Tourism supply chains: Issues and resilience strategies during the global pandemic

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Abstract

Covid-19 related border restrictions and national lockdowns have challenged the overall resilience of hotel supply chains in New Zealand due to the industry's over-reliance on international tourists. Using case study research methodology, this study interviewed 13 hotel managers in Akaroa, a famous tourist destination located near Banks Peninsula in the South Island of New Zealand. This study has revealed that the major objectives for these supply chains were related to surviving and maintaining breakeven during the lockdown periods (March 2020 and August 2021). Significantly, during these restrictions, most of the interviewed hotels streamlined their internal operations and focused on building better relationships with their network partners. Having an extensive network structure, and the help of key government organisations like Tourism NZ (who shared information and created targeted marketing campaigns focused on attracting domestic tourists), enabled these supply chains to bounce back relatively quickly. While managers faced many challenges but the key challenge was demand management as the relationship with online suppliers (booking.com) was deteriorating. Suppliers and other service providers for these hotels also found themselves in a difficult position (due to Covid-19 related restrictions) that further worsened the situation. By modifying their products and services, adjusting their prices, utilising local suppliers, diversifying their customer bases, and coordinating with tour operators in the region, these hotel supply chains were able to quickly recover and today, show further signs of improvement.

The inbound tourism sector has always been a significant contributor to the New Zealand (NZ) economy. In late 2019, international tourists traveling to NZ peaked at slightly over 3.9 million. This figure was almost double the number that visited the country in late 2001, with most coming from Asia and Australia. Several factors have contributed to the growth in international tourist numbers, including the rise of a financially independent middle-class in Asia, increased flight connectivity, and the global tourism boom (Statistics NZ, 2017). However, on the 19th of March 2020, to stop the spread of Covid-19, the New Zealand government closed the country's borders to everyone except for New Zealand citizens, and the nation went into lockdown. This move resulted in the total halt of inbound tourism in New Zealand and the end of travel within the country. Tourism is a vulnerable industry, sensitive to risks originating from external factors, including economic crises, natural or man-made disasters, and, in this case, global pandemics (Ritchie & Jiang, 2019). Not only was the Covid-19 outbreak sudden, but it was also global. Radical measures to control the spread of the deadly virus implemented by governments around the world proved devastating for many businesses in this industry.

The fragmented and interdependent nature of tourism products forces businesses to coordinate with each other for their customers' benefit. Tourism supply chains include a variety of actors such as suppliers, distributors, the government, and competitors. Due to the highly interdependent nature of these firms, a shock in one organisation can impact the whole supply chain or produce ripple effects (iLibrary, 2020). The impact of the Covid-19 pandemic on the travel and tourism sector has been disastrous and due to its ongoing nature and the emergence of different variants, continues to affect these businesses even today. Around the globe, airlines are struggling and have drastically reduced their operations. Likewise, tour operators have also stopped or downgraded their offerings. The hotel sector,

particularly in New Zealand, is struggling, especially in areas dependent upon international tourists. Due to the lockdowns, there have been extremely low occupancy rates, and many have had to close their facilities. In New Zealand, a country which depends on tourism, more than 70% of hotels have temporarily closed, and revenue has declined by 90% (TourismNZ, 2020). While there has been some improvement to occupancy rates due to domestic travel, IATA (2020) predicted that global passenger numbers are not likely to top pre-Covid-19 levels until 2023 as airlines' capacity has significantly reduced, and the cost of travel has increased. So, although domestic tourism has provided some relief to the hotel industry, many small and medium hotel supply chains are still struggling.

This study investigates the challenges and resilience of New Zealand hotel supply chains during the Covid-19 pandemic. Hotels are important nodes within the larger tourism network as they provide tourists with accommodation and link them with numerous other services within the sector. Here, we focus solely on the hotel supply chains or the network of organisations involved in delivering different hotel services to customers. This supply chain relies on the flow of information (bookings), monetary transactions (payments) and physical items (rooms, food and drinks) (Al-Aomar & Hussain, 2017). Many small communities in New Zealand rely heavily on tourism for their economic base. Unlike big cities where visitors can be accommodated relatively easily because tourism represents only a small percentage of their economy, small cities and towns struggle even with small declines in visitor numbers. Akaroa is an example of such a town. It is located near Christchurch, NZ and depends heavily on international tourism. Its hotel industry is struggling with the big dip in the number of international tourists traveling to the area. This paper empirically examines the resilience of small hotel supply chains in Akaroa, NZ and the challenges they have faced as a result of the ongoing global pandemic. The paper answers the following questions:

1) What are the major supply chain coordination issues in hotel supply chains?
2) How are hotel supply chains responding to, and recovering from, the global pandemic-related disruptions?

Before explaining the study's methodology, it is first necessary to review the literature on hotel supply chains.

Literature Review

Supply chain disruptions have the potential to halt the economic activities of any region. This fact explains why the concept of the *supply chain* is now part of everyday conversations and is commonly discussed in the political arena and in Non-Governmental Organisations (NGOs) (Christopher & Peck, 2004). Supply chain management covers the planning and management of different sourcing, logistics, distribution, production, and retail activities. Similarly, the management, coordination, and collaboration with different suppliers, customers, and third-party logistics service providers are also included in supply chain management (Frankel et al., 2008).

The planning and execution of different supply chain activities across the boundaries of many different supply organisations is a difficult task. It is only possible through the efficient and effective coordination of informational, relational, and financial flows across the boundaries of a single organisation (Ponomarov, 2012). Through this well-coordinated effort, supply chains help produce and transport the right products in the right quantities, to the right place, at the right time, in a cost-effective manner. However, every step in the supply chain contains an inherent risk due to unforeseen disruptions. Disruptions due to natural or man-made disasters (such as damaged bridges or roads because of an earthquake or a flood), or border restrictions and lockdowns like the Covid-19 global pandemic, may affect an organisation's revenue and costs. In some instances, every part of a supply chain is exposed to severe damage due to a major disruption (Bradshaw, 2020; Ponomarov & Holcomb, 2009). Tourism supply chains are particularly sensitive to external factors and disruptions. As the New Zealand economy relies heavily on international tourism, it is critical to assess these supply chains, especially in the context of the ongoing global pandemic. Such an assessment would identify the key issues, and provide an opportunity to develop different methods to enhance and secure these critical activities (Berkes & Ross, 2013; Ritchie & Jiang, 2019).

The term tourism supply chains refers to a network of tourism related organisations engaged in range of different activities, from the supply of different tourism components (such as flights and accommodation), to the distribution and marketing of a specific tourism product (X. Zhang et al., 2009). Tapper and Font (2004) define it as a chain that consists of suppliers of different products and services that coordinate together to deliver tourism products to consumers. Within these supply chains, we

particularly focus on hotel supply chains which we define as a network of organisations involved in delivering different hotel services to customers. Such supply chains work through the flow of information (bookings), monetary transactions (payments), and physical items (rooms, food and drinks) (Al-Aomar & Hussain, 2017; Fredendall & Hill, 2000). These hotel supply chain can be considered sub networks within the larger tourism supply network.

The tourism sector is distinct from other manufacturing and service industries because it is comprised of mobile customers who visit destination places to consume a service. Furthermore, the supply elements, such as the hotel itself, are often fixed, geographically speaking (Page, 2011). Tourism is also coordination intensive sector in which different products are often bundled together and sold as a package. In this sector, services like accommodation are considered to be *perishable* as they cannot be stored for other customers (Ujma, 2001). Also, many products which associated with tourism cannot be examined prior to their purchase; therefore, this industry relies heavily on the presentation and interpretation of products. The hotel sector is also an information intensive industry (X. Zhang et al., 2009). It is sensitive to minor disruptions and negative feedback. Part of the reason for these factors is the overall complex nature of these supply networks; most of the products in this industry are heterogenous and compound. Uncertainty around demand is common in hotel bookings as there are typically high levels of competition and the products are complex.

The identified characteristics of tourism supply chains give rise to number of issues that managers need to deal with in order to survive and thrive during a global pandemic. In order to survive and become resilient during a global pandemic, tourism supply chains must have clear objectives. While the ultimate objective for hotels and other operators is to satisfy tourists/customer satisfaction, reducing demand uncertainty and ensuring monetary value (revenue generation and cost reduction) are also vitally important during difficult times (Berkes, 2007; Gómez & Sinclair, 1991). So, while having a clear objective is crucial, a fundamental prerequisite for improved supply chain resilience is to have a clear understanding of the network that connects the hotel industry to its suppliers, its downstream customers, and all other industry actors (Christopher & Peck, 2004). X. Zhang et al. (2009) and Page (2011) have both noted that understanding how the tourism supply chain works is critical to ensure better management of it. Other scholars have suggested that key players should recognise the power relationships and business links (Belaya et al., 2009; Cox et al., 2001).

Next, management issues need to be identified and learned to ensure that key stakeholders can make well-informed decisions during disruptions. Considering the special characteristics of the tourism industry (such as perishability, inconsistency, people oriented), X. Zhang et al. (2009) have identified seven key management issues in tourism supply chains: supply chain coordination, supply management, two party relationships, information technology, demand management, inventory management, and product development. Of these seven elements, supply management, two party relationships and supply chain coordination can be considered supply chain relationship/collaboration management topics (Barratt, 2004). Demand management, inventory management, and information technology are logistic management topics (Murphy & Knemeyer, 2018). One must have a clear understanding of supply chain relationship-related and logistics management issues in order to ensure the resilience of the supply chain. These decisions may be strategic, tactical, or operational in nature and/ or involve government taxation, wage subsidies, price setting, inventory levels, flexible timings, tour scheduling, advertising, and capital investment, components which may be adjusted to help a supply chain to bounce back. Each of these components are associated with different actors in the supply chain and changes to some or all of these may help these supply chains adapt to changing environment (Lee, 2004).

While the above mentioned components lead to effective performance measurement (Mittal & Sinha, 2021; X. Zhang et al., 2009), however, during a global pandemic, surviving and resilience obviously become top priorities for many supply chains (Ali et al., 2017; Bryce et al., 2020). Supply chain resilience seeks to reinstate and/or sustain supply chain operations in the event of a major disruptions (Abe & Ye, 2013; Ferris, 2016). Tourism firms, hotels included, must work together and create plan which outlines how they will provide sustained services in the face of any such event (Roy et al., 2016). In line with the existing literature, tourism supply chain resilience can be considered as the ability of a supply chain to find new ways of providing services to their customers, thus reducing the impact of any disruption (Mandal & Saravanan, 2019). As mentioned earlier, there has been a significant rise in uncertainty, especially after the spread of Covid-19, creating a severe risk to both

manufacturing and service operations. As a result, firms have dedicated time to improving and creating better sustainability plans and risk mitigation strategies. As hotel supply chains have diverse structures, they must coordinate and plan for different possible contingencies. Simple risk management is inadequate as it focuses primarily on day-to-day, low impact, or frequently experienced disruptions. Supply chain resilience refers to a supply chain's capability to deal with such challenges (Ponis & Koronis, 2012; Sheffi & Rice Jr, 2005). Rightly so, Ponomarov and Holcomb (2009) and Christopher and Peck (2004) have defined resilience as a firm's adaptive capacity to meet demand despite disruptions. Resilience can be achieved by coordinating with each other and controlling operations.

Supply chain resilience literature has identified many different antecedents of resilience; for instance, supply chain agility, collaboration, having a culture of risk management, supply chain re-engineering, velocity, visibility, and flexibility (Jüttner & Maklan, 2011; Peck et al., 2003). Scholten and Schilder (2015) have shown that information sharing and coordinated efforts may improve resilience by having better visibility, velocity, and flexibility across the supply chain. As the extent of disruption, especially when its sudden and severe, also has a significant impact on the development of resilience in supply chains, businesses must acquire solid disruption knowledge as this information will enable them to configure useful resources needed to mitigate uncertainty (Umar et al., 2017). Hence, it is essential to determine what supply chain resilience looks like in the hotel industry. This research examines supply chain objectives structure, management issues, decision variables and supply chain resilience in order to provide insight and solutions for this vulnerable industry.

Methodology

Aligned with our goal to analyse supply chain issues and the resilience strategies in the New Zealand hotel supply chains during the Covid-19 pandemic, a multi case study approach was used. The key considerations were to explore and understand supply chain issues due to the Covid-19 pandemic, what measures were taken, and possible recovery strategies. This methodology is a recommended method for exploratory research where focus is to learn contemporary topics in real world settings. This method helps to find new insights and to better understand the complex issues (Halinen & Törnroos, 2005; Yin, 2014). We have adopted an abductive approach for this study where we utilized

already reported constructs of supply chain resilience in the literature but also letting other constructs to emerge from the data analysis thus providing the more holistic picture of the phenomenon.

Case Selection

The research focused on regions which rely on hospitality businesses and international tourism with little diversification to other non tourism-related industries. For this study, we selected Akaroa, located in the South Island of New Zealand. The Covid 19 pandemic has had a significant affect on hotel supply chains in New Zealand, with a lack of tourists and migrant workers who are often employed to service these hotels. The broken supply chain of goods and services has generated other types of problems related to slow economic activity as the whole region depends on the tourism industry to survive. To ensure these supply chains remain functional in the future, there was a need to examine the devastating effect of these lockdowns and border restrictions. Hotel industry is the largest contributor to the economic activity of Akaroa (Christchurch City Council, 2021). We selected hotel industry network as our primary case within Akaroa region. Inside this hotel industry network, we have studied individual supply chains of different hotel as sub cases in order to get the best picture of issues faced and strategies adopted by these supply chains to survive the pandemic related disruptions.

Data Collection

Interviews were the primary method to collect data. An interview protocol was developed through a rigours process to bring the consistency in the asked questions. A group of supply chain experts (Senior faculty members in the Global Supply Chain Department of Lincoln University, New Zealand) were asked to list down potential issues of hotel supply chains in pandemic to develop the protocol. This preliminary interview guide was tested with a hotel business owner. Using the results from this single interview, the researchers refined the protocol. During the data collection process, the researchers regularly met to discuss their experiences during the early interviews and fine-tuned their interview techniques to obtain the necessary data. Semi structured interviews were conducted to get the detailed picture of real time events in this region. Purposive sampling was used to contact the hotel managers/owners in the region. Researchers have travelled to the region and went door to door to these hotels to talk to the managers. Only those informants were picked who met the three-point guidelines; knowledgeable about the pandemic

and its effects, willingness to share information, vast experience of hotel business. We visited 23 hotels in total. Out of these 23 hotels, 15 hotel businesses agreed to participate in the study. However, thirteen of them qualified based on our three-point guidelines.

Most of the respondents allowed us to digital record the interviews, three of them refused and we took the field notes for those respondents. All the digitally recorded interviews were transcribed using the web translation application (Transcribe Wreally). Respondents' names and location were not included in the transcriptions: instead, each respondent was assigned a specific code (for example, C1R1 - case 1 in region 1).

Data Analysis

Data analysis begins along with data collection in the qualitative studies. We made regular interactions with the respondents during the transcription process that aided us generating and enhancing the themes and also improving the findings of this research. We seek the feedback of respondents by sharing the interview transcriptions with them that helped us to validate the research (Kvale & Brinkmann, 2009). We coded the data after the verification of transcripts from the respondents. Initial codes were merged and some were discarded thus leading to generate concepts and themes. We used NVivo 11 software to ease this process. Finally we run the queries to display the data.

The data coding was a complex procedure. Sometimes, more than one code or concept was emerged even for a small paragraph. The coding, categories and themes generation in the NVivo 11 was completed using Silver and Lewin's (2014) four step method. We have used many other general methods to code the data recommended by other authors (Yin, 2014, Miles et al., 2013, Saldaña, 2015, Hesse-Biber & Leavy, 2010).

Research Quality

Lincoln and Guba (2000) emphasize that research quality of qualitative research can be enhanced by four different factors; credibility, dependability, transferability and conformability. In order to improve the quality of this research, we took the following steps:

• Credibility/Internal validity was developed by talking to multiple respondents through interviews.

• Dependability/Reliability was achieved by using interview protocol to conduct detailed interviews.

• Transferability/External validity was attained by using the purposeful sampling and using the criteria

to shortlist the potential respondents for detailed interviews.

• Conformability/Objectivity was developed by asking and recording the details of all the respondents and also by seeking the approval of transcripts by the respondents.

Analysis

The analysis focused on supply chain coordination and supply chain issues. In particular, it examined the strategies that various stakeholders (those linked with hotels around Akaroa) adopted, using five dimensions extracted from the literature review: objectives, network structure, management issues, decision variables, and supply chain resilience.

Objectives of Hotel Supply Chains

Analysis of the transcripts revealed that the key objectives of the hotel SC at the start of the pandemic were tourism satisfaction and monetary value. These objectives have been redefined by many of the industry partners. Firstly, tourism satisfaction is based on tourists' perceived value or their overall experience with the tourism products and services (Williams & Soutar, 2009). The data analysis suggests that pre-covid, the focus was mainly on international tourists (see C1R1, C2R1, C3R1, C5R1, C6R1, C7R1 and C13R1). As C13R1 stated:

> Our customers come from variety of different regions, both domestically and internationally, but our main customers are mainly from overseas. (C13R1)

Our analysis found that these tourists have distinct needs compared to local tourists. Over the years, this has led hotel SCs to target and provide products and services designed primarily for international tourists. However, the border closure resulted in local hotel SCs changing their primary objective to target and increase the value proposition for local tourists. This change in objectives has resulted in various modifications in tourism products and services offered by hotel SCs (further details provided in the following section). Additionally, it is important to note that only a few hotels (C4R1 and C12R1) diversified their product and service offerings towards both international and domestic tourists. Thus, their pre-covid business objective meant that they had products and services designed towards both market segments. For example, one business owner stated:

> We are focused mainly on the international market but our local domestic customer proportion was also reasonably. For example, our pre covid customer

division was 60% international and 40% domestic. (C4R1)

They noted that they collaborated and had pre-existing relationships with their SC partners, including local business associations, competitors, complimentary service providers, and customer loyalty programmes which enabled them to offer diversified products and services. Collaboration with supply chain partners is the critical dynamic capability of any organisation that leads to other capability based outcomes such as supply chain resilience (Dyer & Singh, 1998).

Secondly, during the Covid-19 pandemic, hotel SCs redefined their monetary proposition, mainly by reducing expenditure and operational costs. The pandemic increased the businesses' financial stress due to the cancellation of bookings and having to refund pre-paid customers. These factors were compounded by relatively low demand from local tourists. Significant decreases in their revenue streams meant that some of the businesses were under considerable stress; however, some were

able to negate this due to significant reductions in their operating expenditures. For most, the primary monetary objective during the pandemic was to *break-even,* or absorb losses and thereby survive the crisis. This financial scaling down and quick adjustments in strategy has helped these oganisations to survive the negative effects of locked-downs and border closures thus increasing the resilience (Bryce et al., 2020; Tabaklar, 2017).

Network Structure

It is vital to understand the basic network structure of hotel SCs and to analyse supply chain interdependencies, issues, and response strategies. We initially adopted the tourism supply chain structure, developed by X. Zhang et al. (2009) as a model framework. However, in response to the results of our analysis, we produced a modified version. These modifications were necessary as our focus was predominantly on hotel SCs rather than the tourism industry as a whole. Figure 1 shows the overall network structure of hotel SCs in the Akaroa region of NZ.

Figure 1
Network Structure of Hotel SCs
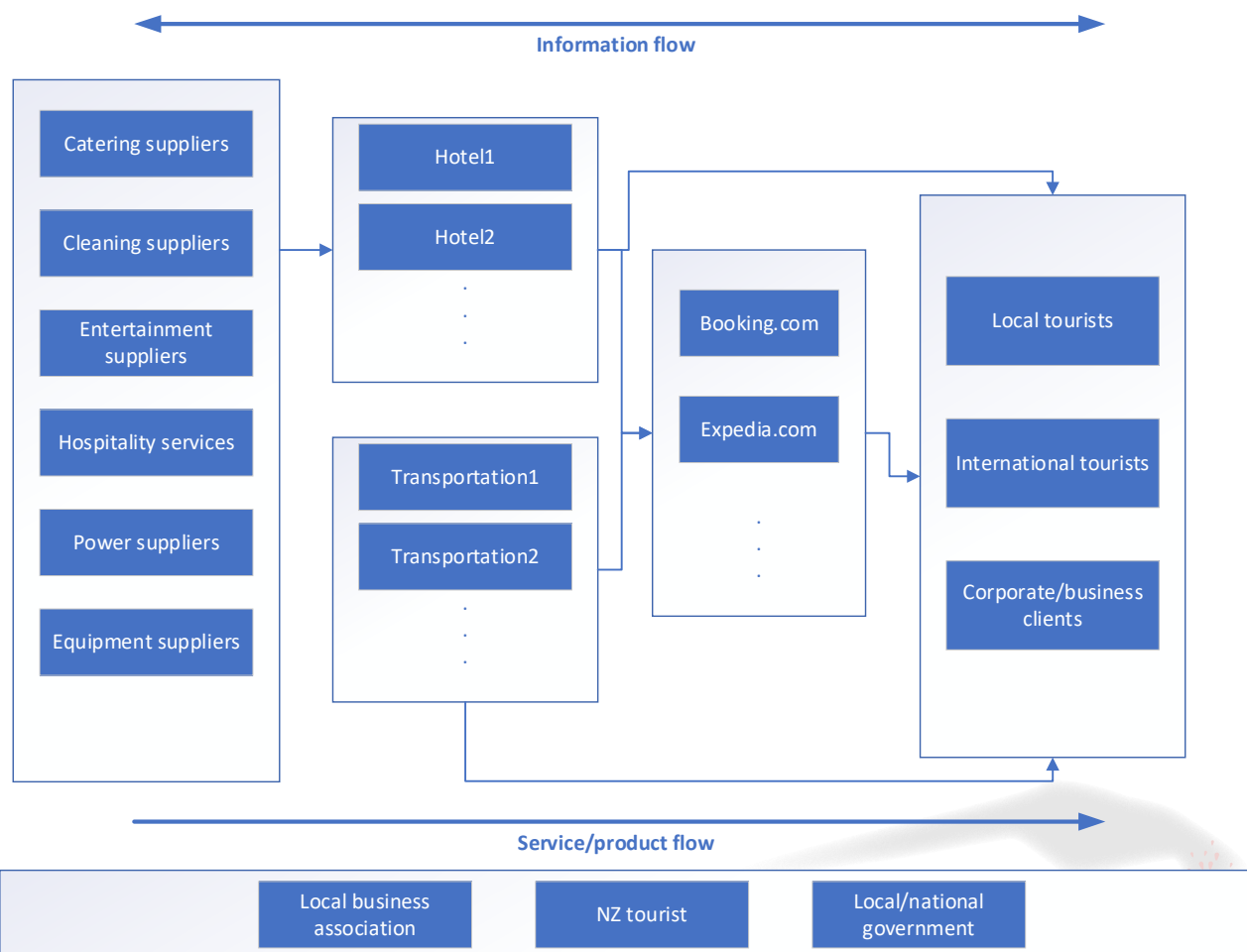
For this research, hotels were the focal organisations. We analysed their relationships with downstream and upstream SC partners.

Upstream SC –We found that hotel SCs only have a few layers, with mostly transactional relationships with the upstream SC partners. This finding may relate to the fact that this research focused on small and medium-sized hotels where the concern was to maintain reasonable expenditure on various supplies. Upstream partners predominantly consist of cleaning, catering, entertainment, hospitality, equipment, and power suppliers. Most of the hotels reported using local or nearby suppliers, especially for their cleaning and catering needs. Some of the hotels mentioned that they switch to local suppliers during the locked down period that helped them to keep running the basic business operations. This flexibility and quick response to focus on local suppliers helped them to stay resilient during these difficult times (Gunasekaran et al., 2008; Yi et al., 2011).

Focal organisations (hotel) structure – The data analysis suggested that the focal organisations can be divided into two different types, based on their business structure:

- Family-owned – Hotels owned and managed by a single family (C5R1 and C7R1).

- Investor/Multiple Investors – Hotels owed by a single or multiple investors. In most cases, however, a general manager runs the day-to-day operations (C1-R1, C4R1, and C10R1). Most of these investors had a number of investments in different tourism products such as restaurants and other attractions.

Downstream SCs – Analysis of the interview data indicated that the businesses had two common ways of approaching the target customers: 1) through online platforms, and 2) directly, through their hotel websites. Apart from local and international tourists, some hotels noted that corporate/business clients were key customers during the pandemic (C1R1 and C2R1). The hotels which had wide customer base were able to quickly respond to disruptions caused by the border closures. This has also helped them to cope well compared to other business and resulted in increased resilience (Oloruntoba & Gray, 2009; Qrunfleh & Tarafdar, 2013).

Other stakeholders – The participating organisations highlighted the positive role of other stakeholders, such as local business associations, New Zealand tourists, and the local or national government during the pandemic. For example, most of the businesses survived due to government support packages provided throughout the various lockdown periods (C2R1, C5R1, C6R1, C7R1, C8R1 and C13R1).

> When the lockdown happened, we applied for funding from the government for our staff. That was very good, and it really helped us a lot during that period. (C2R1)

Similarly, Tourism NZ and local business associations activated their regional promotions to attract local tourism after the first lockdown. This marketing promoted different regions of New Zealand, Akaroa included, as local tourist destinations and helped the hotels to attract domestic tourists.

> Hospitality New Zealand was amazing I have to say. They were really giving a lot of advice with things changing and they were sending newsletters and webinars and what practices should we do and update and that was really helpful. (C2R1)

Management/SC issues

Not surprisingly, the pandemic, and the government's response to it, has led to significant management issues, specifically decisions around demand management, supplier management, inventory management, and day-to-day operations.

Demand management is a critical part of any SC decision which include forecasting around the expected annual number of tourists, pricing strategies, and sales activities. Our data analysis suggests that during the early days of the pandemic (Jan - Feb 2020), the participating organisations did very little to prepare. They did not consider the potential impact to their business until the country went into lockdown in late March 2020. High uncertainty about the nature and potential impact of this crisis was largely unknown, meaning that many of the businesses were somewhat complacent (C7R1, C8R1 and C13R1). As one interviewee said,

> Not really, and at that time (Jan-Feb 2020) I was joking with my husband saying that New Zealand will be fine, and I don't think it's going to affect New Zealand, probably not going to go that big right. […] Yes, we didn't prepare anything and then, just all of a sudden, it's like oh! it came to New Zealand and they needed to shut the whole country and boom everything stopped. (C7R1)

During the lockdown period, many of the hotels closed down their operations (C3R1, C4R1, C6R1, C10R1, C11R1 and C13R1). Others remained open but at a limited capacity, with social distancing protocols in place. These hotels only accommodated essential workers

and tourists who were unable to return to their home countries. Apart from this, almost all of the participants reported tourist booking cancellations for the remainder of the year, right up until 2021. This occurred alongside general demand variations during the winter season (Akaroa is typically considered a winter destination), which meant that the local tourism was also very low until the 2020 spring season.

The uncertainty in demand meant that hotels were faced with numerous challenges relating to supplier and inventory management decisions. Due to the size and nature of the hotel industry, many businesses cancelled, or put their orders for various hospitality services on hold, catering and cleaning included (C3R1, C4R1, C7R1 and C8R1). Some of the businesses also faced challenges related to their suppliers who were unable to fulfil orders because of delivery and logistical challenges.

> Well, cleaning products we buy, and we do our cleaning here except the bedsheets, so we stopped ordering from our suppliers. For cleaning products, we buy monthly from our supplier, so we kept the order once, but didn't re-order anything after that. (C8R1)

Once the initial lockdown restriction were relaxed, the businesses faced additional challenges associated with a lack of international tourists due to continued border restrictions (still largely in place at the time of writing). Businesses were left in a situation where they needed to understand the needs of local tourists, which differ from those of international tourists. For example, in contrast to international tourists, local tourists may visit multiple times a year and, thus, require products and services which allow them to return to the same hotel and attractions (C1R1, C2R1, C3R1, C5R1, C7R1 and C13R1). Similarly, demand is typically higher in the weekends (C2R1), which is not the case for international tourists.

> The good thing about Akaroa is we are near to Ashburton and Christchurch, so people come over to Akaroa during weekends, so we are always busy, full on weekends. (C8R1)

> The difference that you have from them [local tourists] is, instead of booking a place months in advance, the Kiwis were booking last minute. You were looking at a blank sheet for the next week and come Monday and you are full. (C1R1)

Overall, the industry has seen a certain degree of market pressure as there are limited local tourists, a fact which

has compelled hotels to change their pricing strategies to attract as many customers as they can:

> It [changing price] is a slight disadvantage, of course, I have to keep my prices under [other competitors]. (C8R1)

Decision Variables Related to SC Decisions

Following the initial lockdown and travel restrictions, hotels implemented multiple strategies to survive and recover from the significant drop in international tourists.

One of the fundamental changes in operations strategy was to adopt the required social distancing rules and put extensive cleaning protocol in place. This meant many businesses changed how they interacted with customers, especially during levels 2, 3 and 4. For example, some businesses were accommodating international tourists stuck in NZ during the level 4 restrictions.

> We had 6 couples that were locked in New Zealand that stayed with us over the period of six weeks, then they slowly got home [when the international flights were available]. There was one couple from Germany and the other couples were from the UK. (C2R1)

> After the first news [regarding Covid-19] we did some level of preparation, like extra cleaning plus disinfectants for visitors and changed house rules. (C10R1)

The hotels adapted their operations to cater for local tourists' distinct needs. For example, as local tourists tend to be regular customers, some businesses upgraded their services by including complementary products and services. This meant that they collaborated with other tourist attractions and restaurants to provide combo deals with network stakeholders (C2R1, C4R1, C6R1 and C13R1), a practice referred to horizontal collaboration. Some of the businesses responded to the challenges associated with a lack of tourists by lowering their prices (C2R1, C5R1, C12R1 and C13R1).

> I think the main change is like the whole town changed their prices really low. We do that price strategy as our first step and the second step is to work with the local businesses to attract more people. (C13R1)

Some hotels focused on corporate and business clients as their key customer segments during the crisis. Like local tourists, these clients have distinct needs and requirements. To retain both of these customer segments, many of the businesses encouraged their customers to make future bookings via their official website rather than using an online platform (such as booking.com). This

practice enabled them to avoid additional fees charged by these online platforms (C7R1 and C8R1).

> We ran some specials on social media and encouraged people to book directly with us and so people just decide to come to Akaroa and booked with us directly, which was lucky for us. (C7R1)

Regarding pricing strategy, analysis of the data showed that while some of the businesses retained their prices (C6R1 and C10R1), one increased their price (C3R1). However, they noted that this decision was based on significant upgradation of their products and services. Additionally, this hotel had a loyal local customer base before this crisis, and they felt confident in their product offerings. In this case, the business' pre-existing collaborative relationships with other tourist providers enabled them to quickly upgrade their services contributing to price retention.

Regarding upstream SC partners, many of the interviewed hotels changed their sourcing strategy by decreasing the lot size and/or changing to a local supplier to avoid issues associated with transportation and delivery (C5R1 and C13R1). One business reported receiving a discount from one of their suppliers during lockdown (C8R1).

> SkyTV, that's a really big cost here, and having an empty hotel there was no point in keeping SKYTV, but they did offer us a free month and then we got 50% off. (C8R1)

There was a significant push from the tourist industry to promote various tourist destinations across New Zealand. Some of the hotels got involved with local business associations to promote Akaroa as a tourist destination (C2R1, C4R1, C7R1, C8R1 and C13R1). Additionally, hotels got together and collaborated with other tourist attractions to promote their region:

> Well, the whole community try to find out something to attract more people. (C13R1)

Performance/Resilience

To create resilient supply chains, it is important to have the understanding of supply chain operations, objectives, needs, risks, as well as human, capital and network resources (Ali et al., 2017; Scholten & Schilder, 2015).

Overall, analysis of the data shows that although the interviewed hotel owners experienced a significant decrease in tourists from overseas (which resulted in lost sales and revenue), those in Akaroa managed to quickly adapt to the new requirements. This enabled them

not only to survive, but, in some cases, thrive through the Covid-19 pandemic. For all of the hotels, the main performance criterion was to maintain a sufficient number of bookings to stay atleast at the break-even point in terms of their finances. Most of the hotels were aware of the needs and risks associated with covid 19 related disruptions and had clear objectives. This knowledge helped them to stay resilient in these difficult times.

Many of the hotels understood their capacity utilisation throughout the initial locked down months, that helped them later on to schedule better and use their resources in efficient way. This helped them to keep the prices in control and also helped them to keep their operations running resulting in better resilience compared to others (Katiyar et al., 2015). Supplier delivery efficiency has also been attributed to fast and quick response to supply chain disruptions, this ability also stems from the knowledge an organisation has about its network and what options are available if something adverse happens. Most of these hotels had good knowledge about their supplier base, during locked downs when it was difficult to get most of supplies beyond their own locations, this helped them to quickly switch to local suppliers for running their day-to-day operations. This supplier delivery efficiency that resulted in effective delivery lead times helped these supply chains to quickly recover from disruptions (Bhagwat & Sharma, 2007; Cho et al., 2012).

This hotel's higher booking rate enabled them to navigate the crisis without incurring a major loss. As noted in the previous section, this hotel owner attributed their success to pre-existing relationships with other tourist attractions and their strong, loyal, local, customer base.

Some businesses tried to balance their revenue stream by reducing their expenditure. Some achieved this by reducing their operational costs; for example, reducing staff hours, reducing inventory costs and temporarily holding off buying hospitality services. By collaborating with the local community and business associations to attract local tourists, the interviewed hotels were able to respond to the crisis. As emphasised by Ali et al. (2017), collaboration and information sharing are the basic elements of achieving supply chain resilience. Similarly, Christopher and Peck (2004) had identified that high level of coordination among supply chain partners can significantly reduce the risks thus help increase the resilience. It was evident through this research that majority of supply chain partners in these hotel supply chains were coordinating with each other, at some places even were doing the joint planning to survive the disruptions.

Conclusion

This research has examined the major challenges and strategies adopted by hotels in Akaroa to respond and recover from the Covid-19 pandemic. Analysis of the data has provided critical insight into the various ways that the hotel industry has navigated the crisis. As the pandemic is ongoing, the insights from this research provides advice for managing the short to medium term impact of this crisis.

The organisations which participated in this research are small to medium size hotels, which makes them more susceptible to disruptions because of a lack of sufficient resources and capabilities (Burnard & Bhamra, 2011). One of the primary ways to achieve resilience is to be prepared for a potential crisis (Ahmad, 2018; Sheffi, 2005, 2015). However, many hotels simply do not have time to do this as they are busy dealing with operational tasks (Ates & Bititci, 2011; Jiang et al., 2019). Our findings showed that many of the businesses were complacent in the early stages of the pandemic and responded only once border restrictions were implemented; in other words, they did not put contingency plans in place during the early stages of the pandemic. This finding echoes Hystad and Keller (2006) claim that tourism operators put minimal effort in planning and preparing for such a disruption.

The pandemic and the government's response to it has significantly impacted on the tourism industry, especially those businesses reliant on international tourists. To combat these challenges, hotels quickly adapted their day-to-day operations and modified or updated their products and services (H. Q. Zhang et al., 2009). Many drew on pre-existing or established collaborative relationships with their network partners (Becken & Hughey, 2013). Our findings demonstrate the development of collaborative relationships across horizontal SC partners, including competitors, other tourist providers, and local business associations. This analysis has shown that many survived by changing their marketing strategies to showcase tourism destinations for locals wanting to travel in their own country.

References

Abe, M., & Ye, L. (2013). Building Resilient Supply Chains against Natural Disasters: The Cases of Japan and Thailand. *Global Business Review, 14*(4), 567-586. https://doi.org/10.1177/0972150913501606

Ahmad, R. (2018). *Supply chain resilience elements the case of the Dairy Sector*. (n.d.). Retrieved October 13, 2022, from https://ir.canterbury.ac.nz/bitstream/handle/10092/16401/Ahmad%2C%20Rizwan_Final%20PhD%20Thesis.pdf

Al-Aomar, R., & Hussain, M. (2017). An assessment of green practices in a hotel supply chain: a study of UAE hotels. *Journal of Hospitality and Tourism Management, 32*, 71-81. https://doi.org/10.1016/j.jhtm.2017.04.002

Ali, A., Mahfouz, A., & Arisha, A. (2017). Analysing supply chain resilience: Integrating the constructs in a concept mapping framework via a systematic literature review. *Supply Chain Management: An International Journal*, *22*(1), 16–39. https://doi.org/10.1108/scm-06-2016-0197

Ates, A., & Bititci, U. (2011). Change process: a key enabler for building resilient SMEs. *International Journal of Production Research, 49*(18), 5601-5618. https://doi.org/10.1080/00207543.2011.563825

Barratt, M. (2004). Understanding the meaning of collaboration in the supply chain. *Supply Chain Management: An International Journal, 9*(1), 30-42. https://doi.org/10.1108/13598540410517566

Becken, S., & Hughey, K. F. D. (2013). Linking tourism into emergency management structures to enhance disaster risk reduction. *Tourism Management*, *36*, 77–85. https://doi.org/10.1016/j.tourman.2012.11.006

Belaya, V., Gagalyuk, T., & Hanf, J. (2009). Measuring asymmetrical power distribution in supply chain networks: what is the appropriate method? *Journal of Relationship Marketing, 8*(2), 165-193. https://doi.org/10.1080/15332660902876927

Berkes, F. (2007). Understanding uncertainty and reducing vulnerability: lessons from resilience thinking. *Natural hazards, 41*(2), 283-295. https://doi.org/10.1007/s11069-006-9036-7

Berkes, F., & Ross, H. (2013). Community resilience: Toward an integrated approach. *Society & Natural Resources, 26*(1), 5-20. https://doi.org/10.1080/08941920.2012.736605

Bhagwat, R., & Sharma, M. K. (2007). Performance measurement of supply chain management: A balanced scorecard approach. *Computers & Industrial Engineering, 53*(1), 43-62. https://doi.org/10.1016/j.cie.2007.04.001

Bradshaw, K. (2020). COVID-19 Pandemic Reveals True Importance of Recycling and the Supply Chain - ProQuest. Retrieved October 13, 2022, from https://search.proquest.com/docview/2396169889?accountid=27890

Bryce, C., Ring, P., Ashby, S., & Wardman, J. (2020). Resilience in the face of uncertainty: early lessons from the COVID-19 pandemic. *Journal of Risk Research*, 1-8. https://doi.org/10.1080/13669877.2020.1756379

Burnard, K., & Bhamra, R. (2011). Organisational resilience: development of a conceptual framework for organisational responses. *International Journal of Production Research, 49*(18), 5581-5599. https://doi.org/10.1080/00207543.2011.563827

Cho, D. W., Lee, Y. H., Ahn, S. H., & Hwang, M. K. (2012). A framework for measuring the performance of service supply chain management. *Computers & Industrial Engineering, 62*(3), 801-818. https://doi.org/10.1016/j.cie.2011.11.014

Christchurch City Council. (2008). Akaroa Tourism Carrying Capacity. Retrieved November 13, 2022, from https://ccc.govt.nz/assets/Documents/The-Council/Plans-Strategies-Policies-Bylaws/Plans/area-plans/akaroa-harbour-basin-settlements/TourismCarryingCapacity-akaroaharbourbasin.pdf

Christopher, M., & Peck, H. (2004). Building the resilient supply chain. *International Journal of Logistics Management, The, 15*(2), 1-14. https://doi.org/10.1108/09574090410700275

Cox, A., Sanderson, J., & Watson, G. (2001). Supply chains and power regimes: toward an analytic framework for managing extended networks of buyer and supplier relationships. *Journal of Supply Chain Management, 37*(1), 28-35. https://doi.org/10.1111/j.1745-493X.2001.tb00097.x

Dyer, J. H., & Singh, H. (1998). The relational view: cooperative strategy and sources of interorganizational competitive advantage. *Academy of management review, 23*(4), 660-679. https://doi.org/10.2307/259056

Ferris, T. L. (2016). Proactive and Reactive Resilience: A Comparison of Perspectives Scott Jackson. *Insight magazine of the International Council on Systems Engineering (INCOSE)*. Retrieved October 13, 2022, from https://www.incose.org/products-and-publications/periodicals

Frankel, R., Bolumole, Y. A., Eltantawy, R. A., Paulraj, A., & Gundlach, G. T. (2008). The domain and scope of SCM's foundational disciplines—insights and issues to advance research. *Journal of Business Logistics, 29*(1), 1-30. https://doi.org/10.1002/j.2158-1592.2008.tb00066.x

Fredendall, L. D., & Hill, E. (2000). *Basics of supply chain management*. CRC Press. https://doi.org/10.1201/9781420025767

Gómez, V. B., & Sinclair, M. (1991). Integration in the tourism industry: a case study approach. *Integration in the tourism industry: a case study approach.*, 67-90. https://doi.org/10.1016/0261-5177(93)90088-3

Gunasekaran, A., Lai, K.-h., & Edwin Cheng, T. (2008). Responsive supply chain: a competitive strategy in a networked economy. *Omega, 36*(4), 549-564. https://doi.org/10.1016/j.omega.2006.12.002

Halinen, A., & Törnroos, J.-Å. (2005). Using case methods in the study of contemporary business networks. *Journal of business research, 58*(9), 1285-1297. https://doi.org/10.1016/j.jbusres.2004.02.001

Hystad, P., & Keller, P. (2006). Disaster management: Kelowna tourism industry's preparedness, impact and response to a 2003 major forest fire. *Journal of Hospitality and Tourism Management, 13*(1), 44-58. https://doi.org/10.1375/jhtm.13.1.44

iLibrary, O. (2020). *Tourism Policy Responses to the Coronavirus (COVID-19)*. OECD. Retrieved October 13, 2022, from https://www.oecd-ilibrary.org/industry-and-services/tourism-policy-responses-to-the-coronavirus-covid-19_6466aa20-en

Jiang, Y., Ritchie, B. W., & Verreynne, M. L. (2019). Building tourism organizational resilience to crises and disasters: A dynamic capabilities view. *International Journal of Tourism Research, 21*(6), 882-900. https://doi.org/10.1002/jtr.2312

Jüttner, U., & Maklan, S. (2011). Supply chain resilience in the global financial crisis: an empirical study. *Supply Chain Management: An International Journal, 16*(4), 246-259. https://doi.org/10.1108/13598541111139062

Katiyar, R., Barua, M. K., & Meena, P. L. (2015). Modelling the measures of supply chain performance in the Indian automotive industry. *Benchmarking: An International Journal*. https://doi.org/10.1108/BIJ-09-2014-0091

Lee, H. L. (2022, August 1). *The triple-A supply chain*. Harvard Business Review. Retrieved October 13, 2022, from https://hbr.org/2004/10/the-triple-a-supply-chain

Mandal, S., & Saravanan, D. (2019). Exploring the influence of strategic orientations on tourism supply chain agility and resilience: An empirical investigation. *Tourism Planning &*

Development, 16(6), 612-636. https://doi.org/10.1080/21568316.2018.1561506

Mittal, R., & Sinha, P. (2021). Framework for a resilient religious tourism supply chain for mitigating post-pandemic risk. *International Hospitality Review*. https://doi.org/10.1108/IHR-09-2020-0053

Murphy, P. R., & Knemeyer, A. M. (2018). *Contemporary logistics*. Pearson.

Oloruntoba, R., & Gray, R. (2009). Customer service in emergency relief chains. *International Journal of Physical Distribution & Logistics Management, 39*(6), 486-505. https://doi.org/10.1108/09600030910985839

Peck, H., Abley, J., Christopher, M., Haywood, M., Saw, R., Rutherford, C., & Strathern, M. (2003). Creating resilient supply chains: a practical guide. *Centre for Logistics and Supply Chain Management, Cranfield School of Management*. http://hdl.handle.net/1826/4374

Ponis, S. T., & Koronis, E. (2012). Supply chain resilience: definition of concept and its formative elements. *Journal of Applied Business Research, 28*(5), 921. https://doi.org/10.19030/jabr.v28i5.7234

Ponomarov, S. (n.d.). *Antecedents and consequences of supply chain resilience: A dynamic capabilities perspective*. TRACE. Retrieved October 13, 2022, from https://trace.tennessee.edu/utk_graddiss/1338/

Ponomarov, S., & Holcomb, M. C. (2009). Understanding the concept of supply chain resilience. *International Journal of Logistics Management, 20*(1), 124-143. https://doi.org/10.1108/09574090910954873

Qrunfleh, S., & Tarafdar, M. (2013). Lean and agile supply chain strategies and supply chain responsiveness: the role of strategic supplier partnership and postponement. *Supply Chain Management: An International Journal, 18*(6), 571-582. https://doi.org/10.1108/SCM-01-2013-0015

Ritchie, B. W., & Jiang, Y. (2019). A review of research on tourism risk, crisis and disaster management: Launching the annals of tourism research curated collection on tourism risk, crisis and disaster management. *Annals of Tourism Research, 79*, 102812. https://doi.org/10.1016/j.annals.2019.102812

Roy, S., Amar, R. G., & Mandal, S. (2016). A dynamic capability view on tourism supply chain resilience: Evidence from Indian tourism sector. *Journal of Environmental Management & Tourism, 7*(1 (13)), 133. https://doi:0.14505/jemt.v7.1(13).14

Scholten, K., & Schilder, S. (2015). The role of collaboration in supply chain resilience. *Supply Chain Management, 20*(4), 471-484. https://doi.org/10.1108/SCM-11-2014-0386

Sheffi, Y. (2005). Preparing for the big one. *Manufacturing Engineer, 84*(5), 12-15. https://doi.org/10.1049/me:20050503

Sheffi, Y. (2015). *The power of resilience: How the best companies manage the unexpected*. MIT Press. Retrieved October 13, 2022, from https://mitpress.mit.edu/books/power-resilience

Sheffi, Y., & Rice Jr, J. B. (2005). A supply chain view of the resilient enterprise. *MIT Sloan Management Review, 47*(1). Retrieved October 13, 2022, from https://sloanreview.mit.edu/article/a-supply-chain-view-of-the-resilient-enterprise/

Tabaklar, T. (2017). *Scalability and resilience in humanitarian supply chains* Hanken School of Economics. Retrieved October 13, 2022, from https://helda.helsinki.fi/dhanken/handle/123456789/172374

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Tapper, R., & Font, X. (2004). Tourism supply chains. Report of a Desk Research Project for the Travel Foundation. *Tourism supply chains. Report of a Desk Research Project for the Travel Foundation.* Retrieved October 13, 2022, from https://icrtourism.com.au/wp-content/uploads/2012/09/TourismSupplyChains.pdf

Ujma, D. (2001). Distribution channels for tourism: theory and issues. In Buhalis, D., & Laws, E., *Tourism distribution channels: Practices, issues and transformations*, 33-52. London

Umar, M., Wilson, M., & Heyl, J. (2017). Food Network Resilience Against Natural Disasters: A Conceptual Framework. *SAGE Open, 7*(3). https://doi.org/10.1177/2158244017717570

Williams, P., & Soutar, G. N. (2009, 2009/07/01/). Value, satisfaction and behavioral intentions in an adventure tourism context. *Annals of Tourism Research, 36*(3), 413-438. https://doi.org/10.1016/j.annals.2009.02.002

Yi, C. Y., Ngai, E., & Moon, K. (2011). Supply chain flexibility in an uncertain environment: exploratory findings from five case studies. *Supply Chain Management, 16*(4), 271-283. https://doi.org/10.1108/13598541111139080

Yin, R. (2014). *Case study research: Design and methods.* Sage publications.

Zhang, H. Q., Li, M., & Xiao, H. (2009). Tourism Recovery Strategies and Their Implications: A Multiple Case Study Approach. *Journal of China Tourism Research, 5*(3), 273-286. https://doi.org/10.1080/19388160903152811

Zhang, X., Song, H., & Huang, G. Q. (2009). Tourism supply chain management: A new research agenda. *Tourism management, 30*(3), 345-358. https://doi.org/10.1016/j.tourman.2008.12.010