Business Challenges, Opportunity Recognition, and Training Needs in the Cook Islands: The Moderating Role of Business Confidence

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ABSTRACT

Operating within vulnerable economic environments, small and medium-sized enterprises (SMEs) in the Pacific Islands routinely face intense operational pressures. While existing strategic management literature recognises that external challenges necessitate business-level adaptation, the mechanisms translating operational strain into structured capability development remain underexplored. Drawing on Dynamic Capability Theory and the Behavioural Theory of the Firm, this dissertation investigates how perceived business challenges drive organisational capability building operationalised as identified training needs, through the mediating mechanism of opportunity recognition, and critically examines how managerial business confidence moderates this adaptive pathway within the Cook Islands tourism sector.

A quantitative, cross-sectional research design was employed, utilising survey data from SME owner-managers (N=95). Hypothesised direct, mediating, and conditional indirect pathways were tested using Ordinary Least Squares (OLS) regression and non-parametric bootstrapping via the Hayes PROCESS macro (Models 1 and 7). The empirical analysis yielded three primary findings. First, perceived business challenges showed a strong positive relationship with opportunity recognition, indicating that operators actively strategise rather than passively react to operational strain. Second, opportunity recognition successfully mediated the relationship between environmental challenges and the identification of new training needs. Third, business confidence significantly moderated this pathway. Lower business confidence amplified the positive impact of challenges on opportunity recognition, compelling owner-managers to engage in necessity-driven problemistic search to overcome perceived aspirational shortfalls.

Theoretically, this study provides a more critical, integrated view of business adaptation by bridging macro-level Dynamic Capabilities with the micro-foundational psychology of the owners or managers. It establishes that forward-looking business confidence acts as a vital boundary condition, regulating the intensity of the firm's adaptive engine rather than acting as a direct driver of growth. Practically, this research critically challenges conventional capacity-building models in destination management. The findings suggest that support agencies should transition away from generic advisory workshops deployed during periods of economic buoyancy, as high confidence may foster routine inertia. Instead, policymakers and

industry associations should utilise targeted, low-barrier implementation grants during periods of low confidence, precisely when business leaders are expected to exhibit the highest cognitive receptivity to strategic reconfiguration and capability development.

Keywords: Small and Medium-Sized Enterprises (SMEs), Dynamic Capabilities, Behavioural Theory of the Firm, Problemistic Search, Opportunity Recognition, Business Confidence, Moderated Mediation.

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LIST OF ABBREVIATIONS

AUT	Auckland University of Technology
AUTEC	Auckland University of Technology Ethics Committee
B&B	Bed and Breakfast
BCI	Business Confidence Index
BLP	Business Link Pacific
BTOF	Behavioural Theory Of the Firm
CEO	Chief Executive Officer
COVID-19	Coronavirus Disease 2019
CSR	Corporate Social Responsibility
DCT	Dynamic Capability Theory
FY	Financial Year
GDP	Gross Domestic Product
IBM	International Business Machines
ICT	Information and Communications Technology
MIHM	Master of International Hospitality Management
NZ	New Zealand
NZD	New Zealand Dollar
NZTRI	New Zealand Tourism Research Institute
OECD	Organisation for Economic Co-operation and Development
OLS	Ordinary Least Square
PROCESS	Hayes' PROCESS macro for mediation, moderation, and conditional process analysis
SIDS	Small Island Developing States
SME	Small and Medium-sized Enterprise
SPSS	Statistical Package for the Social Sciences
UK	United Kingdom

ATTESTATION OF AUTHORSHIP

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor used artificial intelligence tools or generative artificial intelligence tools (unless it is clearly stated, and referenced, along with the purpose of use), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

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Chapter 1: Introduction

1.1 Background Of the Study

The Cook Islands have a population of about 17,900, a total land area of 240 square kilometres, and 15 islands spread across 2.29 million square kilometres of ocean, with tourism as the main contributor to the economy (Currie, 2021). Tourism is the most significant driver of economic development in the Cook Islands, acting as the cornerstone of the national economy (Teaurere & De Waegh, 2024). Its contribution to national wealth, the labour market, and the survival of the private sector is overwhelming (Becken et al., 2025; Teaurere & De Waegh, 2024). Revenue from tourism is critical for funding the essential government services, including free healthcare, education, and infrastructure development (Cook Islands Tourism Corporation, 2024b). Since the 1980s, the increasing reliance on this single sector has made it a tourism-dependent mono-economy, making it much more vulnerable to external shocks (Teaurere & De Waegh, 2024).

Before the COVID-19 pandemic, tourism contributed an estimated 66% of the Cook Islands' GDP and accounted for 34% of the total workforce (Currie, 2021). During the early stages of the pandemic, job losses were estimated at 20.9% of the working population (Currie, 2021). The closure of international borders in 2020 also triggered a severe economic downturn, causing the economy to contract by 5.9% in 2020 and a further 29% in 2021 (Yang & Kauvai, 2023). Although 25,230 arrivals were still recorded in 2020, they were largely arrivals before the borders were closed and controlled entries of government-exempted returning citizens, permanent residents, and work permit holders, who were subject to a mandatory 14-day quarantine from June 2020 (Ministry of Finance and Economic Management, 2024; Currie, 2021). . Despite these disruptions, the sector has shown strong resilience, recovering from 25,230 arrivals in 2020 (Ministry of Finance and Economic Management, 2024; Currie, 2021) to 143,506 visitors by 2023 (Cook Islands Tourism Corporation, 2024a), and growing tourism's economic contribution to NZD 428.9 million, accounting for 70.6% of GDP (Cook Islands Tourism Corporation, 2024b).

While arrival numbers indicate recovery, tourism businesses continue to operate in a dynamic and uncertain business environment. Tourism businesses depend heavily on the movement and confidence of international travellers, making them vulnerable to disruptions such as pandemics, economic downturns, and shifts in global travel patterns (Sharma et al., 2021). This vulnerability is amplified in island economies like the Cook Islands, where external shocks can have severe economic and social consequences (Foley et al., 2022). The COVID-19 pandemic has further changed the tourism landscape and the way tourism businesses operate. Beyond restoring visitor demand, businesses need to respond to financial uncertainty, labour shortages, changing customer expectations, supply chain interruptions and increasing pressures to adopt digital technologies and innovative business practices (Surya et al., 2022). Consequently, the long-term sustainability of tourism businesses depends not only on attracting visitors but also on the ability to continually adapt, strengthen organisational capabilities and respond strategically to changing business conditions. This is consistent with Becken et al.'s (2025) argument that sustainable tourism recovery should extend beyond restoring visitor numbers and instead focus on developing a tourism sector that is more resilient, adaptive, and capable of supporting long-term economic, community, and environmental well-being.

Despite operating in the same destination and with broadly similar financial, market, labour and environmental conditions, tourism businesses do not all respond in the same way. Existing research suggests that differences in business adaptation don't depend solely on external conditions, but on how businesses perceive changing conditions, identify appropriate responses, and develop the capabilities needed to adapt (Jiang et al., 2019; Seow et al., 2024). These differences suggest that exposure to similar business conditions alone cannot fully explain why some tourism businesses adapt more effectively than others. Understanding the factors that shape these adaptive responses is therefore important for strengthening the long-term resilience and sustainability of tourism businesses operating within tourism-dependent economies such as the Cook Islands.

1.2 Problem Statement

As tourism businesses face growing pressure to change their strategies, operations, and capabilities in response to disruption and uncertainty, adaptation has become an increasingly important area of inquiry within hospitality and tourism research. Resilience has been applied across destinations, organisations, businesses, communities and individuals, yet it remains a contested concept, conceptualised differently as recovery, adaptation, and wider-system reorganisation.(Hall et al., 2023). The impact of COVID-19 has made this discussion timely, as the tourism sector has shifted its focus to understanding how businesses and systems can recover, innovate, and build lasting resilience (Sharma et al., 2021). This concern is especially important for small and medium-sized tourism businesses, as they play a vital role in making a destination truly resilient yet frequently operate with limited resources, face greater exposure to external shocks, and have insufficient access to resilience frameworks suited to their specific circumstances (Badoc-Gonzales et al., 2022).

Previous research has attempted to explain their adaptation through a range of theoretical and organizational perspectives, suggesting that businesses adapt to changing environments through internal mechanisms rather than external conditions alone. Dynamic Capability Theory (Teece et al., 1997) suggests that adaptation depends on a firm's ability to sense opportunities, reconfigure resources and transform organisational routines in response to environmental change (Jiang et al., 2019). Other studies explain the importance of entrepreneurial orientation, managerial perceptions, organisational capabilities, and resource availability in shaping how businesses interpret uncertainty and implement adaptive responses (Calisto et al., 2024; Kallmuenzer et al., 2019). Studies focused on SME (small and medium-sized enterprises) suggest that mechanisms such as adaptive capability, strategic human resource management, supply chain collaboration, and organisational learning build resilience to navigate volatile environments. Collectively, these studies explain that tourism business adaptation is a multidimensional organisational process shaped by the interplay of managerial, organisational, and strategic factors, rather than by external pressures alone.

Although adaptation has been extensively examined within the hospitality and tourism literature, existing scholarship remains theoretical and fragmented (Badoc-Gonzales et al., 2022; Hall et al., 2023; Sharma et al., 2021). Core constructs such as organisational resilience, dynamic capabilities, managerial perceptions, and organisational learning have predominantly been investigated in isolation, creating a significant theoretical gap in understanding the holistic adaptive process (Abdollahi et al., 2023; Jiang et al., 2019; Seow et al., 2024). Grounded in dynamic capabilities theory, recognising an opportunity is insufficient for operational adaptation; firms must systematically identify specific skills and training requirements to transform cognitive opportunity recognition into tangible strategic outcomes (Alim et al., 2023; Teece, 2007). Furthermore, managerial cognition, specifically business confidence, serves as a critical boundary condition shaping how environmental challenges are cognitively appraised as actionable opportunities (Calisto et al., 2024; Schmitt et al., 2018). By focusing on micro-level enterprise dynamics occurring in the Cook Islands, this study confronts the empirical scarcity of business adaptation models in tourism-dependent Small Island Developing States (SIDS) (Bangwayo-Skeete & Skeete, 2021; Becken et al., 2025; Foley et al., 2022; Teaurere & De Waegh, 2024; Wolf et al., 2024). In doing so, this research offers an integrated framework explaining how small tourism businesses interpret, navigate, and operationalize adaptation under conditions of ongoing uncertainty.

The gap can only be addressed by testing sensing [Dynamic Capability Theory (Teece et al., 1997)], interpretation (managerial perception), and capability development (organisational learning) as one connected sequence rather than as separate constructs. Studying these constructs in isolation can confirm that each stage exists, but it cannot establish whether one stage produces the next, or under what conditions. This distinction is relevant to understanding whether reported challenges are associated with proactive responses or with more limited forms of adjustment. By operationalising the full sequence, from perceived challenges through opportunity recognition to training needs, and testing business confidence as a boundary condition, this study moves beyond confirming the existence of individual stages to explaining the pathway between them. Testing it as a single mediation model, rather than as separate relationships, is what allows the study to assess whether opportunity

recognition is the actual mechanism carrying challenges through to training needs, and whether confidence changes the strength of that mechanism rather than simply coinciding with it. The research aims and objectives that follow test this sequence link by link.

1.3 Research Aims and Objectives

The overall aim of this study is to understand how tourism businesses in the Cook Islands adapt to changing business conditions by investigating the relationships among perceived business challenges, opportunity recognition, identified training needs, and business confidence.

To achieve this aim, the study has the following objectives:

1 To identify the main perceived business challenges, recognised opportunities, identified training needs, and levels of confidence among tourism businesses in the Cook Islands.

2 To examine the relationship between perceived business challenges and opportunity recognition among tourism businesses in the Cook Islands.

3 To examine the relationship between opportunity recognition and identified training needs.

4 To investigate whether opportunity recognition mediates the relationship between Perceived Business challenges and identified training needs.

5 To examine whether business confidence moderates the relationship between Perceived Business challenges and opportunity recognition.

6 To investigate whether business confidence influences the indirect relationship between Perceived Business challenges and identified training needs through opportunity recognition.

1.4 Research Questions

To achieve the research aim and objectives outlined above, the present research addresses the following research questions:

RQ1. What are the main perceived business challenges, recognised opportunities, identified training needs, and levels of business confidence among tourism businesses in the Cook Islands?

RQ2. Is there a relationship between perceived business challenges and opportunity recognition among tourism businesses in the Cook Islands?

RQ3. Is there a relationship between opportunity recognition and identified training needs?

RQ4. Does opportunity recognition mediate the relationship between perceived business challenges and identified training needs?

RQ5. Does business confidence moderate the relationship between perceived business challenges and opportunity recognition?

RQ6. Does business confidence moderate the indirect relationship between perceived business challenges and identified training needs through opportunity recognition?

1.5 Significance of the Study

This study has both academic and practical significance because it clarifies the theoretical mechanisms of the adaptation process for businesses in island contexts and provides actionable guidance for tourism stakeholders in resource-limited environments. Academically, it advances Dynamic Capability Theory (DCT) (Teece, 2007; Teece et al., 1997) and the Behavioural Theory of the Firm (Cyert & March, 1963) by providing empirical evidence about associations among selected perceptual indicators of business adaptation in the Pacific Islands context. Existing literature on tourism resilience frequently assumes that

environmental disruptions directly lead to organisational adaptation (Alim et al., 2023; Schmitt et al., 2018), whereas this study identifies opportunity recognition as a mandatory cognitive filter and a full mediator that must occur before perceived business challenges can be translated into specific, actionable training needs. Demonstrating that "Sensing" is a non-negotiable prerequisite for "Seizing" shows how small tourism enterprises may avoid misallocating resources during crises (Teece, 2007). Furthermore, this research fundamentally reconceptualises the role of business confidence within strategic management literature. Rather than treating confidence as a standard direct antecedent to business growth, this study provides evidence that it operates as an interactive regulator. It shows that low confidence serves as a vital aspirational marker that accelerates necessity-driven, problem-focused search, whereas high confidence functions as a psychological buffer that inadvertently dampens the impulse for structural change.

Practically, these theoretical insights translate into an evidence-based framework for tourism support agencies, training providers, and policymakers operating in the Cook Islands and similar Small Island Developing States (SIDS). By identifying reported business confidence as a variable associated with differences in the strength of the challenge–opportunity relationship, this study provides agencies with a predictive mechanism to time their interventions for maximum impact. Furthermore, the evidence challenges the utility of generic advisory models. By providing evidence that opportunity recognition acts as a bridge to training relevance, this research provides a structural blueprint for redesigning publicly funded support, suggesting that agencies must first help operators translate operational strain into recognised opportunities before deploying capability-building resources or funding. Finally, the study identifies specific capability gaps arising from the current operating environment, providing training providers with the empirical justification needed to prioritise targeted digital and social marketing interventions over broad-spectrum business education.

1.6 Dissertation Overview

The dissertation follows a traditional five-chapter dissertation structure.

Chapter 1introduced the study by providing the background to the research, identifying the research problem, presenting the research aim, objectives, research questions, significance of the study, and the overall structure of the dissertation.

Chapter 2 reviews the relevant literature on tourism business adaptation in dynamic business conditions. It examines the theoretical and empirical literature on related business challenges, opportunity recognition, training needs and business confidence and develops the conceptual framework and hypothesis underpinning the study.

Chapter 3 explains the research methodology adopted in the study. It discusses the research philosophy, research approach, the dataset used in the study, data collection procedures, measurements of constructs, analytical methods used in the study and ethical considerations.

Chapter 4 presents the results of the empirical analysis. It begins with describing the respondent profile, followed by descriptive analyses of the study constructs and the item-level distributions. The chapter then reports the results of the correlational analysis and hypothesis testing, including mediation, moderation and moderated-mediation analyses to examine the relationships among the study variables.

Chapter 5 discusses the findings in relation to the existing literature and the theoretical framework. It outlines the theoretical and practical implications of the study, presents recommendations for tourism stakeholders in the Cook Islands, acknowledges the limitations and suggests directions for future research before concluding the dissertation.

Chapter 2: Literature Review

2.1 Chapter Preview

This chapter reviews the literature on how tourism businesses adapt to environmental change, with a particular focus on the relationships among perceived business challenges, opportunity recognition, identified training needs, and business confidence. The chapter begins by establishing the tourism context, before examining each construct in turn and the theoretical and empirical evidence linking them. The chapter then develops the study's hypotheses, culminating in a conceptual model that positions opportunity recognition as a mediating mechanism between reported challenges and identified training needs, and examines how these constructs relate to overall business confidence.

2.2 Background of Research

Although the Cook Islands is a group of 15 islands, tourism activity is concentrated mainly in Rarotonga and Aitutaki, shaped by spatial concentration and connectivity constraints (Currie, 2021). In this Small Island Developing State (SIDS), the performance of tourism firms is directly connected to employment, private-sector activity, public revenue, and the funding of services such as healthcare, education, and infrastructure (Cook Islands Tourism Corporation, 2024b). Before COVID-19, tourism accounted for an estimated 66% of GDP and supported 2,386 jobs, equivalent to about 34% of the national workforce (Currie, 2021). The scale of dependence was also highest in the Pacific region, with the Cook Islands' tourism receipts reaching about 66% of GDP in 2019, compared to 38% in Palau, 28% in Niue, 26% in Fiji and 24.5% in Samoa (Yang & Kauvai, 2023).

The COVID-19 pandemic exposed the vulnerability created by the Cook Islands' dependence on international visitor mobility. Visitor arrivals fell from 171,713 in 2019 to 25,230 in 2020 and remained low at 26,330 in 2021, before recovering to 113,551 in 2022 and 143,506 in 2023 (Ministry of Finance and Economic Management, 2024). The fiscal impact also widened the crisis, as fiscal balances changed to deficits of 10.3% of GDP in 2020 and 29.4% in FY2021, while public debt increased from 16.7% of GDP in FY2019 to 38.9% in FY2021 (Yang & Kauvai, 2023). These figures indicate how COVID-19 caused a system-wide

disruption, affecting firms, employment, public finance, and national recovery capacity. For tourism businesses, the border closures and travel restrictions directly affected visitor demand, cash flow, employment, and business continuity. Businesses unable to adjust their products, markets, staffing or operating practices during such disruption therefore face severe financial pressure or insolvency (Seow et al., 2024).

This makes tourism adaptation important at the business level, not only at the destination level. Most tourism businesses in island economies are small and medium-sized enterprises with limited financial reserves, labour capacity, and access to specialist support, making it harder for them to absorb prolonged disruption (Jiang et al., 2019; Pongtanalert & Assarut, 2022). In the Cook Islands, nearly half of the population either works in or owns a tourism business, which means business-level disruption can quickly become a livelihood and community issue (Currie, 2021). Therefore, resilience in the Cook Islands tourism cannot be understood only as recovering visitor numbers or returning to pre-crisis conditions. Rather, it requires ongoing business-level adjustment through actions such as changing service delivery, targeting different visitor segments, improving digital marketing, developing new products, collaborating with other businesses, or investing in staff capability (Calisto et al., 2024; Giddy & Rogerson, 2021; Jiang et al., 2019; Seow et al., 2024).

Existing literature has examined tourism business adaptation and resilience from important but different perspectives. Business-level studies have shown how tourism businesses respond to crisis and uncertainty through cost reduction, staff adjustment, marketing changes, product innovation, resource redeployment, social capital, and dynamic capabilities (Giddy & Rogerson, 2021; Jiang et al., 2019; Pongtanalert & Assarut, 2022; Zhang et al., 2022). Island and SIDS-focused studies have mostly examined destination-level resilience, system-level recovery strategies, climate-risk adaptation, and broader post-pandemic recovery pathways (Bangwayo-Skeete & Skeete, 2021; Gu et al., 2022; Loehr, 2020; Sheller, 2021). Although these studies are valuable, less attention has been given to how tourism businesses in island contexts move from perceived challenges to recognising opportunities and identifying the capabilities needed to respond. This leaves a significant gap in understanding adaptation as a measurable business-level pathway, rather than only as a destination-level outcome, a policy response, or an isolated crisis-response action. The Cook Islands, therefore, provides a strong

context for examining tourism business adaptation through the relationship between perceived business challenges, opportunity recognition, identified training needs, and business confidence.

2.3 Tourism Business Adaptation in Island Contexts

Tourism Business adaptation is understood as an ongoing process of adjusting routines, resources, strategies, products, and capabilities in response to changing external conditions, rather than simply returning to pre-crisis operations (Hartman, 2023; Jiang et al., 2019). In tourism resilience literature, recovery, resilience, transformation, and adaptation are interconnected yet distinct concepts, often differentiated by the degree of change they entail and the theoretical lens applied (Giddy & Rogerson, 2021; Jiang et al., 2019).

Resilience refers to a broader organisational capacity to absorb disruption, maintain core functions, adapt to new conditions, and potentially transform into a more suitable state, whereas recovery usually means restoring activity to pre-disruption levels (Jiang et al., 2019). Adaptation also sits within the resilience process, as it involves practical and strategic adjustments when existing routines are insufficient to address environmental changes (Hartman, 2023; Jiang et al., 2019).

In the island tourism context, adaptation is quite complex because businesses operate with systems shaped by remoteness, small domestic markets, limited resources, exposure to external shocks, and dependence on international visitor flows (Gu et al., 2022; Loehr, 2020). At the business level, adaptation is shaped not only by managerial interpretation but also by entrepreneurial orientation, resources, networks, and confidence in the future market recovery (Calisto et al., 2024; Kallmuenzer et al., 2019). This explains why businesses facing the same challenges may not respond in the same way; some may read challenges only as limitations, while others may recognise opportunities for product development, market repositioning, collaboration, digital improvement or workforce skill development (Calisto et al., 2024; Giddy & Rogerson, 2021; Kallmuenzer et al., 2019).

Accordingly, tourism business adaptation can be conceptualised as a business-level process in which challenges create pressure, opportunity recognition mediates how that pressure is

interpreted, identified training needs reflect the capabilities required to respond, and business confidence may strengthen or weaken whether the businesses recognise uncertainty as an opportunity (Calisto et al., 2024; Jiang et al., 2019).

2.4 Perceived Business Challenges and Opportunity Recognition

Business challenges refer to the pressures, limitations, and uncertainties that businesses face in their operating environment. In tourism SMEs, these pressures may arise from external disruptions such as natural disasters, health crises, economic downturns, changing visitor demand, supply logistics disruptions, competition, evolving customer preferences, changes in technology and limited resources (Jiang et al., 2022; Seow et al., 2024; Zhang et al., 2022). This explains why perceived business challenges in tourism are understood not only as external conditions but also as pressures that business owners or managers identify and interpret, especially in SMEs.

Opportunity recognition further explains the connection between challenges and adaptation. It can be understood as a cognitive and creative process through which entrepreneurs identify market needs, resource gaps, or possible solutions that can lead to new products, services, or business models (Nguyen & Thi Thu Le, 2024; Taleb et al., 2023). According to Nguyen and Thi Thu Le (2024), challenge stressors, including uncertainty, responsibility, time pressure, and risk, were positively associated with opportunity recognition, suggesting that such pressures push entrepreneurs to use cognitive resources to identify opportunities. It also showed that this relationship was weaker in service businesses than in manufacturing and merchandising businesses. This is relevant because tourism is a service-sensitive industry centred on tourist experience (Gao et al., 2022). Service entrepreneurs often face emotional and interpersonal demands, customer complaints, service requests, and the need to maintain customer satisfaction, which may limit the cognitive space available for recognising creative opportunities (Nguyen & Thi Thu Le, 2024). This means business challenges may encourage opportunity recognition but only when owners interpret those pressures as possible directions for response. Schmitt et al. (2018) provide a further explanation by showing that uncertainty led to opportunity recognition through exploration, particularly for decision makers with high self-efficacy. In their study, exploration involved reviewing or redesigning products and

services, evaluating options, and seeking new opportunities in markets, products, services, or processes. This supports the argument that uncertainty or pressure must be translated into action before opportunity identification occurs. Together, these studies suggest that business challenges may encourage opportunity recognition by stimulating owners or managers to search, reassess**,** and explore adaptive options.

At the same time, pressure should not be treated as automatically positive. Martínez-Canas et al. (2023) found that push factors, such as unemployment and the need to earn a living, weakened opportunity recognition when they increased risk; pull factors, such as self-realisation, independence, gaining social or professional prestige, having power or command, and practising one's own ideas, supported entrepreneurial intention partly through opportunity recognition. This shows that challenges can either restrict opportunity recognition depending on how decision makers perceive and process them.

Tourism literature further supports this interpretation. Price et al. (2022) show that academic labels such as crisis, opportunity, innovation and transformation do not always reflect how small tourism business owners perceive change in the business environment. Similarly, Calisto et al. (2024) show that managerial perceptions are central to strategic decision-making because managers' developed representations guide business action, and these interpretations are inherently subjective. These studies suggest that owner-manager interpretation is central to whether a challenge is viewed as a threat, a constraint, or a possible direction for adaptation.

Dynamic Capability Theory (Teece et al., 1997) provides the theoretical explanation for this relationship. In crisis or disaster contexts, dynamic capabilities explain how businesses respond to turbulent environments by sensing changes, seizing opportunities, and reconfiguring resources (Jiang et al., 2022; Prayag et al., 2024; Seow et al., 2024; Teece, 2007; Teece et al., 1997). In this part of adaptation, the key process is sensing. Perceived business challenges refer to the turbulence or pressure perceived by tourism businesses, while opportunity recognition refers to the sensing processes through which owners or managers identify possible adaptive responses. Therefore, the argument is not that challenges are inherently beneficial, but that they may increase the need to scan the environment, reassess

current practices, and identify possible opportunities for adaptation. Accordingly, this study proposes the following hypothesis:

Hypothesis 1: Reported Business Challenges are positively associated with opportunity recognition among tourism businesses.

2.5 Opportunity Recognition and Identified Training Needs

Opportunity recognition refers to the process by which owners or managers identify opportunities to meet market needs, interests, or desires by combining available resources in new ways to create value (Taleb et al., 2023). In small tourism firms, these possibilities often emerge through owner-managers' experience, social networks, supply chain dynamics, and responses to a changing environment (Yachin, 2019). Recognising an opportunity, however, is distinct from possessing the capabilities needed to exploit it. Training needs can be understood as the gap between the existing human capital, i.e., the skills, knowledge, and education of its workforce, and the competencies required to handle uncertainty, manage service levels, and achieve organisational resilience (Zhang et al., 2022). Sundari and Kusmiati (2022) frame this gap operationally, conceptualising a training need as the disparity between the competencies required to perform a job effectively and the knowledge an individual currently holds.

These two constructs are linked by a sequence that complies with Dynamic Capability Theory (Teece et al., 1997), which distinguishes between sensing opportunities and the subsequent seizing and reconfiguration of resources (Cyfert et al., 2021; Teece, 2007). Cyfert et al. (2021) position opportunity recognition as the starting point of dynamic capability development, followed by knowledge management and learning, coordination, resource reconfiguration, and organisational adaptation; opportunity-seeking itself involves identifying the changes required by environmental developments relative to the organisation's existing potential. Once an opportunity is recognised, a business can evaluate the activities required to pursue it and compare the necessary competencies with those already available. Any deficiency that is revealed by this comparison constitutes an identified training need. Taleb et al. (2023) indirectly support this logic; their finding that opportunity recognition positively predicts innovation capability suggests that recognising opportunities is linked to the

development of the capabilities needed to act on them, though their study did not specifically test training needs.

Evidence from tourism is broadly consistent with this sequence, though it is supportive rather than confirmatory, since none of these studies directly test the relationship. Sheresheva et al. (2021) found that Russian tourism enterprises seeking opportunities during COVID-19 simultaneously increased their focus on staff development, team consolidation, and digital marketing as they adapted to the demand for domestic, safe, and short-distance travel. Calisto et al. (2024) similarly found that tourism businesses with stronger entrepreneurial orientation were more likely to introduce new products and, as a probable consequence, change employee profiles through training or staff replacement, though this evidence concerns entrepreneurial orientation rather than opportunity recognition itself. Knowledge management research offers a further bridge, showing that knowledge management and organisational learning help tourism organisations recognise opportunities and threats and respond to environmental change (Abdollahi et al., 2023). This suggests that businesses that identify opportunities must also develop the capacity to learn, interpret, and act on them.

The relationship is not deterministic. Business responses depend on financial resources, entrepreneurial orientation, managerial perception, networks, and adaptive capacity(Calisto et al., 2024; Kallmuenzer et al., 2019; Pongtanalert & Assarut, 2022; Zhang et al., 2022), and not every recognised opportunity produces an identical training need. Nevertheless, the expected relationship is positive: recognising an opportunity increases managerial awareness of what is required for implementation, and any gap between required and existing capabilities becomes a visible, identifiable training need.

Hypothesis 2: Opportunity recognition is positively associated with identified training needs among tourism businesses.

2.6 Opportunity Recognition as the Mediating Mechanism

Opportunity recognition serves as a bridge or a “generating moment” that transforms external pressures or business challenges into actionable training needs. A direct relationship between external pressures and capability development is theoretically incomplete because managers

don’t simply react to objective facts; rather, they interpret environmental signals through their own subjective perceptions (Alim et al., 2023; Calisto et al., 2024; Jiang et al., 2019). Establishing this interpretive stage is important because it isolates the “sensing” stage of Dynamic Capability Theory (Teece, 2007) as a distinct testable relationship rather than an implicit assumption (Cyfert et al., 2021). This matters because a business that invests in training without identifying a specific opportunity risks investing in day-to-day survival skills rather than dynamic capabilities needed to cope with unexpected turbulence (Jiang et al., 2019), and may even cause “information redundancy”, which occurs when an organisation bears the cost of knowledge or skills it cannot actually use (Cyfert et al., 2021). It also reframes challenges as something a business must interpret rather than react to directly, which helps explain why businesses facing the same disruption can respond differently, where some see only limitations, while others identify directions for innovation.

Entrepreneurship literature supports this mediating logic by showing that opportunity recognition can act as an intervening mechanism between external conditions, motivation, uncertainty, and business outcomes. Martínez-Canas et al. (2023) showed how opportunity recognition can act as an intervening mechanism between motivation and entrepreneurial intention. Similarly, Schmitt et al. (2018) showed that uncertainty can lead to the identification of opportunities through exploration. Alim et al. (2023) provide further support from an SME context, finding that opportunity recognition mediated the relationship between environmental factors and entrepreneurs’ performance, but not the relationship between personal factors and performance. This distinction is useful because perceived business challenges in the present study are closer to external business-environment pressures than to personal traits. However, Alim et al.’s (2023) performance measure was based on perceived SME outcomes, including sales and profitability, product/service quality, and social responsibility, rather than training needs or capability gaps. Therefore, these studies do not directly test the pathway examined here, but they support the broader argument that pressure needs to pass through interpretation, exploration, and recognised opportunity before it becomes an actionable business response.

Dynamic Capability Theory (Teece et al., 1997) explains this mediating pathway: perceived business challenges represent environmental pressure, opportunity recognition represents

sensing, and identified training needs represent the capability requirements for seizing and reconfiguring resources in response (Teece, 2007; Teece et al., 1997). Cyfert et al. (2021) describe this process as beginning with searching for opportunities, followed by knowledge management and learning, coordination, reconfiguration, and organisational adaptation. This supports opportunity recognition's role as the bridge between business pressure and capability development, since it translates general pressure into specific capability needs.

Tourism crisis and adaptation research support this sequence. Giddy and Rogerson (2021) show how South African tourism enterprises responded to COVID-19 disruption through a range of adaptive actions, including price adjustments, revised marketing strategies, and changes to product offerings aimed at retaining reduced demand, demonstrating that firms facing severe external pressure can move beyond simply absorbing the shock toward actively identifying new ways to sustain business. Sheresheva et al. (2021) extended this logic by showing that Russian tourism enterprises not only sought additional market opportunities during the pandemic but also simultaneously increased their focus on staff development, team consolidation, and digital marketing. Prayag et al. (2024) provide broader theoretical support for this pattern, finding that both threats and opportunities arising during COVID-19 activated dynamic capabilities across the whole crisis response and recovery process, rather than at a single stage. Together, these studies provide strong support for an adaptive sequence in which disruption creates pressure, opportunity recognition provides direction, and capability development enables response, with the tourism-specific evidence indicating that this sequence played out consistently across different national contexts during a shared global crisis. Accordingly, this study proposes the following hypothesis:

Hypothesis 3: Opportunity recognition mediates the relationship between reported business challenges and identified training needs among tourism businesses.

2.7 Business Confidence as a Moderator of the Mediated Pathway

Business confidence can be understood as a forward-looking form of economic sentiment, reflecting decision makers' belief in positive future business conditions rather than objective performance alone (Nowzohour & Stracca, 2020). In this study, business confidence is conceptualised as the owner-manager outlook on future business prospects. Although prior

empirical studies on entrepreneurial decision-making have examined related boundary conditions, including Schmitt et al. (2018) on entrepreneurial self-efficacy and Nguyen and Thi Thu Le (2024) on business type and personal values, none of these directly test forward-looking business confidence as a moderating variable. Establishing business confidence as a boundary condition is practically and theoretically vital because it explains why identical operational challenges yield vastly different adaptive responses across firms, governing when managers are cognitively receptive to strategic change (Angus et al., 2023; St-Pierre et al., 2023). From an applied perspective, high business confidence acts as a buffer that fosters routine inertia, whereas low business confidence heightens threat perceptions and illuminates capability deficits (Nowzohour & Stracca, 2020). Identifying this cognitive switch prevents policymakers, industry associations, and vocational training providers from misallocating resources on blanket upskilling programs during buoyant periods, ensuring instead that targeted support interventions are deployed precisely when market conditions render SME leaders most receptive to recognising opportunities and addressing workforce skill gaps (Seow et al., 2024; St-Pierre et al., 2023).

The Behavioural Theory of the Firm (Cyert & March, 1963) provides the foundational theoretical logic explaining this moderating mechanism through the framework of problemistic search. According to the Behavioural Theory of the Firm, organisations operate largely through established routines and compare ongoing performance against internalised aspiration levels, initiating non-routine search for solutions only when actual or expected outcomes fall below these targets (Cyert & March, 1963). In this context, low business confidence functions as an acute threat signal, causing owner-managers to interpret operational challenges such as labour shortages, cost pressures, demand fluctuations, or market volatility as direct threats to future performance and organisational survival (Staw et al., 1981). Under low confidence, these challenges generate cognitive urgency and compel decision-makers to engage in intensive, necessity-driven problemistic search for adaptive workarounds, including new products, market niches, operational adaptations, or collaborative partnerships (Angus et al., 2023; St-Pierre et al., 2023). Conversely, when business confidence is high, optimistic expectations act as a psychological buffer, leading managers to view operational disturbances as temporary blips that will naturally resolve as market conditions improve, thereby weakening the cognitive push to initiate adaptive search

(Cyert & March, 1963). Thus, business confidence moderates the positive effect of business challenges on opportunity recognition, leading to the first moderation hypothesis:

Hypothesis 4a: Business confidence moderates the positive relationship between reported business challenges and opportunity recognition, such that the relationship is stronger when business confidence is low.

This moderation also affects the wider mediated pathway from perceived business challenges to identified training needs through opportunity recognition. Dynamic Capability Theory (Teece et al., 1997; Teece, 2007) explains this adaptation mechanism as a sequence of sensing, seizing, and reconfiguring. In this study, perceived business challenges represent environmental pressure, opportunity recognition represents sensing, and identified training needs represent the capability requirements needed for seizing and reconfiguring. Prior research supports this sequence by showing that opportunity searching is closely related to learning and knowledge management, resource reconfiguration, and organisational adaptation (Cyfert et al., 2021), while tourism and hospitality studies show that adaptive responses after disruption often require new skills, digital practices, staff development, product changes, and managerial capabilities (Seow et al., 2024; Sheresheva et al., 2021; Zhang et al., 2022).

The conditional part is explained by the Behavioural Theory of the Firm (Cyert & March, 1963). Research on uncertainty and problemistic search suggests that businesses respond more actively when owners or managers perceive the future for the business as uncertain or below expectations (Kavusan & Frankort, 2019; St-Pierre et al., 2023). This means low confidence is expected to strengthen the challenge-opportunity relationship because it is more likely to be interpreted as an urgent signal requiring adaptive search, and businesses are also more likely to identify the training and capability requirements needed to act on those opportunities. Overall, Dynamic Capability Theory explains why challenges may move from opportunity recognition to training needs, while the Behavioural Theory of the Firm explains why this pathway is expected to be stronger when business confidence is low. Accordingly, this study proposes this hypothesis:

Hypothesis 4b: Business confidence moderates the indirect effect of reported business challenges on identified training needs through opportunity recognition, such that the indirect effect is stronger when business confidence is low.

2.8 Conceptual Framework

The conceptual framework developed in this study explains how perceived business challenges lead tourism businesses to identify training needs, through the mediating role of opportunity recognition and how business confidence moderates this pathway. The main argument in this framework is that challenges do not automatically translate into training needs; they must first be interpreted by owners or managers as opportunities for adaptation, such as new markets, products, partnerships, technologies or operational practices. Only once these opportunities are recognised are businesses likely to identify the skills, knowledge, and capabilities needed to act on them.

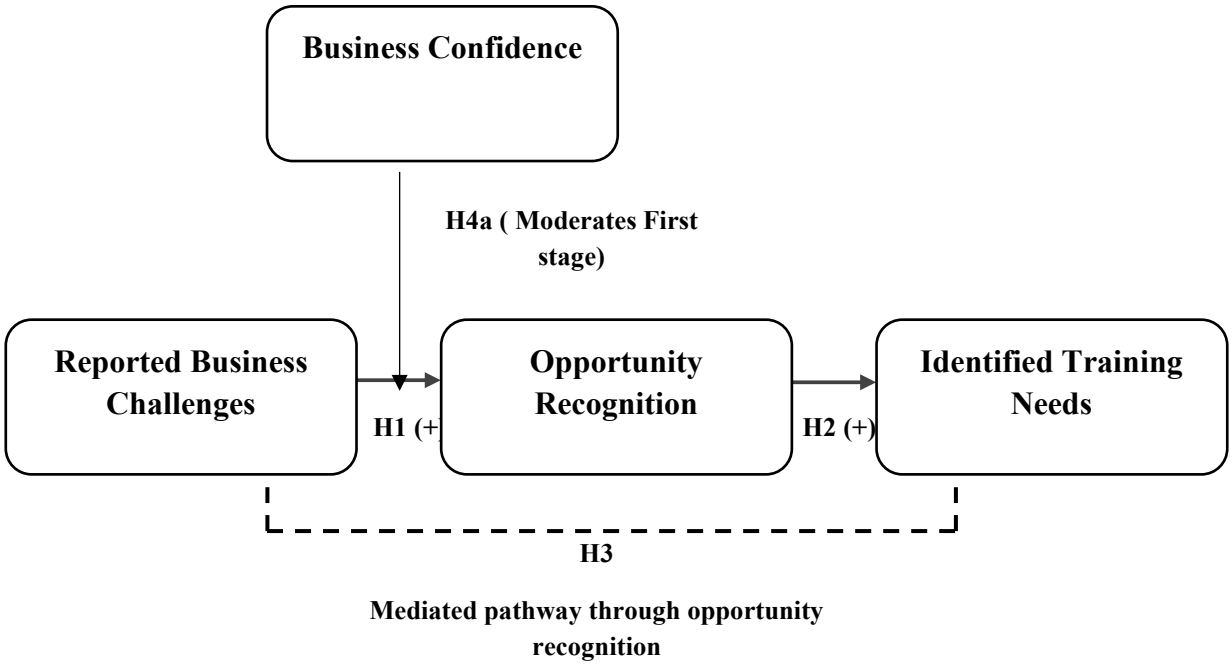
Dynamic Capability Theory explains the mediated pathway in which business challenges represent environmental pressures, opportunity recognition reflects the sensing of possible adaptive responses, and training needs reflect the capability requirements for seizing and reconfiguring resources (Teece et al., 1997; Teece, 2007). Opportunity recognition thus functions as the mechanism through which challenges are translated into capability-development needs.

The framework further proposes that business confidence moderates the first stage of this pathway. Drawing on the Behavioural Theory of the Firm, low confidence is expected to strengthen the relationship between challenges and opportunity recognition, as challenges are more likely to be read as urgent signals demanding adaptive search (Cyert & March, 1963). When confidence is high, the same challenges may instead be viewed as temporary or manageable, reducing the urgency of that search. Business confidence is therefore expected to moderate not only the direct relationship between challenges and opportunity recognition, but also the indirect effect of challenges on training needs through opportunity recognition. Taken together, the framework proposes a moderated mediation model: business challenges influence training needs indirectly through opportunity recognition, while business

confidence moderates the strength of this indirect pathway. These relationships are summarised in Figure 1.

Figure 1

Conceptual Framework of the Study



H4b: Perceived Business Challenges → Opportunity Recognition → Identified Training Needs is stronger when Business Confidence is low.

Note. Business confidence is proposed to moderate the relationship between reported business challenges and opportunity recognition. Opportunity recognition is proposed to mediate the relationship between reported business challenges and identified training needs.

Chapter 3: Methodology

3.1 Chapter Preview

This chapter establishes the philosophical and procedural foundations of this study. It begins by identifying the research paradigm and justifying the choice. After the research paradigm, it specifies the ontological, epistemological, and methodological positions that align with the study's requirements. It then introduces the dataset used for this study, followed by the data collection process and sampling procedures. The four core constructs of the study are then defined and operationalised, and the analytical approach is subsequently outlined. The chapter concludes with ethical considerations.

3.2 Research Philosophy and Paradigm

Research philosophy refers to the system of beliefs and assumptions a researcher holds regarding the development of knowledge and the criteria by which that knowledge is considered acceptable, valid, and legitimate (Jiang et al., 2019). These philosophies and assumptions are encapsulated within a research paradigm, the conceptual framework that guides a researcher and shapes both their research methods and their underlying ontological and epistemological stances (Guba & Lincoln, 1994; p et al., 2023). Having a clear research paradigm with defined ontological and epistemological assumptions not only strengthens credibility but also allows readers to critically evaluate the research, understand the researcher's worldview, and assess whether the chosen methods align with the underlying philosophical stance (Shrestha & Sharma, 2024).

This study adopts a post-positivist paradigm. Post-positivism holds that an objective reality exists but also acknowledges that researchers can only develop an imperfect understanding of that reality because all observations are subject to measurement error, contextual influences, and researcher bias (Ponterotto, 2005; Yilmaz, 2013). Unlike positivism, which assumes that reality can be observed with complete objectivity, post-positivism recognizes that knowledge is provisional and open to revision through empirical testing and critical evaluation (Ponterotto, 2005).

This paradigm is closely associated with quantitative studies because it emphasises hypothesis testing, measurement of observable variables, and the use of statistical techniques to examine relationships among constructs and generate generalizable findings (Creswell, 2009; Yilmaz, 2013). Because this study investigates the relationships among perceived business challenges, opportunity recognition, training needs, and business confidence using quantitative survey data and statistical modelling, a post-positivist paradigm provides an appropriate foundation for this research. This post-positivistic stance informs the study's ontological, epistemological and methodological assumptions, each of which is discussed below.

3.2.1 Ontology

Ontology is concerned with "what is", focusing on the nature of existence and the structure of reality, thereby helping a researcher understand what the world is like (Crotty, 1998). For researchers, ontological assumptions are foundational because they determine which research objects or phenomena are focused on and how researchers approach them (Saunders et al., 2023)

According to Guba and Lincoln (1994), the ontological stances are broadly divided into two perspectives: realism and relativism. Realist ontology assumes the existence of an objective reality that can be investigated through scientific methods, whereas relativist ontology views reality as multiple and context-dependent, with meanings shaped by different interpretations and experiences (Shrestha & Sharma, 2024). The relativist ontology is not appropriate for this study because it denies the existence of objective reality, making it incompatible with the quantitative measurement of a business phenomenon (Creswell, 2009).

Following the post-positivist paradigm, this study adopts a critical realist ontology, which assumes that a single objective reality exists independently of human perception yet remains only imperfectly and probabilistically understandable (Guba & Lincoln, 1994). Unlike naïve realism, which is associated with positivism and assumes reality can be understood with absolute objectivity, it acknowledges human intellectual limitations and that all observations are susceptible to measurement error and researcher bias (Easton, 2010; Ponterotto, 2005).

One of the defining features of this ontological position is that it doesn't have a flat view of reality; it is stratified, with three layers: the actual, the real, and the empirical (Easton, 2010). The empirical layer includes the events that are actually observed by the researcher; the actual layer includes events and non-events caused by the underlying structure that may or may not be observed; and the real layer includes the deep causal structures and mechanisms with lasting characteristics that drive those events (Saunders et al., 2023).

For this research, the core constructs (Perceived Business Challenges, Identified Opportunities, Identified Training Needs, and Perceived Business Confidence) are treated as real, objective phenomena that exist in the Cook Islands' Business landscape, each capable of influencing business outcomes independently of how individual owners perceive or articulate them (Easton, 2010). By employing this stratified ontology, this research finds that the empirical data, including both attitude measures using Likert scales and cumulative counts of category-specific issues (e.g., the total number of Perceived Business Challenges), represent only the observable manifestations of a broader reality. There are actual business events and deeper underlying mechanisms that drive behaviour, which this study attempts to uncover through statistical modelling. Rather than claiming absolute certainty, the findings are treated as a probable explanation of a complex business reality, always open to revision as new evidence emerges.

3.2.2 Epistemology

Epistemology concerns the nature of knowledge, the relationship between the knower and what can be known, and what constitutes acceptable knowledge within a particular discipline (Bryman, 2012; Guba & Lincoln, 1994). Epistemological assumptions are important in the research process because they provide a philosophical framework within which a researcher commits to a stance (e.g., whether knowledge is absolute or relative), thereby constraining and guiding how they process and perceive their experiences (Hofer & Pintrich, 1997).

Crotty (1998) identifies objectivism, constructionism, and subjectivism as three broad epistemological stances that differ in their assumptions about how knowledge and meaning are generated. Objectivism assumes that knowledge is absolute, value-free, and discoverable through systematic observation of external reality (Scotland, 2012). Constructionism, often

referred to as constructivism in the wider research literature (Bryman, 2012), assumes that knowledge is culturally and historically situated, and that meaning is not discovered but constructed through the interaction between human consciousness and the world (Scotland, 2012). Lastly, subjectivism assumes that knowledge originates through an individual's subjective interpretation and is not necessarily from interaction with external reality (Crotty, 1998).

While constructionist and subjectivist epistemologies offer genuine value to studies concerned with how individuals construct and interpret meanings from lived experience. However, this research is not concerned with meaning-making; it is concerned with measurement. The relationships between Perceived Business Challenges, identified opportunities, training needs, and business confidence are treated in this study as investigable phenomena. Also, the research questions here require an epistemological position that supports systematic observation and quantitative inference rather than interpretive exploration.

This naturally leads the study to a position in which knowledge exists independently of the knower and can be accessed through rigorous, systematic inquiry. However, a purely objective stance doesn't align with the post-positivist paradigm and critical realist ontological stance this study has committed to. Considering the conflict, this study adopts a modified objectivist epistemology that holds that knowledge about a business phenomenon can be generated through systematic empirical investigation, while remaining honest about its limitations. Survey responses are not taken as perfect reflections of reality but as proxies of those reflections shaped by measurement error and the gap between what respondents report and what guides their behaviour. Therefore, statistical modelling is used to reveal the most probable explanation among the study's core variables, making them evidence-based and open to revision rather than absolute.

3.2.3 Methodology

Methodology refers to the theory of how research should be undertaken, serving as a philosophical and theoretical framework that provides logical justification for the procedures governing the systematic investigation and acquisition of knowledge (Saunders et al., 2023;

Shrestha & Sharma, 2024). A researcher's choice of methodology is never independently chosen (Scotland, 2012); it always requires ontological and epistemological considerations (Guba & Lincoln, 1994). Research is divided into three main methodological approaches: quantitative, qualitative or mixed methods (Saunders et al., 2023). Consistent with the critical realist ontology and a modified objectivist epistemology, this study adopts a quantitative methodology (Guba & Lincoln, 1994; Antwi & Hamza, 2015).

Within this framework, a qualitative approach would be philosophically inconsistent because it often prioritises co-constructing multiple, individual and equally valid realities, which directly contradicts the realist commitment to a mind-independent world (Guba & Lincoln, 1994; Ponterotto, 2005). Quantitative methodology remains the only coherent choice for this specific design, as it provides the necessary comprehensive approach required to identify patterns, regularities, and statistical relationships that indicate the existence of objective social structures (Easton, 2010; Saunders et al., 2023).

The same logic shapes how this study reasons through its evidence. Deductive reasoning moves from theory to data collection to test hypotheses, whereas the inductive approach moves from observations to general themes in theory (Bryman, 2012; Saunders et al., 2023). This reasoning approach is intrinsically linked with quantitative research, which prioritises testing of objective theories by analysing relationships among measurable variables (Creswell, 2009). This study follows a deductive logic because it seeks to subject recognised theoretical ideas, such as those found in opportunity recognition and business confidence literature. Together, these positions establish a quantitative deductive methodology as the approach capable of investigating the research problem this study aims to address.

3.3 The Dataset

The Cook Islands Business Confidence Index (BCI) is a longitudinal study conducted by the New Zealand Tourism Research Organisation in collaboration with the Cook Islands Tourism Corporation (Milne et al., 2022). The 2023 BCI survey, which ran from 28th November to 26th December 2023, represents the latest iteration of this series, which has been running since 2016 (Zhu et al., 2023).

While previous surveys were conducted at approximately six-month intervals to reflect the seasonality of the tourism industry, the 2023 survey captures the transition from the emergency recovery phase to stabilised growth (Milne et al., 2018; Zhu et al., 2023). This survey captures detailed information about the health and future trajectory of the Cook Islands' Tourism industry.

This dataset captures responses from a cross-section of the private sector, with most businesses located in Rarotonga, followed by Aitutaki (Zhu et al., 2023). It is collected from real respondents, particularly managers, owners, or operators of the businesses, providing a top-down view of the economy (Zhu et al., 2023). A significant feature of this dataset is its tourism linkage, where over half of the businesses surveyed report that more than 90% of their annual turnover comes from international visitors (Zhu et al., 2023). The 2023 survey received 136 responses in total.

3.4 Data Collection:

The 2023 BCI survey employed a purposive sampling strategy, targeting business owners and senior managers across the Cook Islands' Private sector (Zhu et al., 2023). This approach ensured that respondents had sufficient oversight of the business to provide an informed assessment of business performance, challenges, and future confidence.

Data were collected through a structured survey between 28 November and 26 December 2023, collecting responses from 136 businesses across Rarotonga, Aitutaki, Atiu and other locations in the Cook Islands Region (Zhu et al., 2023). The survey instrument combined closed, multi-select checklist items used to capture Perceived Business Challenges, Identified Opportunities, and Identified Training Needs, with single-item 5-point Likert-scale measures used to capture business performance and confidence (Zhu et al., 2023). This structured, closed-format design reflects the reductionist approach characteristic of post-positivist research, converting complex business sentiment and experience into discrete, comparable numerical data suitable for statistical analysis.

For this study, the dataset was screened before analysis. Of the 136 original responses received, three extreme outliers were identified and removed using IBM SPSS (Version 29),

following the protocols established by Field (2018) to satisfy the assumptions of multivariate normality required for mediation modelling. A listwise deletion of cases with incomplete data on the core variables, particularly those relevant to the moderated mediation paths, was then performed, resulting in a finalised sample of N = 95.

It should be acknowledged that the BCI survey was originally designed for broad industry monitoring on behalf of the Cook Islands Tourism Corporation, rather than for the specific research questions addressed in this study. Collected in late 2023, the data reflect a particular period of post-pandemic recovery and may be shaped by contemporaneous pressures such as global inflation and local labour shortages (Zhu et al., 2023). The findings should therefore be understood as a snapshot of business sentiment during this recovery phase, rather than a stable, permanent characterisation of the Cook Islands tourism sector.

3.5 Measures

Four core constructs were derived from the BCI survey to use in this study: Perceived Business Challenges, Identified Opportunities, Identified Training Needs, and Perceived Business Confidence.

Perceived Business Challenges were measured by respondents selecting from a predefined list of business challenge categories (e.g., natural disasters, operating costs, flight-related issues, human resources, supply shortages). As respondents were allowed to select multiple options in the survey, a composite score was computed by summing the total number of challenges identified by each respondent, ranging from 1 to 15. Higher scores indicated that each respondent reported more challenges.

Identified Opportunities was also measured using the same multi-select format, asking respondents to select from predefined categories (e.g., building on reputation, tourism growth, improved flights, business expansion, product or service development). A composite score was computed by summing the opportunities identified, ranging from 1 to 14, with a higher score reflecting a broader recognition of opportunities.

Identified Training Needs also followed the multi-select structure, with participants selecting from a list of training categories (e.g., social and digital marketing, cultural understanding,

customer service, accounting and finance, health and safety). Identified Training Needs were summed to produce a composite score ranging from 1 to 13, with higher scores reflecting a greater number of perceived training requirements.

Perceived Business Confidence was measured using a 5-point Likert Scale, where respondents reported their level of agreement with the statement reflecting confidence in their business's performance for the coming year, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

3.6 Data Analysis: SPSS and PROCESS Macro Application

All statistical analyses were conducted in IBM SPSS (Version 29), with hypothesis testing performed using Hayes' PROCESS macro (Version 5.0). Prior to hypothesis testing, descriptive statistics were examined for all core variables, including means and standard deviations, to confirm the data's suitability for parametric modelling. A listwise deletion check confirmed that all 95 cases had complete data across the variables required for analysis, ensuring that no missing values compromised the integrity of subsequent results. Pearson's correlation coefficients were then computed between all four core variables to examine preliminary relationships and provide an initial indication of support for the study's hypothesised model, prior to formal hypothesis testing.

Hypothesis testing proceeded in three stages, each building on the previous one, reflecting the conditional process model this study set out to test. First, a mediation analysis (PROCESS Model 4) was conducted to test whether Identified Opportunities mediates the relationship between Perceived Business Challenges and Identified Training Needs (H1–H3). Mediation was the appropriate first step because the study's theoretical model proposes that business challenges do not influence training needs directly, but rather indirectly, through the opportunities that challenges prompt business owners to recognise. Bootstrapping with 5,000 resamples was used to generate bias-corrected 95% confidence intervals for the indirect effect, rather than relying solely on traditional significance testing. This approach was necessary because indirect effects are typically non-normally distributed, and bootstrapping does not require this assumption to produce accurate confidence intervals (Hayes, 2022)

Second, a moderation analysis (PROCESS Model 1) was conducted to test whether Perceived Business Confidence moderates the relationship between Perceived Business Challenges and Identified Opportunities (H4a). This step tested whether the strength of the challenge-opportunity relationship established in the mediation analysis depended on a business owner's level of confidence, rather than remaining constant across the sample. Where the interaction term was significant, simple slopes analysis was used to interpret the conditional effects of Perceived Business Challenges on Identified Opportunities at low and high levels of Perceived Business Confidence.

Third, having established both a significant mediation pathway and a significant first-stage moderation effect, a moderated mediation analysis (PROCESS Model 7) was conducted to formally test whether the indirect effect of Perceived Business Challenges on Identified Training Needs, through Identified Opportunities, varied according to the level of Perceived Business Confidence (H4b). This model was necessary because mediation and moderation, tested separately, cannot establish whether a conditional indirect effect exists; only a moderated mediation model can determine whether the strength of an indirect pathway itself depends on a third variable. The index of moderated mediation, along with bootstrapping with 5000 resamples to generate a 95% confidence interval, was used to determine whether this conditional indirect effect was statistically significant.

Across all three stages, a 95% confidence interval excluding zero was treated as the criterion for statistical significance, consistent with the bootstrapping approach recommended by Hayes (2022) for testing indirect and conditional indirect effects.

3.7 Ethical Considerations

This study uses a secondary analysis of the 2023 Cook Islands Business Confidence Index (BCI). This dataset was collected by the AUT Pacific Tourism Data Initiative (PTDI) team in partnership with the Cook Islands Tourism Corporation. Since the data were not directly gathered for this study, it did not require recruiting participants, administering surveys, or collecting personal information. This significantly reduces the ethical risks related to this research. Access to the dataset was granted after submitting a formal request to the data custodians. The data are used only for the purposes outlined in that request. Specifically, this

study examines the relationships among perceived Business Challenges, Opportunity Recognition, Training Needs, and Business Confidence among tourism-related businesses in the Cook Islands. This ensures the data's use is consistent with its original intent as an industry monitoring tool.

The original BCI data were collected by a well-established research organisation with its own ethical protocols for protecting participants, obtaining informed consent, and ensuring confidentiality. Business owners and managers chose to participate voluntarily, and no personally identifiable information was included in the dataset used for this study. Thus, the anonymity of the original respondents has been maintained.

In accordance with AUTEC's ethical standards, full integrity has been upheld in the handling, analysis, and reporting of the data. The findings are reported honestly and transparently, without any manipulation or misrepresentation of results. The dataset is stored securely and will be managed and disposed of in accordance with AUT's data management guidelines. There is no conflict of interest regarding this dataset, and its limitations as a snapshot of business sentiment during the 2023 post-pandemic recovery period have been clearly acknowledged throughout this dissertation.

Chapter 4: Results

4.1 Chapter Preview

This chapter presents the results from the data analysis. Firstly, a respondent profile is provided, outlining the participants' basic information and characteristics of the businesses they manage. The results of the descriptive analyses of the core variables are then presented to confirm that the data are suitable for parametric modelling and PROCESS analysis. Following the descriptive analyses, the results of the correlational analysis of the core variables are presented to show the strength and direction of the relationships among the study variables. After the correlational analysis, the hypothesis are tested. The chapter concludes with hypothesis testing using the PROCESS macro: model 4 (mediation), model 1 (moderation), and model 7 (moderated mediation).

4.2 Respondent Profile

The respondent profile provides a detailed diagnosis of the survey sample, offering critical context for further analysis. A total of 95 surveys (N = 95) were used in this study. While this dataset shows a high completion rate, there are minor variations in responses across a few variables. However, the sample remains statistically robust and clearly represents the perspective of the Cook Islands' Tourism Leadership. The respondent profile output is shown in Table 1 below.

The participants' origins reflect a balance between Indigenous and International perspectives. Cook Islanders represent 54.7% (N = 52) of the sample, while non-Cook Islanders account for 45.3% (N = 43). Within the non-Cook Islanders' subgroup (N = 40), New Zealand is the dominant source market at 50%, followed by Australia (22.5%), North America (12.5%), and Europe (10%). This distribution regionally is consistent with the ANZAC corridor while also providing a global outlook. This blend of participants from within and outside the region enhances the generalizability of the findings.

Gender Identification was provided by 94 participants, with female representation (59.6%) higher than that of males (40.4%). While all respondents were from leadership roles, with Owner-Operators (36.8%), Owners (33.7%), and Managers, CEOs, or Directors (29.5%), a defining characteristic of this sample is professional experience. More than half of the leaders

(56.8%) have held the current roles for six years or more, with 20% having served 16 years or more

The operational sector profile of business reveals accommodation and hospitality as a dominant sector in the Cook Islands. Accommodation providers constitute the largest segment at 43.2%, followed by Restaurants, Cafes and Bars (15.8%) and Visitor Activities or Tours (10.5%). Other sectors, including transportation, weddings, and health and beauty, constitute the remaining 30.5%. The sectoral concentration aligns with the tourism linkage identified in the dataset's background. Furthermore, 51.6% of these businesses maintain a secondary focus, highlighting the multidisciplinary nature of the tourism industry in an island economy.

The data regarding the scale of business clearly indicates that this sector is primarily driven by small to medium enterprises (SMEs), with half of the businesses (50.5%) being small-scale operations with five or fewer staff, and a substantial 28.4% being larger operations with 16 or more employees. The industry shows good longevity and stability, with 22.1% of businesses still operating after 30 years. Lastly, the geographical sample shows concentration in the nation's primary tourism hubs, with 88.4% based in Rarotonga and 10.5% in Aitutaki.

Table 1

Respondents' Profiles

	Frequency (N)	Percent (%)
Origin (N=95, missing = 0)		
Cook Islanders	52	54.7
Non-Cook Islanders	43	45.3
Non-Cook Islanders' Origin (N=40, missing = 3)		
NZ	20	50.0
Australia	9	22.5
Europe	4	10.0
North America	5	12.5
Asia	2	5.0
Gender (N = 94, missing = 1)		
Female	56	59.6
Male	38	40.4
Role In Business (N = 95, missing = 0)		
Owner	32	33.7
Manager/ CEO/ Director	28	29.5
Owner/ Operator	35	36.8
Years In Role (N = 95, missing = 0)		
0-5 years	41	43.2
6-15 years	35	36.8
16 years and more	19	20.0
Business Sector (N = 95, missing = 0)		
Accommodation Provider	41	43.2
Visitor Activities/ Tours	10	10.5
Restaurant/ Café/ Bar	15	15.8
Other Business Sectors*	29	30.5
Secondary Focus (N = 95, missing = 0)		
Yes	49	51.6
No	46	48.4
Business' Operating Years (N = 95, missing = 0)		
0-10 years	41	43.2
11-20 years	21	22.1
21-30 years	12	12.6
30+ years	21	22.1
Business Size (N = 94, missing = 1)		
0-5 employees	48	50.5
6-15 employees	19	12.6
16 employees and more	27	28.4
Business Location (N = 95, missing = 0)		
Rarotonga	84	88.4
Aitutaki	10	10.5
Other	1	1.1

Note. Other Business Sectors include Health and Beauty, Transportation/rentals/transfers, and Weddings/Events.

4.3 Descriptive Analysis

Descriptive statistics, including measures of central tendency, variability, and score range, were computed using SPSS for all core study variables across the full sample (N = 95) and are summarised in Table 2.

Perceived Business challenges had a mean of M = 5.42 (SD = 2.86), with scores ranging from 1 to 15. This places the average in the lower half of the possible score range, which suggests that participants differed in the number of business challenges they reported.

Similarly, the Identified Opportunities showed a mean of M = 5.43(SD = 2.85), with scores ranging from 1 to 14. The similar mean and standard deviation scores suggest that participants who reported more business challenges might have also recognised more opportunities.

Identified Training Needs, on the other hand, had a mean of M = 4.31 (SD = 3.10), with scores ranging from 1 to 13. The highest standard deviation among the three composite variables suggests that training needs were the most unevenly distributed among the sample.

Lastly, Perceived Business Confidence, which was measured on a Likert scale ranging from 1(strongly disagree) to 5(strongly agree), showed a mean of M = 4.28(SD = 0.74), indicating most participants showed high levels of business confidence, with a small standard deviation reflecting a tightly grouped distribution compared to other variables.

Table 2

Descriptive Analysis

Identified opportunities	Frequency (N)	Mean(M)	St. Deviation (SD)	Min.	Max.
Perceived Business challenges	95	5.42	2.86	1	15
Identified Opportunities	95	5.43	2.85	1	14
Identified Training Needs	95	4.31	3.10	1	13
Perceived Business confidence	95	4.28	0.74	1	5

Note. Business Challenges, Identified Opportunities, and Training Needs represent summed composite scores of identified items. Perceived Business Confidence reflects a single Likert-scale questionnaire item ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

4.3.1 Item-Level Frequency Analysis

To complement the descriptive analysis, a frequency analysis was conducted to identify the specific factors affecting the three core composite variables. Because the survey allowed respondents to select multiple options, the total number of responses (n = 1442) far exceeds the sample size (N = 95); therefore, percentages are used throughout to show how widely each factor was reported across the sample. Given the volume of items, this section focuses on the top six factors per variable, defined as those reported by at least 35 % of the total sample.

Across 515 responses recorded for Perceived Business Challenges, external and systemic challenges were most prominent. Natural Disasters such as cyclones and tsunamis were the most reported challenge, with 60% of the respondents flagging it as a business challenge, followed by Operating Costs (56.8%), Flight-related Issues (54.7%), Human Resources (53.7%), Global or Local Economy (44.2%), and Supply Shortages (41.1%). These data suggest a business environment where the operators are dependent on external factors they cannot directly control.

Identifies Opportunities with 518 responses showed a similar outlook to that of Perceived Business Challenges, with building on reputation being the most identified opportunity, reported by 57.9% of participants, followed by tourism growth (54.7%), Improved Flights

(53.7%), Business Expansion or Diversification (52.6%), Product or Service Development (50.5%), and More High-Yield Tourists (40.0%). Having Improved Flights as one of the main challenges and opportunities suggests that operators look at air connectivity as the primary improvement that would unlock broader growth opportunities.

For Identified Training Needs, the 409 responses showed digital skills as a clear priority with Social and Digital Marketing as the most identified training need, reported by 63.2% of participants, followed by Kia Orana Values and Cultural Understanding (37.9%), Customer Service (35.8%), General Hospitality and Tourism Skills (35.8%), Accounting and Finance (35.8%) and Health and Safety (34.7%) completing the top six.

Table 3

Item-Level Frequency Analysis

	n	% of Cases
Perceived Business challenges (n = 515 responses)		
Natural Disasters (Cyclone, Tsunami, etc.)	57	60.0
Operating Costs	54	56.8
Flight Related Issues	52	54.7
Human Resources	51	53.7
Global or Local Economy	42	44.2
Supply Shortage	39	41.1
Identified Opportunities (n = 518 responses)		
Building on Reputation	55	57.9
Tourism Growth	52	54.7
Improved Flights	51	53.7
Business Expansion or Diversification	50	52.6
Product or Service Development	48	50.5
More High-Yield Tourists	38	40.0
Identified Training Needs (n = 409 responses)		
Social and Digital Marketing	60	63.2
Kia Orana Values and Cultural Understanding	36	37.9
Customer Service	34	35.8
Accounting / Finance	34	35.8
General Hospitality / Tourism Skills	34	35.8
Health and Safety	33	34.7

Note. This table presents the six most frequently reported responses. The full frequency distribution of all items is provided in Appendix A. Percentages exceed 100% as multiple responses were permitted.

4.4 Correlational Analysis

Pearson's Correlation coefficients were computed for all four main study variables to examine the nature and strength of their relationship before hypothesis testing. The results, presented in Table 4, provide preliminary support for the study's theoretical framework.

Perceived Business Challenges and Identified Opportunities showed a strong positive relationship ($r = .595$, $p < .001$), indicating that participants who reported more business challenges also identified more opportunities, which is consistent with the descriptive analysis.

Identified Training Needs showed positive relationships with Perceived Business Challenges ($r = .405$, $p<.001$) and Identified Opportunities ($r = .565$, $p <.001$). Because training needs are more closely linked to opportunities than to challenges, this suggests that they are perceived not only as a response to existing challenges but also as an opportunity for growth.

Perceived Business Confidence did not show any significant relationship with any of the three variables ($p>.05$). Rather than being treated as a null finding, this absence of a direct relationship suggests that business confidence might operate indirectly within the model through a mediating or moderating pathway.

Table 4

Correlation analysis

Variable	1	2	3	4
1. Perceived Business Challenges	1			
2. Identified Opportunities	.595***	1		
3. Identified Training Needs	.405***	.565***	1	
4. Perceived Business Confidence	-.082	.113	.092	1

Note. (N = 95). Variables 1, 2, and 3 represent summed composite scores. Variable 4 represents a single 5-point Likert scale item. *** $p < .001$.

4.5 Hypothesis Testing

The following section presents the results of hypothesis tests examining the proposed relationships among Perceived Business Challenges, Identified Opportunities, Identified Training Needs, and Perceived Business Confidence. Three analyses were performed in sequence using Hayes' PROCESS macro: a mediation analysis, followed by a moderation analysis and a moderated mediation analysis to test whether the pathway from challenges to

training needs operates through opportunity recognition and whether it is affected by perceived business confidence.

4.5.1 Mediation Analysis

A mediation analysis was conducted using the PROCESS macro (Model 4) to test whether Identified Opportunities mediate the relationship between Perceived Business Challenges and Identified Training Needs. The results of the analysis are presented in Table 5.

In the first part of the model, Perceived Business Challenges significantly predicted Identified Opportunities ($b = 0.593$, $t = 7.14$, $p < .001$), indicating that respondents who reported more business challenges also tended to identify more opportunities, supporting Hypothesis 1. In the second part, Identified Opportunities significantly predicted Identified Training Needs ($b = 0.548$, $t = 4.716$, $p < .001$), indicating that identifying opportunities is directly associated with a higher perceived need for training, supporting Hypothesis 2.

The Direct Effect of Perceived Business Challenges on Identified Training Needs was not significant ($b = 0.116$, $t = 1.000$, $p = .320$), with a 95% confidence interval of [-.114, .346] that crossed zero, indicating that business challenges alone do not directly lead to greater training needs. Instead, it operates by identifying opportunities.

Lastly, the indirect effect of Perceived Business Challenges on Identifies Training needs through Identified Opportunities was .325, with the 95% bias-corrected confidence interval [.148, .505] not including zero, confirming statistically significant full mediation, supporting Hypothesis 3.

Table 5

Mediation Analysis

Relationship	Coefficient (b)	SE	t	p	95% CI (LL, UL)
Model 1- Outcome: Identified Opportunities (M)					
Constant	2.218***	.508	4.365	.000	[1.209, 3.227]
Perceived Business challenges (X -> M)	.593***	.083	7.140	.000	[.428, .758]
Model 2- Outcome: Identified Training Needs (Y)					
Constant	.704	.625	1.127	.263	[-.537, 1.944]
Identified Opportunities (M -> Y)	.548***	.116	4.716	.000	[.317, .778]
Perceived Business challenges (Direct Effect: X -> Y)	.116	.116	1.001	.320	[-.114, .346]
Indirect Effect	**Effect**		**Boot SE**		**95%Boot CI[LL,UL]**
X -> M -> Y	.325		.091		[.148, .505]

Note. N = 95. X = Perceived Business Challenges; M = Identified Opportunities; Y = Identified Training Needs. Unstandardized coefficients (b) reported. Bootstrap results for the indirect effect are based on 5,000 resamples. *** $p < .001$.

4.5.2 Moderation Analysis

After confirming full mediation, a moderation analysis was conducted using the PROCESS macro (Model 1) to test whether Perceived Business Confidence moderates the relationship between Perceived Business Challenges and Identified Opportunities. The results are presented in Table 6.

Perceived Business Challenges were a significant positive predictor of Identified Opportunities (b = .530, t = 6.277, p < .001). While Perceived Business Confidence did not show a significant relationship with identified opportunities at the bivariate level, it appeared as a significant positive predictor within the full regression model (b = .704, t = 2.284, p =.025), indicating that its effect on opportunity recognition becomes apparent only when business challenges and their interaction are considered simultaneously.

The Interaction between Perceived Business Challenges and Perceived Business Confidence was significant and negative (b = -.218, t = -2. 672, p = .009), with a 95% confidence interval of [-.381, -.056] that did not cross zero. This confirms that while both variables contribute independently to opportunity recognition within the model, the positive effect of challenges on opportunity recognition weakens as business confidence increases, supporting Hypothesis 4a.

To further test this interaction, a simple slopes analysis was conducted at low and high levels of Perceived Business Confidence. As shown in Figure 2, when confidence was low (-1 SD), challenges had a stronger positive effect on opportunity recognition (Effect = .592, t = 7.436, p<.001). On the other hand, when confidence was high (+1 SD), this effect remained significant but was weaker (Effect = .374, t = 3.169, p<.001). Figure 2 also reveals that at lower levels of Perceived Business Challenges, operators with high confidence began from a higher baseline of opportunity recognition. However, as challenges increased, this gap narrowed, with low-confidence operators showing a steeper rise in opportunity recognition.

Table 6

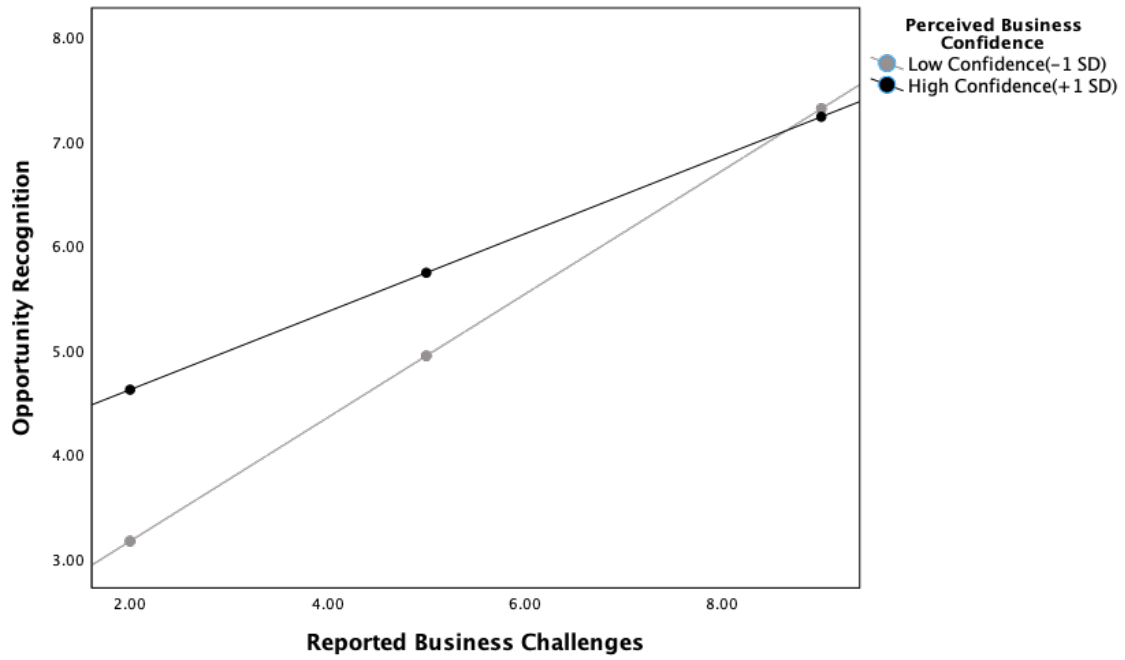
Moderation Analysis

Variable	Coefficient	SE	t
Direct Effects			
Constant	5.394***	.225	23.936
Perceived Business Challenges (X)	.530***	.084	6.277
Perceived Business Confidence (W)	.704*	.308	2.284
Interaction Term			
Perceived Business Challenges (X) x Perceived Business Confidence (W)	-.218**	.082	-2.672
Conditional Effects	**Effect**	**SE**	**t**
Low Perceived Business Confidence (-1 SD)	.592***	.080	7.436
High Perceived Business Confidence (+1 SD)	.374**	.118	3.169

Note. N = 95. R^2-change due to interaction = .045, F (1, 91) = 7.140, p = .009

Figure 2

Moderation Effect of Perceived Business Confidence on the Relationship Between Perceived Business Challenges and Identified Opportunities



4.5.3 Moderated Mediation Analysis

At last, a moderated mediation analysis was conducted using the PROCESS macro (Model 7) to test whether Perceived Business Confidence moderates the indirect effect of Perceived Business Challenges on Identified Training Needs through Identified Opportunities. The results are presented in Table 7

The Index of moderated mediation was significant (Index = -.120, SE = .051, 95% CI [-.215, -.013]), with a confidence interval that did not include zero. This confirms that the indirect pathway from challenges to training needs through opportunity recognition differs depending on the level of business confidence

Examining the conditional effects, the indirect effect was strongest when Perceived Business Confidence was low (-1 SD; Effect =.324, 95%CI [.148, .505]) and weaker, though still significant, when confidence was high (+1 SD; Effect =.205, 95% CI [.067, .386]). These data reveal that while the pathway from challenges to opportunities to training needs is present across all confidence levels, it is most pronounced among operators who feel less certain about their business environment. In low-confidence conditions, challenges appear to more urgently trigger opportunity recognition and, in turn, demand for new skills. In high-confidence conditions, this chain of responses is present but less intense. This confirms that lower business confidence intensifies the indirect adaptive pathway from business challenges to training needs via opportunity recognition, supporting Hypothesis 4b.

Table 7

Moderated Mediation Analysis

Variable	Coefficient (b)	SE	t	p	95% CI (LL,UL)
Model 1- Outcome: Identified Opportunities					
Constant	5.394***	.225	23.936	.000	[4.946, 5.842]
Perceived Business Challenges (X)	.523***	.084	6.277	.000	[.3621, .697]
Perceived Business Confidence (W)	.704*	.308	2.284	.025	[.092, 1.317]
Perceived Business Challenges x Perceived Business Confidence (X x W)	-.218**	.082	2.672	.009	[-.381, -.056]
Model 2- Outcome: Identified Training Needs					
Constant	1.331	.684	1.947	.055	[-.027, 2.689]
Identified Opportunities	.548	.116	4.716	.000	[.317, .778]
Perceived Business Challenges (X)	.116	.116	1.001	.320	[-.114, .346]
Conditional Indirect Effects	**Effect**	**Boot SE**			**95% Boot CI**
Low Perceived Business Confidence (-1 SD)	.324	.090			[.148, .505]
High Perceived Business Confidence (+1 SD)	.205	.082			[.067, .386]
Index Of Moderated Mediation	**Index**	**Boot SE**			**95% Boot CI**
Perceived Business Confidence (W)	-.120	.051			[-.215, -.013]

Note. N = 95. Bootstrapping based on 5,000 samples.

Chapter 5: Discussion

5.1 Chapter Preview

This chapter discusses the findings presented in Chapter 4 in relation to the study's theoretical framework and the existing literature. First, the research implications of the mediation, moderation, and moderated mediation results are discussed, situating each finding within Dynamic Capability Theory, the Behavioural Theory of the Firm, and prior research on entrepreneurship and tourism resilience. Following this, the practical implications of these findings are considered for tourism support agencies, advisory bodies, and training providers operating in the Cook Islands. The chapter then outlines the study's limitations, relating to its cross-sectional design, secondary data, sample, and single-country context, before identifying directions for future research that address these constraints. The chapter concludes by summarising the study's overall contribution to the literature on business adaptation in small island tourism economies.

5.2 Research Implications

This study found support for all four proposed hypotheses. Perceived business challenges positively predicted opportunity recognition (H1); opportunity recognition positively predicted identified training needs (H2); opportunity recognition fully mediated the challenge-training needs relationship (H3); and business confidence significantly moderated both the direct challenge-opportunity relationship and the full indirect pathway, with effects strongest at low confidence (H4a, H4b). Previous tourism adaptation studies have shown that businesses respond to crisis and uncertainty through actions such as cost reduction, staff adjustment, marketing changes, product innovation, social capital, and dynamic capabilities (Giddy & Rogerson, 2021; Jiang et al., 2022; Pongtanalert & Assarut, 2022; Sheresheva et al., 2021; Zhang et al., 2022). However, SIDS tourism research has more commonly focused on destination-level vulnerability, recovery, climate adaptation, and system resilience (Bangwayo-Skeete & Skeete, 2021; Gu et al., 2022; Loehr, 2020; Sheller, 2021; Wolf et al., 2024). This leaves the business-level adaptation pathway less clearly explained, particularly how business challenges are interpreted as opportunities and then translated into specific training or capability-development needs. The findings of this research point towards Opportunity Recognition as the central mechanism through which Cook Islands' tourism

businesses translate perceived challenges into training needs, with business confidence conditionally affecting the strength of this adaptive pathway.

Prior research found that challenge stressors were positively associated with opportunity recognition, with service businesses having notably weaker relationships than manufacturing and merchandising businesses (Nguyen & Thi Thu Le, 2024). The finding that perceived business challenges significantly predicted opportunity recognition is consistent with the existing entrepreneurship literature, while not fully consistent with the conditional nuances. Since tourism is an intensely service-oriented industry (Gao et al., 2022), it was expected to show a positive but comparatively weaker relationship. However, the strong relationship found in this study suggests that Cook Islands tourism business leaders recognise opportunities from challenges, just as owners in less service-intensive sectors do. According to Dynamic Capability Theory (Teece et al., 1997), one possible explanation could be that small, owner-operated tourism businesses are highly involved in their operating environment, requiring continual monitoring of visitor demand, transport connectivity, labour availability, operating costs, and environmental risks to maintain business viability (Currie, 2021; Yang & Kauvai, 2023), which potentially counterbalances the limitations Nguyen and Thi Thu Le (2024) observed in service-oriented businesses. This extends the empirical application of Dynamic Capability Theory by demonstrating that its sensing capability remains observable in resource-restricted tourism SMEs in the SIDS context.

This pattern extends into the next stage. Opportunity recognition significantly predicted identified training needs, extending the evidence linking opportunity recognition to capability development and providing specific empirical evidence that prior research has not addressed. A study conducted in Malaysia found that opportunity recognition significantly predicted innovation capability, defined broadly as the continuous development of the resources and skills needed to explore and exploit opportunities (Taleb et al., 2023). Further, Sheresheva et al. (2021) observed a related pattern among tourism SMEs, noting that businesses seeking opportunities during the pandemic simultaneously increased their attention to staff development. Neither study measured training needs as a specific, identifiable construct; rather, they examined it using broader or descriptive indicators of capability development. The present finding, therefore, moves beyond confirming that opportunity recognition relates

to capability development in general to demonstrating a direct, statistically significant relationship with concrete, identifiable training needs. This distinction matters theoretically because it operationalises the "seizing" and "reconfiguring" stages of Dynamic Capability Theory (Teece et al., 1997) much more clearly than prior tourism and SME research. Rather than treating capability development as an abstract organisational outcome, this study demonstrates that opportunity recognition translates into specific, nameable skill gaps that a business can act on directly. This closes part of the gap where tourism-specific evidence in the existing literature for this pathway was described as supportive rather than confirmatory, by providing a direct statistical test of the relationship between opportunity recognition and training needs in a tourism SME context.

The identification of opportunity recognition as a full mediator challenges the implicit assumption in traditional crisis and small business literature that environmental disruptions directly compel organisational adaptation (Alim et al., 2023; Schmitt et al., 2018). By proving that the direct relationship between perceived challenges and training needs becomes non-significant in the presence of opportunity recognition, this study reveals that external adversity is theoretically insignificant. Perceived challenges, whether stemming from operating costs, geographical isolation, or environmental hazards, do not inherently trigger capability development. Left unmediated, external pressure induces operational paralysis or passive cost absorption rather than proactive structural change.

This finding also advances Dynamic Capability Theory (DCT) by empirically establishing the strict, sequential micro-foundations of adaptation under resource-restricted contexts (Teece, 2007; Teece et al., 1997). While DCT conceptualises Sensing and Seizing as core organisational capabilities, empirical studies frequently treat them as parallel attributes or focus solely on macro-performance outcomes. Demonstrating full mediation indicates that Sensing (cognitively identifying market opportunities) is a mandatory, non-negotiable prerequisite for Seizing (reconfiguring human capital and articulating training needs). Small firm operators in Small Island Developing States (SIDS) do not engage in workforce development as a vague or reactive reflex to environmental stress; rather, skill acquisition is a target-driven, downstream consequence of strategic re-orientation. Altogether, this mechanism resolves how small tourism enterprises avoid misallocating scarce resources

during structural disruptions. Without the cognitive filter of opportunity recognition, capability identification risks producing generic, misaligned operational demands that fail to enhance resilience (Schmitt et al., 2018; Teece, 2007). By establishing that opportunity recognition fully governs the translation of environmental pressure into skill demand, this study offers a refined conceptual model of small business adaptation where cognitive interpretation, rather than environmental severity alone, dictates the trajectory of organisational capability building (Schmitt et al., 2018; Teece, 2007).

Lastly, the finding that business confidence significantly moderated the relationship between perceived business challenges and opportunity recognition, and that this moderation extended to the full mediated pathway to identified training needs, addresses a gap that the reviewed literature had already implicitly identified. Prior studies establishing that uncertainty-related pressure affects opportunity recognition conditionally have relied on related but distinct constructs. Schmitt et al. (2018) used entrepreneurial self-efficacy; Nguyen and Thi Thu Le (2024) examined business type and personal values; and Angus et al. (2023) and St-Pierre et al. (2023) focused on perceived uncertainty rather than confidence in future business conditions. No prior study appears to have tested business confidence, as a forward-looking belief in prospects, as a moderator of either the challenge–opportunity relationship or the wider mediated pathway to training needs. Beyond resolving specific empirical gaps, the primary theoretical contribution of this study lies in a fundamental re-conceptualisation of how business confidence is theorised within strategic management literature. Conventionally, forward-looking economic sentiment has been modelled as a simple direct driver of organisational growth, investment, or performance. However, these findings demonstrate that treating business confidence purely as a direct antecedent represents a theoretical mis-specification. Instead, business confidence operates as a contextual boundary condition that regulates the operational intensity of a business's adaptive engine.

By establishing that low business confidence amplifies the entire mediated sequence, from perceived operational challenges to opportunity recognition and downstream training needs, this research significantly refines both Dynamic Capability Theory and the Behavioural Theory of the Firm. Specifically, it suggests that reduced confidence acts as a vital aspirational marker. Rather than inducing paralysis, an aspirational shortfall sharpens

managerial sensing mechanisms, overcomes routine organisational inertia, and accelerates necessity-driven problemistic search. Conversely, high confidence functions as a psychological buffer that inadvertently dampens the impulse to translate operational strain into capability development. Consequently, future scholarship must shift from treating business confidence as a routine predictor of firm growth to conceptualising it as an interactive regulator, a cognitive switch that governs the rate at which external environmental pressures are translated into structured organisational adaptation.

5.3 Practical Implications

The strong positive relationship between perceived challenges and opportunity recognition demonstrates that Cook Islands tourism operators are not passive victims of operational strain; rather, they actively identify strategic solutions when facing pressure. Furthermore, because business confidence acts as a cognitive thermostat that accelerates this adaptive pathway when confidence is low, support agencies must align the timing and format of their interventions with manager sentiment. Rather than deploying generic, standalone advisory workshops during buoyant periods, when high confidence breeds routine inertia, agencies should deploy targeted interventions precisely when market sentiment declines and operators are most receptive to strategic change. Because operators are already independently identifying opportunities, agencies should shift from problem-diagnosis campaigns to action-oriented support by providing small, low-barrier implementation grants that allow managers to test and execute their ideas, such as new product offerings or market diversification. This findings-led approach is supported by international evidence showing that financial mechanisms yield more consistent firm-level outcomes than generic advisory programs (OECD, 2023; Srhoj et al., 2021), as well as regional evaluations of Business Link Pacific (BLP), which demonstrate that direct grant funding combined with subsidised services delivers genuine additionality and cost-effectiveness (Blick et al., 2021).

Opportunity recognition translated into specific, identifiable training needs. However, these needs were not evenly distributed, with social and digital marketing standing out as the clearest priority in this sample (63.2%), well ahead of any other category. This gives training providers and tourism support bodies in the Cook Islands a clear basis for prioritising digital marketing training rather than distributing it across broad categories, such as developing

accessible, practically oriented training covering social media use, content creation, and basic analytics. This priority is consistent with the evidence from other developing-economy tourism contexts, where small operators often lack the digital literacy needed to participate fully in digital marketing, risking exclusion from broader tourism growth, and where targeted training has been recommended as the primary remedy (Kumar et al., 2025).

Challenges alone did not predict training needs and only did so once filtered through opportunity recognition; a business must first recognise opportunity before a training need becomes visible to it. This points to a specific design principle for advisory services: rather than presenting operators with a general menu of available training courses, advisory support should include a structured step that helps an operator explicitly translate a named challenge into a named opportunity before any training recommendation is made. Evidence on publicly funded business advisory services is otherwise mixed internationally, with some evaluations finding that costs may outweigh benefits when advisory content is generic or poorly targeted (Ton et al., 2023). This suggests that the mediating mechanism identified in this study, opportunity recognition as the necessary bridge to training relevance, could serve as a practical targeting principle that makes advisory services more specific and outcome-relevant, addressing a likely source of the inconsistency found in broader advisory service evaluations.

The challenge-opportunity pathway and its extension into training needs were strongest among low-confidence operators, suggesting outreach should not assume these operators are disengaged or unresponsive; the data indicate the opposite: low-confidence operators are the most likely to act on support when it reaches them at the right moment. This has a direct targeting implication for tourism support bodies such as the Cook Islands Tourism Corporation or Business Link Pacific's in-country representatives: light-touch confidence check-ins during routine business visits or membership renewals could help identify operators currently most receptive to advisory or funding engagement, concentrating outreach effort where it is likely to have the greatest effect rather than spreading it evenly and thinly across the sector. The pathway remained significant even among high-confidence operators; however, this indicates that support should not be designed only around crisis or hardship messaging (Cyert & March, 1963). High-confidence operators still identify training needs

and may respond better to growth-oriented framing that presents training as an opportunity to capture an already recognised opportunity, rather than as a response to a problem.

5.4 Limitations and Future Research Directions

This study relies on cross-sectional data, capturing perceived business challenges, opportunity recognition, business confidence, and identified training needs at a single point in time during the 2023 BCI survey (Zhu et al., 2023). While the PROCESS macro allows for the statistical modelling of mediation and moderation, it cannot establish temporal precedence or rule out reverse or reciprocal relationships between the study's core variables (Hayes, 2022). Longitudinal or panel data, ideally drawing on multiple waves of the BCI series, would allow future research to test whether these relationships hold, strengthen, or reverse over time as the Cook Islands tourism sector moves further from the pandemic recovery period.

Perceived business challenges, opportunity recognition, and identified training needs were all captured through owner-manager self-report, and the study does not link these perceptions to objective indicators of business performance, such as revenue, employment change, or survival. This means the study can speak to how tourism business owners interpret their environment and respond to it, but not to whether these perceptions translate into measurable business outcomes. Future research could pair perceptual survey data of this kind with objective performance records to examine whether businesses that recognise more opportunities and identify more specific training needs perform better than those that do not.

The model also tests a single mediator and a single moderator, and other variables not captured in this study may shape the pathway from perceived business challenges to identified training needs. Factors such as entrepreneurial orientation, prior business experience, access to finance, or digital capability could plausibly act as additional mediators or moderators alongside opportunity recognition and business confidence. Because they are not included in the model, it may only capture part of this complex adaptive process. Future studies could extend this model by testing additional mediating or moderating variables to establish how much of the challenge–training needs pathway is explained by opportunity recognition and business confidence relative to other mechanisms.

Another limitation concerns the sample. The relatively small sample (N = 95), combined with a purposive sampling strategy (Zhu et al., 2023), may have reduced statistical power, particularly for detecting interaction effects in the moderated mediation model. Furthermore, although the sample broadly reflects tourism business leaders in the Cook Islands, the use of non-probability sampling limits the generalisability of the findings. Future studies should seek to replicate the model using larger, randomly selected samples across the Cook Islands and other Pacific small island developing states to examine the robustness of the findings in different settings.

The Cook Islands' near-total tourism dependence, small population, and distinct post-pandemic recovery trajectory are not conditions shared by every SIDS (Currie, 2021; Yang & Kauvai, 2023), and destination-level vulnerability and recovery dynamics vary considerably across the wider group (Bangwayo-Skeete & Skeete, 2021; Foley et al., 2022; Wolf et al., 2024). Future studies should therefore examine this challenge–opportunity relationship in other SIDS contexts to test whether the moderating role of business confidence depends on the economy's reliance on tourism.

What the quantitative design cannot do is explain why business confidence intensifies the challenge–opportunity relationship at low levels, or why some challenges translate more readily into recognised opportunities than others. Qualitative interviews with tourism business owners, layered onto this model, could reveal the reasoning behind these statistical patterns and offer a richer account of how Cook Islands operators interpret and respond to the challenges they

5.5 Conclusion

This research examined the relationships among perceived business challenges, opportunity recognition, identified training needs, and business confidence among small and medium-sized tourism businesses in the Cook Islands. The findings show that perceived challenges significantly predict opportunity recognition, that opportunity recognition fully mediates the relationship between challenges and training needs, and that business confidence moderates both this relationship and the wider mediated pathway, with the effect strongest when confidence is low. These results suggest that Cook Islands tourism operators respond to pressure by actively recognising opportunities rather than experiencing challenges as a direct

trigger for capability development. Theoretically, the study extends Dynamic Capability Theory and the Behavioural Theory of the Firm by reframing business confidence as a boundary condition that regulates this adaptive process rather than a direct driver of it. Practically, it suggests that training and advisory support, particularly in digital marketing, is likely to be most effective when timed to periods of lower confidence rather than delivered generically. Together, these findings clarify how challenge, opportunity, and confidence combine to shape capability development in small island tourism enterprises.

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Appendices

Appendix A

Table A1

Full Item-Level Frequency Distribution

	Frequency (n)	Percent of Cases (%)
Perceived Business challenges (N=95, 515 responses)		
Natural disaster (e.g., Cyclone, Tsunami)	57	60.0%
Operating costs	54	56.8%
Flight related issues	52	54.7%
Human resources	51	53.7%
Global or local economy	42	44.2%
Supply shortage	39	41.1%
Competition from other businesses	35	36.8%
Political issues and regulation	34	35.8%
Climate change or environmental degradation	33	34.7%
Competition from other Pacific Island destinations	32	33.7%
Infrastructure	26	27.4%
Number of quality customers	21	22.1%
Destination development	19	20.0%
Business development	12	12.6%

Advertising and marketing limitations	8	8.4%
Identified Opportunities (N=95, 518 responses)		
Building on reputation	55	57.9%
Tourism growth	52	54.7%
Improved flights	51	53.7%
Business expansion or diversification	50	52.6%
Product or service development	48	50.5%
More high-yield tourists	38	40.0%
Asset maintenance / refurbishment	35	36.8%
Staffing (recruitment and skill development)	35	36.8%
Reducing the cost of business	34	35.8%
Technology or ICT development	29	30.5%
Target market segments	26	27.4%
Government support	26	27.4%
Developing local collaboration/partnerships	24	25.3%
Improved environment and climate	13	13.7%
Little or no opportunities	2	2.1%
Identified Training Needs (N=95, 409 responses)		-
Social and digital marketing	60	63.2%
Kia Orana values and cultural understanding	36	37.9%
Customer service	34	35.8%

Accounting / finance	34	35.8%
General hospitality / tourism skills	34	35.8%
Health and safety	33	34.7%
General sales and promotions	31	32.6%
Management skills	30	31.6%
Content development	27	28.4%
Sustainable Tourism / CSR training	26	27.4%
Mental wellbeing	23	24.2%
Workplace ethics training	22	23.2%
ICT skills	18	18.9%
Other	1	1.1%

Note: Percentages exceed 100% as multiple responses were permitted.