UNIVERSITY OF GOTHENBURG
SCHOOL OF BUSINESS, ECONOMICS AND LAW

# Resilient Retailing

## The effects of sustainability and omnichannel practices on resilience for retailers in Gothenburg

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Moa Udén
Lina Andersson

Supervisor: PhD John Armbrecht

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# Abstract

The aim of this study is to gain understanding of in what ways sustainability and omnichannel practices could lead to greater organizational resilience in the retail industry. This study contributes to the field by studying the relationship between sustainability management and resilience in an overall retail setting. Furthermore, this study contributes by also examining the relationship between omnichannel and resilience which has not been covered in earlier research. Sustainability is defined through the Triple Bottom Line logic and omnichannel through channel integration. Resilience is delimited to organizational resilience and measured through adaptive capacity of the companies. A systematic literature review is carried out, suggesting positive impact of omnichannel management and sustainability management on resilience. A systematic literature review is carried out, suggesting positive impact of omnichannel management and sustainability management on organizational resilience.

The literature review is followed by a quantitative methodology where data is collected from representatives of retail companies in central Gothenburg. The data is analyzed using confirmatory factor analysis and structural equation modelling. The results of the analysis show a significant positive relationship between sustainability and resilience, leading to the findings that sustainability management contributes to increased adaptive capacity for retail companies. Digital capabilities are also found to have a positive impact on organizational resilience, suggesting a continued focus on digitalization of the retail industry. No significant relationship is found between omnichannel and resilience from the results of our study. The findings consist of theoretical contributions on the subjects as well as implications for managers within the retail sector.

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# 1. Introduction

## 1.1. A Shifting Retail Sector

A key concept within many business sectors that has gained rising acknowledgement over the last decades is *sustainability* (Deegan, 2002; Porter & Kramer, 2011; Gardner, Benzie, Börner, Dawkins, Fick, Garrett & Mardas, 2019). With the UN acting as a leader promoting the importance of sustainability management within all sectors through the 2030 Agenda for Sustainable Development (United Nations, 2015), no sector is unaffected by external and internal pressures of adopting sustainability goals and activities. Retailers specifically find themselves in a position with pressure coming from various stakeholders, including supply chain actors such as consumers and producers (Erol, Cakar, Erel & Sari, 2009) but also public institutions and media. Questions have been raised regarding the environmental, social and economic sustainability of retailing, often focusing on global inequalities (Niinimäki, 2020; Benn, Edwards & Williams, 2018), sustainable supply-chain management (Carbone, Moatti & Vinzi, 2012; Styles, Schoenberger & Galvez-Martos, 2012) and transparent reporting (Deegan, 2002; Higgins & Larrinaga, 2016). Retailers have been under scrutiny regarding the sustainability of their operations for decades, with pressure arising from governments, non-governmental organizations, media and consumers (Benn et al., 2018). However, while discussions about sustainability have been around both in research and media for a long time before the covid-19 pandemic, its importance is expected to increase even more following the crisis (Svensk Handel, 2020). Currently, a topic that has gained attention is how the pandemic could support in the transition towards more sustainable consumption (Cohen, 2020; Brydges, Retamal, & Hanlon, 2020; Bodenheimer & Leidenberger, 2020), focusing on issues such as just-in-time manufacturing contributing to increased emissions and the concentrated amount of production taking place in low-wage countries (Bodenheimer & Leidenberger, 2020). Sustainability thus remains a central concept even in times of crisis when retailers and other actors in society arguably face many other issues.

Another concept that has affected the retail sector, and still is of great importance, is digitalization. Following technological development and changes in consumer behaviour and demands, the retail sector has responded with digitalization of the entire business models (Hagberg, Sundström & Egels-Zandén, 2016) and digitization of the physical retail spaces (Roggeveen & Sethuraman, 2020a). The digitalization of retailing early on included both changes of existing activities such as offering mobile payments, and the introduction of new activities such as offering e-commerce besides physical stores (Hagberg et al., 2016), which shows the holistic impact that digitalization has had and continues to have on the retail sector. Along with the changes stemming from digitalization, consumers are now demanding more memorable and valuable experiences from retailers (Pantano & Gandini, 2018) and are actively co-creating retail experiences by self-service options (Hagberg et al., 2016). Many of the ongoing changes to the retail sector can be grouped under the umbrella term of digitalization. While retail technologies were readily available and implemented by many even before the pandemic, the changes are thought to be altered by the current situation (Roggeveen & Sethuraman, 2020a).

The current covid-19 pandemic and responses to tackle the spread of the virus have had a great impact on most businesses. Now entering over a full year of the pandemic, the retail sector is one of the most affected (Svensk Handel, 2020; Roggeveen & Sethuraman, 2020b). As for now, the retail sector of Sweden has faced consequences of the pandemic even if there have not yet been any full lockdowns in response to the spread of the virus. Many retail sectors have faced losses in overall sales, including for example apparel, toys, and books. On the contrary, some sectors have instead had an upswing compared to the year before, including sports and leisure and home decorations (Svensk Handel, 2020). Many consumers choose to make their usual in-store purchases online instead, speeding up the shift towards online channels as the preferred option. As shown by Svensk Handel (2021), e-commerce in Sweden has had higher sales and profits than other channels for a few years, consistent with global trends (Briedis, Kronschnabl, Rodriguez & Ungerman, 2020). Still, many European consumers state that they

wish to continue shopping in-store, mostly for non-food items (PwC, 2020), and physical stores contribute greatly to customer experiences, urban living and tourism of Sweden (Svensk Handel, 2019). This indicates that a full shift to e-commerce is not the desired option.

Many retail professionals see a need for preparing for potential channel shifts in the future as learning from the pandemic (Roggeveen & Sethuraman, 2020b). Top measures that are now being undertaken within risk management include reshaping of digital strategies, crisis contingency plans, and omnichannel distribution (Euromonitor International, 2020). Omnichannel is commonly defined as providing the consumer a seamless experience across channels (Verhoef, Kannan & Inman, 2015; Piotrowicz & Cuthbertson, 2019), including activities such as self-service checkout via mobile applications, allowing customers of inventory status check across all channels, and offering click-and-collect services (Euromonitor International, 2020). Overall, customers are suggested to focus more on price and value, experiment with new channels, and demand a good balance between digital solutions and the traditional store format (PwC, 2020; Verhoef et al., 2015; Roggeveen & Sethuraman, 2020a; Hagberg et al., 2016), all of which are in favor for retailers to consider an omnichannel approach. Moving towards complete omnichannel integration is suggested to be one of the most important strategic actions for retailers to take (Briedis et al., 2020; Verhoef et al., 2015), including a reassessment of the role of the physical store to be more experiential and tailored for omnichannel strategies (Briedis et al., 2020; Roggeveen & Sethuraman, 2020a; Hagberg et al., 2016).

## 1.2. Problem Discussion

When considering organizations' survivability in and recovery from crises, resilience is a concept that is often used. Resilience is defined in the Cambridge Business English Dictionary as 'the quality of being able to quickly return to a previous good condition after problems', and is therefore suitable for analysis in the context of the pandemic. Further explaining resilience within a business context, Linnenlucke (2017) highlights characteristics such as the ability to recover fast, responsiveness, and being innovative during stressful situations. Resilience is thus of high relevance in the current state of the retail industry. In light of the challenges the retail sector is facing due to the pandemic, there is a need for better understanding considering what factors are determining how well companies are coping with crises.

Omnichannel management is offered as a possible solution to many of the pressures that retailers face as a result of both the pandemic (Roggeveen & Sethuraman, 2020a) and ongoing changes in consumer behavior (Huré, Picot-Coupey & Ackermann, 2017; Verhoef et al., 2015). The emphasis on omnichannel technologies and management in the retail industry both before, during, and after the pandemic calls for further understanding how integration of omnichannel solutions are affecting how retail companies are handling and recovering from crises such as covid-19. However, there is a gap in research investigating the connection between omnichannel management and resilience in an organizational context. Omnichannel management has not received extensive consideration in connection to resilience, however, digital technologies in general have been highlighted as an enabler for resilience in a business context (Moşteanu, Faccia & Cavaliere, 2020). One of the contributing factors for the survival of organizations is the ability to embrace digital change (ibid.). The ability to embrace digital technologies has been defined as digital capability, and can be considered as the organization's digital capabilities in terms of digital competence within the organization and the management of related technologies (Khin & Ho, 2018). Omnichannel management can be argued to be an important aspect of the ongoing digital change within the retail context, with emphasis on meeting the changing consumer demands with certain service offerings, such as click-and-collect and integrated inventory systems. In order to gain more understanding of the concept, both the definition and operationalizing of omnichannel management will be presented in this report.

Discussions considering resilience are often connected to sustainability, as these two concepts share many characteristics including long-term survival of different systems such as organizations (Marchese,

Reynolds, Bates, Morgan, Clark & Linkov, 2018). Sustainability is also one of the most critical issues faced by the retail sector, with pressure coming from various stakeholders (Ruiz-Real, Uribe-Toril, Gázquez-Abad, & de Pablo Valenciano, 2019). Many retail professionals explicitly state a need for investing in supply chain resiliency to avoid shocks like the one covid-19 brought about with heavily restricted global transportation (Euromonitor International, 2020), but resilience and sustainability within retail also have connections outside supply chain management. Svensk Handel (2020) reports that for the Swedish market, the importance of values such as sustainability in consumption decisions is likely to be amplified by the pandemic. From a global perspective, a survey conducted in the midst of the pandemic by Kachaner, Nielsen, Portafaix and Rodzko (2020) found that 87% of the respondents from countries worldwide expressed a desire for companies to further incorporate environmental concerns considering their activities, products and services, indicating an intact or even increasing demand for sustainable business practices from the consumer side. For retailers, this means sustainability could be a key aspect to focus on to attract and keep consumers even in times of crisis. Investing in long-term resilience over short-term financial gains has even been suggested to be the only road forward if similar catastrophes are to be avoided (OECD, 2020).

## 1.3. Aim and Purpose

The demand for sustainable business practices within retail from consumers and public institutions is growing, while simultaneously the continued digitalization has led to consumers demanding a seamless customer experience across channels. Retailers are found in a position where they must deal with these changes while maintaining their resilience. Therefore, the purpose of this study is to gain understanding on how well sustainability and omnichannel practices are creating organizational resilience in the retail industry. Through examining in what ways companies within the retail sector are working with omnichannel management and sustainability, and how they are currently withholding resilience, the aim is to answer the following research questions:

- *In what ways are retail companies' sustainability management contributing to resilience?*

- *In what ways are retail companies' omnichannel management contributing to resilience?*

In existing research, there are a number of papers examining and testing the relationships between sustainability and resilience defined in various ways. Previous related research have focused on sustainability and digitalization in general, with the former focusing on sustainability in the supply chain in particular, indicating a gap in exploring the broader sustainability management and omnichannel management in relation to resilience. This paper tests specifically the relationship between sustainability through the TBL logic and organizational resilience. The relationship between these specific constructs are unique in the context of Swedish retailers and the main contribution of testing this relationship lies in adding to the existing body of research on the subject. As for the relationship between omnichannel and resilience, on the other hand, there are not as many published papers. Omnichannel is here understood as channel integration, and it is the organizational resilience that is in focus when testing resilience. This paper contributes by investigating the relationship between channel integration and resilience.

# 2. Literature Review

## 2.1. Organizational Resilience

Resilience in a business context is the organization's survivability and ability to endure or strengthen during crises (Seville, Brunsdon, Dantas, Le Masurier, Wilkinson & Vargo, 2008; Whitman et al., 2013; Stephenson, Vargo & Seville, 2010; Lee, Vargo & Seville, 2013). This is usually highly visible during natural disasters, but also involves several other aspects such as supply chain disruptions and financial difficulties (Stephenson et al., 2010). Consideration of the many aspects that affects and is affected by a company's resilience is also why there are so widespread theoretical and empirical insights to find (Linnenluecke, 2017).

The ability to adapt has been highlighted as an important factor when considering resilience in a business context (McManus, Seville, Vargo & Brunsdon 2008). In practice, this can be seen by including a business continuity plan and risk management in the organization (Lee et al., 2013), meaning that a company has a plan for how to deal with several situations that may occur. However, adaptive capacity also involves companies' ability to respond to crises in a dynamic manner, resulting in the creation of new capabilities (Lee et al., 2013). One category of capabilities that has been found to be contributing to organizational survival is digital capabilities (Moşteanu et al., 2020), which indicates how companies must stay adaptive to changes and progress in their environment including new technologies. McManus et al. (2008) conducted a literature review with the purpose of operationalizing resilience, where the planning of both risk management and business continuity is seen as important.

One important factor to consider when examining organizational resilience is the size of the company (Linnenluecke, 2017). Consideration must also be taken to the context in which the organization is found. There is not much research on this subject, but it has been suggested that important factors for organizational-level resilience include the industry in which the company operates, and the interdependence between the company and various other actors (ibid.). When studying the concept of organizational resilience, it would thus be interesting to include factors of company size and context, which for the retail sector specifically could include what sales and communication channels are used and whether these extend across national borders, either directly or as part of a larger corporate group. Furthermore, company age is a factor that has been theoretically and empirically studied in relation to other concepts such as financial performance, innovation, survival and growth (Coad, Holm, Krafft & Quatraro, 2018). It would therefore be interesting to also include this factor when studying organizational resilience.

## 2.2. Sustainability Management

Sustainability is a concept that has received great attention in many business sectors over the last decades, demonstrated in for example the United Nations' 2030 Agenda for Sustainable Development (2015), emphasizing each and everyone's responsibility for sustainable action. The Agenda and its associated goals for sustainable development were adopted by all United Nations' member states in 2015. While several efforts have been made to define the concept of sustainability, many agree upon the commonly used definition established in the United Nations' report *Our Common Future* (1987) where sustainable development is defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 2015, ch.2, p.1). While this definition has been criticized for being too technocratic and anthropocentric (Davies, 2013), it is still the underlying definition used for example when defining the 2030 Agenda for Sustainable Development (United Nations, 2015) and is therefore recognized globally.

There are several reasons for engaging in sustainable retailing. The retail sector is under pressure from governments, global institutions and consumers with increased awareness of sustainability-related areas (Benn et al., 2018). In the large body of research on business sustainability, business cases are often built on the subject of why companies should engage in sustainability practices, including connections to value-creation (Kramer & Porter, 2011; Crane, Palazzo, Spence & Matten, 2014), competitiveness through resources (Hart, 1995), risk reduction (Lovins, 2008), and legitimizing company operations (Strannegård, 2000; Deegan, 2002). The increased consumer pressure on firms to adopt more sustainable practices indicates that improved competitiveness can be achieved for companies that manage to be more responsible (Huang, Hu, Liu, Yu & Yu, 2016). Thus, there is widespread agreement on the positive outcomes that can be achieved for companies engaging in different sustainability practices by incorporating sustainability in the business model. One common way of defining sustainability within sustainable business model research is applying the Triple Bottom Line (TBL) approach (Bocken, Short, Rana & Evens, 2013; Stubbs & Cocklin, 2008), that is economic, environmental and social aspects of sustainability (Elkington, 1997).

A result of retailers operating in the interface between consumers and producers with pressure coming from various stakeholders (Erol et al., 2009; Ruiz-Real et al., 2019), is that the sector has achieved much attention in literature connected to sustainable supply chain management. However, as sustainability should play part of all business strategies and activities (Bocken et al., 2013; Urbinati et al., 2017; Stubbs & Cocklin, 2008), this indicates that isolating sustainability efforts to specific business areas is not desirable. This is further supported by the United Nations (2015) Agenda 2030 for Sustainable Development that applies to all public and private sectors. It is therefore necessary to apply an understanding of sustainability that takes a similar holistic approach. This is where the TBL logic of sustainability plays a major role, as also indicated in research on sustainable business models (Bocken et al., 2013; Stubbs & Cocklin, 2008).

### 2.2.1. Triple Bottom Line

To understand sustainability in a measurable way, and to form an understanding for how this concept is operationalized and defined, the Triple Bottom Line (TBL) model was developed. The model was a way of summarizing Corporate Social Responsibility (CSR) in a framework forcing companies to refocus on perspectives outside profit alone (Elkington, 1997). CSR is often used in business contexts, retail included, and similar to sustainability it has many definitions but one common way of defining it is as exceeding levels set by regulations (Kitzmueller & Shimshack, 2012). The TBL model clarifies this by defining sustainability as consisting of three dimensions: social, environmental and economic (Elkington, 1997), often also referred to as people, planet, profit in a business context (Slaper & Hall, 2011).

One contribution of the TBL logic is its efforts to harmonize social, environmental and economic business sustainability activities (Glavas & Mish, 2014). It thus provides a logic from which measures of sustainability can be built in research. The three pillars of the TBL model can also be defined in various ways, discussed by Høgevold, Svensson, Klopper, Wagner, Carlos Sosa Varela, Padin, Ferro and Petzer (2015) as follows: Economic sustainability in its simplest definition is how companies stay in business, by making profit and benefiting the economic systems in its surroundings. Environmental sustainability is often based on international standards that have been developed to help organizations set objectives and targets for reducing their specific environmental impacts. Social sustainability has been the hardest to define as it also concerns definitions of culture and society. CSR is often used as a term defining social sustainability, including legal and ethical responsibilities of organizations (Høgevold et al., 2015).

Within retail, an increased number of companies communicate their sustainability efforts in various ways as a response to changing consumer demands and other external pressures (Higgins & Larrinaga, 2016). Sustainability reporting is one common way of doing this and has since a few years back been mandatory for Swedish companies exceeding set levels of employees, balance sheet total and net sales

(Bolagsverket, 2019). While there is no particular guidance in what type of framework should be used, one commonly used guide for companies in how to disclose their sustainability performance is the Global Reporting Initiatives (GRI) guidelines which is an accounting framework based on the notion that sustainability consists of economic, social and environmental factors (La Torre, Sabelfeld, Blomkvist, Targuinio & Dumas, 2018). Thus, large corporations use a TBL-based framework for reporting on their sustainability performance, simultaneously setting a standard for those not formally required to report on their sustainability initiatives. This is not unusual, since increased transparency could help in minimizing risk of scandals, enhancing efficiency, and gaining legitimacy for continued operations and sales (Deegan, 2002; Gardner et al., 2019). The retail sector has been in the forefront of this with increased consumer demands on transparent operations (Higgins & Larrinaga, 2016) and the TBL approach has been found useful in explaining consumer perceptions on fashion brands' sustainability performance (Park & Kim, 2016).

What must be considered is that TBL, such as any measure of sustainability, should be understood in its context and it might therefore not be appropriate to generally compare industries, as their strategies and activities are differently oriented. However, one could use the TBL model as a basis for systematic assessment of business sustainability in combination with other elements (Padin, Ferro, Wagner, Carlos Sosa Valera, Høgevold & Svensson, 2016). The TBL logic has fascinated many business sectors and researchers since it argues for long-term profits when incorporating sustainability as a core value (Slaper & Hall, 2011), for example through a sustainable business model (Wilson, 2013). It can easily be applied in different situational contexts, contributing to its widespread use (Svensson, Ferro, Høgevold, Padin, Carlos Sosa Varela & Sarstedt, 2018). This has been pointed out as a reason why other frameworks and models found in literature or businesses are built upon the TBL logic (ibid), including sustainable business models (Bocken et al., 2013; Stubbs & Cocklin, 2008). Few studies have been made where the three pillars of TBL are addressed simultaneously in a sustainable business context (Høgevold et al., 2015). There is a large quantity of studies of sustainability in a business setting, however most focus on specific functions, settings or dimensions of sustainability (Ruiz-Real et al., 2019; Wiese, Kellner, Lietke, Toporowski & Zielke, 2012). When assessing overall sustainability in a business, all the three pillars as well as the integration between them should be included to fully assess the impact of TBL management (Høgevold et al., 2015; Padin et al., 2016).

### 2.2.2. Sustainability and Organizational Resilience

Viewing resilience through the lens of sustainability is common (Scheufeler & Bennett, 2011), and the both concepts are often used in conjunction or interchangeably in literature. As a result, there is a lack of consensus on the definitions. Generally, sustainability focuses on social, environmental and economic considerations both for present and future generations (Marchese et al., 2018), such as the TBL logic. Resilience, on the other hand, deals with the response of systems, be it environmental, social or economic systems. Even though they share similarities of context and complexity, they must be considered as separate and distinct concepts. Joint research methodology and management of the concepts might be efficient because of the links to global political trends and socioeconomic conditions. However, there are important spatial and temporal differences between sustainability and resilience that must be acknowledged (ibid.).

Sustainability initiatives often focus on both larger spatial and longer temporal scales (Redman, 2014) and tend to aim at preservation of traditional knowledge on livelihoods, knowledge and environmental resources (Marchese et al., 2018). In contrast, resilience initiatives often aim at adapting to new conditions and creating new knowledge (Lew, Ng, Ni & Wu, 2015), showing an important difference between the two concepts. As Redman (2014) points out, there are important synergies between sustainability and resilience, but to best take advantage of this researchers and practitioners should view them as separate entities. This does not mean that they should be managed separately, on the contrary there is wide recognition within literature that integrated sustainability and resilience management is important to avoid potential conflict between the concepts (Marchese et al., 2018). Still, managing sustainability and resilience conjointly does not mean that they should be thought of as the same.

Generally in literature on sustainability and resilience, the concepts are either organized as separate entities, or as components of each other (Marchese et al., 2018). When resilience is viewed as a component of sustainability, this is predominantly in literature on societal resilience and societal sustainability (ibid.). Likewise, the concepts are studied as separate entities within civil infrastructure (Bocchini, Frangopol, Ummenhofer & Zinke, 2014; Meacham, 2016; Ning, Liu, Chen, Dong, Li & Liang, 2013), urban planning (Fiksel, Goodman & Hecht, 2014) and similar community-level fields of studies (Redman, 2014; Lew et al., 2015; Fiksel et al., 2014). The third option often found in literature is sustainability contributing to resilience, most often used when the main aim of resilience is maintaining a key functionality or goal such as performance or profit through some business disruption (Marchese et al., 2018). These studies indicate that sustainability can enhance business resilience (ibid.), and could thus be applied in the retail setting. Important findings include that a TBL perspective in sustainable leadership practices generates the social capital needed to keep the business resilient through disturbances (Avery & Bergsteiner, 2011).

Business-focused studies reviewed by Marchese et al. (2018) thus assumes that increased sustainability will lead to increased resilience of a company. Many of these studies are contextualised by supply chain management specifically, but the same logic can be applied in any context where the aim of resilience is maintaining performance or profit (ibid.). A common feature of the studies is the assertion that increasing the sustainability of a system makes it more resilient, but that increased resilience of the same system does not necessarily make it more sustainable (Bansal & DesJardine, 2014; Ahi & Searcy, 2013; Marchese et al., 2018). Thus, sustainability in these settings becomes a managerial tool for achieving organizational resilience. Following this reasoning, sustainability management defined through the TBL logic would lead to higher organizational resilience.

- *H1: TBL management is positively associated with organizational resilience*

## 2.3. Omnichannel Retailing

When retail companies began to operate in multiple channels, both online and offline, they were kept separate from one another (Peltola, Vainio and Nieminen, 2015). Consumers are not able to use the online and offline channels simultaneously, but will be able to decide whether to make a purchase online or offline since the retailer offers products both through digital channels and physical stores (Verhoef et al., 2015). One example of keeping the channels separate is retailers not sharing inventory data between channels, which results in customers not being able to see if a product is in stock in a physical store through the companies' websites. Research on the subject of multichannel retailing has been emerging from the growth of online channels, such as web stores, and what effect that has had on the traditional channels, such as catalogs and physical stores (Verhoef et al., 2015). Through this development, different channels have commonly been developed and operationalized separately by organizations, with limitations when it comes to integration between channels (Beck & Rygl, 2015). This does not imply that the subject of integration has been non-existing within the multichannel literature. Pan, Ratchford, and Shankar (2004) express the need for channel integration as consumers are starting to use multiple channels, thus, getting a consumer experience based on all of these various moments of contact with the company combined.

As retailers began to integrate sales and communication across channels, a new strategy evolved, moving away from multichannel retailing (Verhoef et al., 2015). The continuing digitalization and changing consumer expectations have led to the integration of multiple channels in order for them to work seamlessly, commonly referred to as omnichannel retailing (Peltola et al., 2015). Several authors consider three types of channels to be part of omnichannel; offline, online, and mobile (Verhoef et al., 2015; Beck & Rygl, 2015; Alexander, 2019). The offline channels are the physical stores, whereas the online channels are commonly referred to as retail web stores (Verhoef et al., 2015). Mobile channels, social media, and tablets are adding more customer touchpoints that customers are using, adding

customer connectivity and movement between channels (Giuffrida, Mangiaracina, Miragliotta, Perotti & Tumino, 2019). According to Piotrowicz and Cuthbertson (2019), the aim of omnichannel retailing is to provide a seamless customer journey across all customer touchpoints. Integrating customer touchpoints in order for the shopping experience to become more seamless is, thus, used as a way of describing the omnichannel management approach (Beck & Rygl, 2015). The main difference between multi- and omnichannel is found in the integration of and between channels, where the integration enables a more seamless experience for consumers. With this in mind, this study defines omnichannel management as the integration of channels and customer touchpoints in order to provide a seamless experience, with channel integration being the fundamental enabler of this type of service.

### 2.3.1 Channel Integration

The importance of channel integration is central in research when considering omnichannel management (Piotrowicz & Cutchbertson, 2019; Beck & Rygl, 2015; Hosseini, Merz, Röglinger, & Wenninger, 2018; Peltola et al., 2015; Verhoef et al., 2015; Silva et al., 2019). Depending on the type and scope of change, integrating online and offline channels can vary in complexity (Gallino & Moreno, 2014). Challenges when adding new channels to the existing retail mix include channel cannibalization, that is, when one channel causes decreased sales in other previously existing channels (Verhoef, 2012; Avery, Steenburgh, Deighton & Caravella, 2012), yet again emphasizing the importance of channel integration.

One of the most researched areas of channel integration is how it influences consumer behavior and their shopping experience (Poncin & Ben Mimoun, 2014; Rippé, Weisfeld-Spolter, Yurova, Dubinsky, & Hale, 2017; Parise, Guinan and Kafka, 2016; Silva et al, 2019; Herhausen, Binder, Schoegel & Herrmann, 2015). Channel integration can in this aspect be seen as the access and information that is provided for one channel in another (Herhausen et al., 2015). In addition, Herhausen et al. (2015) presented findings indicating that channel integration has a positive effect on willingness to purchase, both overall as well as via online and offline channels separately. In order to provide a seamless experience, there is a need for retailers to remove obstacles so that services can be provided across channels.

When considering channel integration, technology is an important component (Cao & Li, 2015). In order to develop integrated systems for activities such as inventory management and delivery options, omnichannel management requires technology that can be used for both data collection and analysis (Verhoef et al., 2015). There is a great potential to access larger volumes of customer demand data (Larke, Kilgour & O'Connor, 2018), creating opportunities to forecast demand more accurately as well as develop the shopping experience for consumers. Developing inventory systems that are integrated across channels is a long process that requires planning on a strategic level, which also is associated with large costs and risk (Larke et al, 2018). However, Hübner, Kuhn, Wollenburg, Towers, and Kotzab (2016) suggest that integrated inventories and warehouses come with positive outcomes that exceed the complexity and cost. Thus, channel integration can involve both positive and negative outcomes for the firm. However, there is still a need of understanding the practical aspects of integrating channels in a retail setting. A study conducted by Oh, Teo and Sambamurthy (2012) provides six routines for retail channel integration that collectively represent the channel integration in a retail context.

*Table 1: Six routines for channel integration*

| Routine | Definition |
|---|---|
| *Integrated promotion (IP)* | The promotion of one channel in another channel in order to boost awareness of the various channels and increase customer usage |
| *Integrated transaction information management (IT)* | Customers' transaction information is gathered both from online and offline channels, and is thereafter assured to be accessible across channels |
| *Integrated product and pricing information management (IPP)* | Making sure that the information regarding product and price is consistent through all channels |
| *Integrated information access (IIA)* | Provide customers with the option of accessing information from one channel in another channel, for example by having information about product stock in the physical store on the website |
| *Integrated order fulfilment (IOF)* | Creating options for customers' to make a purchase from their preferred channel, for example by click-and-collect or handing in gift coupons both online and offline |
| *Integrated customer service (ICS)* | Offering access to customer service in customers' preferred channels, for example by allowing online purchases to be returned in the physical store |

### 2.3.2. Channel Integration and Organizational Resilience

In order to understand challenges such as the current covid-19 pandemic affecting the retail sector (Roggeveen & Sethuraman, 2020b), resilience has historically been used when describing companies that are able to quickly adjust and recover from crises (Linnenluecke, 2017). However, what factors that lead to resilience are theoretically dispersed and studied from various perspectives (ibid.). As previously mentioned, a fundamental aspect of omnichannel management in a retail setting is the integration between channels, which have shown positive outcomes for retail organizations (Larke et al., 2018; Herhausen et al., 2015; Parise et al., 2016; Poncin & Ben Mimoun, 2014). The seamless experience that channel integration can offer consumers is better optimized for meeting changing consumer demands (Huré et al., 2017) indicating that this type of strategy could benefit retailers during disturbing times such as the ongoing shift towards e-commerce, made even more distinct by the covid-19 restrictions. Therefore, it is of interest to gain further insights in how channel integration can lead to better organizational resilience to handle crises.

Channel integration and data management are two important mechanisms within the omnichannel context when considering both adaptability and resilience (Mirzabeiki & Saghiri, 2020). These mechanisms can support the efforts of managing changes both before, during, and after they take place (ibid.). The report by Briedis et al., (2020) further suggests that companies with omnichannel management implemented in their organization are able to adjust more rapidly to changing consumer preferences when needed (ibid.), indicating that an omnichannel approach leads to organizational resilience. As for channel integration, which in this study is used to measure omnichannel management, various aspects are reliant on technological and digital aspects (Oh et al., 2012). As digital capabilities have been found to contribute to organizational survival (Moşteanu et al., 2020), this indicates that channel integration could lead to organizational resilience. In addition, findings by Oh et al. (2012)

suggest that channel integration in retail companies has a positive impact on firm performance. As for the outcome of the channel integration efforts, improving the coordination between various channels has been shown to improve conversion rates and consumer trust and loyalty (Cao & Li, 2015). Thus, it could lead to companies experiencing an increase in their sales growth (ibid.). Moreover, channel diversity can help companies reduce costs or make improvements in operational efficiency (Du, 2018).

In the current retail environment, many companies are in need of adapting to changing consumer behavior, where omnichannel management can help companies to more rapidly make the necessary adjustments. In addition, the restrictions that are in place due to covid-19 are affecting the physical retail place (Svensk Handel, 2020), indicating an immediate need of having online channels in place in order to maintain sales figures. The cost-efficiency of integrating IT-based services combined with the remaining demand for offline channels suggests that adapting towards omnichannel retailing could help companies remain competitive in the current state of retailing and recover when or if the retail environment goes back to what was the normal state before the pandemic. As channel integration is a widely used concept within omnichannel literature and a suggested way of operationalizing omnichannel management, the literature review suggests that channel integration would contribute to better organizational resilience for companies in the retail sector.

- *H2: Channel integration is positively associated with organizational resilience*

## 2.4. A Model of Channel Integration, Triple Bottom Line and Organizational Resilience

Following the reasoning of the literature review, a conceptual model of the relationships between organizational resilience, channel integration, and sustainability understood through the TBL logic can now be developed. As the above review discusses, sustainability management and omnichannel management defined as channel integration can be seen as factors contributing to organizational resilience. Sustainability is viewed through the TBL logic consisting of economic, environmental and social aspects of sustainability. A general measure of the TBL performance including these three dimensions as well as interconnections between them will be used, developed by Høgevold et al. (2015) and validated by Padin et al. (2016). Higher scores on TBL performance is hypothesized to lead to higher organizational resilience in line with the above discussion on the concepts.

Likewise, higher scores on channel integration as measured in six dimensions of integration proposed by Oh et al. (2012) is hypothesized to lead to higher organizational resilience. There is not as much existing research on the relationship between resilience and omnichannel management or channel integration, but enough theoretical and empirical support to raise the question of the existence of such a relationship. Organizational resilience is understood in the business context as survivability and ability to strengthen in a crisis, and measured with the short form of the Benchmark Resilience Tool (BRT) developed by Whitman et al. (2013), consisting of the two dimensions of adaptive capacity and planning factor.

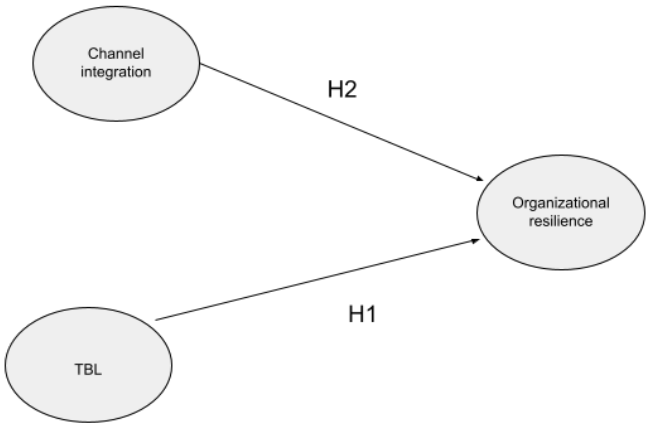


*Figure 1. Conceptual Model of the hypotheses.*

# 3. Methodology

## 3.1. Research Approach

This study uses a quantitative research approach to explore how organizational resilience is affected by sustainability management and omnichannel management. To investigate the relationship between the variables, an online survey was conducted. The decision to use an online survey was made based on the relatively large number of companies that could answer at a limited cost, and the ability for respondents to answer anonymously at a time that was convenient for them. These are often-mentioned arguments for choosing an online survey approach (Nardi, 2018; Bryman & Bell 2015).

Through the use of a deductive approach as defined by Bryman and Bell (2015), a literature review of the concepts sustainability, omnichannel and resilience in a retail and/or business context was conducted in order to find relevant relationships between the concepts and develop hypotheses from theory. Measures of TBL and channel integration were, respectively, chosen as representatives of sustainability and omnichannel for this study and context. Resilience was delimited to regard organizational resilience specifically. Based on the literature review, a conceptual model was established with the proposed relationships between the concepts. A measurement model was drawn from this, using validated measurement scales for each of the concepts. These measurement scales together with background questions and control variables also formed a survey aimed at retail companies. The complete survey is found in Appendix A, and was sent to respondents via the free online survey tool Microsoft Forms. Answers could then be retrieved for further analysis using the statistical programs IBM SPSS 26 and IBM SPSS Amos 26, henceforth referred to as SPSS and Amos. These are the most widely used programs for quantitative analysis within social sciences (Bryman & Bell, 2015).

## 3.2. Measurement Scales

Before conducting the analysis, the internal validity is assessed as this relates to the causality of the relationships (Bryman & Bell, 2015). There is an ongoing debate in literature on the constructs on how to define them and their relationships. However, as the literature review shows, there are indications that in the specific context of this study TBL management and channel integration respectively leads to organizational resilience and not reversed. That is, organizational resilience is viewed as the dependent variable in relation to the other two constructs. However, as there is no consensus in existing research, the internal validity cannot be entirely ensured. To ensure valid measurement, measures of studied constructs were adapted from prior studies, with minor modifications to fit the research context and purpose. Questions were translated from English to Swedish to ease participation for respondents. All constructs were measured using a Likert five-point scale ranging from “Not correct at all” to “Completely correct”. Likert scales are commonly used within marketing research (Dawes, 2008), which is also the case for the measurement scales adopted in this study. The choice was made to transform all measures to 5 point scales for consistency and ease of participation. Only minor changes to the reliability coefficient have been found when comparing scales of different points and results are generally comparable (Dawes, 2008).

### 3.2.1. Channel Integration

Channel integration was measured using the construct of retail channel integration developed by Oh et al. (2012), consisting of six dimensions. The construct has been found reliable and valid with regards to item loadings, composite reliability and discriminant validity (ibid.). When shortening the length of the study, at least three items per dimension was kept in line with the three indicator-rule to avoid identification problems (Hair et al., 2014). The choice of items to keep was made based on the weighted

scores and significance level of each item found in the original study. In order to involve more channels than the physical store and the website, items ip2 and ip3 were modified by substituting the word "website" with "digital channels". To use a more everyday language in our setting, the word "internet kiosks" was substituted with "digital screens".

### 3.2.2. Sustainability

Sustainability was measured using a TBL construct developed by Høgevold et al. (2015) and validated by Padin et al., (2016). Consisting of items related to TBL as an integrated entity as well as the three pillars of economic, social and environmental sustainability separately, it fills a gap in research of a general TBL model of business sustainability. It was specifically designed for use in further studies where the TBL construct is put in relation to other constructs, which makes it suitable to use in this context. It has been tested and validated in studies of companies of various business sectors in Norway and Spain, facilitating a transfer to a Swedish context.

The TBL construct has been validated for a sample of mid- to large sized companies, but the nature of the questions in the survey are estimated to be of relevance for smaller companies in our sample. However, as smaller companies do not have the obligation to conduct sustainability reporting to the same extent as larger companies, we decided to include the option to answer that the company does not work systematically with sustainability/TBL. This was done since it was considered difficult to evaluate whether smaller companies of the population are working systematically with sustainability. As the aim of this study is to gain an understanding of the overall sustainability management within a company, the decision has been made to also exclude additional parts of the original study focusing on items related to underlying reasons for implementing sustainability practices.

### 3.2.3. Resilience

Resilience was measured using the short-form version of the Benchmark Resilience Tool 53, (BRT-53), originating from Stephenson et al. (2010), developed by Whitman et al. (2013). Findings of this study suggests that the original tool BRT-53 can benefit from being shortened down, since survey respondents found the survey too time consuming, and in addition, small- to medium-sized organizations (SMEs) found some of the items non applicable (ibid). The short-form version developed by Whitman et. al (2013) was found both reliable and valid in comparison to the BRT-53, suggesting that the shorter version is applicable for studies like ours. The authors developed and tested two versions of the short-form, and the version we chose for this study was the one with the highest Cronbach's alpha and better significance levels. It consists of thirteen items assigned to the two dimensions of adaptive capacity and planning factor. It is particularly useful for use when researching organizational resilience in combination with other factors, as the length of the associated survey is considerably shorter than the original version.

### 3.2.4. Control Variables

We expect resilience to be influenced by firm size, age, and the overall digital capabilities of the companies. These features are believed to have an impact on the organizational resilience as indicated both in earlier studies (Linnenluecke, 2017; Coad et al., 2018) and through consideration of the specific characteristics of the retail industry. Control variables are also valuable in order to ensure representativeness of the sample (Bryman & Bell, 2015).

Digital capabilities of the responding companies are included as a control variable since digital capabilities have been found to be a contributing factor to resilience in earlier studies (Moşteanu et al., 2020). In order to measure digital capability, questions adopted from Khin and Ho (2018) were used in

the control variable section of the survey. The construct is adopted from a measure of technological capabilities developed by Zhou and Wu (2010). When used in Khin and Ho (2018), the construct is adopted to fit a context of digitalization of companies and has also been found to be statistically reliable and valid. While the context of this study is small- to medium sized enterprises within IT in Malaysia, the generalizability of the measure is found to be sufficient enough to transfer to the context of this study.

## 3.3. Sampling

### 3.3.1. Population and Delimitations

The study focuses on retailers with physical stores in the inner city areas of Gothenburg, as delimitations had to be made due to the restricted time and scope of the study. By choosing this geographical delimitation, a variety of retailers of different size and sector could be included. Total population sampling was then considered the most suitable sampling approach for the study.

Defining the inner city area was done through narrowing down the geographical area that the City of Gothenburg defines as the city centre, then choosing the sub-areas in which the main shopping streets and centres are located. As one of the aims of the study is to investigate channel integration, the retailers should, besides from a physical store, also have a website and/or a webshop. Commodity retailers are not included in the population of choice. Likewise, retailers of goods requiring substantial investments are not included. Lastly, retailers of prescribed medications are not included in the population. The reason for these delimitations is to ensure that retailers in the study face similar consumption reasons and patterns, allowing for comparison of the theoretical constructs in similar settings.

### 3.3.2. Reducing Common Method Bias

A priori measures were taken to reduce common method bias. One crucial part of achieving results that are both valid and reliable from a survey is through ensuring that it is well-written and clearly structured (Nardi, 2018). Measures undertaken included pretesting the questionnaire regarding the design of the study and understanding of items. The reason for this was to reduce the effort that respondents would have to make in responding to the survey. Suggestions regarding format and wordings of the measures were used in the revised questionnaire. To further enhance the quality of the answers, efforts were made to reach employees at the companies who would have better insight into the areas of research. By including a control variable of position within the company, there was a possibility of excluding respondents who were not considered qualified.

### 3.3.3. Sampling Technique

Based on the postal codes for the chosen inner city area of Gothenburg, a list of 446 retailers was provided by an official Swedish research institute. This will not be disclosed due to confidentiality matters. 264 companies were eliminated from the list, either because they did not match the requirements or because of double entries. This left 181 companies in the sampling frame. Through online search, contact details to relevant employees at the companies were retrieved. Primarily, CEOs or employees at managerial levels within the marketing function were contacted at larger companies. At smaller companies, the store email was used in order to get in touch with owners and store managers. In some instances, employees were contacted via LinkedIn since this social media platform gives the opportunity of targeting employees with suitable roles and responsibilities. All companies were initially contacted in the middle through end of April 2021, and then reminded of the survey approximately one to two weeks later.

Out of 181 contacted companies, 42 completed the survey which translates to a response rate of 23,20%. However, 7 of the companies stated that they do not work with sustainability, which led to a final complete sample of 35 and a response rate of 19,34%. Since most of the companies who did not participate in the survey did not respond at all, it cannot be ensured that there is no non-response bias. However, the few reasons given for not responding to the survey all related to lack of time.

### 3.3.4. Measures to Reduce Error

Since there are a number of errors that could occur when conducting a survey which could potentially lower the overall quality of the study (Hair et al., 2014), measures were undertaken to minimize these. As a low response rate was expected from the population, the whole population was contacted to minimize sampling errors of non-response character. This eliminates beforehand bias in sample selection and is an effort of ensuring heterogeneity in the sample representative of the population.

To reduce coverage error, employees with relevant roles of the companies in the population were addressed directly or with the request to forward this to an employee with relevant knowledge and position. Contact with each company in the population was continuously recorded to avoid double contacts, which could also be a potential cause of coverage error. There might still be a small risk of coverage error as slightly different approaches were used to reach the respondents. The main measurement error that could occur in this study is the width of concepts covered in the survey, which might lead to respondents being unsure about their answers. Thus, some level of measurement error from the inability of respondents to provide accurate answers is believed to be found. Likewise, some data entry errors have probably occurred.

### 3.3.5. Sample Characteristics

One distinguishing feature between respondents in the sample is retail industry sector belonging, which as found in Table 2 can be compared to the sector distribution of the population. Another aspect that is important with regards to coverage error is respondents' positions in their companies, of which the major part were CEOs or marketing managers. Furthermore, there was an equal share of companies that are part of a corporate group and not, and most companies state that they have some international sales and communication presence. A full summary of the sample characteristics is found in Appendix B.

*Table 2. Comparison of the population and sample with regards to the retail industry sector in Sweden.*

| Retail industry sector | Number population | % population | Number sample | % sample |
|---|---|---|---|---|
| Apparel, shoes and accessories | 114 | 62,98% | 21,5 | 61,43% |
| Other | 28 | 15,47% | 5,3 | 15,24% |
| Home interior | 16 | 8,84% | 2,3 | 6,67% |
| Sports and leisure | 9 | 4,97% | 2,7 | 7,62% |
| Electronics and appliances | 7 | 3,87% | 2,7 | 7,62% |
| Books | 5 | 2,76% | 1,0 | 2,86% |
| Toys | 2 | 1,10% | 0,3 | 0,95% |
| *Total* | 181 | 100 | 35 | 100 |

# 4. Empirical Findings and Data Analysis

In this section, the empirical findings related to the survey will be presented and displayed. The main purpose is to test the hypotheses which aim to provide insight into the research questions of the study, that is, in what ways omnichannel management and sustainability management respectively are contributing to resilience in retail companies.

- H1: TBL management is positively associated with organizational resilience
- H2: Channel integration is positively associated with organizational resilience

## 4.1. Descriptive Statistics

The mean and median of the constructs were retrieved in order to set the context of the analysis. With the 5-point Likert scale as reference, Table 3 shows that respondents score highest on resilience and TBL while channel integration usually falls into the response category 'neither correct or incorrect'. The mean and mode of the constructs were calculated using the final variables extracted for analysis, which means that for resilience it is the items related to adaptive capacity that result in a mean value of 4.15. For TBL, it is the variables using an integration of economic, environmental and social aspects that are kept, which means that it is the integrated sustainability management that receives a mean value of 3.83. Channel integration is represented by variables of integrated order fulfilment and integrated information access, resulting in an intermediate mean value of 3.10.

*Table 3. Mean and mode of the constructs*

| Construct | Mean | Median |
|---|---|---|
| Triple Bottom Line | 3.83 | 4 |
| Channel Integration | 3.10 | 4 |
| Resilience | 4.15 | 4 |

## 4.2. Data Approach of Testing the Hypotheses

With a sample size consisting of 35 collected answers, too complex and sophisticated multivariate techniques should be considered carefully as this often results in either too little statistical power to identify significant results, or overfitting the data to the extent of no generalizability (Hair et al., 2014). This aspect will be taken into account when conducting tests for internal reliability, confirmatory factor analysis (CFA) and structural equation modelling (SEM) in order to test the proposed model.

### 4.2.1. Internal Reliability in Constructs

Before performing CFA, the internal reliability for each construct was evaluated. Cronbach's alpha is a measure that is used to assess internal reliability, and is often used when checking the internal consistency of a survey consisting of several Likert scale-items (Gliem & Gliem, 2003). All items measuring the same construct were tested, and the results were analyzed with emphasis on the Cronbach's alpha and inter-item correlations. A Cronbach's alpha coefficient >.7 is considered acceptable, and a value >.8 indicates good internal consistency among the selected items (ibid), listed in Table 4. During this procedure, the underlying theory was taken into consideration. Hence, deletion

of additional items when a construct received Cronbach's alpha >.8 needed to result in considerable improvement in order to be considered. A complete list of the items originally included in the study are found in Appendix A.

*Table 4. Items used in CFA*

| **Construct** | **Items** | **Cronbach's Alpha** |
|---|---|---|
| Triple Bottom Line | tbl1, tbl2, tbl3, tbl4, env1, env2, env3, soc2, soc3 | 0.835 |
| Channel Integration | iia1, iof2, iof3 | 0.834 |
| Resilience | pf2, pf3, ac1, ac2, ac4, ac5, ac6, ac7, ac8 | 0.835 |

### 4.2.2. CFA and SEM

As a first step of the SEM analysis, the measurement model was tested using CFA (Hair et al., 2014). Schumacker and Lomax (2004) suggests that model fit could as a first step be assessed by using the chi-square to degrees of freedom ratio with an associated significance level as a goodness-of-fit measure. Values between 1-5 are usually considered acceptable (ibid), and the significance level should show non-statistical significance (Schumacker & Lomax, 2004; Hair et al., 2014). As this measure is sensitive to sample size and level of model complexity, it should also be paired with at least one absolute fit index and one incremental index such as RMSEA and CFI (Hair et al., 2014). Besides assessing the overall model fit, the individual estimates should also be assessed. This is done by examining the factor loading of each variable on the latent factor, and the associated significance levels.

*Table 5. Summary of model fit indices used in CFA/SEM*

| **Model Fit Indices** | **Acceptable values** |
|---|---|
| Chi-square/df; probability level | 1.0-5.0; p >.05 (Schumacker & Lomax, 2004) |
| CFI | >.95 or at least >.90 (Hair et al., 2014) |
| RMSEA | <.05 or at least <.08 (Hair et al., 2014) |
| **Estimates** | |
| Standardized regression weights (factor loadings) | >.7 or at least >.5 (Hair et al., 2014)<br><br>Should also be significant when examining regression weights |
| Standardized residual covariances | Consider deleting items with covariance >\|2.5\| (Hair et al., 2014). |
| **Reliability Measures** | |
| Average Variance Extracted (AVE) | >.5 (Hair et al., 2014) |
| Construct Reliability | >.7 (Bacon, Sauer & Young, 1995) |

In the first attempt, the CFA did not result in satisfactory values of incremental and absolute fit indices. Furthermore, many of the factor loadings were both insignificant and with values well below the suggested thresholds. Therefore, variables were eliminated in a step-by-step procedure starting with the variable scoring lowest on factor loadings in each step. This was done while carefully considering the theoretical implications of such removals. The outcome of this procedure was a model consisting of the items found in Table 6.

*Table 6. Items used in SEM with associated reliability measures.*

| **Construct** | **Items** | **AVE** | **Construct Reliability** |
|---|---|---|---|
| Triple Bottom Line | tbl1, tbl2, tbl3, tbl4 | 0.571 | 0.838 |
| Channel Integration | iia1, iof2, iof3 | 0.632 | 0.822 |
| Resilience | ac1, ac2, ac4, ac5, ac6, ac7, ac8 | 0.410 | 0.837 |

After item deletion, the model fit values all reached commonly acceptable values and all factor loadings were significant on at least a 95 % level, most of them with factor loadings >.5 and many >.7. Two variables, ac4 and ac2, were kept due to theoretical relevance even though they showed slightly lower factor loadings. This has a negative impact on the average variance extracted (AVE) for the construct, which preferably should be >.5 (Hair et al., 2014). With these variables, the CFA of the model reached a satisfactory model fit as summarized in Table 7. With reference to acceptable values reviewed in Table 5, the output shows that the model fit indices of the measurement model fall in between the range of desired and acceptable values for the incremental and absolute fit indices CFA and RMSEA, as well as in the range of acceptable chi-square to degrees of freedom ratio. Since this relationship is also non-significant, the measurement model was considered good and used for further procedure.

*Table 7. Model fit of the measurement model.*

| **Model Fit Indices** | **Value** |
|---|---|
| Chi-square/df; probability level | 1.118; p = .228 |
| CFI | .948 |
| RMSEA | .059 |

With the measurement model confirmed, the structural model was constructed by adding the hypothesized relationships between the latent variables, as shown in Figure 2. The model fit indices of the structural model is summarized in Table 8, reaching satisfactory model fit. With reference to Table 5 and Table 7, the output shows that the model fit of the structural model improved somewhat compared to the measurement model. It reaches higher values of the incremental fit index CFI, indicating better fit. It also has lower values on the absolute fit index RMSEA, also indicating that this approximated model fits better. The chi-square to degrees of freedom remains non-significant and within the acceptable range.

*Table 8. Model fit of the structural model.*

| Model Fit Indices | Value |
|---|---|
| Chi-square/df; probability level | 1.104; p = .251 |
| CFI | .954 |
| RMSEA | .055 |

### 4.2.3. Hypothesis Testing

Through conducting SEM in Amos, the hypotheses H1 and H2 can be tested by examining the path coefficients and associated significance levels. The path coefficient from TBL to Resilience received a regression weight of 0.508 and is significant at p < .05. Thus, hypothesis H1 can be accepted. The path coefficient from CI to Resilience received a regression weight of -0.177 and was not significant, leading to the rejection of hypothesis H2.

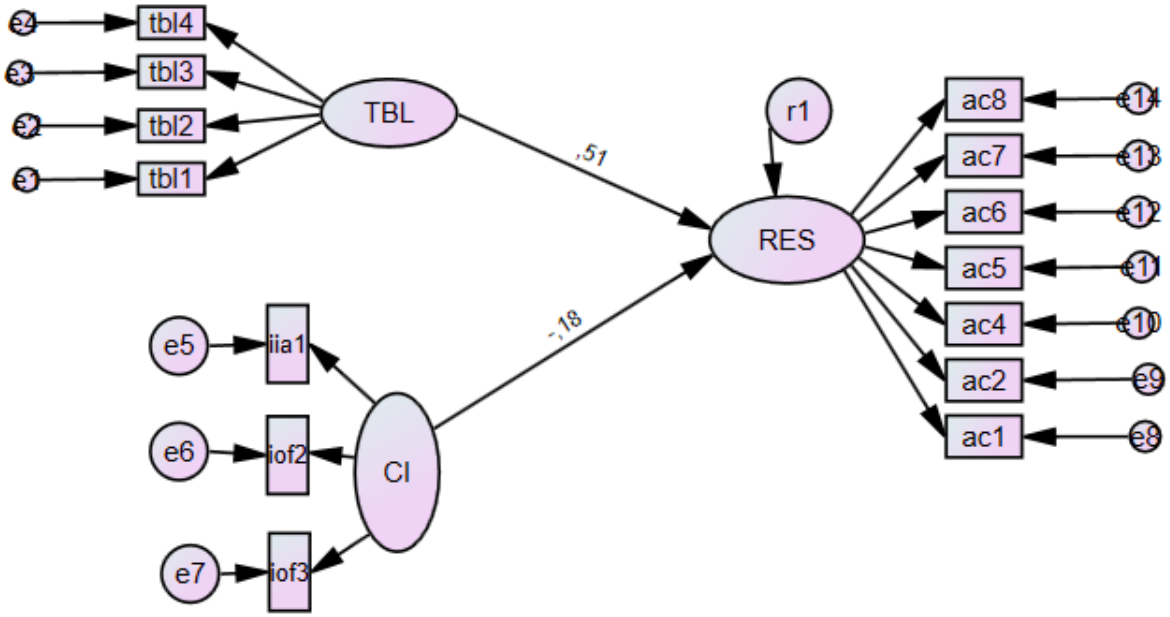


*Figure 2. Final structural model used for analysis.*

### 4.2.4. Controlling for Other Factors

As the literature review indicates that company size and age, as well as digital capabilities, might have an effect on resilience, these were controlled for by testing their relationships with simple regression. No statistically significant evidence was found of the company size represented by the number of employees affecting resilience, thus this has no impact on the findings of this analysis. Neither did the webshop age have any statistically significant impact on resilience. The company age was however found to have a minor positive impact on resilience at a significance level of p <.1. Digital capabilities were also found to have a slight positive impact on resilience at a significance level of p >.1. Therefore, company age and digital capabilities can have an impact on the hypothesis testing in SEM.

## 4.3. Validity and Reliability

Cronbach's alpha was first estimated to confirm internal consistency between the items measuring the constructs. AVE and weighted construct reliability were also calculated as these are suggested measures of reliability when CFA is used (Hair et al., 2014). It should be noted that the items included in the resilience construct were kept to maintain the theoretical foundation, even though the AVE for Resilience received a value below 0.5. However, the Cronbach's alpha and construct reliability tests show internal consistencies of the dimensions with values above suggested acceptable levels. When conducting CFA and SEM in Amos, a systematic process was followed in order to make it easy to follow, which enhances the replicability of the study.

Construct reliability is also an important indicator of convergent validity, which is the confirmation that measures of the same construct are correlated. As both construct reliability and factor loadings reach above threshold values, convergent validity for this model can be considered satisfactory. By controlling that the square root of AVE of a latent construct is higher than the correlations with other latent constructs, the discriminant validity is ensured. Moreover, the remaining items in our simplified model each represent the intended construct as proposed by theory. The construct measuring TBL was composed of items measuring TBL as an entity instead of measuring environmental, economic and social aspects separately. Thus, face validity is considered to be acceptable as the construct captures the intended theoretical measure. The original measurement scale of resilience used in this study consisted of two dimensions, planning factor and adaptive capacity, of which adaptive capacity was kept in the final measurement and structural model. Thus, the model ensures face validity for adaptive capacity, which is one of the two most important dimensions of resilience. While resilience is measured by adaptive capacity alone in this study, this dimension is still capturing a major part of resilience and thus the findings are considered to be of relevance for drawing conclusions regarding resilience overall. Finally, the channel integration construct was reduced from 19 to 3 items which makes it hard to ensure face validity for this construct.

The fourth and last validity component that is part of assessing the overall construct validity that would confirm the model is nomological validity, which is the assessment of whether construct relationships are theoretically consistent (Hair et al., 2014). The analysis shows that there is statistically significant support of a path coefficient from TBL to resilience, which is consistent with the arguments of the literature review. No evidence was found of a relationship from channel integration to resilience, which also is consistent with literature as no earlier theoretical contributions have been made on such a relationship. Overall, the construct validity of this model is considered acceptable.

# 5. Discussion of Empirical Findings

## 5.1. Theoretical Implications

In contrast to the large portion of existing literature suggesting a positive relationship between TBL and resilience, the relationship between omnichannel management and resilience have not received great attention. Although the literature review suggested that outcomes such as adapting to changing consumer behavior (Huré et al., 2017; Briedis et al., 2020), increasing loyalty (Cao & Li, 2015), and higher profit sales (ibid.) could potentially indicate the existence of a relationship, no such evidence was found in the quantitative results of this study. Therefore, the research question regarding in what ways companies' omnichannel management practices contribute to resilience can not be answered with statistical evidence. Instead, the major theoretical implications of this study would be the literature review which provides the starting point for further research within the omnichannel area. However, a significant positive relationship was found between the control variable digital capability and resilience, suggesting that retail companies' abilities to manage digital technologies and digital competence have a positive impact on their ability to handle crises. This goes in line with previous research suggesting that digital technologies and ability to adapt to digital change can contribute to organizational resilience (Moşteanu et al., 2020). The digitalization of the retail sector is an ongoing change affecting both physical and online aspects of retail (Hagberg et al., 2016), and digital capabilities are arguably important abilities for companies involved in this change. Increased focus on the role of digital capabilities in the interplay with other factors creating organizational resilience is therefore a suggested direction for creating further understanding on the subject. Company age was also found to have a slight positive impact on resilience, which is a contribution to earlier findings where company age has been found to contribute to innovation and survival of companies (Coad et al., 2018). In this study, company age specifically has a positive impact on the adaptive capacities of the sample, which indicates that this might be an explanatory factor also in other research contexts. However, further research needs to be conducted in order to fully explain this relationship, as other factors might have an impact on this relationship.

Besides the relationship between digital capabilities and resilience, this study contributes to research by adding to the existing literature on the relationship between sustainability management and resilience, here represented by the TBL logic and organizational resilience specifically. As hypothesized, TBL management contributes positively to organizational resilience when measured by adaptive capacity variables. In line with earlier findings (Marchese et al., 2018), the impact is both strong and significant, adding to the understanding of the relationship between the two concepts. In the retail context of this study, the analysis shows that integrative aspects of TBL lead to increased adaptive capacity. Mean values on both TBL and organizational resilience measured by adaptive capacity are relatively high on a 5-point scale, indicating that the retailers of the sample adopt integrative aspects of sustainability management and have the adaptive capacity for handling a crisis. This provides insight into the research question of the study regarding in what ways companies' sustainability management contributes to resilience. While most earlier studies on this subject have focused on supply chain management in particular (Marchese et al., 2018; Bansal & DesJardine, 2014; Ahi & Searcy, 2013), this study lifts the context to the whole business unit and establishes evidence of a positive impact of TBL management on resilience through enhanced adaptive capacity of the company.

Since sustainability management in this study is defined and measured with integrative aspects of the TBL logic, this further adds to the understanding of what specific type of sustainability contributes to resilience. The analysis suggests that sustainability management that simultaneously considers environmental, economic and social aspects of sustainability creates adaptive capacity. This is interesting since it suggests that a holistic and integrative approach to sustainability management can be helpful in achieving positive outcomes, which is in line with literature suggesting that isolated sustainability efforts are undesirable (Bocken et al., 2013; Urbinati et al., 2017; Stubbs & Cocklin, 2008). This study therefore questions studies focusing on specific functions or aspects of sustainability

management. Given the findings of this study, it could be argued that these studies miss out on important integrative factors that could have an impact on the results. One major contribution of TBL has, as earlier research shows, been the harmonization of different aspects of sustainability (Glavas & Mish, 2014). This study further emphasizes that these efforts can be rewarding by contributing to the adaptability of a company. Therefore, as also stated in earlier research (Høgevold et al., 2015; Padin et al., 2016), the findings of this study show that sustainability should be viewed as an integrated concept with both environmental, economic and social dimensions. Following the findings of the analysis, it could then be argued that retailers should adopt an integrative approach to sustainability management in order to create the adaptive capacities needed for resilient business.

As the literature review suggests, there is widespread agreement between scholars on the positive outcomes that can be achieved for companies that engage in sustainability practices (Kramer & Porter, 2011; Crane et al., 2014; Lovins, 2008; Deegan, 2002; Huang et al., 2016). This is further enhanced by the findings of this analysis, which show that increased adaptive capacity can be one such positive outcome for companies engaging in TBL practices. Thus, this research shows that one positive outcome achieved by incorporating sustainability management is better adaptive capacity in crises. Adaptive capacity is, as earlier stated, a key feature of resilience (Linnenluecke, 2017; Lee et al., 2013; McManus et al., 2008) which suggests that resilience overall would be positively affected. It is also similar to findings of Avery and Bergsteiner (2011) suggesting that a TBL perspective in leadership creates resilience in crises. The findings of this analysis point in the same direction, where integrated sustainability management shows positive outcomes in the adaptive capacity dimension of resilience, which is related mostly to ongoing crisis management. This is therefore a contribution to literature on leadership, indicating that a focus on integrative sustainability management is important for resilient leadership practices. What is also interesting is that sustainability in this analysis leads to adaptive capacity, while the literature review suggests that a great difference between the both concepts is the focus on adaptation. While literature suggests that the focus of sustainability management on holisticity and long-term initiatives (Redman, 2014), resilience initiatives aim at adaptation (Lew et al., 2015). TThe adaptive capacities thus seem to be an important distinction between resilience and sustainability in earlier literature, while this study instead suggests that sustainability is an important cause of adaptive capacities leading to resilience. The relationship between the concepts might therefore be more complex than earlier thought, and the synergies suggested by earlier studies (Redman, 2014; Marchese et al., 2018) would be interesting to consider more thoroughly. Given that this study finds a relationship between integrative aspects of TBL and adaptive capacity, it suggests that synergies arise from these dimensions of sustainability and resilience. These findings also enhance the commonly accepted idea that the concepts should be viewed simultaneously but as separate entities. Failing to do so could risk ignoring the important cause-and-effect relationship between sustainability and resilience.

## 5.2. Managerial Implications

The managerial implications of this study is of main interest for the population from which the sample was retrieved, which is retailers in central Gothenburg. Some learnings could be applied to other contexts, such as the finding that digital capabilities sustainability leads to resilience, but then with respect to the particular contextual factors of this sample. As discussed in the theoretical implications, the relationship between TBL sustainability management and the adaptive capacity dimension of resilience indicates that managers should focus on incorporating environmental, economic and social aspects of sustainability into their leadership practices to remain resilient in disturbing times. A learning for managers is that TBL practices should not be abandoned in times of crisis, which is of current relevance considering the ongoing covid-19 pandemic. As earlier research indicates that consumers increasingly demand sustainable practices from retailers, this is of even greater importance.

No implications can be stated regarding the omnichannel management besides the average score of channel integration of retail companies in central Gothenburg. However these show that for the sample, channel integration is intermediate in dimensions of integrated order fulfilment and integrated

information access, exemplified by practices such as click-and-collect and consistency of information on product availability across channels. Even if no conclusions can be drawn on whether higher scores on these variables would lead to better results in this study, these are features commonly used to describe omnichannel management activities in literature. Thus, managers could make use of the literature review to assess their omnichannel practices in relation to suggested practices. Related to this is the finding that digital capabilities lead to higher adaptive capacity which indicates that greater digital capabilities could be an important factor for surviving crises. Managers should thus review the digital capabilities of their companies in order to better prepare for future challenges. Furthermore, as the analysis shows that company age could have an impact on the adaptive capacity of the company, managers should take this factor into consideration when assessing the resilience of their company. However, as further research is needed to fully understand the interplay between these factors, it should not be the focal aspect. Rather, this study suggests that managers should focus on establishing integrative sustainability management and improving the digital capabilities of the company as part of preparing the company for future crises.

## 5.3. Limitations of the Study

One of the main limitations of the study is the generalizability of the study. A comparison of the distribution of the retail industry sector between the population and sample was made, as shown in Table 2. Based on these results, it could be concluded that the sample is satisfactorily similar to the population with regards to retail industry sector distribution. However, as the chosen population is rather small and specific, no conclusions can be drawn on statistical grounds about the nature of things outside the population. Reaching relevant respondents from the population was found to be difficult, resulting in a small sample size. Moreover, the sample collected from the companies in this study is each from one respondent, involving risk for potential bias. With this in mind, replication of the study in another retail context than Gothenburg should therefore be necessary in order to further validate and extend the results of this study. Another limitation of the methodology of the study is the complexity of the model and measurement in relation to the small sample size. The SEM technique has only been proved valid for samples as small as 50 in earlier research and would generally require much larger samples to provide satisfactory results (Hair et al., 2014). The sample size required also increases with model complexity (ibid.), and thus the original measurement scales would have required much larger samples to prove reliable and valid. This led to the removal of several variables which reduced complexity of the model used for the analysis, limiting the validity. With a sample size better suited for the model, the findings would have achieved greater theoretical and managerial implications. This is particularly true for the measurement of channel integration which was heavily reduced from the original construct.

## 5.4. Suggestions for Further Research

There are several interesting roads forward within research on the subjects of this study. As indicated in the theoretical implications, it would be of interest to gain a deeper understanding of the synergies between sustainability and resilience to assess how and when these occur. Furthermore, the potential relationship between omnichannel and resilience remains unproved of, and thus a suggestion for further research would be to thoroughly review the indicators of such a relationship and test it with new measures. A relationship that however has been tested before and is also found in this study is that between digital capabilities and resilience. It would be interesting to further explore this relationship and what implications it brings to researchers and practitioners of different sectors. One of the findings of this study is the high scores on resilience from the responding companies. As this study only focused on companies still operating in the Gothenburg area, there was no room for comparison between these companies and the ones who were forced to shut down as a result of the pandemic. A suggestion for further research is therefore to examine these two groups of companies in order to explore potential differences in sustainability management and adaptive capacity between the ones currently surviving the pandemic and the ones who did not.

# Author Contributions

Both authors designed the work process and methodology, contributed to the literature review and problem discussion, collected the data, carried out the data analysis and interpretation, discussed the results and implications, and made a final critical revision of the study. The authors' contributions are therefore considered equal.

# References


Ahi, P. & Searcy, C. (2013). A comparative literature analysis of green and sustainable supply chain management. *Journal of Cleaner Production*, 52(1), 329-341.

Alexander, B. (2019). Store of the future: Towards a (re)invention and (re)imagination of physical store space in an omnichannel context. *Journal of Retailing and Consumer Services*, 55, p.101913.

Avery, G.C. & Bergsteiner, H. (2011). Sustainable leadership practices for enhancing business resilience and performance. *Strategy & Leadership*, 39(3), 5-15.

Avery, J., Steenburgh, T. J., Deighton, J., & Caravella, M. (2012). Adding bricks to clicks: Predicting the patterns of cross-channel elasticities over time. *Journal of Marketing*, *76*(3), 96-111.

Bacon, D. R., Sauer, P. L., & Young, M. (1995). Composite reliability in structural equations modeling. Educational and psychological measurement, 55(3), 394-406.

Bansal, P. & DesJardine, M.R. (2014). Business sustainability: It is about time. *Strategic Organization*, 12(1), 70-78.

Beck, N., and D. Rygl. (2015). "Categorization of Multiple Channel Retailing in Multi-, Cross-, and OmniChannel Retailing for Retailers and Retailing." *Journal of Retailing and Consumer Services* 27, 170–178

Benn, S., Edwards, M. & Williams, T. (2018). *Organizational Change for Corporate Sustainability*, 4th ed. Routledge.

Bocchini, P., Frangopol, D.M., Ummenhofer, T. & Zinke, T. (2014).
Resilience and sustainability of civil infrastructure: toward a unified approach
Journal of Infrastructure Systems, 20, 1-16.

Bocken, N., Short, S., Rana, P. & Evans, S. (2013). A value mapping tool for sustainable business modelling. *Corporate Governance*, 13(5), 482-497.

Bodenheimer, M., & Leidenberger, J. (2020). COVID-19 as a window of opportunity for sustainability transitions? Narratives and communication strategies beyond the pandemic. Sustainability: Science, Practice and Policy, 16(1), 61-66.

Bolagsverket (2019). Hållbarhetsrapport [online]
https://bolagsverket.se/ff/foretagsformer/aktiebolag/arsredovisning/delar/hallbarhetsrapport-1.17962

Briedis, H., Kronschnabl, A., Rodriguez, A. & Ungerman, K. (2020). Adapting to the next normal in retail: The customer experience imperative. McKinsey & Company, May 2020.

Brydges, T., Retamal, M., & Hanlon, M. (2020). Will COVID-19 support the transition to a more sustainable fashion industry?. *Sustainability: Science, Practice and Policy*, *16*(1), 298-308.

Bryman, A. & Bell, E., (2015). *Business research methods*. 4th ed. New York: Oxford University Press.

Cao, L. & Li, L., (2015). The Impact of Cross-Channel Integration on Retailers' Sales Growth. *Journal Of Retailing*, 91(2), pp.198–216.

Coad, A., Holm, J.R., Krafft, J. & Quatraro, F. (2018). Firm age and performance. *Journal of Evolutionary Economics*, 28, 1-11.

Cohen, M. J. (2020). Does the COVID-19 outbreak mark the onset of a sustainable consumption transition?.

Crane, A., Palazzo, G., Spence, L. J., & Matten, D. (2014). Contesting the value of "creating shared value". *California management review*, 56(2), 130-153.

Davies, G. R. (2013). Appraising weak and strong sustainability: Searching for a middle ground. *Consilience*, (10), 111-124.

Dawes, J. (2008). Do data characteristics change according to the number of scale points used? An experiment using 5-point, 7-point and 10- point scales. *International Journal of Market Research*, 50(1), 61-104.

Deegan, C. (2002). Introduction: The legitimising effect of social and environmental disclosures–a theoretical foundation. *Accounting, Auditing & Accountability Journal*.

Du, K. (2018). The impact of multi-channel and multi-product strategies on firms' risk-return performance. *Decision Support Systems*, 109, 27-38.

Erol, I., Cakar, N., Erel, D., & Sari, R. (2009). Sustainability in the Turkish retailing industry. *Sustainable Development*, *17*(1), 49-67.

Euromonitor International (2020). Euromonitor International's Voice of the Industry COVID-19 Survey, fielded April/July/October 2020

Fiksel, J., Goodman, I., & Hecht, A. (2014). Resilience: Navigating toward a Sustainable Future. *Solutions*, 1–13.

Gallino, S. and Moreno, A., (2014). Integration of online and offline channels in retail: The impact of sharing reliable inventory availability information. *Management Science*, *60*(6), pp.1434-1451.

Gardner, T. A., Benzie, M., Börner, J., Dawkins, E., Fick, S., Garrett, R., ... & Wolvekamp, P. (2019). Transparency and sustainability in global commodity supply chains. *World Development*, 121, 163-177.

Giuffrida, M., Mangiaracina, R., Miragliotta, G., Perotti, S., & Tumino, A. (2019). Modelling the environmental impact of omni-channel purchasing in the apparel industry: the role of logistics. *International Journal of Logistics Systems and Management*, *34*(4), 431-456.

Glavas, A. & Mish, J. (2014). Resources and capabilities of triple bottom line firms: going over old or breaking new ground? *Journal of Business Ethics*, 127(3), 624-634

Hagberg, J., Sundstrom, M., & Egels-Zandén, N. (2016) The digitalization of retailing: An exploratory framework. *International Journal of Retail & Distribution Management*, 44(7), 694-712.

Hair, J.F., Black, C.F., Babin, B.J. & Anderson, R.E. (2014). *Multivariate Data Analysis.* 7th ed. Harlow: Pearson Education Limited.

Hart, S. L. (1995). A natural-resource-based view of the firm. Academy of management review, 20(4), 986-1014.

Herhausen, D., Binder, J., Schoegel, M., & Herrmann, A. (2015). Integrating bricks with clicks: retailer-level and channel-level outcomes of online–offline channel integration. *Journal of retailing*, *91*(2), 309-325.

Higgins, C. & Larrinaga, C. (2014). Sustainability reporting insights from institutional theory. In: Unerman, J., O'Dwyer, B. & Gibassier, D. (2014). Sustainability Accounting and Accountability, 2ed. Taylor & Francis. Ch. 13, 273-285

Hosseini, S., Merz, M., Röglinger, M., & Wenninger, A. (2018). Mindfully going omni-channel: An economic decision model for evaluating omni-channel strategies. *Decision Support Systems*, *109*, 74-88.

Hübner, A. H., Kuhn, H., Wollenburg, J., Towers, N., & Kotzab, H. (2016). Last mile fulfilment and distribution in omni-channel grocery retailing: a strategic planning framework. International Journal of Retail & Distribution Management.

Huang, X. X., Hu, Z. P., Liu, C. S., Yu, D. J., & Yu, L. F. (2016). The relationships between regulatory and customer pressure, green organizational responses, and green innovation performance. Journal of Cleaner Production, 112, 3423-3433.

Huré, E., Picot-Coupey, K., & Ackermann, C. L. (2017). Understanding omni-channel shopping value: A mixed-method study. *Journal of Retailing and Consumer Services*, *39*, 314-330.

Høgevold, N.M., Svensson, G., Klopper, H.B., Wagner, B., Carlos Sosa Varela, J., Padin, C., Ferro, C. & Petzer, D. (2015). A triple bottom line construct and reasons for implementing sustainable business practices in companies and their business networks. *Corporate Governance*, 15(4), 427-443.

Kachaner, N., Nielsen, J., Portafaix, A. and Rodzko, F., (2020). The Pandemic Is Heightening Environmental Awareness. [online] *BCG Global*. Available at: <https://www.bcg.com/publications/2020/pandemic-is-heightening-environmental-awareness> [Accessed 26 February 2021].

Khin, S. & Hu, T.C.F. (2018). Digital technology, digital capability and organizational performance. A mediating role of digital innovation. *International Journal of Innovation Science*, 11(2), 177-195.

Kitzmueller, M., & Shimshack, J. (2012). Economic perspectives on corporate social responsibility. Journal of Economic Literature, 50(1), 51-84.

Larke, R., Kilgour, M. & O'Connor, H., (2018). Build touchpoints and they will come: transitioning to omnichannel retailing. International Journal of Physical Distribution & Logistics Management, 48(4), pp. 465-483.

Lee, A. V., Vargo, J., & Seville, E. (2013). Developing a tool to measure and compare organizations' resilience. *Natural hazards review*, *14*(1), 29-41.

Lew, A.A., Ng, P.T., Ni, C-C. & Wu, T-C. (2015). Community sustainability and resilience: similarities, differences and indicators. *An International Journal of Tourism Space, Place and Environment*, 18(1), 18-27

Linnenluecke, M. K. (2017). Resilience in business and management research: A review of influential publications and a research agenda. International Journal of Management Reviews, 19(1), 4-30.

Lovins, L. H. (2008). The Business case for climate protection. Environmental Management: Reading and Cases, 15-39.

Marchese, D., Reynolds, E., Bates, M., Morgan, H., Clark, S. and Linkov, I. (2018). Resilience and sustainability: Similarities and differences in environmental management applications. *Science of The Total Environment*, 613-614, pp.1275-1283.

McManus, S., Seville, E., Vargo, J., & Brunsdon, D. (2008). Facilitated process for improving organizational resilience. *Natural Hazards Review*, *9*(2), 81-90.

Mirzabeiki, V. & Saghiri, S.S. (2020). From ambition to action: how to achieve integration in omni-channel? *Journal of Business Research*, 110, 1-11.

Moşteanu, N. R., Faccia, A., & Cavaliere, L. P. L. (2020). Disaster Management, Digitalization and Financial Resources: key factors to keep the organization ongoing. In *Proceedings of the 2020 4th International Conference on Cloud and Big Data Computing* (pp. 118-122).

Nardi, P. M. (2018). *Doing survey research: A guide to quantitative methods*. 4th ed. New York: Routledge.

Niinimäki, K., Peters, G., Dahlbo, H., Perry, P., Rissanen, T. & Gwilt, A. (2020). The environmental price of fast fashion. *Nature Reviews Earth and Environment*, 1, 189-200.

Ning, X., Liu, Y., Chen, J., Dong, X., Li, W. and Liang, B., (2013). Sustainability of urban drainage management: a perspective on infrastructure resilience and thresholds. *Frontiers of Environmental Science & Engineering*, 7(5), 658-668.

OECD (2020). Building Back Better: A Sustainable, Resilient Recovery after COVID-19. OECD Policy responses to Coronavirus (COVID-10).

Oh, L. B., Teo, H. H., & Sambamurthy, V. (2012). The effects of retail channel integration through the use of information technologies on firm performance. *Journal of Operations Management*, 30(5), 368-381.

Padin, C., Ferro, C., Wagner, B., Carlos Sosa Valera, J., Høgevold, N.M. & Svensson, G. (2016). Validating a triple bottom line construct and reasons for implementing sustainable business practices in companies and their business networks. *Corporate Governance*, 16(5), 849-865.

Pan, X., Ratchford, B.T. and Shankar, V., (2004). Price dispersion on the internet: a review and directions for future research. *Journal of Interactive Marketing*, *18*(4), pp.116-135.

Parise, S., Guinan, P.J. & Kafka, R., (2016). Solving the crisis of immediacy: How digital technology can transform the customer experience. *Business horizons*, 59(4), pp.411–420.

Park, H. & Kim Y-K. (2016). An empirical test of the triple bottom line of customer-centric sustainability: the case of fast fashion. *International Journal of Interdisciplinary Research*, 3(25)

Peltola, S., Nieminen, M. & Vainio, H., (2015). Key factors in developing omnichannel customer experience with finnish retailers. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 9191, pp.335–346.

Piotrowicz, W., & Cuthbertson, R. (2019). *Exploring Omnichannel Retailing: Common Expectations and Diverse Realities.* In: Piotrowicz W., & Cuthbertson, R. (2019). Exploring Omnichannel Retailing: Common Expectations and Diverse Realities. Springer Link. Chapter 1.

Poncin, I. and Ben Mimoun, M.S. (2014), "The impact of e-atmospherics on physical stores", Journal of Retailing and Consumer Services, Vol. 21 No. 5, pp. 851-859, available at: http://doi.org/10.1016/j.jretconser.2014.02.013

Porter, M. & Kramer, M. R. (2011). Creating shared value (Vol. 17). FSG.

PwC (2020). The consumer transformed: Changing consumer behaviours are accelerating trends along a reinvented customer purchase journey. PwC Global Consumer Insights Survey 2020

Redman, C.L. (2014). Should sustainability and resilience be combined or remain distinct pursuits? *Ecology and Society*, 19(2), 37.

Rippé, C. B., Weisfeld-Spolter, S., Yurova, Y., Dubinsky, A. J., & Hale, D. (2017). Under the sway of a mobile device during an in-store shopping experience. Psychology & Marketing, 34(7), 733-752.

Roggeveen, A.L. & Sethuraman, R., (2020a). Customer-Interfacing Retail Technologies in 2020 & Beyond: An Integrative Framework and Research Directions. Journal of retailing, 96(3), pp.299–309.

Roggeveen, A. L., & Sethuraman, R. (2020b). How the COVID-19 pandemic may change the world of Retailing. Journal of Retailing, 96(2), 169.

Ruiz-Real, J. L., Uribe-Toril, J., Gázquez-Abad, J. C., & de Pablo Valenciano, J. (2019). Sustainability and retail: analysis of global research. *Sustainability*, *11*(1), 14.

Scheufeler, G. & Bennett, J. (2011). Valuing ecosystem resilience. *Journal of Environmental Economics and Policy*, 1(1), 18-31.

Schumacker, R. E., & Lomax, R. G. (2004). *A beginner's guide to structural equation modeling*. psychology press.

Seville, E., Brunsdon, D., Dantas, A., Le Masurier, J., Wilkinson, S., & Vargo, J. (2008). Organisational resilience: Researching the reality of New Zealand organisations. *Journal of business continuity & emergency planning*, *2*(3), 258-266.

Slaper, T. F., & Hall, T. J. (2011). The triple bottom line: What is it and how does it work. Indiana business review, 86(1), 4-8.

Stephenson, A., Vargo, J., & Seville, E. (2010). Measuring and comparing organisational resilience in Auckland. *Australian Journal of Emergency Management, The*, *25*(2), 27-32.

Strannegård, L. (2000). Flexible couplings: combining business goals and environmental concern. *Business Strategy and the Environment*, 9(3), 163-174.

Stubbs, W. & Cocklin, C.C. (2008). Conceptualizing a "Sustainability Business Model". *Organization & Environment*, 21(2), 103-127.

Styles, D., Schoenberger, H., & Galvez-Martos, J. L. (2012). Environmental improvement of product supply chains: A review of European retailers' performance. *Resources, Conservation and Recycling*, 65, 57-78.

Svensk Handel (2019). Shoppingturism i Sverige.

Svensk Handel (2020) Läget i Handeln - 2020 års rapport om branschens ekonomiska utveckling.

Svensk Handel (2021). Handelsbarometern - Januari 2021

Svensson, G., Høgevold, N., Ferro, C., Carlos Sosa Varela, J., Padin, C. & Wagner, B. (2016). A Triple Bottom Line Dominant Logic for Business Sustainability: Framework and Empirical Findings. *Journal of Business-to-Business Marketing*, 23(2), 153-188

Svensson, G., Ferro, C., Høgevold, N., Padin, C., Carlos Sosa Varela, J. & Sarstedt, M., (2018). Framing the triple bottom line approach: Direct and mediation effects between economic, social and environmental elements. *Journal of Cleaner Production*, 197(1), pp.972-991.

Urbinati, A., Chiaroni, D. & Chiesa, V. (2017). Towards a new taxonomy of circular economy business models. *Journal of Cleaner Production*, 168, 487-498.

Verhoef, P.C., (2012). *Multichannel customer management strategy*. In: Handbook of marketing strategy. Edward Elgar Publishing.

Verhoef, P. C., P. K. Kannan, and J. J. Inman. (2015). "From Multi-channel Retailing to Omni-channel Retailing: Introduction to the Special Issue on Multi-channel Retailing." *Journal of Retailing* 91 (2): 174–181.

Whitman, Z. R., Kachali, H., Roger, D., Vargo, J., & Seville, E. (2013). Short-form version of the Benchmark Resilience Tool (BRT-53). *Measuring Business Excellence*.

Wiese, A., Kellner, J., Lietke, B., Toporowski, W. & Zielke, S. (2012). Sustainability in retailing - A summative content analysis. *International Journal of Retail & Distribution Management*, 40(4), 318-335.

Wilson, J.P. (2013). The triple bottom line: Undertaking an economic, social, and environmental retail sustainability strategy. *International Journal of Retail & Distribution Management*, 43(4), 432-447.

Zhou, K.Z. and Wu, F. (2010). Technology capability, strategic flexibility and product innovation, *Strategic Management Journal*, 31(5-6), 547-561.

# Appendix A: Complete list of dimensions and items used in the survey

| Construct | Dimension | Item | Label | Reference |
|---|---|---|---|---|
| **Channel Integration** | Integrated Promotion | ip1 | The firm's brand name, slogan and logo are consistent both online and offline | Oh, L.B., Teo, H.H. & Sambamurthy, V. (2012). |
| | | ip2 | The Website/social media highlights in-store promotions that are taking place in the physical store | |
| | | ip3 | The Website/social media advertises the physical store by providing address and contact information of the physical store | |
| | | ip4 | The physical store advertises the Website/social media through signs, receipts, and carrying bags | |
| | Integrated Transaction | it1 | The firm keeps an integrated purchase history of customers' online and offline purchases | |
| | | it2 | The firm makes future purchase recommendations to customers based on past consolidated online and offline purchases | |
| | | it3 | The Website customizes Web pages for customers based on past consolidated online and offline purchases | |
| | Integrated Product and Pricing Information | ipp1 | Product/service descriptions are consistent in both the physical store and Website | |
| | | ipp2 | Product/service category classifications are consistent in both the physical store and Websit | |
| | | ipp3 | Product/service prices are consistent in both the physical store and Website | |
| | Integrated Information Access | iia1 | The Website allows customers to search for products available in the physical store | |
| | | iia2 | The firm allows checking of inventory status at the physical store through the Website | |
| | | iia3 | The physical store provides screens for customers to find answers to frequently asked questions without making enquiries to the physical store customer service assistants | |
| | Integrated Order Fulfillment | iof1 | The gift coupons or vouchers issued by the store can be redeemed either online or offline | |
| | | iof2 | The physical store allows customers to self collect their online purchases | |
| | | iof3 | The firm allows customers to choose any physical store from which to pick up their online purchases | |
| | Integrated Customer Service | ics1 | The in-store personnel accepts return, repair, or exchange of products purchased online | |
| | | ics2 | The Website/social media provides post-purchase services such as support for the products purchased at physical stores | |
| | | ics3 | The Website/social media provides interactive access to the customer service assistant through a real-time chat program | |
| **Triple Bottom Line** | General | | *Economic, social and environmental efforts of sustainable business practices [...]:* | Høgevold, N.M., Svensson, G., Klopper, H.B., Wagner, B., Carlos Sosa Varela, J., Padin, C., Ferro, C. & Petzer, D. (2015) |
| | | tbl1 | [...] are well intertwined in the company | |
| | | tbl2 | [...] need to be simultaneously addressed | |
| | | tbl3 | [...] are interconnected in the company | |
| | | tbl4 | [...] are not treated separately from one another | |
| | | tbl5 | [...] are considered separately from one another | |
| | Environmental | | *Our sustainable business practices [...]:* | |
| | | env1 | [...] focus on environmental issues | |
| | | env2 | [...] make the most efficient use of the resources available in the environment | |
| | | env3 | [...] are based upon environmental monitoring | |
| | Economic | eco1 | [...] rest on economic considerations | |
| | | eco2 | [...] focus on survival in the marketplace | |
| | | eco3 | [...] saved money to the company at the beginning of implementation | |
| | Social | soc1 | [...] take current activities in the community into account | |
| | | soc2 | [...] consider the well-being of society as a whole | |
| | | soc3 | [...] focus on social (i.e. relational or societal) aspects | |
| **Resilience** | Planning Factor | pf1 | We are mindful of how a crisis could affect us | Whitman, Z.R., Kachali, H., Roger, D., Vargo, J. & Seville, E. (2013) |
| | | pf2 | We believe emergency plans must be practised and tested to be effective | |
| | | pf3 | We are able to shift rapidly from business-as-usual to respond to crises | |
| | | pf4 | We build relationships with organisations we might have to work with in a crisis | |
| | | pf5 | Our priorities for recovery would provide direction for staff in a crisis | |
| | Adaptive Capacity | ac1 | There is a sense of teamwork and camaraderie in our organisation | |
| | | ac2 | Our organisation maintains sufficient resources to absorb some unexpected change | |
| | | ac3 | People in our organisation "own" a problem until it is resolved | |
| | | ac4 | Staff have the information and knowledge they need to respond to unexpected | |
| | | ac5 | Managers in our organisation lead by example | |
| | | ac6 | Staff are rewarded for "thinking outside the box" | |
| | | ac7 | Our organisation can make tough decisions quickly | |
| | | ac8 | Managers actively listen for problems | |

| Dimension | Label | Reference (where applicable) |
|---|---|---|
| Sample characteristics | What is your role at the company? | |
| | Is your company part of a corporate group? | |
| | Is the company and/or the corporate group established with physical stores and/or websites outside Sweden? | |
| | Mark the categories best corresponding to your company's sector. Multiple choices are allowed: Apparel; Sports and leisure; Home interior; Electronics and appliances; Toys; Books; Other [insert text] | |
| | What sales and communication channels does your company use in Sweden today? Multiple choices are allowed: Physical store; Website without webshop; Website with webshop; Social medias; Other [insert text] | |
| Size | Approximately how many employees does your company have in Sweden, including store employees and other employees | |
| Age | For how long has the company existed? Less than 1 year; 1-5 years; 5-10 years; Longer than 10 years; Do not know | |
| | For how long has the company had a webshop? Less than 1 year; 1-2 years; 2-5 years; Longer than 5 years; Do not know | |
| Digital capability | *Assess your company's capability in the following areas from (1) Low to (5) High. Our company's capability to [...]* | Khin, S. & Hu, T.C.F. (2018). Digital technology, digital capability and organizational performance. A mediating role of digital innovation. *International Journal of Innovation Science* , 11(2), 177-195. |
| | [...] acquiring important digital technologies | |
| | [...] identifying new digital opportunities | |
| | [...] responding to digital transformation | |
| | [...] mastering the state-of-the-art digital technologies | |

# Appendix B: Sample Characteristics

| | Category | Number | % |
|---|---|---|---|
| Retail industry sector* | Apparel, shoes and accessories | 21,5 | 61 |
| | Sport and leisure | 2,3 | 7 |
| | Home interior | 1,3 | 4 |
| | Electronics and appliances | 2,7 | 8 |
| | Toys | 0,3 | 1 |
| | Books | 1,0 | 3 |
| | Other | 4,7 | 13 |
| | | | |
| Respondent position | CEO, founder, owner | 7 | 20 |
| | Marketing manager | 11 | 31 |
| | Area manager | 3 | 9 |
| | Store manager | 8 | 23 |
| | Sales | 4 | 11 |
| | Other | 2 | 6 |
| | | | |
| Number of employees | < 10 | 1 | 3 |
| | < 50 | 7 | 20 |
| | 50-100 | 7 | 20 |
| | 100-250 | 8 | 23 |
| | > 250 | 12 | 34 |
| | | | |
| Company age | < 1 year | - | - |
| | 1-5 years | - | - |
| | 5-10 years | 4 | 11 |
| | > 10 years | 31 | 89 |
| | | | |
| Webshop age | < 1 year | - | - |
| | 1-2 years | - | - |
| | 2-5 years | 2 | 6 |
| | > 5 years | 33 | 94 |
| | No webshop/do not know | - | - |
| | | | |
| Corporate group | Yes | 20 | 57 |
| | No | 15 | 43 |
| | | | |
| International presence | Yes | 29 | 83 |
| | No | 6 | 17 |
| | | | |
| Sales and communication channels** | Physical store | 35 | 100 |
| | Website with webshop | 35 | 100 |
| | Website without webshop | - | - |
| | Social media(s) | 28 | 80 |
| | Other | 3 | 9 |

* As multiple choice was allowed, some entries have more than one category. In these cases, ½ or ⅓ have been assigned to the chosen categories to adequately report the retail sectors of the sample.
** As multiple choice was allowed, the total will be larger than the actual sample size and thus the cumulative percentage greater than 100.