDI Adoption in Small Businesses Using a Technology–Organization–Environment Framework. *Inf. Manag.* **2001**, *38*, 507–521. [CrossRef]
73. Premkumar, G.; Roberts, M. Adoption of New Information Technologies in Rural Small Businesses. *Omega* **1999**, *27*, 467–484. [CrossRef]
74. Porter, M.E. *Competitive Advantage of Nations: Creating and Sustaining Superior Performance*; N.Y. Free Press: New York, NY, USA, 1985; 592p.
75. Castaño, M.S.; Méndez, M.T.; Galindo, M.Á. Innovation, Internationalization and Business-Growth Expectations among Entrepreneurs in the Services Sector. *J. Bus. Res.* **2016**, *69*, 1690–1695. [CrossRef]
76. Schumpeter, J.A. *Capitalism, Socialism and Democracy*; Routledge: London, UK, 2010; ISBN 0-203-85709-7.
77. Dibrell, C.; Davis, P.S.; Craig, J. Fueling Innovation through Information Technology in SMEs. *J. Small Bus. Manag.* **2008**, *46*, 203–218. [CrossRef]
78. Hoffmann, K.; Parejo, M.; Bessant, J.; Perren, L. Small Firms, R&D, Technology and Innovation in the UK: A Literature Review. *Technovation* **1998**, *18*, 39–55.
79. Terziovski, M. Innovation Practice and Its Performance Implications in SMEs in the Manufacturing Sector: A Resouce-Based View. *Strateg. Manag. J.* **2010**, *31*, 891–902.
80. Rosenbusch, N.; Brinckmann, J.; Bausch, A. Is Innovation Always Beneficial? A Meta-Analysis of the Relationship between Innovation and Performance in SMEs. *J. Bus. Ventur.* **2011**, *26*, 441–457. [CrossRef]
81. Ayyagari, M.; Beck, T.; Demirguc-Kunt, A. Small and Medium Enterprises Across the Globe. *Small Bus. Econ.* **2007**, *29*, 415–434. [CrossRef]
82. Anton, S.G.; Onofrei, M. Public Policies to Support Entrepreneurship and SMEs. Empirical Evidences from Romania. *Transylv. Rev. Adm. Sci.* **2016**, *2016*, 5–19.
83. Wright, M.; Westhead, P.; Ucbasaran, D. Internationalization of Small and Medium-Sized Enterprises (SMEs) and International Entrepreneurship: A Critique and Policy Implications. *Reg. Stud.* **2007**, *41*, 1013–1030. [CrossRef]
84. Ebeke, C.; Jovanovic, N.; Valderrama, L.; Zhou, J. *Corporate Liquidity and Solvency in Europe during COVID-19*; IMF Working Papers; IMF: Washington, DC, USA, 2021; Volume 21. [CrossRef]
85. UNCTAD. How COVID-19 Triggered the Digital and e-Commerce Turning Point. 2021. Available online: https://unctad.org/news/how-covid-19-triggered-digital-and-e-commerce-turning-point (accessed on 17 September 2021).
86. Zakaria, M.S.; Janom, N. Developing and Validating Readiness Measures of Inter-Organizational e-Commerce on SMEs. *J. Internet Bank. Commer.* **2011**, *16*, 1–15.
87. Fan, Q. An Exploratory Study of Cross Border E-Commerce (CBEC) in China: Opportunities and Challenges for Small to Medium Size Enterprises (SMEs). *Int. J. E-Entrep. Innov.* **2019**, *9*, 23–29. [CrossRef]

88. Gavrila Gavrila, S.; de Lucas Ancillo, A. Spanish SMEs' Digitalization Enablers: E-Receipt Applications to the Offline Retail Market. *Technol. Forecast. Soc. Chang.* **2021**, *162*, 120381. [CrossRef] [PubMed]
89. Parker, C.; Fraunholz, B.; Zutshi, A.; Crofts, M. How Do Australian Small and Medium Enterprises Communicate Their Environmental Improvement Activities Online? *Australas. J. Inf. Syst.* **2011**, *17*, 5–21. [CrossRef]
90. Comission, E. *How Can Public Space in a City Help to Address Future Urban Challenges?* European Commision: Luxembourg, 2021.
91. Pettersson, F.; Winslott Hiselius, L.; Koglin, T. E-Commerce and Urban Planning—Comparing Knowledge Claims in Research and Planning Practice. *Urban Plan. Transp. Res.* **2018**, *6*, 1–21. [CrossRef]
92. Crocco, F.; Eboli, L.; Mazzulla, G. Individual Attitudes and Shopping Mode Characteristics Affecting the Use of E-Shopping and Related Travel. *Transp. Telecommun. J.* **2013**, *14*, 45–56. [CrossRef]
93. Visser, E.-J.; Lanzendorf, M. Mobility and Accessibility Effects of B2c E-Commerce: A Literature Review: Mobility and Accessibility Effects of B2c e-Commerce. *Tijdschr. Voor Econ. Soc. Geogr.* **2004**, *95*, 189–205. [CrossRef]
94. Subramaniam, A.; Felman, J. How Deglobalization Is Hurting the World's Emerging Economies. Available online: https://www.weforum.org/agenda/2020/09/convergence-threatened-by-deglobalization-covid19 (accessed on 17 September 2021).