2022

# The Good, the Bad, and the Dynamic: Changes to Retail Business Models During COVID-19

Timo Phillip Böttcher

Jörg Weking

Helmut Krcmar

# The Good, the Bad, and the Dynamic: Changes to Retail Business Models During COVID-19

Timo Phillip Böttcher, Jörg Weking & Helmut Krcmar
Technical University of Munich, Department of Informatics, Germany.
E-mail: timo.boettcher@tum.de, joerg.weking@tum.de, helmut.krcmar@tum.de

**Abstract** Crises, such as the COVID-19 pandemic, challenge the economy and require firms to become resilient to external change. During COVID-19, the retail industry faced double-edged consequences. While brick and mortar business models (BMs) were discontinued, online retail thrived. Extant BM research has investigated several crises; however, it still lacks an explanation of how BM change increases resilience to cope with crises. We analyze the BMs of 45 European retailers and the BM changes implemented during the COVID-19 pandemic and their influence on the retailers' revenue. We identify three types of retailers implementing different strategies to cope with the crises: the »good,« the »bad,« and the »dynamic.« These represent resilient BMs, un-resilient BMs, and BMs becoming resilient enabled by digital technology. We show how BM change creates resilience and performance benefits. For practice, we show how retailers adapted their BM to a crisis leveraging digital technology.

**Keywords:** business model, resilience, COVID-19, innovation, retail.

University of Maribor Press

DOI https://doi.org/10.18690/um.fov.4.2022.8
ISBN 978-961-286-616-7

## 1 Introduction

COVID-19 has had a severe impact on industries like tourism through the imposition of travel restrictions. In contrast, others, such as home entertainment and software, have benefitted immensely from people having to stay at home. One industry that has experienced various reactions to the crisis is retail. Especially, brick-and-mortar retailers have faced various governmental actions restricting their business operations. For example, retail was closed completely, opened with limited opening hours, or with limited customer capacity, excluding infected, untested, and unvaccinated customers. On the contrary, online retailers were thriving.

While a crisis can have detrimental effects on businesses, it also creates opportunities and potential for innovation (Chisholm-Burns, 2010). Innovation in a time of crisis is necessary for a firm's long-term survival and building resilience (Floetgen et al., 2021; Wenzel et al., 2020). One way of improving resilience and gaining a competitive advantage during a crisis is to adapt the business model (BM) (Ucaktürk et al., 2011).

The BM describes how a firm creates and captures value and impacts its performance (Zott & Amit, 2007). BM research provides insights into how a firm can cope with a crisis and sustain its performance. Extant BM research covers crises such as the dot-com bubble and the 2008 global financial crisis and several natural disasters. This research shows how differences in BMs within a focal industry affect financial performance during and after a crisis (Hryckiewicz & Kozłowski, 2017; Ritter & Pedersen, 2020). Additionally, BM change provides a gateway towards creating resilience and even securing a long-term competitive advantage (Ucaktürk et al., 2011; Wenzel et al., 2020).

However, BM research primarily analyzes individual case studies and lacks generalizability (Lambert & Davidson, 2013). Moreover, since the emergence of the BM concept, there have only been three major economic crises, which further limits our knowledge of BM change and its impact in times of crisis. Thus, research lacks an explanation and practical guidance about how BM change can improve a firm's resilience to crisis. Hence, we propose the following research question: *What are BM changes in retail to cope with COVID-19?*

We conduct a qualitative case survey analysis (Larsson, 1993), collecting a sample of 45 large, publicly listed European retailers. Based on publicly available data, we analyze their BM changes implemented during the pandemic and identify twelve BM changes, primarily based on digital technologies. We identify three types of retailers through qualitative comparison of these changes, their pre-COVID-19 BMs, and their financial performance during the pandemic. The three types allow us to derive successful resilience strategies that support trends in retail and thus will probably prove successful even after the pandemic. We contribute to research on BM resilience, BM change, and digital retail. We identify resilient and non-resilient BM patterns that cause firms to either cope well or not so well with the COVID-19 crisis. We also identify BM changes that improve retail firms' coping with the crisis. We show how retailers gain resilience through BM changes and suggest digitalization strategies for future success in digital transformation. For practice, we provide tangible BM changes and practical examples of which BM changes were implemented and proved to improve retailers' resilience and revenue performance successfully.

## 2 Theoretical background

### 2.1 Business models during economic crises

Changing BMs in times of crisis is a new line of research based on the continuing importance of BMs (Massa et al., 2017). The two global crises BM literature covers are the 2008 financial crisis and the dot-com crash of the early 2000s. However, during the COVID-19 pandemic, scholars have placed renewed attention on the role of BMs during crises (Breier et al., 2021; Ritter & Pedersen, 2020; Seetharaman, 2020). Crises create tense situations endangering various parts of society. However, they also present opportunities for innovation. For example, the car radio, the supermarket, and even the Monopoly board game were all invented during the great depression (Chisholm-Burns, 2010). More recent examples such as WhatsApp, Airbnb, and Uber were founded during the 2008 financial crisis. The rise of Internet firms and the parallel emergence of BM research (Amit & Zott, 2001) was followed in the early 2000s by the dot-com crash. This resulted in a backlash to the BM concept that saw its viability questioned and condemned firms for focusing solely on their online business and losing sight of their business as a whole (Porter, 2001). However, it also spawned increased research into the BM and its importance (Ritter

& Pedersen, 2020). Roughly a decade later, government deregulation and consequent excessive risk-taking by banks led to a financial crisis that soon took on global economic proportions (Crotty, 2009). Relevant BM literature mainly focused on financial institutions, but it also generated research on BMs in general in times of crisis. The BM influences a firm's performance before, during, and after a crisis (Böttcher, Bootz, et al., 2021; Curi et al., 2015; Hryckiewicz & Kozłowski, 2017; Weking et al., 2019). Along with the focus on financial performance, BM resilience emerged. Research now concentrated on differences in BM resilience (Mora & Akhter, 2012) and the reasons for organizational resilience, such as management awareness (Ritter & Pedersen, 2020) and inter-firm partnerships (Birchall & Ketilson, 2009). On a BM level, customers favored low-cost offerings such as low-cost airlines (Štimac et al., 2012) during a crisis. Ultimately, the financial crisis in 2008 had such a severe impact on the airline BM that it can still be felt today. Consequently, BM innovation during a crisis is a source of resilience that can even produce a competitive advantage after the crisis (Ucaktürk et al., 2011). On the downside, the failure of firms to adapt their BMs during a crisis is one cause of bankruptcy (Beqiri, 2014). To innovate or adapt a BM, firms first need to understand their current BM (Böttcher & Weking, 2020; Chesbrough, 2007). From there, they can either innovate their BM to possibly even thrive during a crisis or decide to retrench parts of it to limit the negative repercussions (Ritter & Pedersen, 2020). For example, Uber's drivers faced low incomes, as transportation in lockdowns is seldomly required. Uber assisted them by adapting the BM from transporting people to transporting medicines and enhancing its food delivery BM (Scheepers & Bogie, 2020). In the hospitality industry, firms primarily rely on financial aid from the government. However, BM changes, such as delivery services or meal pick-ups, help to limit financial losses (Breier et al., 2021).

## 2.2 Business models in retail

Since the turn of the millennium, the rise of the Internet has ushered in retail's digital age. While, at first, the rise of online business resulted in the dot-com bubble, the digital age manifested itself in the declining importance of brick-and-mortar retail due to the inexorable rise in the importance of e-commerce. Frequently, retailers no longer serve as intermediaries but as multifaceted digital platforms (Sorescu et al., 2011). Due to the rapid pace of digital innovation, retailers now have to constantly adapt their BMs (Böttcher, Rickling, et al., 2021; Frew, 2017; Gavrila & de Lucas

Ancillo, 2021). Multichannel retail, which consists of offline and online channels, has also developed alongside pure e-commerce (Kumar et al., 2019). This concept is currently being developed further into omnichannel retailing. Omnichannel retailing, too, is based on multiple sales channels, for example, brick-and-mortar stores, online stores, and digital applications (Brynjolfsson et al., 2013). However, in omnichannel retail, the different channels are seamlessly integrated and enhance each other rather than existing in parallel (Cao, 2014; Liao & Yang, 2020). The omnichannel BM aims to create a superior digital customer experience (Verhoef et al., 2009). A successful digital retail BM is enhanced by engaging with customers, for example, through social networks or websites, to support their experience even when not shopping (Grewal et al., 2017). In addition, digital BMs allow customer data to be collected, leveraging this data for personalized content or offers tailored to the customer and creating personalized experiences (Baecker et al., 2021; Böttcher, Li, et al., 2021). In summary, the retail industry is amidst a digital transformation. Moreover, being an industry that is significantly exposed to the kind of closures and social constraints caused by COVID-19, primarily offline retailers have faced constraints to their BM that they have had to address to survive the economic crisis.

## 3 Method

We conduct a case survey to obtain generalizable, cross-sectional insights from qualitative data (Larsson, 1993). We collected our case sample from Crunchbase. Crunchbase is a comprehensive firm database that includes financial ratios and descriptive attributes, as well as descriptions of organizations' value propositions. We have filtered based on three criteria. First, firms need to be assigned to the retail industry. Second, to ensure that the available data on financial performance was reliable, we only included publicly listed firms. Third, firms had to be headquartered in Europe to establish comparability across firms. The initial search resulted in 183 firms. According to our criteria, we excluded firms from this initial sample that were not retailers (n = 65), that did not provide sufficient (n = 23) or comparable financial information (n = 47), and that did not operate in Europe (n = 13). Eventually, our final case sample consisted of 45 firms, whose 2019 and 2020 were then collected from their annual reports.

To analyze the pre-COVID-19 BM, we coded their pre-COVID-19 BM using 19 retail-specific BM patterns by Remane et al. (2017). Following Böhm et al. (2017), we coded each firm according to whether it applied a pattern or not in its BM. For this coding, we used information collected from their websites and annual, semestrial, and quarterly reports published before March 2020. This resulted in binary vectors for each firm, that defines their pre-COVID-19 BM. To identify BM changes during COVID-19, we used the same sources, adding recent news articles and firm statements. We followed an inductive coding procedure to identify patterns of BM changes through open, axial, and selective coding (Strauss & Corbin, 1998). After coding which retailers implemented BM change, we qualitatively analyzed the pre-COVID 19 BMs, the BM changes, and revenue performance to identify patterns of retailers' actions and performance during the pandemic.

# 4 Results

## 4.1 Business model changes

In response to COVID-19, we found 265 individual BM changes, grouped into 12 BM changes presented in the following. On average, firms implemented 5 BM changes during COVID-19. Most common were home delivery (n = 20), click and collect (n = 19), omnichannel and social responsibility (both n = 18). Generally, most firms were found to be accelerating the process of digitalization, and a trend towards *omnichannel* was apparent. Omnichannel refers to the concept of reaching a customer on as many touchpoints as possible. It creates a seamless customer experience, in which the lines between the different channels are blurred. Many of the BM changes contribute to omnichannel retailing. However, due to COVID-19, efforts have been accelerated. For example, ICA Gruppen accelerated their online shop rollout and added such services as click and collect, and they also developed a mobile app.

*Online channels* have been on the rise since the inception of the Internet and following the creation of pure-play online retailers. The COVID-19 pandemic limited mobility and customers spent more time at home and ordering online. This has forced retailers to adapt or improve their online channels. For instance, Cafom, a home furnishings retailer, created dedicated websites for each of its stores to assist customers in obtaining information about store opening times, what products are available, and what services are provided. Others, such as M.Video, a consumer electronics retailer, added online shops to digital platforms, despite already having their online channels.

*Click and collect* refers to ordering products online and picking them up at the store in person. Due to COVID-19, click and collect has increased drastically. We observe deviations from the regular in-store collection by enabling pick-up independent of opening hours. For example, Axfood and X5 Retail Group, both grocer retailers, and M.Video offer order collection from locker storage. Similarly, Dunelm and Teknosa offer a drive-through click and collect service.

*Home delivery* is another example of a service that has been offered before but gained new attention during the pandemic. Retailers added delivery services to their BMs and lowered the usage barriers, such as minimum order value. Furthermore, subscription services, well known from digital services, were introduced to various retail BMs. For example, Carrefour created a weekly food box delivery subscription service. Others, such as Ahold Delhaize, ICA Gruppen, and Matas, a drugstore chain, offer premium customer subscriptions with unlimited free delivery and special promotional offers.

*Express delivery* fulfills customers' need to receive products immediately rather than wait a few days. In this sense, express delivery fulfills the same need as click and collect, where customers order online and receive products as fast as possible. For example, the X5 Retail Group created an express delivery platform to connect their store network and manage their orders for express delivery options. The express delivery options increase convenience and allow firms to differentiate from competitors.

During COVID-19, retailers increasingly invested in *app development* to offer additional convenience services and engage remotely with their customers. On the one side, firms, such as ICA Gruppen, developed apps for new BMs, such as the delivery of pre-cooked meals from professional cooks whose restaurants were closed. On the other side, they incorporated functions to engage with their customers digitally. For example, M.Video added a video call function to their app to enable customers to call consultants in-store for assistance in online shopping.

New payment services support *new digital services by retailers*. While contactless payment was already well underway, COVID-19 increased the need for contactless or other payment options, such as self-checkouts. Magnit and Ozon have even developed their payment services enabling cashback on purchases. This aims to retain customers, collect customer data, and encourage repeat purchases.

By introducing *virtual shopping experiences* (VSEs), retailers have implemented new digital formats to present their products to customers. Carrefour and Axfood piloted voice-controlled shopping using intelligent home assistants, such as Google Nest. Magnit offers customers digital tours of their stores, while Dunelm offers one-on-one shopping with sales assistants present in a store using video calls. Hugo Boss, a luxury clothing brand, used TikTok to create challenges and even revealed their newest collection in a live stream on the video platform.

*Social responsibility* refers to a firm's involvement in supporting local communities. COVID-19 hit small firms particularly hard, as they often do not possess the resources and capabilities to implement digital BMs. Larger retailers have, in many cases, taken the responsibility to support small local firms. For example, Ahold Delhaize and Axfood started buying from local producers who generally sold to restaurants, whose demand plummeted due to restrictions. Online retailers, like Cnova, offered product placements for free and Ozon offered their digital knowledge to support small firms to create a digital presence.

*Partnerships* played a critical role due to the urgency of implementing these changes. Partnerships with specialists, such as delivery services like Deliveroo or Uber Eats, and even taxis or technology providers fastened the implementation, especially when the retailers did not possess the required capabilities before. For example, Carrefour partnered with a SaaS startup focusing on grocery retail to implement their express delivery service. They also partnered with a live-streaming platform to implement their VSEs. Partnerships also enabled the implementation of the aforementioned express delivery.

Of course, not all retailers implemented the changes mentioned above. Most pure online retailers were able to continue their *business as usual*. Also, following a cost leadership strategy, low-cost retailers continued the BM successfully, as customers favored cheap products. Finally, some retailers had retrenched parts of their business. Retailers in *retrenchment* had to close stores, cut down on staff, and negotiate rent with their landlords to manage expenditures. For example, Hugo Boss and Geox had to postpone future investments in new stores and launch new collections.

### 4.2 The good, the bad, and the dynamic

Changes in revenue range from an increase of +81.60% (e.g., Farfetch, a luxury fashion retail platform) to a decrease of -63.37% (e.g., Dufry, a duty-free retailer operating in airports, on cruise ships, etc.). The Shapiro-Wilk normality test reveals a normal distribution of the revenue change data ($p > 0.05$). To analyze the differences in revenue change among our case sample, we divide the sample into three subsets, comprising retailers who can continue their business as usual ($n = 11$), retailers who have to retrench their operations ($n = 12$), and all the others, i.e., those who are trying to manage the pandemic by implementing various BM changes ($n = 22$). The »*good*« retailers continued their business-as-usual. Their average revenue increase amounted to +36.92%. Thus, in relation to their peers, they profit from the pandemic. As they do not change their BM, apart from adding some functionality to previously existing online channels, the source of their good financial performance is their pre-COVID-19 BM, usually pure online or low-cost BMs. The »*bad*« retailers had to retrench parts of their BMs. Their average revenue increase amounted to -35.29%. While the retailers in this subsample tried to adapt their BM to cope with the pandemic, primarily focusing on online channels to implement an omnichannel BM, we observe no overall pattern in their responses. However, we do observe two patterns in their pre-COVID-19 BMs. First, high-quality retailers focusing on superior customer experiences in their stores failed to transfer these experiences into an online environment during lockdowns and store closings. Second, franchise retailers who frequently build on customer loyalty lost major revenue. The »*dynamic*« retailers changed their BM to manage the crisis successfully. They show a higher average revenue change (+ 7.66%) and slightly higher median (+ 5.84%) than the overall sample. Regarding their pre-COVID-19 BM, these firms build on customer loyalty and customer relationship management. In contrast to the »*bad*« sample, »*dynamic*« retailers supported their customer engagement through BM changes by leveraging new mobile apps, new payment services, and express delivery. They also build new digital relationships with their customers. Due to their satisfactory financial performance, they could also engage in social activities to engage in social responsibility activities.

## 5 Discussion

Due to COVID-19, research and practice increasingly discussed how firms could become more resilient to major and minor environmental changes. The BM is shown to be an influencing factor for firm performance (Böttcher, Al Attrach, et al., 2021; Böttcher, Bootz, et al., 2021; Weking et al., 2019). BM changes are a relevant source of innovation and, if implemented by competitors, can create significant changes in the competitive environment of a focal firm (Böttcher, Phi, et al., 2021; Böttcher & Weking, 2020). Thus, the BM can be a source of disruption and increase firms' resilience. Retail has been affected particularly strongly by social restrictions due to COVID-19. Therefore, we analyze the BMs before, and BM changes implemented during COVID-19 of 45 European retailers and compare the revenue performance of these firms.

We identify twelve patterns of BM changes and three types of retailers, the »*good*,« the »*bad*,« and the »*dynamic*,« with different performance outcomes demonstrating different types of resilience. The »*good*« retailers performed exceptionally well during the pandemic, grounding their performance in their pre-COVID-19 BM. The e-commerce and low-cost retailer patterns thrive in the current situation. While their offline competitors were forced to close their stores, e-commerce retailers profited from the fact that people stayed at home and ordered online, which reduced competition from the offline world. On the other hand, the economic crisis led to decreased consumer confidence. Economic uncertainty, reduced income, and the increasing threat of job loss led to increased price sensitivity. Thus, retailers employing the low-cost pattern benefited from the pandemic. Compared to the pre-COVID-19 period, the »*bad*« retailers lose revenue. On the one hand, these are premium retailers offering superior customer experiences in their stores. However, they could not transfer this experience to the online world when stores had to close. Additionally, customers avoided making any expensive investments due to the aforementioned economic uncertainty. On the other hand, we observe that franchise retailers suffer in the crisis. Such franchise stores are often located in highly frequented places, such as malls or city centers. During the COVID-19 lockdowns, malls were closed, and people avoided potentially crowded places. Additionally, the headquarters had no direct influence on franchise stores through the franchise organization. Thus, it was up to the franchisees to respond to the crisis by changing their BM (e.g., offering click and collect), making a unitary response difficult. In comparison, we observe resilient BMs on the one hand and non-resilient BMs on the other hand. The COVID-19 pandemic, societal lockdowns, and significant economic downturn reveal how resilient a BM is. Such BM resilience is crucial to whether a firm can survive or even thrive in times of crisis. In addition to BM resilience, our results also show another form of resilience. The »*dynamic*« retailers demonstrate the opportunities of BM change in response to the pandemic. Retailers leveraged digital technology, such as mobile apps or new digital payment services. They also built up resilience based on customer relationships. Using mobile apps, VSEs, online channels, etc., these retailers began to engage more with their customers. As the customers' needs shifted in the pandemic, dynamic retailers changed their BM. For example, customers started buying building materials from hardware stores. Using apps and video calls, hardware stores could assist and advise their customers. The implemented changes support the overall trend in retail towards omnichannel BMs (Keiningham et al., 2020; Sorescu et al., 2011). The BM changes we observe during COVID-19 are necessary to their future survival (Bell et al., 2014). Now, as customers have experienced how the integration of online and offline can work, these BMs will become the norm rather than temporary (Breier et al., 2021; Seetharaman, 2020).

### 5.1 Contributions to research and practice

This paper shows how a BM influences how firms cope with the COVID-19 crisis. We also show how a change to the BM helps firms build resilience. Hence, this paper contributes to research on BMs, especially BM change and BM resilience. First, we show how retailers changed their BM during the COVID-19 pandemic and gained resilience. As the pre-COVID-19 BMs could not be continued during the pandemic, retailers needed to adapt. In this respect, we contribute to the scant research on BMs during economic crises (Ritter & Pedersen, 2020). Second, we contribute to the emerging stream of research on BM resilience (Niemimaa et al., 2019) and performance implications of BMs (Spiegel et al., 2016). We show resilient BMs that outperform others (the »*good*«) and point out BMs that are particularly prone to underperform (the »*bad*«). The BM changes improve and especially digitalize the customer experience to create BM resilience and improve performance, highlighting the importance of the digital transformation in retail. We show how retailers leverage BM change and digital technology to enable them to evolve towards omnichannel BMs by seamlessly integrating online and offline channels (Brynjolfsson et al., 2013;

Hansen & Sia, 2015). Omnichannel BMs and digital customer experience are set to be the new normal, and the COVID-19 pandemic is only accelerating this development.

### 5.2 Limitations and future research

There are some limitations to this research. First, our analysis is limited to European and publicly listed retailers. While our case sample provides a cross-section of retailers covering different areas from groceries to luxury fashion, it is limited to large firms. Small or medium-sized retailers with limited resources may adapt their BMs differently. Second, we did not account for long-term developments that began before the onset of COVID-19. Third, our research relies on publicly available information reported by the firms and relevant news outlets. Therefore, we may not have captured all the details of the BM changes. Future research can build on our findings to analyze the long-term effects of BM changes implemented during the pandemic. The BM changes leading to superior short-term performance identified in this paper primarily improve the customer experience by creating digital experiences for customers, supporting extant research. Future research can verify whether the BM changes identified to improve the digital customer experience are substantial and whether they also lead to improved business performance in the long term. This could provide further insights into the claims that COVID-19 served as a catalysator for digital transformation, forcing even reluctant firms and industries to engage in digital transformation initiatives.

## 6 Conclusion

In this paper, we analyze the BMs of 45 European retailers and changes to BMs and performance during the COVID-19 pandemic. We find two types of resilient BMs and two types of non-resilient BMs. In addition, retailers that use digital technologies to affect BM's chance of connecting with their customers in difficult times are coping better than others.

**Acknowledgements**

The authors would like to thank the track chairs, editors and all anonymous reviewers for their helpful comments and suggestions. We thank the German Federal Ministry for Economic Affairs and Energy for funding this research as part of the project 01MK20001B (Knowledge4Retail).

**References**

Amit, R., & Zott, C. (2001). Value creation in E-business. Strategic Management Journal, 22(6-7), 493-520. https://doi.org/10.1002/smj.187

Baecker, J., Böttcher, T. P., & Weking, J. (2021). How Companies Create Value From Data – A Taxonomy on Data, Approaches, and Resulting Business Value 28. European Conference on Information Systems (ECIS), Marrakesh, Morocco.

Bell, D. R., Gallino, S., & Moreno, A. (2014). How to win in an omnichannel world. MIT Sloan Management Review, 56(1), 45.

Beqiri, G. (2014). Innovative business models and crisis management. Procedia Economics and Finance, 9, 361-368.

Birchall, J., & Ketilson, L. H. (2009). Resilience of the cooperative business model in times of crisis. International Labour Organisation.

Böhm, M., Weking, J., Fortunat, F., Mueller, S., Welpe, I., & Krcmar, H. (2017). The Business Model DNA: Towards an Approach for Predicting Business Model Success. 13. Internationale Tagung Wirtschaftsinformatik (WI 2017), St. Gallen, Switzerland.

Böttcher, T., Al Attrach, R., Bauer, F., Weking, J., Böhm, M., & Krcmar, H. (2021). Why Incumbents Should Care–The Repercussions of FinTechs on Incumbent Banks. 25. Pacific Asia Conference on Information Systems, Virtual.

Böttcher, T., Bootz, V., Zubko, T., Weking, J., Böhm, M., & Krcmar, H. (2021). Enter the Shark Tank: The Impact of Business Models on Early Stage Financing. 16. International Conference on Wirtschaftsinformatik, Duisburg-Essen, Germany.

Böttcher, T., Li, W., Hermes, S., Weking, J., & Krcmar, H. (2021). Escape from Dying Retail by Combining Bricks and Clicks: A Taxonomy of Digital Business Models in Retail. 25. Pacific Asia Conference on Information Systems, Virtual.

Böttcher, T., Phi, D. A., Flötgen, R., Weking, J., & Krcmar, H. (2021). What Makes an Innovative Business Model? Evidence From the 70 Most Innovative Firms. 27. Americas Conference on Information Systems, Virtual.

Böttcher, T., Rickling, L., Gmelch, K., Weking, J., & Krcmar, H. (2021). Towards the Digital Self-Renewal of Retail: The Generic Ecosystem of the Retail Industry 16. International Conference on Wirtschaftsinformatik, Virtual.

Böttcher, T., & Weking, J. (2020). Identifying Antecedents & Outcomes of Digital Business Model Innovation. 28. European Conference on Information Systems, Virtual.

Breier, M., Kallmuenzer, A., Clauss, T., Gast, J., Kraus, S., & Tiberius, V. (2021). The role of business model innovation in the hospitality industry during the COVID-19 crisis. International Journal of Hospitality Management, 92, 102723.

Brynjolfsson, E., Hu, Y., & Rahman, M. (2013). Competing in the Age of Omnichannel Retailing. MIT Sloan Management Review, 54, 23-29.

Cao, L. (2014). Business model transformation in moving to a cross-channel retail strategy: A case study. International Journal of Electronic Commerce, 18(4), 69-96.

Chesbrough, H. (2007). Business model innovation: it's not just about technology anymore. Strategy & Leadership, 35(6), 12-17. https://doi.org/10.1108/10878570710833714

Chisholm-Burns, M. A. (2010). A crisis is a really terrible thing to waste. American journal of pharmaceutical education, 74(2).

Crotty, J. (2009). Structural causes of the global financial crisis: a critical assessment of the 'new financial architecture'. Cambridge journal of economics, 33(4), 563-580.
Curi, C., Lozano-Vivas, A., & Zelenyuk, V. (2015). Foreign bank diversification and efficiency prior to and during the financial crisis: Does one business model fit all? Journal of Banking & Finance, 61, S22-S35.
Floetgen, R. J., Strauss, J., Weking, J., Hein, A., Urmetzer, F., Böhm, M., & Krcmar, H. (2021). Introducing platform ecosystem resilience: leveraging mobility platforms and their ecosystems for the new normal during COVID-19. European Journal of Information Systems, 30(3), 304-321. https://doi.org/10.1080/0960085x.2021.1884009
Frew, D. (2017). There is Hope for Brick and Mortar Retail: A Time to Transform the Business Model. IEEE Consumer Electronics Magazine, 6(4), 105-106.
Gavrila, S. G., & de Lucas Ancillo, A. (2021). Spanish SMEs' digitalization enablers: E-Receipt applications to the offline retail market. Technological Forecasting and Social Change, 162, 120381.
Grewal, D., Roggeveen, A. L., Sisodia, R., & Nordfält, J. (2017). Enhancing Customer Engagement Through Consciousness. Journal of Retailing, 93(1), 55-64.
Hansen, R., & Sia, S. (2015). Hummel's Digital Transformation Toward Omnichannel Retailing: Key Lessons Learned. MIS Quarterly Executive, 14(2), 51-66.
Hryckiewicz, A., & Kozłowski, Ł. (2017). Banking business models and the nature of financial crisis. Journal of International Money and Finance, 71, 1-24.
Keiningham, T., Aksoy, L., Bruce, H. L., Cadet, F., Clennell, N., Hodgkinson, I. R., & Kearney, T. (2020). Customer experience driven business model innovation. Journal of Business Research, 116, 431-440.
Kumar, A., Mehra, A., & Kumar, S. (2019). Why do stores drive online sales? Evidence of underlying mechanisms from a multichannel retailer. Information Systems Research, 30(1), 319-338.
Lambert, S., & Davidson, R. (2013). Applications of the business model in studies of enterprise success, innovation and classification: An analysis of empirical research from 1996 to 2010. European Management Journal, 31(6), 668-681. https://doi.org/10.1016/j.emj.2012.07.007
Larsson, R. (1993). Case Survey Methodology: Quantitative Analysis of Patterns Across Case Studies. Academy of Management Journal, 36(6), 1515-1546. https://doi.org/10.5465/256820
Liao, S. H., & Yang, L. L. (2020). Mobile payment and online to offline retail business models. Journal of Retailing and Consumer Services, 57, Article 102230. https://doi.org/10.1016/j.jretconser.2020.102230
Massa, L., Tucci, C. L., & Afuah, A. (2017). A Critical Assessment of Business Model Research. Academy of Management Annals, 11(1), 73-104. https://doi.org/10.5465/annals.2014.0072
Mora, P., & Akhter, M. (2012). Why and how some wine SMEs resist to the crisis? International Journal of Business and Globalisation, 8(1), 95-111.
Niemimaa, M., Järveläinen, J., Heikkilä, M., & Heikkilä, J. (2019). Business continuity of business models: Evaluating the resilience of business models for contingencies. International Journal of Information Management, 49, 208-216.
Porter, M. E. (2001). Strategy and the Internet [Article]. Harvard Business Review, 79(3), 62-78, 164. <Go to ISI>://WOS:000167207700009
Remane, G., Hanelt, A., Tesch, J. F., & Kolbe, L. M. (2017). The Business Model Pattern Database-A Tool For Systematic Business Model Innovation [Article]. International Journal of Innovation Management, 21(1), Article 1750004. https://doi.org/10.1142/S1363919617500049
Ritter, T., & Pedersen, C. L. (2020). Analyzing the impact of the coronavirus crisis on business models. Industrial Marketing Management, 88, 214-224.
Scheepers, C. B., & Bogie, J. (2020). Uber Sub-Saharan Africa: contextual leadership for sustainable business model innovation during COVID-19. Emerald Emerging Markets Case Studies.

Seetharaman, P. (2020). Business models shifts: Impact of Covid-19. International Journal of Information Management, 54, 102173.

Sorescu, A., Frambach, R. T., Singh, J., Rangaswamy, A., & Bridges, C. (2011). Innovations in Retail Business Models [Article]. Journal of Retailing, 87, S3-S16. https://doi.org/10.1016/j.jretai.2011.04.005

Spiegel, O., Abbassi, P., Zylka, M. P., Schlagwein, D., Fischbach, K., & Schoder, D. (2016). Business model development, founders' social capital and the success of early stage internet start-ups: a mixed-method study [Article]. Information Systems Journal, 26(5), 421-449. https://doi.org/10.1111/isj.12073

Štimac, I., Vince, D., & Vidović, A. (2012). Effect of Economic Crisis on the changes of low-cost carriers business models. 15th International Conference on Transport Science ICTS,

Strauss, A. L., & Corbin, J. M. (1998). Basics of qualitative research: Techniques and procedures for developing grounded theory (2nd ed. ed.). Sage Publications.

Ucaktürk, A., Bekmezci, M., & Ucaktürk, T. (2011). Prevailing during the periods of economical crisis and recession through business model innovation. Procedia-Social and Behavioral Sciences, 24, 89-100.

Verhoef, P. C., Lemon, K. N., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L. A. (2009). Customer experience creation: Determinants, dynamics and management strategies. Journal of Retailing, 85(1), 31-41.

Weking, J., Böttcher, T., Hermes, S., & Hein, A. (2019). Does Business Model Matter for Startup Success? A Quantitative Analysis. 27. European Conference on Information Systems (ECIS), Stockholm, Sweden.

Wenzel, M., Stanske, S., & Lieberman, M. B. (2020). Strategic responses to crisis. Strategic Management Journal, in press. https://doi.org/10.1002/smj.3161

Zott, C., & Amit, R. (2007). Business Model Design and the Performance of Entrepreneurial Firms [Article]. Organization Science, 18(2), 181-199. https://doi.org/10.1287/orsc.1060.0232