

‘From Dirt to Shirt’: Australian Cotton Conferences Driving Industry Transformation

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Abstract

While the literature identifies various benefits of business events, more work is required to investigate the ways in which such outcomes are achieved and how they fit into a whole of industry ecosystem. In this study, we apply the concept of sustainable business models to explore elements and mechanisms of how values combining economic, social, and environmental stakeholder benefits are proposed, created, delivered and captured through conferences. To study these nuances, we analyse the case of the Australian cotton industry conferences. Our findings suggest that mechanisms of building industry community, forming a social platform and managing sustainability solutions were core conference elements that led to desired industry changes. The study contributes to business events literature by delineating a means of achieving industry outcomes as a result of organising industry conferences. The paper proposes a business model specifically reflective of the Australian cotton industry conferences.

Keywords: sustainable business model, industry conference, business events, cotton industry

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Business events comprising conferences, conventions, exhibitions or meetings play a vital role in the life of individuals, industries, innovation growth and government agendas (Edwards et al., 2017; Foley et al., 2019). Several important findings enrich our understanding of the benefits of conferences for various stakeholders. Business events have been found to have good outcomes for sustainability (Berchin et al., 2018); knowledge diffusion (Edwards et al., 2017; Luo & Zhong, 2016); economic development (Edwards et al., 2017; Foley et al., 2013) and even friendship (Foley et al., 2014). Edwards et al. (2011) introduced a taxonomy of benefits conferences provide. They explain that benefits occur at individual and group level (intrinsic, practice) and at the level of communities, industry, and country (social, economic, and attitudinal).

Research clearly indicates that conferences create economic benefits related to expenditure (Carlsen, 1995) resulting in the conference delegate being widely regarded as the most desirable visitor in the world (Business Events Council of Australia, 2010; Edwards et al., 2015). However, business events are making a broader range of significant contributions to economic, social and environmental sustainability (Edwards et al., 2017; Edwards et al., 2011; Foley et al., 2014; Foley et al., 2013). Despite these valuable findings, a comprehensive theory explaining the underlying mechanisms of how a conference can successfully create economic, social, and environmental benefits has not been fully addressed by researchers (c.f., Edwards et al., 2017). Current approaches to investigating conferences and the multiplicity of relevant outcomes have yet to explain how such complex value is generated and captured. This constrains our understanding of how benefits are formed and the further implications they convey. Moreover, it obscures the ways in which conferences fit into the overall development of an industry in which they are embedded.

The purpose of our paper is to address this shortcoming by posing the following research questions: how are the benefits of conferences created? And linked to this question, how can conferences drive sustainable change in an industry? We address this research opportunity by exploring the business model of industry conferences and the elements and mechanisms involved. Business models can be broadly defined as an underlying logic of how business is done or how money is made (Massa et al., 2017; Zott et al., 2011). The perspective of sustainable business models supports our theorising a broad range of economic, social, and environmental sustainability outcomes (Bocken et al., 2014; Schaltegger et al., 2016) at conferences. This perspective serves as a valuable lens in guiding our research.

We take the case of the Australian cotton industry conferences, held once every two years on Queensland's Gold Coast. The conferences have continued to attract record numbers of attendees and are regarded as an important mechanism for driving the industry's ongoing growth, development, and success. We chose this sectors because of the presence of industry pressures, such as limits on water usage, sustainability issues, 'millennium drought' and demands from textile retailers. As we have found previously, conferences can catalyse stakeholder focus and action on industry issues thereby creating value for their stakeholders (Edwards et al., 2017; Foley et al., 2013). We explored this process by applying a qualitative single-case methodology and analysing written documents and interviews with industry experts.

Our paper contributes to the business events literature and through an exploration of a unique context we aim to enrich the research on conference business models (Bocken et al., 2014; Schaltegger et al., 2016). In particular, we add to the research on sustainable business models by bringing in the element of the 'social space' of a conference (Edwards et al.,

2011). Social space can act as a binding platform for all elements of the conference business model and the wider industry ecosystem.

The paper begins with our theoretical framing. We introduce the business model literature and clarify why this approach is suitable for our study. We then proceed with the research design which also includes details on the context of Australian cotton industry conferences. In reporting our findings, we outline a model exploring how cotton conferences form benefits and transform the industry. The paper closes with discussion of these elements, their link to the literature, and how they contribute to theory and practice.

Business Models and The Events Industry

Business models research is situated in the field of strategic management (Ritter & Lettl, 2018). Although the burgeoning literature has not provided a unifying definition of this concept, the underlying quest of business model researchers is to uncover how firms do business (Massa et al., 2017; Zott et al., 2011). Business models can appear either at the level of organisations or aggregated and generalised into a higher level business model consisting of a group of similar business models (Osterwalder et al., 2005). For example, business models can be applied to single companies (e.g., Google, Xerox and Apple), industry sectors (e.g., transport or accommodation sectors) or socio-economic movements (e.g., sharing economy, pink-dollar economy).

The study of business models takes into account various stakeholders and other elements linked to an entity and considers competitive advantage as a “system of activities that it performs to deliver value to its large networks” (Massa et al., 2017, p. 94). For example, Massa et al. (2017) observed that the value proposition of an internet company such as Google is not formed only by possession of the unique intellectual property (e.g., search engine features) but also by advertisers, applications and their developers. Similarly, in the

case of the events industry, we can assume that the value is not created only by how the conference is organised (e.g., program and location) but also by the various networks of participants (e.g., researchers, doctoral students, and industry delegates), sponsors, institutions (e.g., universities, research institutes) and government. Hence, while conference organisers (e.g., venues, agencies) are delivering the service and creating value, further value, as formulated by the business model literature (Massa et al., 2017; Zott et al., 2011), is co-created and delivered through other elements.

The specificity of business models, then, is in their inclusion of various stakeholders and their relationships as to how firms or organisations do business. From an economic perspective this would imply that business models are “nothing less than the organizational and financial ‘architecture’ of a business” (Teece, 2010, p. 173, original quotations). However, there has been growing interest to explore sustainable business models, which go beyond the traditional business models forming economic value (Bocken et al., 2014; Lüdeke-Freund et al., 2016; Schaltegger et al., 2016). Sustainable business models comprise “integrating social, environmental, and business activities” (Schaltegger et al., 2012, p. 112) “to create positive societal and environmental value and optimise value for itself as well as for a wider network of stakeholders” (Bocken et al., 2019, p. 1498). That is, organisations are interested in the creation of economic value for their shareholders along with the creation of a broader range of benefits to society. This can include organisations for whom the primary goal is to deliver sustainable solutions, such as eco-entrepreneurial ventures offering energy-saving products (Bocken et al., 2019) as well as firms who purposively transform their existing (purely economic) business model to a more sustainable version. For example, some fashion companies have introduced value chain solutions for lowering their negative social and environmental impact (Pedersen et al., 2018), while the German carmaker Daimler founded a car sharing company Car2Go to provide a more sustainable transport solution

(Schaltegger et al., 2016).

Such extensions of the business model perspective bring challenges. The major complexity is that “it is not always so clear how delivering social and environmental value might translate into profit and competitive advantage for the firm” (Bocken et al., 2014, p. 44). Therefore, some scholars studying sustainable business models have focused their efforts on exploring ways to balance the goals of financial profit and sustainability throughout the whole value development process. For example, Boons and Lüdeke-Freund (2013) presented a model delineating three core elements of a business model for sustainability. These elements are value proposition (presentation of potential or existing product or service to various stakeholder groups targeting both their social and economic needs), value constellation (relevant value chain and network elements inside but also outside of the organisation to deliver both economic and social value), and value capture (outcomes covering not only economic but also social outcomes for an organisation and its stakeholders) (Boons & Lüdeke-Freund, 2013). Moreover, Bocken et al. (2019) reported that innovative processes under sustainable business models require multiple actors to collectively work towards understanding the needs of wider stakeholder groups, and to regularly assess whether the processes are heading towards delivering sustainable values and are implemented in the right time. Overall, while the literature provides some excellent guidance, we argue that the industry context in which the business model is embedded may play an important role in defining all sustainable business model elements and their relationships.

Researchers have already verified the ability of conferences to leverage not only economic benefits (e.g., employment, investment flows and tourism growth, contributions to knowledge economies and innovation), but also social and environmental outcomes for various stakeholders (Edwards et al., 2011; Foley et al., 2014; Foley et al., 2013). However,

scholars and industry leaders recognise the need to understand more about the mechanisms through which conferences can leverage outcomes. We develop this research problem further by arguing that the environmental, social and economic outcomes of conferences are co-created by a range of stakeholders and that this aspect is both under-researched and closely linked to a sustainable business model perspective. The broader tourism literature includes several papers that use the term ‘business model’, including: sustainability and social implications of the business model of a car-sharing industry (Singh, 2017), a low-cost carrier industry (Whyte & Prideaux, 2008), and adoption of environmental standards (Pelham, 2011). These papers make an excellent initial contribution to this area of literature; however, more work is required to develop theoretical and conceptual clarity of the concept and stronger links to relevant business model literature.

Our purpose is to show the value of embedding the sustainable business model perspective into the analysis of the benefits of conferences and to enrich the approach itself by conceptualising a business model of a business event. Therefore, to guide our data analysis we applied the theoretical framework of sustainable business models (Bocken et al., 2019; Bocken et al., 2014) with a focus on the transformation of markets and industries (Schaltegger et al., 2016). This concept helped us uncover not only the outcomes themselves but also allowed us to detail the mechanisms for achieving the outcomes, enriching both theory and practice. In this way, our paper explores how the benefits of conferences are created and how they can drive sustainable change in an industry.

Research Design

We used a single case research design (Yin, 2014) which allowed us, instead of focusing on replication logic and generalisation of case outcomes, to report in-depth understandings of the phenomenon and its unique characteristics. Our design embeds two

units of analysis: the business model of the event (cotton industry conferences) and innovations in the Australian cotton industry.

Australian Cotton Industry Conferences

Since the 1960s, the Australian cotton industry has grown to be Australia's fifth most valuable agricultural export, worth approximately \$1.9 billion annually (Cotton Research & Development Australia, 2020). Cotton is farmed around the world by some 70 countries (Cotton Australia, 2018c) and Australia grows 3% of the global crop, and exports nearly 100% (Cotton Australia, 2018a). Locally, the industry provides employment for approximately 10,000 Australians and supports 152 rural communities (Cotton Australia, 2018a). The success of Australia's cotton industry is multi-faceted; an early uptake of technology, a culture of knowledge-sharing and co-operation, and a significant investment in research and development has seen the industry evolve into a world-leader for yield, quality and water efficiency. Australian cotton is promoted as "the highest yielding, finest, cleanest and greenest" cotton in the world (Cotton Research & Development Australia, 2020, p. 4).

Traditionally, cotton was considered a 'thirsty crop' and reliant upon the use of pesticides, insecticides and herbicides. By the mid-nineties, the Australian cotton industry was in crisis. The 'millennium drought', one of the longest and hottest drought periods recorded in Australia, was ravaging the country, and the industry was facing questions regarding its sustainability and future (Irrigation Australia, 2019; Reading, 2017). Low rainfall meant farmers were struggling to harvest useful crops, publicity and community sentiment against the industry was growing, finding experienced labour at harvest time was becoming increasingly difficult, and there was pressure from regulators about the future of cotton in Australia. Fast forward and Australia's peak research body, the Commonwealth Scientific and Industrial Research Organisation (CSIRO), claims that Australian cotton

farming is now the most water efficient in the world (Roth et al., 2013; Silburn et al., 2013).

The CSIRO works closely with the cotton industry, and the Cotton Research and Development Corporation (CRDC), which is a statutory authority, established by the federal government in 1990 to work alongside industry and is a founding partner of the cotton conferences.

The Australian Cotton Growers Research Association (ACGRA) held the first cotton conference in 1982. Since then, the conference has been held every two years on the Gold Coast, Queensland, Australia. The purpose of the ACGRA conferences was to give growers the opportunity to be part of decision-making processes with regard to where and how research dollars were being spent. In 2008 ACGRA merged with the Australian Cotton Foundation (ACF), a grower's advocate organization that was simultaneously formed in 1972, to become Cotton Australia. This merger was an impetus to support processes of change and to ensure the market was represented. Then in 2008 the cotton conference became a joint venture with the Australian Cotton Shippers' Association (ACSA). Titled 'From dirt to shirt' the conference included a broad range of stakeholders from growers to retail brands and representatives. As well as the large conference (attended by more than 2460 delegates, 150 speakers and panellists, 28 sponsors, 110 exhibitors and 12 start-ups), the industry conducts mini-conferences to identify research gaps for the purpose of new research development (Cotton Australia, 2018b).

Data Collection

We used interviews and archival documents to study the Australian cotton industry conferences. As we wanted to explore the industry perspective, industry change and details on how the conferences operated, we selected participants directly involved in the cotton industry. The primary method of data collection was semi-structured interviews with four

industry key informants including: Cotton Australia (CA) executive; Cotton Australia Board member; a cotton farmer and past conference chair; Australian Cotton Shippers' Association member and previous Conference Secretariat; and CA Policy Officer (Research Direction & Stewardship). An overview of interview participants is presented in Table 1.

<<< Table 1 about here >>>

Interview questions were informed by the authors' previous research on conferences (Edwards et al., 2011; Foley et al., 2014; Foley et al., 2013) and included:

- Overview of the participant's role in the cotton industry.
- First conference experience.
- The role of conferences in the cotton industry.
- Influence if any on friendships, innovative practices, stimulating new research and/or ideas and knowledge diffusion, networking opportunities, increasing scientific research and public and private funding, and shaping public discourse around issues of importance to the cotton industry,.

Interview data were supplemented with archival documents from various sources, including websites of industry bodies and associations (e.g., industry histories, data, statistics, reports and research findings), websites of government bodies (e.g., reports and industry details), news about the past industry events, issues and transformation (Table 2).

<<< Table 2 about here >>>

Taken together, the document sources provided a richer context for understanding existing pressures and the industry transformation and allowed us to correlate data provided by interview participants.

Data Analysis

In an iterative fashion, we progressed our data analysis in several steps by using the qualitative software NVivo. We analysed the data gathered from interviews and documents, travelling back and forth between raw data, emerging business model of cotton conferences and the literature (Gioia et al., 2013; Miles & Huberman, 2014). First, we canvassed a range of benefits the conferences created for various stakeholders. We further categorised benefits by their content and based on the stakeholders who benefited (economic, social, community; benefits for individuals, groups, industry or whole economy). This map of activities and benefits helped us to look for elements characterising how these benefits were achieved.

In the second stage, we focused on consolidating the codes identified in the first phase. We cross-referenced the identified conference benefits and how they were linked to what was happening in the cotton industry. This led to codes, such as ‘social interaction and knowledge development’, ‘changing behaviour’ and ‘inspiring and motivating’ which we collectively labelled as ‘building industry community’. It allowed us to link our two levels of analysis, which we identified as a business event and industry.

In the third, and the final, stage we formed our model by connecting the established aggregate theoretical dimensions. This meant that we put together the theoretical categories from the second phase and looked for underlying mechanisms and logic that tied these constructs together. At this stage, we attended to the business model literature to navigate the construction of our emerging final framework. In particular, we focused on the business model seen as a system of interlinked elements explaining how the business operates (Massa et al., 2017; Zott et al., 2011). We built our aggregate theoretical dimensions around the concepts of value proposition, creation, delivery, and capture by attending to social, environmental, and economic aspects. The data structure is summarised in Figure 1, which

shows first-order categories, theoretical categories, and aggregate theoretical dimensions.

<<< Figure 1 Here >>>

Results

Australian Cotton Industry Conferences Facilitating Industry Change

As indicated in Figure 1, data analysis identified three distinct constructs defining the business model of the cotton industry conferences. The central role of the conference is to navigate the industry ecosystem in an environment shaped by various pressures. That is a conference needs to act as a binding and empowering element in order to successfully change the industry “where everyone comes together to hear each other’s stories and see what they can learn from them underpins that progressive nature” (CS).

To enact this role of change facilitator, we found three processes led to its transformation: *building industry community*, *forming a social platform* and *managing sustainability solutions*. That is, they (1) form industry cohesiveness, collaboration and sense of belonging to form collective power and engagement of the industry; (2) facilitate interactions and synergies of collaborations among various stakeholders to deliver and realise the benefits of formed social space; and (3) drive dissemination of the outcomes from the conference through delivery to a wider audience and also further improvements. Underlying these processes is the incorporation of a sustainable business model as a binding logic by considering a wide range of stakeholders and their interests (Bocken et al., 2014). Hence, we see these three building blocks as embedded within a broader logic of value proposition, its creation, delivery and capture (Schaltegger et al., 2016). Together this set of activities enables the industry to take an active position of change-maker under the conditions of industry pressures.

Building industry community

Cotton conferences were utilised as an essential space for creating and disseminating the need for change through building industry community. This was facilitated by three main elements of *social interaction and knowledge development*, *changing behaviour*, and *inspiring and motivating*. All three elements had an important binding role for the industry to come together, build common interests, spark enthusiasm, and empower its members. Perceptions of belonging and camaraderie in the industry were stepping stones for pursuing change in the industry.

Social Interaction and Knowledge Development. One of the major benefits the cotton conferences offered to their members was creating a program that stimulated social interaction and knowledge development among attendees. They built an industry community through discussing the major topic of interest - cotton. Social interaction which included active participation and networking at the conference provided an important medium to form various benefits for participants. Such social interaction facilitates the process of strengthening the industry community. Attendees were seeking that human connection which can only be achieved through face-to-face interaction. While technologies were important for conference activities such as videoconferencing and online surveys, key informants reported it can be difficult to get some people to interact via technology (such as webinars) in interpersonal activities such as sharing their stories, engaging in social networking, sharing ideas, or simply building trust (CS). The conference is more than a program of speakers, “they’re really there to network and share their ideas. We give them the right stimulation in the program, the right environment, and the opportunities to talk to each other” (CS).

Moreover, social interaction spurs knowledge development, knowledge creation,

building and sharing. For example, the conferences enabled growers to directly engage with researchers and exchange their practical experience, while researchers provide the latest update on technologies and innovations, “whether it’s a researcher or somebody from outside the industry... innovation breeds innovation...we try to make sure they go home with some new ideas” (CS).

The conferences acted as a place for farmers to share their experiences and ideas, within a formal setting of a public presentation as well as during the more casual social interaction. In one example a participant shared an innovative way of packing the huge bales of cotton onto trucks so that six could be transported at a time rather than only five as had previously been the upper limit. After presenting his findings other farmers were able to replicate his method and significantly improve productivity, “conferences are really important for building communities, which is so important in an industry like cotton” (PO).

Overall, the immediate benefits of both social interaction and knowledge sharing contributed to much larger outcomes, such as building a sense of community within the industry. This encouraged ongoing communication between growers and researchers without which there would be a big gap left because there would be nothing to bring us together to have a good time and to learn and share information” (CF). In an industry so geographically dispersed as cotton, the conference setting is especially important for bringing farmers from isolated rural areas, together.

Changing Behaviour. Cotton farmers rely heavily on research and development, and the wealth of research presented at conferences is highly valuable and attendees used the conference to one-on-one and establish relationships with researchers that would extend beyond the conference. The conferences presented the latest technology, and the conference setting enabled the growers to view and discuss technological

advancements, the practical implications for their farm, and the research that validates these findings. Social interaction, presented above, provided the participants with confidence to adopt new practices and technologies. As an example, cotton breeders will “talk about their new varieties and then a few months later other farmers have ordered them, so the conference is a key part of that” (CAE).

Additionally, presentations promoted and enhanced discussions. In another example, the topic of precision farming using drones was heavily discussed at one of the conferences, and the interest and use of this technology was expanded significantly as a result. Similarly, the conferences played an important role in the adoption of biotechnology to improve industry sustainability by coalescing industry attitudes “in terms of the uptake of genetic modification seeds for cotton, the conference played a critical role because it enabled the whole industry to come together” (CAE).

Inspiring and Motivating. An important value of the cotton conferences was the platform it provided for people to inspire and motivate each other, whether that was through speaker presentations or simply through stories shared over dinner. “Everyone can come away feeling reassured that the industry is strong, growing, and vital, because there’s a wonderful feeling of confidence and positivity generated at the conferences” (CF). Interviewee (CF) added that this inspirational element was particularly evident at one conference where, despite a difficult season for growers due to limited water, the overall attitude was still very positive and upbeat. The conference set a holistic picture of the role of the cotton industry enabling participants to maintain confidence and motivating them to overcome challenges in an industry facing many pressures. For

instance, the Cotton Industry Awards night, acknowledges those who have made significant contributions to the development of the industry.

Furthermore, conferences were vitally important for giving students and early career graduates a start in their careers. Interviewee (PO) reported receiving a Cotton Australia scholarship after leaving high school and further funding to support postgraduate studies that investigated heat stress in cotton plants. Nearing the end of those studies they were invited to be a part of Cotton Australia's 'Future Cotton Leaders Program', a role which involved not only attending, but helping to organise the cotton conferences. Utilising early career researchers for ideas and innovations were invaluable as they provided this group of stakeholders with confidence and assurance about being part of the conversation.

Another story of career growth was shared by interviewee (CF) who said that what they learned at the conferences they put into practice on their farm. For example, they learnt that they could address chronic staffing issues during their annual harvest by sourcing labour based on attitude to work and personality, rather than cotton skills and knowledge. This new approach won her and her husband the Cotton Industry's Innovative Grower of the Year Award and CF was invited to be part of the Australian Rural Leadership Program (ARLP). These opportunities for professional growth demonstrate that conferences can play a central role in the process of self-improvement, networking, empowerment and realising personal potential.

Forming a Social Platform

Building industry community, strongly facilitated by the conference acting as a social platform, created outcomes sustained beyond the timeframe of the event. The conference was used as a means to accelerate the formation of industry networks and incubate innovation development to deliver positive industry change. Thus, the conference setting was an

important platform for various stakeholders to work towards common interests “because it means you can help build a better future rather than feeling like you’re going around in circles” (PO).

It was vitally important to enable various stakeholders to enter this social platform. In particular, the industry never shied away from the hard topics that needed open debate as people tried to resolve conflicts or find solutions, and the cotton conferences provided the forum for such conversations to happen. This included inviting politicians to engage in various debates dealing with industry issues or even asking critics to be keynote speakers, “because it gives everyone a better understanding of the issues [and] gives us an opportunity to provide them with information that can steer them in the right direction” (CAE).

Industry Actors. Organisers of the cotton conferences realised that if they wanted to strengthen the industry and create change, they needed to involve all elements of the cotton industry value chain. “So, in 2008 [we] combined forces [with the Australian Cotton Shippers Association] to provide for everyone in the industry, from the beginning of the process through to the end. We called it ‘From dirt to shirt’” (CS). The conferences benefited both growers and suppliers and their interactions at the conference strengthened their mutual respect. The growers had the opportunity to view all the latest technology, and the newest and best products in one location, and the suppliers could reach the maximum number of their targeted audience in one place. Hence, the conference setting became an important platform for companies to “come and talk about their products or what they have to offer or have a display in the middle of the convention centre with their latest machines, so the farmers can look at them and ask about them” (CAE).

The inclusion of representatives of retailers and brands in the profile of conference

attendees assisted the industry to leverage their commitment to sustainability practices.

Retailers both in Australia and globally have been very committed to sustainable practices:

“If you can’t show them your credentials they’ll source their cotton elsewhere” (CAE).

Retailers such as Target, Kmart, Nike, and H&M were able to “see for themselves that we mean what we say” (CAE). This reinforced the industry commitment to growing sustainable cotton and to showcase their transparency through implemented sustainability solutions.

Associations. The conference also invites various organisations that advocate for more sustainable practices in the textile industry. In advancing the industry’s commitment to sustainable practice, Cotton Australia was instrumental in the establishment of the Better Cotton Initiative (BCI). BCI is a not-for-profit organisation that brings together retail brands, not-for-profit organisations from a range of service areas, environmental groups, and cotton producers from around the world with the aim of making global cotton production better for the people who produce it, better for the environment in which it grows and better for the sector’s future. Representatives of the BCI team and other BCI stakeholders including brands and retailers actively participate in the cotton conferences to establish relationships with the brands, “they can see for themselves that we’re committed to things like ongoing research and making a sustainable product” (CAE).

Research and Academia. Researchers work closely with growers to set research priorities, protect existing technologies into the future, and manage bio-security issues. Growers pay levies that fund 50% of research and development, as such their research interests must be well represented. A cotton conference activity aimed at showcasing research initiatives is the ‘Three Minute Thesis’, where people present their latest research ideas or products, in three minutes. It enables more people to share their

created knowledge and conference attendees can seek out those speakers that interest them. Moreover, to encourage the involvement of young researchers, tertiary students can apply for one of twenty scholarships that cover attendance costs of the conference. Similarly, the Cotton Catchments Communities Co-operative Research Centre's Legacy Fund sponsors nine high school teachers to attend a specially designated, 'Teachers' Day' which is now an integral part of the program. By using conferences in these ways to expose students and teachers to the issues and merits of the industry, organisers hope cotton-related activities will be included in classroom activities and curriculum thereby encouraging greater engagement, and over the longer term, a larger, more highly skilled workforce. While cotton conferences are not designed to influence public opinion, there is still a connection to the broader community through such educational programs.

Managing Sustainability Solutions

Changing industry aspirations. Data revealed that organizing the cotton industry conferences, despite the accompanying costs, contributed to helping "our industry grow...they've made things happen more quickly than they otherwise would" (CF). Through programs, working groups and policies initiated via conference discussions, the cotton industry became the first agricultural industry in Australia to embrace auditing processes. Auditing ensures technology is used correctly. Improper usage of technology can decrease its life span, and lead to insects becoming resistant to insecticides, pesticides and herbicides.

The industry aspires to become the producer and supplier of the most environmentally and socially responsible cotton in the world and a global leader in sustainable agriculture and performance (CRDC, 2020). While various external factors, such as existing industry pressures and climate change, spurred the necessity for change, the industry as a collective

actor aimed to form a self-reinforcing mechanism of an agent of change instead of being constrained by government and other regulatory institutions. “The last thing we wanted was an industry where bureaucrats and politicians were constantly telling us what we could and couldn’t do” (CF).

Implementation of Best Management Practice. Following an ultimatum from the Australian Federal Government to tidy up the industry or come under government control, the industry launched the Best Management Practice (BMP) program (now ‘myBMP’) in 1997. Developed at a conference, and as a result of industry-wide consultation with growers, researchers, peak bodies and local authorities, the BMP program is a voluntary farm and environmental management system to help growers improve on-farm production and sustainability. It provides learning resources, assessment mechanisms, practical tools, and auditing process assistance, to ensure that Australian cotton is being produced according to the best industry practices. “BMP is still always discussed [at the conferences] because that’s where we communicate to the growers what the program is all about, why we’re doing in, and how it can be used by them and by the industry and the conference provides an opportunity to fine-tune the program” (CF).

In keeping with the industry’s commitment to BMP, the cotton conferences are used to further improve the industry and leverage their commitment to sustainability. Growers who align with BMP, once certified, can then sell their crop as an accredited and sustainably produced Australian product. The BMP program fosters a spirit of continuous improvement toward innovative practices for productivity and efficiency gains “and it’s still going to this day” (CF).

As a result of these strategies and the industry’s commitment, water is now better

managed and regarded as a precious resource, there is minimal use of pesticides and the industry as a whole is committed to research, networks, connectivity, compliance and ongoing improvement. The industry has responded to challenges by promoting a culture of innovation partnered with access to research, development, and extension. This was delivered through implementation of the BMP that fostered a spirit of continuous improvement toward innovative practices for productivity and efficiency gains. The biennial cotton conference is used as a tool to build intra-industry networks and share information to deliver positive change.

Discussion

Toward a sustainable business model of a conference

In our paper, we have explored how value generated by Cotton conferences is proposed to stakeholders and then created, delivered, and captured. The sustainable business model perspective (Bocken et al., 2014; Schaltegger et al., 2016) acted as a useful lens to guide our analysis. We identified *building industry community*, *forming social platform* and *managing sustainability solutions* as important elements of what we see as a sustainable business model of a conference (Figure 2).

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First, the construct *building industry community* (Figure 2) highlights that conferences acted as a means to not only meet and share information but also acted as a binding mechanism for the industry to enhance collaboration and to form a collective power leading to change. Similarly, several studies from the craft beer industry showed how collaboration and formation of a ‘friendly industry’ contributed to managing various industry forces, such as competitive attacks from large breweries (Mathias et al., 2018). Industry cohesiveness and collaboration have been shown to drive sustainable change and challenge the status-quo of

the sector.

Second, as shown in Figure 2, building industry community is inter-linked with the conference creating and delivering value through its role as a social space (Edwards et al., 2017). In particular, cotton industry conferences provided the social space for fostering sustainable innovation resembling innovation accelerators and innovations, which, in the context of sustainable business models, has been conceptually presented by Bocken et al. (2019); and Lüdeke-Freund et al. (2016). However, in our case, *forming the social platform* (Figure 2) enabled the industry to navigate and coalesce the interests and goals of various stakeholders. Hence, the effectiveness of the conference as a social platform was also shaped by activities which nurtured the active participation of attendees. This means that a conference needs to recognise specific members (conference participants), acknowledge their interests and roles in the industry, and link to other members to deliver long-term outcomes to the various stakeholders. For example, cotton growers' financial contribution to industry research and development automatically raises their interest in the latest innovations and their value, hence presentations on the outcomes of research funding were important. Moreover, the pressures faced by growers from retailers were eased by inviting various companies to the conferences to collectively address sustainability challenges. Finally, realising the important role played by tertiary students, and teachers and growers led to facilitating various sponsorship initiatives for them to be able to attend to the conference.

Building industry community and forming a social platform are important for another element of the model, *managing sustainability solutions* (Figure 2). Again, the relationships between these three constructs are mutually reinforcing. The sustainability solutions arise from various collective activities nurtured through the conference acting as a social platform. The creation of solutions feeds back and strengthens industry coherence, power and

confidence of members and of the conference social platform. Additionally, conferences provided awareness about industry growth which drove further engagement of industry participants in the conference. Hence, cotton conferences can be assigned to a non-traditional form of social enterprise (Mair & Martí, 2006), as they act on behalf of various stakeholders and achieve their activities through the active participation of members who are inherently embedded in all stages of value development.

Lastly, building industry community, forming a social platform, and managing sustainability solutions are the means by which the conferences facilitate the transformation of the industry, in particular, its direction towards implementing sustainable practices (Figure 2). These findings offer a view as to how conferences navigate industry changes from their emergence (formation of awareness), through their development and nurturing (engagement in innovation and research) towards their dissemination (sharing practices and forming confidence to act). In this way, the conference event, as a collective actor, is an important facilitator of industry change. Industry, instead of individual enterprises, acts as a collective social entrepreneur to change the sector utilising the conference as a social platform. Such activities often resemble social movement models, as witnessed in the transformation of microbreweries through collective action (Mathias et al., 2018) or consumer watchdog organisations (Rao, 1998).

Contributions

We have developed a business model of cotton conferences by identifying three core mechanisms: *building industry community, forming a social platform and managing sustainability solutions* collectively contributing to *industry transformation*. Importantly, rather than engaging in incremental research by adding new typologies of benefits we address the more fundamental question of how these benefits are formed. Incorporating the

perspective of sustainable business models, we contribute to the business events literature and sustainable business models.

For business events literature, our framework of the conference through the lens of a sustainable business model offers insight into activities forming not only economic but also environmental and social (non-economic) outcomes (Edwards et al., 2017; Edwards et al., 2011; Foley et al., 2014; Foley et al., 2013). We identified that these activities were co-created by both providers (conference organisers) and consumers (conference attendees and other stakeholders) which suggests a more interlinked perspective on the relationships between demand and supply in the value development process (Beattie & Smith, 2013; Massa et al., 2017). Hence, the value development of the conference is embedded in the industry specifics.

Further, our model offers insights into the role of conferences in resolving industry-wide challenges. The cotton conference business model is successful as it is formed by core industry members interpreting and translating industry pressures and issues by involving various constituents, activities, elements, and relationships. This was observed, for example, in the computer and telecommunications industries characterised by turbulent developments in which firms had to quickly respond to new risks and opportunities (Hacklin et al., 2018). In a wider array of strategic management (Porac et al., 2011) and tourism (Dwyer & Edwards, 2009) literature, such an approach is important to respond to competitive industry forces. These perspectives highlight the interpretation of industry forces by industry members as an important contribution to the business events industry.

Our study aims to add to the business models literature, and in particular sustainable business models (Bocken et al., 2014; Schaltegger et al., 2016). Specifically, we bring forward an element of ‘social space’ represented here by a business event (Edwards et al.,

2017), which forms a unique platform bringing various members of the business model ecosystem together to work towards creating and capturing economic, environmental and social value. For example, incubators were a key element for many tech-entrepreneurs by which to develop unique ideas to form a winning business model (e.g., Silicon Valley).

However, business conferences are a specific form of social platform where ideas of various forms are nurtured, generated and transformed into valuable outcomes, for economy, community and society (Crowther et al., 2018).

Practical Implications

The Australian cotton industry has developed an impressive mix of integrated strategies around their conference delivery to ensure they achieve industry identified goals and objectives. From selection of new and diverse members to each conference's organising committee, to program linkages with students and research, to encouragement of whole-of-farm and whole-of-industry involvement, to ongoing, genuine evaluation – they constantly seek to improve on the successfulness of not only each conference but in how they perform as an industry. Our model, highlighting some of these best practices, can serve as an important message to other industries when organising conferences.

Limitations and Future Research

While our study focuses on a single industry with its unique ecosystem, value chain mechanism and industry forces, our model can be applied to conferences related to other types of industries. Industry forces current in the cotton industry are largely focused on sustainable environmental practices and the implementation of these practices throughout the whole value chain. Other industries experiencing similar (e.g., hop industry) or completely different (e.g., information technology sector) sets of pressures could be explored to identify ways in which industry events may help navigate the industry towards addressing the various

pressures. Environmental sustainability can be translated to other value forms through ideas spawned at industry conferences.

Moreover, the sources of our data were limited to industry actors and conference organisers. As this perspective was purposively selected to identify the various interpretations of industry actors and their intended and implemented strategies, it may be insightful to explore the viewpoint of other conference stakeholders, such as participating organisations in the cotton value chain. Finally, our paper applied the business model approach, defined as a formal representation of how an organisation, or in our case conferences, operate (Massa et al., 2017). An in-depth exploration of how managers use business models and narrative devices may reveal why some business models are more successful than others. Explanations could be formed through identifying various forms of biases the individuals often fall into during their decision making.

Conclusion

The modern Australian cotton industry was shaped by an industry-wide response to concerns about the sustainability of the industry leading up to the new millennium. Cotton growers found themselves facing an increasingly challenging social, financial, and political landscape, with issues like genetic modification of crops and the protection of the environment becoming ‘hot’ topics. Cotton conferences were an important tool that helped the industry to unite diverse stakeholders and generate change. The conferences continue to support research, unite industry players, inform, innovate, strengthen and grow the industry today. A conference is a tool and, like any tool, its effectiveness depends on how it is used.

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Table 1.*Interview Participants*

	Interviewee	Number of the interviews	Label used in the ‘findings’
1	Cotton Australia Executive	2	CAE
2	Queensland cotton farmer, Cotton Australia Board member, and past conference chair	1	CF
3	Conference Secretariat and Australian Cotton Shippers’ Association member	1	CS
4	Policy Officer (Research Direction & Stewardship)	1	PO

Table 2*Document Sources*

Type	Source details	
Industry organisations and associations	Cotton Australia	www.cottonaustralia.com.au
	National Farmers' Federation	www.nff.org.au
	Cotton Grower	www.cottongrower.com.au
	Plant Health Australia	www.planthealthaustralia.com.au
	Agriutures	www.agrifutures.com.au
	Queensland Farmers' Federation	www.qff.org.au
	Australian Weaving	www.australianweaving.com.au
	Cotton Info	www.cottoninfo.com.au
	Southern Cotton	www.southerncotton.com.au
	Australian Cotton Awards	www.australiancottonawards.com.au
	Australian Cotton Conference	www.australiancottonconference.com.au
	IBISWorld	www.ibisworld.com.au
Industry databases	CSIRO	www.csiro.au
Research organisations	Cotton Research and Development Corporation (CRDC)	www.crdc.com.au
	Department of Agriculture and Water Resources	www.agriculture.gov.au
Government bodies	Department of Agriculture and Fisheries (Queensland Government)	www.qld.gov.au

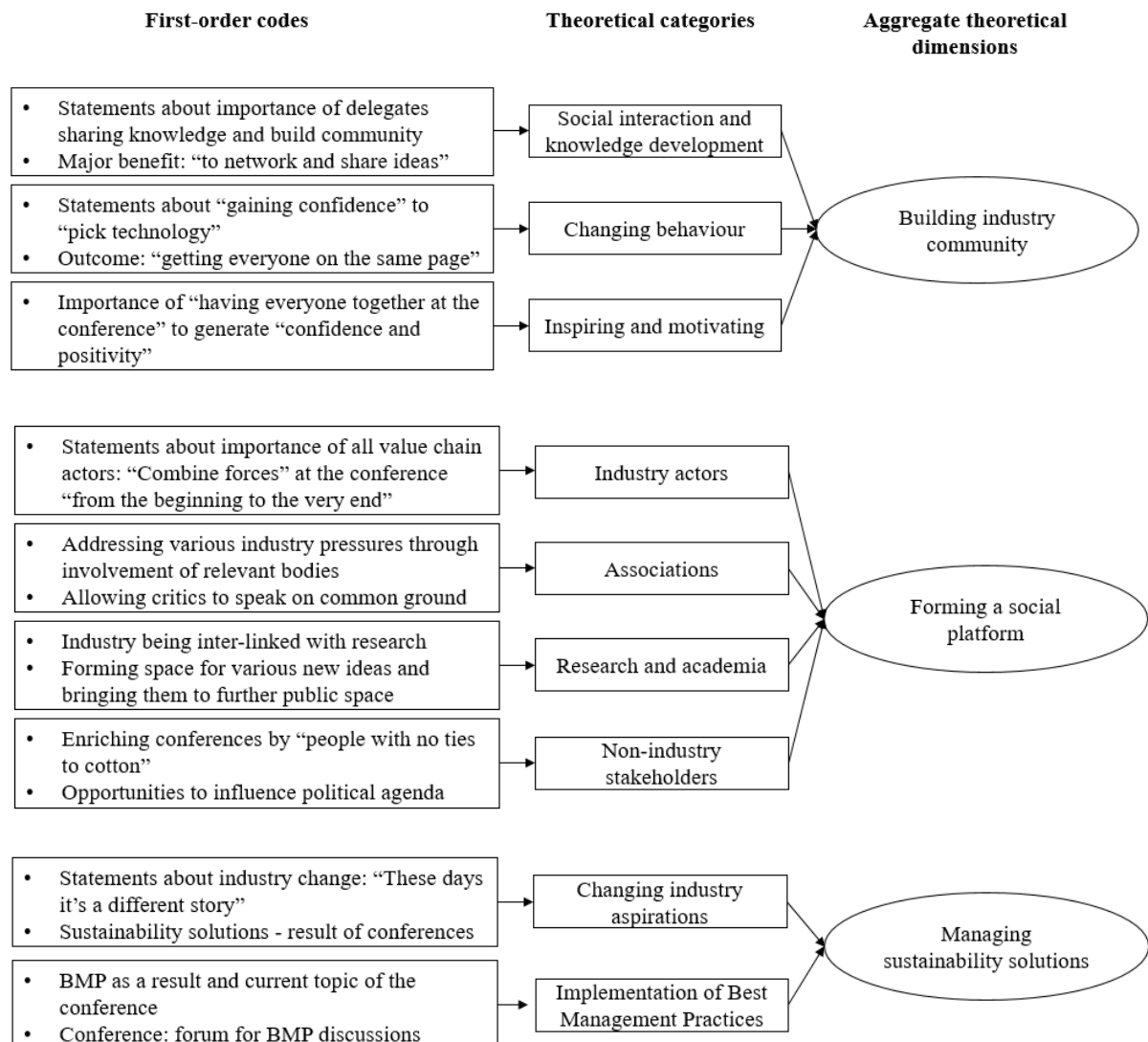
Figure 1*Data Structure*

Figure 2*Business Model of Australian Cotton Industry Conferences*