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Exploring supply chain sustainability drivers during COVID-19- Tale of 2 cities

Abstract

This study explores drivers of supply chain sustainability during COVID-19 in both the Australian and Saudi Arabian fashion industries. COVID-19 is the most recent global crisis to amplify sustainability issues in a very polluting sector. This qualitative, comparative study draws on 44 semi-structured interviews with fashion brands across the fashion spectrum, evenly distributed between Australia and Saudi Arabia. A grounded approach to analysis was applied. Findings indicate reactive and proactive approaches to dealing with COVID-19 and its impacts. A reactive approach, or dealing with a situation when faced with it, is guided by isomorphic pressures, which are classified as external forces that shape and influence how an organisation operates within society, but also can lead to changes in internal practices. A proactive approach implies foresight and acts upon a situation prior to being 'forced' to make changes and encourages social sustainability along the supply chain. To overcome challenges intensified by the pandemic, fashion organisations need to increase flexibility and collaborative approaches. This study makes a novel contribution to the literature through its cross-cultural comparison, exploring sustainability drivers with institutional theory.

Keywords

COVID-19, institutional theory, sustainability drivers, supply chain, Australia, Saudi Arabia

1. Introduction

Although sustainability, the interplay between economic, social, and environmental aspects, is a growing priority in the fashion industry, changes have been slow. A possible explanation can be linked to supply chain management (SCM) in that fashion supply chains (SCs) span globally and have been said to often disregard ethical, employment and environmental issues (Barnes & Lea-Greenwood, 2006; Turker & Altunas, 2014; Moretto et al., 2018). This article follows Mukendi et al.'s (2020: 2896) definition of sustainable fashion, where it is approached as a form of 'radical change' "through innovative business models, empowering changemakers and better understanding sustainable fashion consumer lifestyles". Thus, sustainability is viewed as creating an equilibrium between flora and fauna, referred to as Earth Logic (Fletcher & Tham, 2019), which should also translate into SCs and their management.

The fashion industry remains highly polluting, resource-intensive and the growing list of social sustainability challenges facing the industry are growing (UN, 2019). The pressure to produce more garments at faster speeds and low prices, comes at environmental and social costs (Brydges, 2021a). The Rana Plaza factory incident in 2013 revealed that it is often the most vulnerable in fashion SCs (garment workers) who pay the costs of this production system (Brydges & Hanlon, 2020a). Various stakeholders, including charities and non-governmental organisations (e.g., Oxfam, Fashion Revolution), and supranational institutions (e.g., the UN), have called for changes in fashion production and consumption, which has been magnified through the recent pandemic (Shulla et al., 2021; UN, 2021).

During COVID-19 environmental and social sustainability efforts seemingly took a backseat with industries trying to overcome SC disruptions (Brydges et al., 2021a). With 'side effects' such as clear skies and better air quality emerging because of halted production processes (Gardiner, 2020), the focus has shifted towards "economic recovery packages (that) should be designed to "build back better"" (OECD, 2020) thus, bring economic sustainability to the centre stage.

Against this backdrop, the year 2020 placed the industry at a crossroads: either to continue 'business as usual' or to accelerate urgently needed sustainable practices. COVID-19 has "highlighted the interconnectedness of our lives and the inherent uncertainty surrounding global economies, businesses and humankind" (McKinsey, 2020: 1). COVID-19 has caused an economic crisis (e.g., lockdowns, social distancing), whilst magnifying existing environmental issues (e.g.,

GHG emissions) (Brydges & Hanlon, 2020a; Brydges et al., 2021a). Thus, COVID-19 has shocked both the supply and demand sides of the global economic system (Silva et al., 2021), unduly affecting fashion businesses, alongside others globally.

Over a year into the pandemic, we have seen changes in fashion consumer behaviour. Some consumers are consciously opting for more ‘sustainable alternatives’ as well as decluttering wardrobes and decreasing impulse purchases (Brydges et al., 2021a; Vladimirova et al., 2022). The impact of COVID-19 on livelihoods and diversions can help explain the latter. In a time of economic uncertainty, job losses, and changes to disposable income to spend on non-essential items, not to mention that people have fewer opportunities to go shopping as a social activity, relationships to fashion are changing (Granskog et al., 2020). Yet, it is unclear whether we have observed an actual attitude shift in consumption practices, or if we may observe a rebound effect, due to consumers wanting to make up for lost time (Iran et al., 2022).

Similarly, the fashion retail landscape has seen dramatic changes, with a growing number of organisations ceasing operations (Henninger et al., 2021). As demand has plummeted, stock has remained unsold, and new apparel production stopped (Majumdar *et al.*, 2020; McIntosh, 2020). Simultaneously, we see fast fashion companies (e.g., Shein) that have been criticised for unsustainable practices, rapidly increasing market share and overtaking giants including Inditex and H&M (Elan, 2021; Wolfe, 2021). Yet, there is hope for the industry. Fish (2020) remarked that sustainability emerged as an even stronger guiding force, with several companies using time in lockdown to refocus efforts on sustainability. Currently it is unknown which changes will stay and how fashion businesses are dealing with the unprecedented situation.

This article explores Australia and Saudi Arabia, which were chosen to compare contrasting cultures and economic settings, which lacks research (Henninger *et al.*, 2019). The Australian fashion industry is valued at AUS\$ 27.2bn, which equates to 1.5% of the Australian GDP in 2021, and employs 489,000 people, 77% of which identify as female (AUS Fashion Council, 2021; Statista, 2022a). Although Australia “was ranked the richest in the world on median wealth per adult” (BBC, 2019), consumers are hesitant to spend money especially on unnecessary commodities (*ibid*). Yet, this is changing with consumers being described as having a buoyant mood, accompanied by the notion of Australia being “luxury’s new retail hotspot” (Marian, 2021).

Australia is a sustainability forerunner within the fashion industry, with various brands producing their creations locally and Australian consumers showing an appreciation for

homegrown fashion, perhaps because fast fashion chains relatively recently entered the market (AUS Fashion Council, 2021). When COVID-19 hit Australia, fast fashion companies suffered more, with several smaller sustainability-focused brands innovating and driving change with their made-to-order business models (Boland & Lloyd, 2020; Brydges *et al.*, 2021b).

Saudi Arabia is described as a conservative country shaped by Islamic values, such as modesty (Alosaimi, 2022). Currently the country is going through a lot of change with the Vision 2030 and the economy not only opening, but also more than 31.4% of women entering the workforce in 2020 (Saudi General Authority for Statistics, 2020; Statista, 2022b). Although fashion is currently produced outside the country, there is an increase in female fashion entrepreneurs, who are slowly changing the fashion landscape and bringing fashion production home (Alblowi *et al.*, 2021). Similarly to Australia, Saudi Arabia is a stronghold for luxury fashion (Alosaimi, 2022).

Interestingly, although Saudi Arabia is best known for its oil resources, the government recently introduced the Vision 2030 to foster sustainability by focusing on environmental and social aspects across various industries (Vision 2030, 2020). The fashion industry was identified as a key industry for the country's economic achievements and a driver for sustainable change (Vision 2030, 2020; Henninger *et al.*, 2021).

Despite the geographic distance, Australia and Saudi Arabia share important similarities such as population size, habitats (e.g., deserts, metropolitan cities, rural areas) (Gassem, 2020), and ownership of natural resources. The two countries provide an opportunity for comparison, with one already having a reputation for implementing sustainability in manufacturing processes and the other seeking to implement these.

Based on the challenges raised, we explore these issues through the following research questions:

- 1) What sustainability drivers are influencing fashion businesses in their response to COVID-19?
- 2) What have been the key priorities of brands in response to the crisis?

In the remainder of the article, we review key literature surrounding supply chain management and sustainability, before outlining our methodology, and presenting findings of this comparative study. The article concludes with highlighting key contributions and areas of future research.

2. Literature Review

Sustainable supply chain management (SSCM) is not a new *per se*, as it has received increased scholarly interest, especially in the fashion sector (Turker & Altunas, 2014; Moretto et al., 2018). SSCM can be defined as “the management of material, information and capital flows as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development (...) into account which are derived from customer and stakeholder requirements” (Seuring & Müller, 2008: 1700). Turker and Altunas (2014) argue that it is vital to focus on sector specific studies as different industry sectors will have different requirements.

This holds even more true for the fashion industry with different segments (fast fashion versus luxury versus slow fashion) showing different attitudes towards speed to market, stock turnover, and raw materials (e.g., Barnes & Lea-Greenwood, 2006; Garcia-Torres et al., 2021). A commonality is the preparedness to be responsive and efficient (Turker & Altunas, 2014; Wren, 2022). Several different SC strategies can be implemented to address the former (level of responsiveness), such as just-in-time or agile SCM. Yet, it has been argued that in order to stay responsive a sustainability price is paid, in that environmental and social issues are often side-lined (Turker & Altunas, 2014; Henninger et al., 2015). Thus, it may not be surprising that fashion retailers have faced criticism, as media outlets uncovered inhumane working conditions in factories, as well as negative climate change impacts (McKinsey, 2020).

Seuring and Müller (2008: 1703) divide their conceptual framework of triggers for SSCM into three parts: 1) “Triggers for sustainable supply chain management”, which centres on pressures from the external environment, as well as incentives set by different stakeholder groupings to adopt SSCM practices; 2) “Supplier management for risks and performance”, which provides an internal perspective and evaluates factors that could act as barriers; and 3) “Supply chain management for sustainable products”, which heavily relies on communication and seeks to satisfy consumer needs, by further securing a competitive advantage in the market place. As alluded previously, changes towards more sustainable practices in the fashion industry have been slow. One explanation is complex SCs and their management, whilst another could be COVID-19, which saw companies struggling financially and individuals losing jobs (Majumdar *et al.*, 2020; Nundy et al., 2021).

Moretto et al. (2018) highlight that achieving sustainability across the SC can be challenging as different regulations and laws may be enforced across different countries, which is fostered through increasingly global SCs. The need to implement these changes can be linked to institutional theory. Companies are forced to become more alike in terms of their practices and overall form, a phenomenon often referred to as isomorphism or isomorphic pressures (coercive, mimetic, and normative) (Di-Maggio & Powell, 1983).

Moretto et al. (2018) suggest a roadmap approach to achieving sustainability, which allows fashion companies to reshape their internal practices and adapt products they manufacture (Formentini and Taticchi, 2016). Whilst this may be achieved theoretically, in reality this is a highly complex process and often unachievable in a linear pathway. Historically, garments were produced locally; however, the industrial revolution provided new opportunities, and fashion businesses settled either in surrounding countries (nearshoring), or farther afield (offshoring). Today, businesses often use different 'modes' to source and produce their garments (e.g., offshoring, nearshoring) (McKinsey, 2020). Each mode has implications for lead times and SC responsiveness and efficiency (Turker & Altunas, 2014; Wren, 2022).

To explain this in light of isomorphic pressures, coercive pressures are exerted on the company from the external environment, most often through government regulations or cultural expectations. Once new industrial rules are introduced and enforced by regulatory bodies, organisations must comply and make necessary changes to ensure compliance (Macchion et al., 2017; Moretto et al., 2017). For example, the Australian government has introduced the Modern Slavery Act, which requires organisations over a certain size to publish a report on (potential) risks of modern slavery within their SC (AUS Gov, 2018). Similarly, Saudi has set technical regulations for textiles (enforced in 2019), which ensure environmental protection and consumer health and safety (SGS, 2018).

Mimetic pressures often arise through uncertainties in the external environment (e.g., technology changes, market dynamics, COVID-19). When high environmental uncertainties remain, companies look at successful organisations and start adopting similar practices (Aksom & Tymchenko, 2020; Wren, 2022). Ideally, these changes become mainstream over time, and businesses adopt them in order to legitimise certain operations, which links to normative pressures. Normative pressures are driving forces that can affect socially compliant behaviours and actions, by influencing existing norms and focusing on responsibility.

According to Di-Maggio and Powell (1983) these pressures lead companies to become more isomorphic. Although organisations in an industry may become more similar, isomorphism does not explain why companies may respond to these pressures differently (Aksom & Tymchenko, 2020; Wren, 2022). It is possible that organisations provide different solutions due to different kinds of institutional logic based on different belief systems and thus, affect the way organisations respond to isomorphic pressures (ibid).

Developed countries seem to have foundations for change, whilst emerging economies still lag behind, with sustainable measures receiving insufficient attention. The fashion industry is highly volatile with suppliers often competing against each other to win orders. In low-income countries, suppliers may feel they need to reduce costs, often at the expense of implementing sustainable measures (Khurana & Ricchetti, 2015; Majumdar *et al.*, 2020).

Seuring and Müller (2008) provide an overview of triggers that could lead companies to implement more sustainable practices. They identify external pressures (e.g., government regulations) or incentives within a company's environment (e.g., stakeholder pressure, consumer preferences), which Jennings and Zandbergen (1995) describe as coercive and mimetic pressures. Thus, changes made to SCM practices, especially related to sustainability, may be driven less by functional aspects and more by symbolic actions ('good corporate citizen') or external influencers (e.g., regulations). Karmaker *et al.* (2020) highlight that COVID-19 has dramatically changed what we know about (sustainable) SCM and triggers that may foster change.

Various fashion organisations have outlined their own sustainability agenda to counteract negative headlines, by further signing up to, for example the Bangladesh Accord (2018) or the Fashion Pact (2020). Both coercive and mimetic pressures have led organisations to address these issues, whereby (non-)governmental organisations, and consumers have exerted their powers to drive these changes. Now, COVID-19 is also pushing the sustainability agenda.

From the literature it becomes apparent that the main drivers towards implementing SSCM practices are legal compliance, which has often emerged due to scandals (e.g., environmental and/or social disasters) (Jorgensen and Jensen, 2012; Macchion *et al.*, 2017). NGOs in the past have also attacked companies and forced them to make changes, similar actions are taken by consumers through vocalising their demand for more sustainability. More recently, we have seen an increasing number of companies internalising sustainability and making it part of their core values and long-term vision, which often also enhances their overall business performance.

COVID-19 has magnified issues surrounding sustainability and the fashion supply chains. Karmaker *et al.* (2020) investigate drivers advancing sustainability within SCM, by focusing specifically on the context of COVID-19, thereby identifying thirteen drivers as key priorities (Table 1). These thirteen drivers are an extension of those that have previously been mentioned within the literature, by further focusing on how COVID-19 has changed and/or added to these drivers.

Table 1: SC sustainability drivers (Karmaker et al., 2020: 419)

Driver	Description	Explanation
D1	Efficient disruption risk management capacity	- Monitor long-term COVID-19 impacts along SC. - Provide uninterrupted product supply (Ivanov & Dolgui, 2020).
D2	SC agility	- Ensures profitability and product delivery with short lead times and differing volumes (Karmaker <i>et al.</i> , 2020)
D3	Customer support, awareness and community pressure	- Links to mimetic pressures and responds to changes in the external environment. - Increased consumer pressure to provide sustainable solutions (Macchion <i>et al.</i> , 2017; Mukendi <i>et al.</i> , 2020).
D4	Blockchain technology adoption	- Transparency among SC partners, as well as data privacy and process integrity (Ivanov & Dolgui, 2020; Wren, 2022).
D5	Increasing the applications of data analytics in SC	- Monitor progress with real-time data (Karmaker <i>et al.</i> , 2020). - Enhances business performance (Macchion <i>et al.</i> , 2017)
D6	SC collaboration to ensure materials supply	- Ensures uninterrupted flow of materials and production (Majumdar <i>et al.</i> , 2020).
D7	Building sustainable procurement strategies considering COVID-19	- Develop a Plan B (de Sousa Jabbour <i>et al.</i> , 2020).
D8	Development of health protocols for stakeholders across the SC	- Alignment with supranational organisation advice.
D9	Policy development to recover from impact of COVID-19	- Develop protocol in case of future crisis (Karmaker <i>et al.</i> , 2020).
D10	Financial support from SC partners	- Collaboration to ensure sustainability across SC.
D11	Application of automation and robotics in manufacturing and logistics service	- To avoid long-term shut downs

D12	Building resilient transportation and logistics facilities	- Tracking products and sharing resources to improve logistics capabilities.
D13	Financial support from the government through offering incentives, tax cuts, loans etc.	- Supports companies through challenging times.

COVID-19 has magnified sustainability issues and fashion SC complexities (Brydges *et al.*, 2020b). For example, cancelled orders and declining payments for already produced garments (ordered pre-COVID-19), affected garment workers in developing/emerging countries (Brydges & Hanlon, 2020a; Karmaker *et al.*, 2020). Moreover, the fashion industry has experienced first-hand that SCs may develop in problematic ways, an issue that links to drivers D1, D2, and D6 (Table 1).

Specifically, a relatively small number of countries produce trend-led fashion items and personal protective equipment (PPE). Relying on single countries to deliver essential equipment can be risky. Accordingly, countries need to rethink sourcing strategies of certain products to ensure that shortages, such as those experienced during COVID-19, will not happen in the future (D9) (Karmaker *et al.*, 2020: 419).

With factories ceasing operations or halting manufacturing processes, new lines were delayed in the initial manufacturing phase. Moreover, local lockdowns and other restrictions have prevented businesses from delivering new garments to their final destinations; with collections having gone out of fashion before even hitting the shopfloor (Dirvanauskas, 2020). These disruptions have had social implications, notably furloughing schemes and job losses across the fashion SC (Majumdar *et al.*, 2020; Brydges *et al.*, 2021a).

Although COVID-19 has seen many negative reports, there have been some positive environmental outcomes. For example, when production across industries was halted, GHG emissions dropped by 25% (Edited, 2020). Berg *et al.* (2020: 12) noted as a result, companies may need to develop better strategies “to better balance risk, cost, and flexibility”. We address this by exploring drivers for change in the fashion industry and how companies have responded to them, by combining this with institutional theory, specifically the coercive and mimetic pressures that companies may face during COVID-19.

3. Methods

This comparative case study explores drivers and lessons learned from COVID-19 in relation to SSCM within the Australian and Saudi. Although COVID-19 was not the main focus, it emerged as a key theme due to the timing of our data collection (June-October 2020). We draw on 44 semi-structured interviews with key fashion players (Table 2). Within the Australian data set, we distinguish between fashion brands and ‘other industry actors’. Although these latter participants sometimes had their own fashion brands, they may have acted more as intermediaries by facilitating garment rentals, managing department stores, or working with fashion related non-governmental organisations.

Table 2: Participant overview

	Participant	Role	Segment	In-country Production
Australia	Fashion Brands			
	AUSBrandA	Co-founder	Designer/casual wear	Yes
	AUSBrandB	Operations	Designer women’s workwear	
	AUSBrandC	Co-founder	Designer workwear and evening apparel	
	AUSBrandD	Owner	Womenswear	
	AUSBrandE	Co-founder	Luxury resort wear	No
	AUSBrandF	Co-founder	Contemporary womenswear	Yes
	AUSBrandG	Co-founder	Designer womenswear	
	AUSBrandH	Founder	Ethical children’s and womenswear	No
	AUSBrandI	Operations	Wo/menswear	Yes
	AUSBrandJ	Founder		
	AUSBrandK	Founder		
	Other Industry Actors			
	AUSIntermediaryA	Management	Industry association	N/A
	AUSIntermediaryB	Management		
	AUSIntermediaryC	Management	Social enterprise	
	AUSIntermediaryD	Founder	Retail (pop-up, online)	
AUSIntermediaryE	CSR officer	Retail (online, direct-to-consumer)		
AUSIntermediaryF	Founder	Retail (rental)		
AUSIntermediaryG	CSR officer	Retail (in-store, online)		

	AUSIntermediaryH	Founder	Retail (secondhand, in-store/online)	
	AUSIntermediaryI	Founder	Retail (rental)	
	AUSIntermediaryJ	Management	Retail (in-store/online)	
Saudi Arabia	Fashion Brands			
	KSABrandA	Owner	Children's and Womenswear	Yes
	KSABrandB	Owner	Womenswear	
	KSABrandC	Founder	Women's ready-to-wear	No
	KSABrandD	Owner	Designer womenswear	Yes
	KSABrandE	Owner	Luxury womenswear	
	KSABrandF	Owner	Womenswear	
	KSABrandG	Co-founder	Designer womenswear	
	KSABrandH	Co-founder		
	KSABrandI	Founder	Women's ready-to-wear	
	KSABrandJ	Co-founder	Designer womenswear	No
	KSABrandK	Owner		
	KSABrandL	Owner		
	KSABrandM	Owner		
	KSABrandN	Owner		
	KSABrandO	Owner		
	KSABrandP	Owner		Yes
	KSABrandQ	Co-founder		No
	KSABrandR	Co-founder		
	KSABrandS	Owner		Yes
KSABrandT	Owner	No		
KSABrandU	Owner	Yes		
KSABrandV	Owner			

To ensure comparability between the data sets, a flexible interview protocol was created that allowed developing new topics and add probing questions (Easterby-Smith *et al.*, 2018). Table 3 provides sample questions from the interview protocol, how these relate to the literature.

Table 3: Sample Interview Questions

Themes	Questions	References
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General Information	<ul style="list-style-type: none"> - Can you tell me about your brand? <ul style="list-style-type: none"> · Do you have a local or global supply chain focus? · Why? - What makes your brand unique? <ul style="list-style-type: none"> · Are there any benefits/drawbacks that are associated with your supply chain and linked to brand? 	Jorgensen and Jensen, 2012; Macchion et al., 2017; Turker & Altunas, 2014; Wren, 2022
Sustainability	<ul style="list-style-type: none"> - What does sustainability mean to you? <ul style="list-style-type: none"> · Has this changed since COVID-19? · Have you changed anything as a result to COVID-19? - Are there any drivers and/or barriers to implementing sustainability? - What do you see as the future of the fashion industry? 	Henninger et al., 2015; Mukendi et al., 2020 Macchion et al., 2017; Karmaker et al., 2020
COVID-19	<ul style="list-style-type: none"> - What has COVID-19 meant for you and your brand? <ul style="list-style-type: none"> · How have things changed (or not) during COVID-19? · What have been drivers/barriers for change? · What have been learning points from COVID-19? · Have there been any opportunities? - How would you describe the relationship between you and your suppliers/customers? <ul style="list-style-type: none"> · Has anything changed? 	Turker & Altunas, 2014; Karmaker et al., 2020; Brydges et al., 2021a

Participants were selected randomly, an approach that gave each fashion organisation the same opportunity to participate. Ethical approval was obtained and included COVID-19 precautions (e.g., online data collection).

All interviews, which averaged 90 minutes, were transcribed verbatim, and in the Saudi case, translated from Arabic into English and back, to ensure accuracy. Data analysis followed Easterby-Smith *et al.*'s (2018) seven-step guide of data analysis, thus, we familiarised ourselves with both data sets, reflected on similarities and differences, conceptualised the data, catalogued concepts, re-coded, linked different themes, and re-evaluated outcomes.

To ensure intercoder reliability, parts of the data set were coded independently before discussing it as a group (O'Connor & Joffe, 2020). Once the initial codes were identified, the lead authors coded the data, following the coding protocol. Themes were aligned across the coders and were supported by the same citations, emphasising intercoder reliability (*ibid*).

4. Results and Discussion

4.1 Short-term immediate impact of COVID-19

COVID-19 has changed business practices (Boland & Lloyd, 2020) and companies agreed: “*when the pandemic hit it obviously had an immediate impact on the local manufacturing industry and that immediate impact was seen by some of our brands first of all having to close their stores or their boutiques or change kind of the way that they're engaging with front line customer service staff*” (AUSIntermediaryB). This highlights that in altering market dynamics, COVID-19 acts as a mimetic pressure, which requires companies to change (Di-Maggio & Powell, 1983).

This change equated to job losses, as brands were unable to afford “*high rents and employee salaries... in addition to industry and warehouse rents*” (KSABrandH). Participants revealed that material flows across the SC were disrupted at different points, with COVID-19 hitting countries at different times, thus creating unprecedented challenges. Various companies were ‘out of their depth’ because they lacked an initial strategy (Karmaker *et al.*, 2020).

Short-term measures included moving sales channels from an in-store environment to an online setting. Businesses also enhanced e-commerce strategies to “*compensate for any losses resulting from COVID-19*” (KSABrandM). Coercive pressures could explain this behaviour, in that government restrictions (e.g., curfews, non-essential businesses closures) (Di-Maggio & Powell, 1983), forced these organisations to move sales online for survive. Companies wanted to limit touch-points between staff and consumers to avoid spreading the virus and follow health protocols (D8) (Karmaker *et al.*, 2020).

Depending on each brand’s initial setup, some had to make bigger changes than others that already had an e-commerce strategy. Saudi brands seemed keen to move online and found this transition smooth, whereas Australian brands remained focused on their physical stores, which can be explained through high inner-city rents. Moreover, Australia’s unique geography can create obstacles, with some areas being densely populated, whilst the outback includes miles of uninhabited land. An e-commerce strategy requires infrastructure and access to high-tech equipment, resources that may not always be available. Although the transition to e-commerce overall has been smooth, geographic distances have required Australian brands to invest more in their online and social media presence to create interest and buy-in.

Table 4 provides a summary of this section outlining that COVID-19 acts as a mimetic pressure that disrupts SCM and results in job losses and store closures. From the findings it can be

implied that coercive pressures in the form of government legislation have provided opportunities to enhance social sustainability, by moving sales channels online or provide changed ways of interaction by developing a strategy that fosters limited touch-points.

Table 4: Summary of isomorphic pressures and implications

Isomorphic Pressure	Actor	Results
Mimetic pressure	COVID-19	<ul style="list-style-type: none"> • Job losses • closures
Coercive pressure	Government legislation	<ul style="list-style-type: none"> • e-commerce strategy • limiting touch-points

4.1.1 Reactive versus proactive approaches to COVID-19

Fashion organisations in both countries dealt with COVID-19 through two different approaches: reactive or proactive. These approaches further demonstrate that isomorphic pressures (coercive, mimetic, normative) (Di-Maggio & Powell, 1983) alone cannot account for the way organisations tackle changes in their environment (Macchion et al., 2017). Instead, these reactions depend on the organisation’s values (Aksom & Tymchenko, 2020). Fashion companies following a reactive approach were waiting for isomorphic pressures (Seuring & Müller, 2008); they made no changes to any of their SC processes until such changes were enforced (e.g., government guidelines).

Generally, a reactive approach implies that COVID-19 related health and safety concerns had to happen overnight, with little notice, limited forward planning, and within a high-pressure environment that forced staff to deal with situations instantaneously. These companies were faced with high uncertainty levels as *“people (are) wondering... where's my work going to come from in terms of the actual manufacturing”* (AUSIntermediaryB). Brands observed this uncertainty within manufacturing processes and sales. Intermediaries facing similar challenges, no longer wanted pre-COVID-19 placed orders, leaving some brands in a difficult situation: *“the collection has not sold; people didn’t want to buy it”* (KSABrandK).

Uncertainties created by the reactive approach can have long-term implications on partnerships and brand reputation. With material flows across the SC and cash flows disrupted; companies can face financial difficulties. If stores neither pay for nor accept orders, this situation

can raise issues among SC members and negatively impact working relationships. Brand reputations may also suffer, with social media allowing for real-time updates on what is happening in an industry, including comments by customers and staff, those organisations seen as less supportive may face consequences in the future. Consumers, in particular, are paying increasing attention to what they buy and whom from.

Fashion organisations following a proactive approach relied less on isomorphic pressures and responded more on life after the pandemic. These companies did not wait until coercive pressures (e.g., government regulations) forced them to implement one-way walking systems or develop click-and-collect approaches. Instead, these companies implemented these measures prior to government enforcement, which was often inspired by normative pressures.

Due to fashion's global nature, these pressures exist within countries and transnationally. Data indicated that some participants looked at successful COVID-19 measures in other countries and adopted them (Jennings & Zandbergen, 1995; Aksom & Tymchenko, 2020): *"we heard murmurings of what was happening in China and then in Italy.(...) Our plan was to really work with all our retail partners and all our suppliers.(...) We really took a lot of responsibility and tried to salvage as much business as we possibly can. It put us in good standing with our partners. I think the relationships have definitely gone a lot stronger, and there's a lot more communication going on"* (AUSBrandA).

AUSBrandA's actions suggest the importance of several SC sustainability drivers, namely D1 (efficient disruption risk management capacity), through monitoring their SC, D6, by ensuring material and capital flows. And D7 by putting a back-up plan in place, should one supplier be unable to deliver (Karmaker *et al.*, 2020; Majumdar *et al.*, 2020). The Saudi data revealed similar attitudes. KSABrandA stated, *"I can't leave them (suppliers) I must stay with them in the crisis"*, thereby insisting that sharing the burden was important, not just moving production forward quickly once restrictions were removed. Overall, the brands stressed that COVID-19 strengthened their supplier relationships.

The proactive and reactive approaches to COVID-19 suggest different concerns and goals, in that the proactive approach strongly aligns with economic and social sustainability. Organisations seek not only to survive but also to collaborate in order to keep the entire SC afloat. They also try to create a safer environment by introducing, for example, one-way systems, facemask requirements, and social distancing protocols, and acting in a measured way rather than

initiating changes overnight. Within the reactive approach, organisations tend to fend for themselves and thus seem mainly concerned with their own economic sustainability. Thus, the proactive and reactive approaches seem connected to an organisation’s value system, which helps explain how individual companies have responded to COVID-19.

We concur with past research indicating that collaborations are a priority during crises (Karmaker *et al.*, 2020; Majumdar *et al.*, 2020). However, our findings extend this notion, as data indicate that this collaboration is not solely about the smooth material supply (D7), but instead about sharing financial burdens so that SC partners survive. Thus, a strong focus on the social dimension of sustainability emerges, with companies encouraging safe working environments and financial support through saved jobs.

Table 5 provides a summary of this section and outlines key insights. We found that both the reactive and proactive approach have a focus on economic sustainability, whilst the proactive one further extends to include social sustainability. It was indicated that the reactive approach may show short-term benefits, due to aligning with coercive and mimetic pressures, yet could have negative consequences in the long-term. Our findings confirmed that the proactive approach is linked with effective crisis management and carefully building up protocols, which subsequently can lead to a fast recovery.

Table 5: Summary of findings and key insights

	Reactive	Proactive
Economic Sustainability	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Social Sustainability		<input checked="" type="checkbox"/>
Strategy	Individualistic	Collaborative
Isomorphic pressure	Coercive, mimetic	normative
Key insights	<ul style="list-style-type: none"> • Can have negative impact on brand reputation and SC relationships 	<ul style="list-style-type: none"> • Stronger bonds within SC • Foresight through managing D1, D6, D7 and D8 • Potential for faster recovery and also survival

4.1.2 Supply chain responsiveness and efficiency

Supply chain agility emerged as a key theme and is a strategy that can be implemented to foster high level of responsiveness and efficiency, which are vital for SCM (Turker & Altunas,

2014; Wren, 2022). Although past research indicated (Turker & Altunas, 2014; Henninger et al., 2015) that responsiveness often comes at the price of sustainability, the opposite was observed within our findings, which will be explain in more detail.

Due to Australia's geographic location, off-shoring and near-shoring measures may not always be financially viable, as long transportation corridors and different time zones create challenges. This explains its history of domestic production (English & Pomazan, 2010). During COVID-19, local manufacturing has offered benefits: First, manufacturers were able to adapt to the situation quickly, producing both garments and PPE. *"Looking at certainly PPE wear that's been needed with the pandemic, whether that's been medical gowns or scrubs or face masks, and local manufacturers have been looking to take up orders there and do some work in that way"* (AUSIntermediaryB).

Although financial aspects are key for organisations, COVID-19 has created closer bonds across the SC (e.g., AUSBrandD; AUSBrandI; KSABrandE; KSABrandU). By sharing the burden of COVID-19's impact, all partners ensured that everyone survives. This links with D2: organisations need SC agility (Ivanov & Dolugi, 2020) in order to change production processes quickly and produce something different. This further supports the proactive approach, in that organisations changed production practices to avoid for example the medical industry being impacted by a lack of PPE.

Second, AUSBrandD insists, engaging with local manufacturing meant they could honour their orders and could intervene faster: *"I called my retail customers and said 'don't panic, I'm not going into production yet, you've got the opportunity to make changes before we do this. I know other brands that you buy from, because they make offshore can't do that for you, but we can'. We all held tight until the end of May, at which point we were up and running again. My makers were ready to get back to work and most retailers had continued with their orders. Production started up quickly. Many of the brands we compete with are made offshore and couldn't honour their orders. The flexibility we could offer our retailers was a huge advantage"*.

Some companies not only combined D2 with a proactive approach (putting provisions in place) but also with D1 (efficient disruption risk management capacity) and D6 (SC collaborations) (Moktadir et al., 2018; Majumdar et al., 2020). Intriguingly, mimetic pressures seemed to have affected SC agility. When stakeholders and society expressed an urgent need for PPE, the fashion

industry felt obliged to respond and provide support. Although this call for supplies exerted pressure on the industry only indirectly, it clearly influenced the actions of fashion organisations.

Similar actions were taken in Saudi. Brands switched to in-house, small scale PPE production, guided partly by mimetic pressures and partly by a strong social sustainability urge. Saudi companies emphasised they saw it as their duty to send *“free masks to my customers that buy products from our brand”* (KSABrandE). Aside from potential mimetic pressures, organisations also wanted to emerge as good corporate citizens. This desired perception aligns with sustainability because when organisations seek long-term stakeholder relationships (Brydges & Hanlon, 2020a), they demonstrate a strong social responsibility agenda. This agenda may be even more important during COVID-19, with commerce activities moving online.

Saudi brands further insisted that product design changes were essential to support government restrictions. Thus, organisations were exerting pressure back onto society by *“creat(ing) a new style appropriate to meet current conditions(...) COVID-19 has created new design ideas, including a variety that is considered safer in terms of the quality of the cloth, as well as the availability of pockets to put masks and sterilisers. They are choosing fabrics that are more effective in not capturing dust and dirt, especially in light of COVID-19”* (KSABrandL).

This statement suggests that organisations are not only dealing with isomorphic pressures within their environment that can impact their SCM (Seuring & Müller, 2008; Turker & Altunas, 2014; Wren, 2022) but also exerting pressure onto their surrounding environment. Thus, there is a two-way flow of pressure that has not previously been documented.

A possible two-way flow fosters a proactive approach and highlights that social responsibility is vital in dealing with COVID-19, in terms of internal practices and external results, thereby suggesting that organisations must become ethical and social (Alharbi & Alharbi, 2019). Especially in Saudi, we see D3 (customer support, awareness and community pressure) (Moktadir *et al.*, 2018) emerging yet working the opposite way. Fashion organisations are actively raising awareness of COVID-19 and putting pressure on the community to act in a more sustainable manner. This behaviour implies social sustainability by supporting local business and by adhering to government regulations.

Two implications emerge: 1) reactive behaviour implies a direct response to government pressure, which can leave especially suppliers in a precarious situation. 2) Proactive behaviour circumvents isomorphic pressures and thus creates stronger supplier bonds, where SC members

share the impact. This second implication may also explain why smaller fashion brands were able to recover faster (Boland & Lloyd, 2020). Similarly, we found that in a time of crisis, SSCM seems to be associated with predominantly social rather than environmental aspects. Thus far, the most prominent drivers for change are D1 (efficient disruption risk management capacity), D2 (SC agility), D6 (SC collaboration to ensure materials supply), D7 (Building sustainable procurement strategies considering COVID-19), and D8 (Development of health protocols for stakeholders across the SC) (Karmaker *et al.*, 2020; Majumdar *et al.*, 2020).

4.2 COVID-19 and sustainability

One of the ‘positive’ outcomes of COVID-19 is a renewed emphasis on environmental sustainability (McKinsey, 2020). Although our data concurs that environmental sustainability is important, social sustainability seems an even bigger driver.

“I don’t think COVID made the industry focus on sustainability, that’s been happening for the last few years. We’ve noticed a marked change in that, in probably the last 18 months mostly. I don’t think it’s COVID-induced (...) I 100% think that COVID will lead to a more sustainable fashion industry. Everybody is reconsidering how much product they need to put out there” (AUSBrandG). AUSBrandA noted seeing a change in attitude from other brands since COVID-19: *“When we started, the local manufacturing industry was actually starting to die because everything was moved offshore”*. Offshore production is now seen as problematic, as SCs become increasingly complex, and communication is often lacking. If SCs are to remain agile and material flows are to be guaranteed, communication is key.

The Australian interviewees did not see COVID-19 as a sustainability trigger (as evidenced by AUSBrandA; AUSBrandG); instead, it was seen as a catalyst that accelerated some changes that organisations would have implemented over time (e.g., local manufacturing), which links to an emerging normative pressure. Specifically, if brands require more agile SCs, they may need to increase local manufacturing, because shorter SCs make communication faster and more efficient (Henninger *et al.*, 2015). Similarly, sustainability measures could be enhanced. Some fashion SCs have a global reach, with organisations not always being aware of whom their contractors are subcontracting, a lack of awareness that can affect social and environmental sustainability. Shorter, more localised SCs could overcome this challenge (Seuring & Müller, 2008).

Although COVID-19 has financially devastated many companies, *“COVID has encouraged us to dig deeper into sustainability. We had just started a new pilot project to improve our cotton supply chain when COVID hit. We could have just as easily not worried about it. Instead we worked with our partners to address some of the issues COVID was presenting to some of the most vulnerable workers in our supply chain”* (AUSBrandI).

This highlights brands not only consider environmental sustainability important but also feel a social responsibility towards SC workers (Brydges & Hanlon, 2020). These aspects present companies as good corporate citizens and can foster a favourable brand image, which may ultimately lead to increased consumer buy-in. Similarly, AUSBrandD insisted that COVID-19 was a wake-up call: *“the pandemic has gotten my *&! into gear and get our production facilities accredited by Ethical Clothing Australia. All of our makers have been union-approved for a long time. (...) getting that piece of paperwork and that logo, will be a nice piece of promotion for us”*.

Thus, the Australian participants see COVID-19 as a catalyst that enhances already existing processes and prompts them to demonstrate their commitment to sustainability through third-party accreditation.

Our research demonstrates that during a crisis, brands need to show commitment, as consumers want to spend their (increasingly limited) disposable income on products that meet their own sustainability values. Accordingly, it may be beneficial organisations respond to the same issue differently. Similar to personal values, organisational values differ, and each company must carefully consider its own values in order to keep the original brand image intact (Aksom & Tymchenko, 2020).

Saudi data showed similar results. *“I announced at the beginning of the crisis that I would take proactive steps to have a positive impact... The goal behind these initiatives was to support poor families, provide clothes for Eid, to make people feel happy and put some hope in people’s hearts”* (KSABrandL). Interestingly, social sustainability actions in Saudi are less focused on improving supplier relationships and more focused on ensuring individual and societal welfare. *“After COVID-19, I will start selling secondhand abayas... I will buy the old abayas and sell them to other people and give the money... to the Disabled Children’s Association”* (KSABrandS). KSABrandS further revealed that they work with other stakeholders to collectively encourage secondhand consumption. The brand seems to be responding to pressures from supranational organisations that call for extending the useful life of garments.

This links to isomorphic pressures, in that organisations are adapting their practices in reaction to changes in the environment. The example of KSABrandS shows a changed sourcing process, by working with others whilst ensuring uninterrupted material flows. This can be challenging, because secondhand garments are limited, and their usability depends on the quality of the product (Henninger *et al.*, 2019). The full implications are currently unknown. Issues concerning hygiene, secondhand fabrics, and COVID-19 may emerge and require investigation in the future.

KSABrandQ insists that “*we need to have an integrated industry in Saudi.(...) Now the crisis has occurred everything has stopped and now we understand how important it is during the pandemic to have a sustainable fashion sector*”. This comment may also explain why there is a stronger focus on CSR within Saudi. With only limited manufacturing happening in the country, the fashion industry has redirected its focus onto society.

In summary, data indicate that fashion organisations interpret sustainability mainly along the social dimension. The Australian data show a concern for ethical trading, as well as a deepening commitment to the welfare and empowerment of their suppliers. Within the Saudi data, we see a stronger emphasis on CSR and society. These findings are somewhat surprising, seeing as the literature focuses mainly on environmental aspects when discussing sustainability (Mukendi *et al.*, 2020).

4.3 COVID-19 and its impact on fashion consumption

In the immediate aftermath of COVID-19, fashion consumption drastically declined (Iran *et al.*, 2022), with people working from home having less need to purchase garments, with fewer occasions to showcase these (Brydges *et al.*, 2021a; Vladimirova *et al.*, 2022). There has also been a shift in consumer sentiment: shoppers are more conscious about which brands they are buying.

The year 2020 was particularly hard for Australia (COVID-19, bushfires). “*COVID put a pause on certain sustainability initiatives as the business was forced to focus on the direct and uncertain impact of COVID-19 on operations. It has reinforced just how important strong values are within a brand if it is wanting to sustain a meaningful connection with customers.(...) In an increasingly oversaturated industry, with a growing awareness of global affairs, we need to continue defining our role in people’s lives and delivering more to the customer than just product*” (AUSIntermediaryJ).

This highlights that there is an emphasis on localisation and social sustainability measures. Whilst Australians may have always been patriotic, AUSBrandF indicated: *“with the pandemic and the bushfires before that, supporting Australian and Australian-made businesses is becoming more important.(...) consumers are really tuned in now and want to know more about sustainability and the ethics of how something is made. They are slowly coming to understand that comes at a price because local manufacturing isn’t cheap. But I think they get that it is better made and better quality, so yes it costs more but at least they’re supporting the industry that is here”*.

Other brands in both Australia and Saudi echoed this sentiment. AUSBrandD heard from retailers that consumers were more interested in the local aspect: *“I want to support local and buy Australian, what brands do you have?’. We’re noticing good sales. Kudos on that front”*. Similarly, KSABrandG emphasised that *“the new generation is more conscious and they will lead us to change our fashion lines”*.

Data suggest a move in both countries towards going ‘back to their roots’ and promoting shorter SCs and more efficient communication processes, which is in line with a proactive approach. Within the Australian data, we also observed concerns about what will happen post-COVID: *“People are looking for retail therapy. The biggest trend we’ve experienced is people looking to buy at a discount. There’s no question in our mind that we are going to see more people just waiting for a sale. Even designer brands are going on sale more and more often”* (AUSBrandE). This raises concerns for potential over-consumption. Thus, there is a need to carefully balance a new norm and returning to old habits.

Saudi brands felt that COVID-19 provided them with a platform to educate consumers, by providing workshops online (KSABrandN) and introducing ‘behind the scenes’ social media clips (KSABrandI, KSABrandD). *“The COVID-19 crisis had some positive impact”* (KSABrandJ), as it exposed shortcomings in the industry’s current structure and revealed potential solutions. Interviewees suggested bringing manufacturing back to the country, providing younger generations with more skills, and educating consumers about fashion’s environmental impacts. *“We must start by making people in Saudi aware that the fashion industry is the second biggest polluter and a major cause of environmental damage in the world... Saudi society is ready to embrace social change”* (KSABrandN). This quotation demonstrates that customer awareness (D5) remains a prominent driver.

5. Conclusion

The biggest challenges faced by our fashion organisations during COVID-19 depended on the approach they took to deal with the situation, which partly reflected their institutional values. Those organisations that followed a reactive approach were heavily influenced by isomorphic pressures (coercive, mimetic, normative) and predominantly concerned with economic sustainability. Yet, this approach created more uncertainty for the organisation and its suppliers and customers, as it focused on reacting to a situation in the moment, as opposed to forward plan for prevention. Although it may address issues in the short-term, it can have negative consequences in the long-term. Contrarily, brands that took a proactive approach were better able to deal with challenges, by anticipating financial difficulties and finding solutions, thereby focusing on stakeholder collaborations and strong communication. Thus, companies following the proactive approach tried to anticipate how the external environment may change prior to being ‘enforced’ by isomorphic pressures. Contrarily to the reactive approach, the proactive approach focuses on both economic and social sustainability. Especially within the Saudi case we see a two-way flow of pressure emerging, whereby fashion organisations re-designed outfits to almost force consumers to adhere to the newly enforced regulations. Our findings suggest that the longer COVID-19 continues, the more organisations should (ideally) move towards proactive approaches, even though this may not always be possible given the uncertainties. The proactive approach has key implications for the SC and its management, as organisations must develop crisis protocols that span across the SC. Thus, brands may experience financial burdens as they continuously monitor the SC within a global context. With different rules and regulations in different countries, this monitoring could add another layer of complexity. On a more positive note, the proactive approach enhances communication flow along the SC, which can build stronger collaborations. Although COVID-19 has impacted everyone (some more, some less), our data sets indicate that working together is vital in order to ensure the survival of all partners.

In addressing the research questions, social and economic sustainability emerge as key drivers in response to COVID-19, by outlining the importance of crisis management, which are reflected in ensuring that SCs are agile, foster a collaborative approach and developing crisis management protocols that can be adapted in the future. Depending on the approach taken (reactive or proactive) we see different factors prioritized (strong and weak drivers). The reactive approach sees short-term gains and egocentric attitudes as strong drivers, which outweigh potential negative

consequences. Contrarily, the proactive approach sees these weak drivers and is guided by normative pressures. This implies taking short-term losses into account in lieu of collective survival. COVID-19 has created chaos in the fashion industry, forcing many organisations to cease production and/or operations. The current situation offers the industry a crucial lesson: organisations should invest now in D9 (policy development to recover from impact of COVID-19) as a strong driver to prepare for similar situations and allow for a proactive approach in the future. Interestingly, according to our data, policy development did not yet seem a key priority and thus, could be categorized as a weak driver, perhaps because the magnitude of COVID-19 remains unknown. Future research could investigate why fashion organisations in Saudi focus more on CSR than on sustainable SCM, as Australian organisations seem to do. Similarly, follow-up studies could see whether brands take different approaches after the second and third wave of COVID-19. We also suggest that researchers look more generally at the impact of COVID-19 on the fashion industry and how this impact unfolds in the future, seeing as we currently do not know the full implications.

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