Economic Development and Fiscal Policy: Tourism Taxation and Its Contribution to Municipal Revenue in the City and Borough of Juneau

Dissertation

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Abstract

The problem addressed by this quantitative study was that the reliance of the City and Borough of Juneau, Alaska, on tourism necessitated an evaluation of how tourism taxes aligned with municipal revenues. The relationships between the variance in tourism-related taxation, volume, and spending, and the variance in municipal revenues in the City and Borough of Juneau were explored. A partial least square structural equation model (PLS-SEM) was developed to address the population, intervention, comparison, outcome, time (PICOT) question: Based on the archived records for the City and Borough of Juneau, Alaska (population), to what degree does the variance in tourism-related taxation, tourist volume, and tourist spending, after controlling for covariates (interventions), before and after taxation policy changes and the COVID-19 pandemic (comparisons), predict the variance in municipal revenues generated by taxes (outcomes) between 2010 and 2024 (time)? Covariates (i.e., tourism-linked employment and business growth) and interruptions by disruptive events (i.e., taxation changes and the COVID-19 pandemic in 2020) were incorporated into the model. There were three key findings from the PLS-SEM analysis. First, tourism-related taxation significantly predicted revenue variance. The path coefficient was weak from 2010–2019 but became stronger from 2020–2024, indicating increased post-pandemic dependence. Second, tourist volume had a consistently weak predictive relationship with municipal revenue in both periods, showing limited influence without policy alignment. Third, tourist spending was the strongest predictor throughout, underscoring the importance of per-capita visitor expenditure. Assessing tourism tax roles in Juneau before and after the pandemic informed the city planners' findings, which will help devise taxation frameworks that promote tourism growth and economic development and ensure stable municipal income in the future.

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Chapter 1: Introduction

Economic development is the foundation, emphasizing wealth growth, poverty reduction, and social justice (Augustin, 2018). It involves job creation, infrastructure development, and public service enhancement (Abdu & Adem, 2023). Taxation plays a critical role in supporting economic growth. Effective tax policies generate revenue, influence economic behavior, and incentivize investments in critical sectors (Burgess & Stern, 1992). Tourism taxation generates municipal revenues by capturing a portion of the economic benefits from tourism, which is vital for funding public services and infrastructure in the City and Borough of Juneau (CBJ) (Addison et al., 2018; Halim & Rahman, 2022). Progressive tax systems support social development through investments in public goods and social protection (Lierse & Seelkopf, 2020).

Through taxation, government spending, and budgeting, fiscal policy directly shapes economic conditions by influencing aggregate demand, economic growth, and inflation (Thapa, 2020). Adjustments in tax rates and government expenditure can either stimulate or slow economic activity. In CBJ, tourism taxation is a critical component of fiscal policy, crucial for generating municipal revenue that funds public services and drives further economic growth and social equity.

According to Meyer et al. (2018), Juneau was founded during the late 19th-century gold rush, and its unique geographical isolation, bordered by water on one side and towering mountain ranges on the other, has historically presented opportunities and challenges. While its scenic beauty and rich Tlingit heritage have attracted tourists, fostering a significant tourism economy, its geographical peculiarities have also brought forth unique infrastructural and fiscal challenges. According to Meyer et al. (2018), Juneau's location in the challenging landscape of

Southeast Alaska means it is one of just two U.S. states that can only be reached by air or water, with Hawaii being the other.

In light of these challenges, sustainable development, aiming to meet present needs without compromising future generations, is paramount. Effective fiscal policies, including well-managed tourism taxes, are essential for balancing economic benefits with environmental and social goals (Gorina & Maher, 2018; Honadle et al., 2004). However, the impact of taxation on municipal revenues can be mixed, with higher taxes sometimes driving away businesses, while strategic incentives can attract economic activity (Bartik, 1994; Gorina & Maher, 2018).

Tourism is a significant driver of economic development, particularly in regions like Juneau, where it generates employment, foreign exchange, and infrastructure investment (Zhuang et al., 2019). The relationship between tourism taxation and municipal revenues highlights the importance of strategic fiscal policies for sustainable economic growth. This framework guides examining tourism taxes' impact on municipal revenues and sustainable development in CBJ, assessing current tax policies, and exploring community participation in policy development.

Schuler and Pearson (2019) informed that CBJ’s economy is primarily driven by public sector employment and tourism, especially from cruise ships, and the oil industry's indirect impact, faces potential risks from inadequate fiscal management, which could undermine sustainability projects and long-term goals. They highlighted the importance of whale-watching, supported by a stable humpback whale population, in boosting the economy and fostering environmental awareness. However, without careful planning to manage vessel traffic, the industry's future may be threatened, with negative repercussions for residents, businesses, public sector employees, indigenous communities, and other stakeholders.

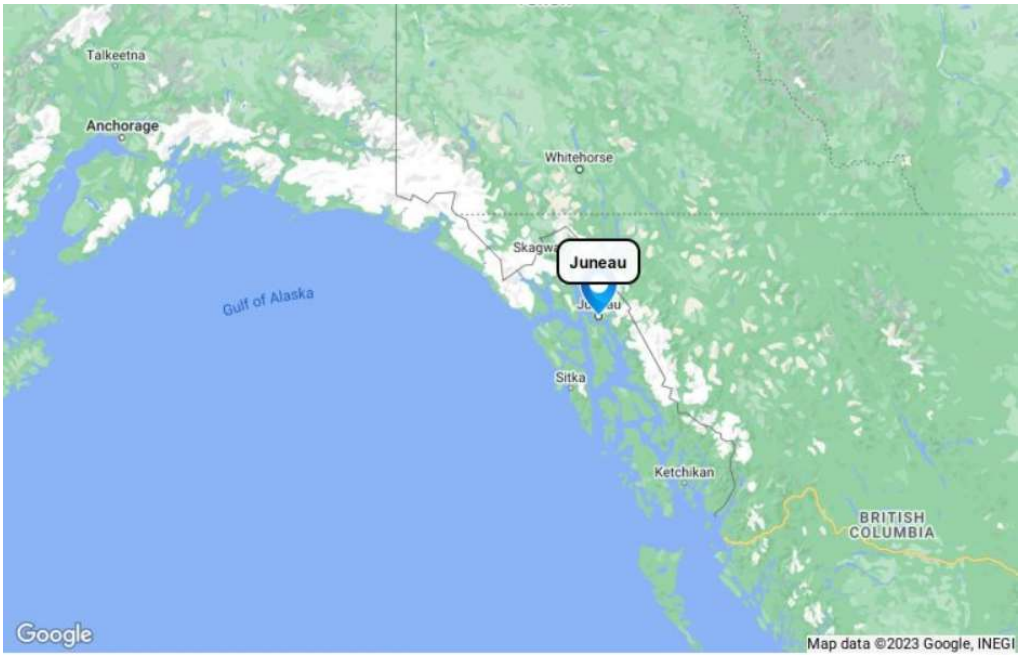
Like any other city, an economic downturn in Juneau would negatively impact various stakeholders, reducing job opportunities and income for residents, declining sales and potential business closures, particularly in tourism, and revenue cuts affecting public sector employees. Indigenous communities could struggle to preserve their traditions and economic activities, while educational institutions, non-profits, and the real estate sector would also face challenges. These economic changes in Juneau could have ripple effects at the state, national, and global levels.

Setting for This Study

An ever-increasing number of tourists and tour operators are recognizing the attractiveness of Alaska (Alaska Tourist Industry Association, 2023a; 2023b). Passengers arriving on cruise ships contribute about $2.2 billion to tourism spending in Alaska (Reynolds et al., 2024). The setting for this study, located near the center of the map in Figure 1, is CBJ in Southeast Alaska. Tourism-related taxation in CBJ is a critical component of Alaskan fiscal policy (Alaska Taxable, 2024). It is crucial for generating municipal revenue to fund public services and drive further economic growth and social equity (McKinley Research Group, 2022). Tourism-related taxation generates municipal revenues by capturing a portion of the economic benefits from tourism, which are vital for funding public services and infrastructure (Addison et al., 2018; Durbarry & Sinclair, 2021; Falk & Hagsten, 2020; Halim & Rahman, 2022; Sisneros-Kidd et al., 2019).

Figure 1

Location of Juneau, Alaska



Juneau was founded during the late 19th-century gold rush (Meyer et al., 2018). Its unique geographical isolation, bordered by water on one side and towering mountain ranges on the other, has historically presented opportunities and challenges. Juneau's natural beauty and deep Tlingit roots have drawn many visitors, supporting a robust tourism industry, yet its remote geography has created distinct financial and infrastructure issues. Situated in the rugged terrain of Southeast Alaska, Juneau is one of only two U.S. state capitals inaccessible by road from the continental U.S. (Meyer et al., 2018).

Juneau's economy is primarily driven by public sector employment and tourism, especially from cruise ships. The oil industry's indirect impact faces potential risks from inadequate fiscal management, which could undermine sustainability projects and long-term goals. Schuler and Pearson (2019) highlighted the importance of whale-watching, supported by a stable humpback whale population, in boosting the economy and fostering environmental

awareness. However, without careful planning to manage vessel traffic, the industry's future may be threatened, with negative repercussions for residents, businesses, public sector employees, indigenous communities, and other stakeholders. An economic downturn in CBJ would negatively impact various stakeholders, reducing job opportunities and income for residents, declining sales and potential business closures, particularly in tourism, and revenue cuts affecting public sector employees. Indigenous communities could struggle to preserve their traditions and economic activities, while educational institutions, non-profits, and the real estate sector would also face challenges. These economic changes in Juneau could have ripple effects at the state, national, and global levels.

Statement of the Problem

The problem addressed in this study was the lack of comprehensive empirical analysis on the impact of tourism-related taxation on municipal revenue, development, and sustainability in CBJ. Juneau's reliance on tourism, especially from cruise ships, necessitates an evaluation of how tourism taxes align with broader economic goals (Andronova & Sakharov, 2022; Cavaliere & Branstrator, 2024; Poort & Persson-Fischier, 2021; Schwoerer & Dawson, 2022; Wright, 2022). While tourism increases the local tax base, it also strains infrastructure and public services (Ahmed & Krohn, 1990; Wong, 1996). This complicates fiscal policy design, balancing economic growth, sustainable development, and equitable outcomes. Indigenous communities face increased cultural and economic vulnerabilities, highlighting the need for effective fiscal management to prevent resource exploitation and economic instability (Hakim & Dewi, 2021; Pole & Grizane, 2021; Schuler & Pearson, 2019).

Policymakers must understand the challenges and benefits of various taxation frameworks to promote tourism growth and municipal income stability (Adedoyin et al., 2021;

Litvin et al., 2006). Historical evidence (e.g., Ahmed & Krohn, 1990; Wong, 1996) suggests that unchecked tourism growth can overwhelm local resources, leading to higher maintenance costs, service degradation, and potential infrastructure failures. Juneau's heavy reliance on tourism creates economic vulnerability, especially in the cruise sector. The city risks fiscal instability if tourist numbers fluctuate, as shortfalls in tourism revenue could result in budget deficits and cuts to essential services. Moreover, indigenous communities are at particular risk of cultural degradation and economic exploitation as tourism expands.

Without effective fiscal policies, these vulnerabilities could exacerbate social inequities and erode cultural heritage (Hakim & Dewi, 2021; Pole & Grizane, 2021; Schuler & Pearson, 2019). If this issue remains unresolved, Juneau could face infrastructure strain, service collapse, diminished residents' quality of life, and reduced tourism appeal, leading to long-term economic decline. Indigenous communities could suffer cultural losses and economic marginalization, worsening social inequalities. Effective tourism taxation could stabilize municipal revenue, enhance infrastructure, protect indigenous heritage, and ensure sustainable tourism growth, providing policymakers with insights for aligning economic growth with sustainable development.

Purpose of the Study

This quantitative study explored the relationship between the variance in tourism taxation, volume, spending patterns, and the variance in municipal revenues in CBJ, Alaska. The study focused on understanding the impact of tax policies on municipal revenues, the influence of tourism patterns on tax revenue, and changes in visitor spending on tax collections. Tourism tax policies, municipal revenue figures, and key economic indicators were examined using time-series data spanning 15 years, from 2010 through 2024. The study relied on archival or

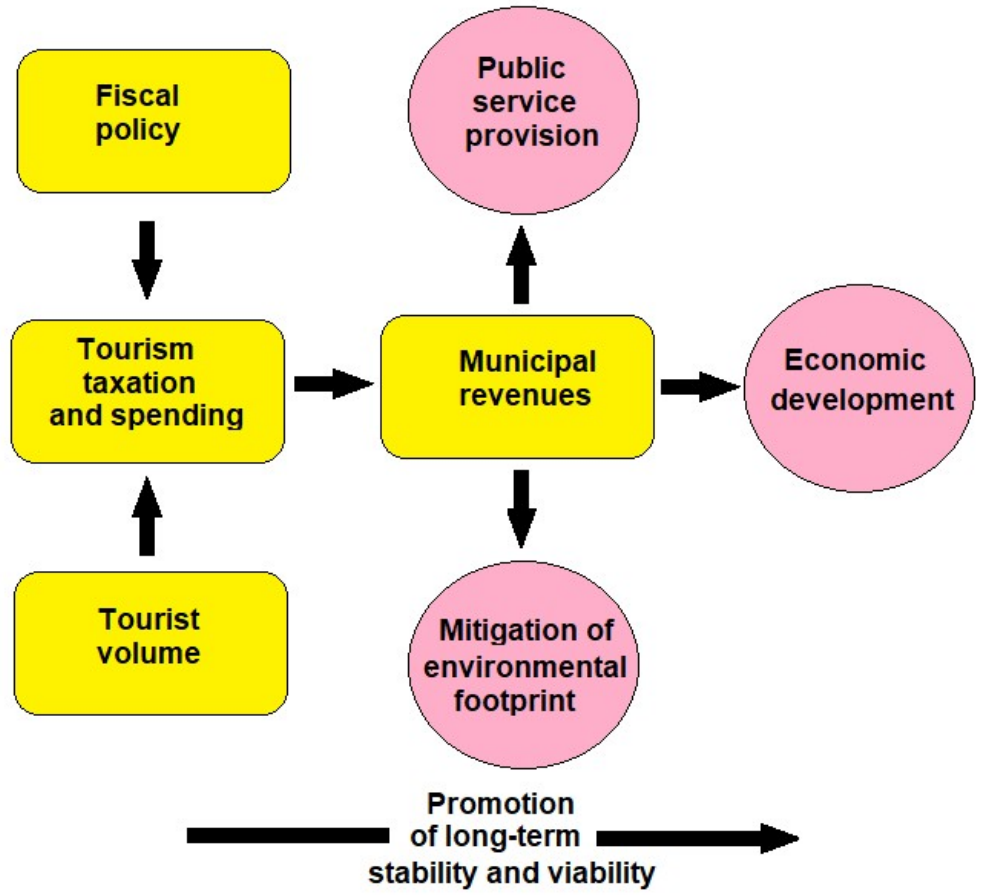
secondary sources for data collection. Statistical models were developed to analyze the data, accounting for potential confounding variables such as employment rates and business growth. Additionally, the analysis considered the impact of the COVID-19 pandemic in 2020 as a major disruptive event.

Conceptual Framework

The interaction between fiscal policy, municipal revenue, and tourism-related taxation (illustrated diagrammatically in Figure 2) formed the core of the conceptual framework. This framework assumes that tourism-related taxation is an essential component of fiscal policy to support economic development in tourist destinations. Fiscal policy, encompassing taxation and spending, governs the allocation of tourism-related revenue. Well-structured fiscal policies ensure that tourism taxes bolster public service provision and economic growth without negatively impacting the tourism sector (Şengel et al., 2023). Tourism is a critical economic driver that supports public services, including infrastructure projects (Siltanen et al., 2023). Tourism-related taxation includes levies on accommodations, tours, and other tourism-driven services, such as hotel (bed) and cruise ship taxes, which generate significant revenue from non-residents. Carefully designed tourism-related taxes provide municipalities with much-needed funds for developing infrastructure and providing public services without deterring tourists.

Figure 2

Conceptual Framework



Tourist-related taxes, or transient visitor levies, are taxes imposed on accommodation or other services tourists use. The taxes are used for various purposes, including funding local infrastructure and mitigating the adverse effects of tourism, such as environmental degradation and overcrowding. Tourism-related taxation is assumed to represent a crucial revenue source for local governments, especially in regions heavily dependent on seasonal tourism, such as CBJ (Addison et al., 2018; Durbarry & Sinclair, 2021; Falk & Hagsten, 2020; Halim & Rahman, 2022; Sisneros-Kidd et al., 2019). These principles are reflected in practical applications, as demonstrated by Zeng et al. (2022) and Swenson (2022), who found that targeted taxes fund

infrastructure improvements. Additionally, taxes levied on tourists may help regulate tourist volume, promote sustainable development, and mitigate tourism's negative impacts on local communities and the environment (Baggio, 2008; Lehloenya, 2017). McKinley Research Group (2022) emphasized the role of tourism revenue in supporting waste management systems to address the increased waste generated by tourists. In municipalities like Juneau, taxes exemplify how fiscal tools can align with sustainable tourism development principles to promote long-term stability and viability.

Figure 2 presents a conceptual framework based on the assumption that an effectively managed tourism-related taxation system significantly contributes to local revenues. Consequently, fiscal policy directly influences economic development and a municipality's capacity to deliver public services. Tourism spending and taxation from specific sources contribute significantly to municipal revenues in tourism-dependent regions where it helps to maintain public services like healthcare, education, and infrastructure. Integrating tourism-related taxation and spending into broader municipal revenue strategies helps sustain public services and promote sustainable development (Niekerk, 2014; Nzama, 2010). By leveraging tourism-related revenue through sound fiscal policy, municipalities can ensure long-term growth and avoid over-taxation pitfalls (Group NAO. 2020, November).

Tourism is assumed to be a key economic driver in Juneau because it generates a consistent income even during economic fluctuations (Falk & Hagsten, 2020; Seetaram, 2019). Şengel et al. (2023) also highlighted the importance of fiscal policy in maintaining economic stability through effective management of tourism-related revenue, especially during crises. Tourism is sensitive to fiscal policy because poorly calibrated taxes may reduce tourist volume; however, Falk and Hagsten (2020) concluded that well-structured taxation could promote

sustainable growth without deterring visitors, reinforcing the importance of balanced taxation strategies. Durbarry and Sinclair (2021) also concluded that tourism-related taxation directly bolsters municipal revenue, while effective fiscal policies ensure that these taxes do not harm the tourism sector. Falk and Hagsten (2020) highlighted the importance of maintaining balance, as overly aggressive taxation can deter tourists, while insufficient taxation may leave the municipality underfunded.

Introduction to Research Methodology and Design

Multiple linear regression (MLR) was initially considered as a possible analytical approach to address the PICOT question. MLR predicts a dependent variable (e.g., municipal revenue) using it, is linearly related to multiple independent predictor variables. (e.g., tourist taxation, tourist volume, and tourist spending). MLR and other approaches based on the analysis of ordinary least squares (OLS) using lagged time-series data (e.g., Granger causality models), based on outdated frequentist principles, developed over 100 years ago, have experienced a marked decline in relevance within business and economics research in the 21st century (Hair et al., 2022). Empirical models constructed using OLS are to statistical modeling what a sailing ship is to global travel – of historical importance, but rarely of use today because it has been superseded by modern methods less likely to result in disaster.

The chosen analytical method was partial least squares structural equation modeling (PLS-SEM), which is particularly well-suited for examining complex relationships involving observed and latent variables (Hair et al., 2022). PLS-SEM is a well-suited method for examining complex relationships involving observed and latent variables. This is especially important in investigating the multifaceted effects of tourism taxation on municipal revenue. The research encompasses various dimensions—tax policies, visitor numbers, economic indicators,

and infrastructure strain—which require a modeling approach capable of incorporating mediating and moderating variables. PLS-SEM offered a clear advantage in this context due to its robustness against normality violations, applicability to minor or moderate sample sizes, and efficiency in data-limited settings like the CBJ. Because it imposes minimal distributional assumptions, PLS-SEM is better equipped than more rigid statistical methods to handle real-world tourism and economic data (Hair et al., 2020).

Over the past 10 years, PLS-SEM has emerged as the leading methodology for empirical predictive modeling in tourism, hospitality, and economics. Studies by Abbasi et al. (2024), Al Badi et al. (2020), Assaker and O'Connor (2023), do Valle and Assker (2015), Elshaer et al. (2023), and Seyfi et al. (2024) have demonstrated its effectiveness in modeling tourism-related behavior and economic performance. Likewise, research in the domains of taxation and economics has increasingly adopted PLS-SEM, as evidenced in the work of Ahmed (2024), Borkowski (2023), Fedajeve et al. (2023), Leal-Rodriguez et al. (2023), and Putra et al. (2024), primarily due to its superior predictive capabilities and flexibility. By contrast, MLR, a technique developed over a century ago and based on traditional frequentist principles, has experienced a marked decline in relevance within these fields in the 21st century. The growing reliance on PLS-SEM in advanced business, economics, and public policy research highlights its methodological strength and alignment with the analytical requirements of this study.

Purposive sampling was used to select archived municipal financial and tourism data from CBJ, the State of Alaska, and other relevant sources. This approach is suitable because it ensures the data directly aligns with key study variables (Rai & Thapa, 2015), such as tourism-related tax revenues, visitor spending, and economic indicators, which are essential for answering the research questions. By deliberately selecting historical and financial records

relevant to assessing the impact of tourism taxation on municipal revenues and sustainability, this method helps exclude irrelevant data. As a non-random sampling technique, purposive sampling allows researchers to focus on specific data sources that meet predefined criteria.

Research Questions

Research grounded in time-series data analysis should ideally be structured around a PICOT framework—population, interventions, comparison, outcomes, and time—to ensure methodological clarity and rigor (McLinton,2022).

PICOT Research Question (PRQ)

Based on the archived records for CBJ, Alaska (population), to what degree does the variance in tourism-related taxation, tourist volume, and visitor spending, after controlling for covariates (interventions), before and after taxation policy changes and the COVID-19 pandemic (comparisons), predict the variance in municipal revenues generated by taxes (outcomes) between 2010 and 2024 (time)? Three sub-questions extend this inquiry.

RQ1

To what degree does the variance in tourism-linked taxation contribute to the variance in municipal revenue generated by taxes on tourists in CBJ, after controlling for covariates?

RQ2

To what degree does the variance in tourist volume contribute to municipal revenue generated by taxes on tourists in CBJ, after controlling for covariates?

RQ3

To what degree does the variance in tourist spending contribute to the variance in municipal revenue generated by taxes on tourists in CBJ after controlling for covariates?

Significance of the Study

The study's significance laid in examining tourism taxation's impact on municipal revenue, a vital consideration for policymakers crafting equitable fiscal policies. The research clarified how tourism taxation affects local businesses and sustainable development in Juneau, providing valuable insights for optimizing tax policies. Tourism is a critical economic driver that supports public services and infrastructure (Siltanen et al., 2023).

Assessing tourism tax roles in Juneau informed the city's financial sustainability, economic development, and investment decisions. This analysis will help devise taxation frameworks that promote tourism growth and ensure stable municipal income. Comparing Juneau with other cities facing similar challenges will provide valuable insights for enhancing revenue and economic development (Gnanapala & Sandaruwani, 2016). The findings elucidate the connections between tourism taxation, local businesses, and sustainable development in Juneau. Beneficiaries include policymakers, business owners, residents, and economic development professionals, who will gain insights into optimizing tourism taxation for balanced revenue generation and economic growth.

Effective taxation policies can improve public services and infrastructure, enhance residents' quality of life, and help them gain community support (Zaei & Zaei, 2013). Moreover, understanding tourism's diverse impacts enables planners to mitigate adverse effects and enhance positive outcomes, promoting societal advancement and effective tourism policies (Uslu et al., 2020). Tourism is a cornerstone of Juneau's economy, bolstering the hospitality sector and

stimulating various local industries. The seasonal influx of tourists drives significant economic activity and employment opportunities, although it also poses sustainability challenges due to its cyclical nature (Meyer et al., 2018).

Definitions of Key Terms

Fiscal Management

Fiscal management is a critical aspect of organizational and governmental operations, encompassing the efficient and effective management of financial resources. It involves planning, monitoring, and controlling financial activities to achieve an organization's objectives. One fundamental component of fiscal management is working capital management, which includes managing cash, receivables, and inventory (Ramzi et al., 2023)

Tlingit

The Tlingit are an indigenous people of the Pacific Northwest Coast, primarily in Southeast Alaska. They are known for their rich cultural traditions, complex social structure, and art, including totem poles and intricate carvings. The Tlingit language is part of the Na-Dene language family. The Tlingit are known for their solid social order and ability to resist American intrusion (Harring, 1989).

Tourism

Tourism is a multifaceted phenomenon that encompasses the activities of individuals who travel to and stay in places outside their usual environment for leisure, business, or other purposes. Today, the term "tourism" has evolved from its original meaning and is now associated with the act of traveling, as well as the broader concept of how individuals utilize their leisure time, as long as travel, whether international or within one's own country, is a component and at

least one night is spent away from home (Amoako et al., 2021; Meyer-Arendt et al., 1992; Xiao, 2022;).

Tourism Taxation

Tourism taxation encompasses various levies governments impose on tourism-related activities, including value-added taxes, hotel levies, infrastructure taxes, and specific activity charges (Lehloenya, 2017; Mahangila & Anderson, 2017). The rationale for such taxation is multifaceted: It is a significant government revenue source due to tourism's substantial income and employment contributions (Aryasih et al., 2023; Baggio, 2008). Additionally, these taxes help regulate visitor flow, promote sustainable development, and mitigate tourism's negative impacts on local communities and the environment (Baggio, 2008; Lehloenya, 2017).

Summary

The role of tourism taxation in bolstering municipal revenues and promoting sustainable economic development in Juneau, Alaska, was explored. Given the city's reliance on tourism, particularly from cruise ships, how tourism taxes contribute to financial stability and support sustainable growth were examined. Purposive sampling was used because it ensures the selected data directly aligns with key study variables like tourism-related tax revenues, visitor spending, and economic indicators. By deliberately targeting relevant historical and financial records, this method focuses on data essential for evaluating tourism taxation's impact on municipal revenues and sustainability while excluding irrelevant information.

This comprehensive approach provided valuable insights for optimizing tourism tax policies to support Juneau's long-term financial sustainability and economic growth. The significance of this study lies in its potential to inform policymakers and stakeholders about the impacts of tourism taxation on municipal revenues and economic development. The findings will

help devise tax policies that promote tourism growth while ensuring stable municipal income and community well-being. Beneficiaries include policymakers, business owners, and residents who will gain insights into optimizing tourism taxation for balanced revenue generation and economic growth, enhancing public services and infrastructure, and improving residents' quality of life.

Building on the established significance of tourism taxation in supporting municipal revenues and fostering sustainable economic growth in Juneau, Alaska, this chapter explored conceptual frameworks and empirical studies relevant to tourism taxation, economic development, and sustainability. By critically analyzing previous research, the literature review contextualized the study within broader academic discussions, identifying gaps and aligning the current research with ongoing debates on tourism taxation's economic and environmental impacts. This review provided the groundwork for the methodological approach and analysis in subsequent chapters. Chapter 2 presents a comprehensive review of existing literature to identify gaps in existing knowledge, establish the context for the study, and demonstrate how the study will contribute to the field.

Chapter 2: Literature Review

The problem identified in this study was the lack of comprehensive empirical analysis on the effects of tourism-related taxation on municipal revenue, economic growth, and sustainability in Juneau. The study aimed to evaluate the relationship between tourism taxation and municipal revenue in CBJ, focusing on the role of tax policies in enhancing Juneau's financial stability and sustainability. By addressing gaps in the literature, this research aimed to analyze the role of tourism taxation in funding public infrastructure, stabilizing municipal revenue, and aligning fiscal policies with sustainability principles to benefit local communities and protect environmental resources.

Tourism taxation is vital in balancing economic growth with sustainability and municipal revenue stability (Shekhar, 2024), particularly in tourism-dependent municipalities such as Juneau, Alaska. Tourism contributes over 30% to Juneau's local economy as a significant economic driver with key revenue streams derived from mechanisms like the Commercial Passenger Vessel (CPV) excise tax and bed taxes (Sisneros-Kidd et al., 2019). However, the seasonal nature of tourism, heavily reliant on cruise ship visitors, creates fiscal volatility that challenges municipal planning and resource allocation.

Existing studies highlight the potential of tourism taxation to support sustainability and economic stability through mechanisms like environmental levies and investments in green infrastructure (Guettabi, 2017; Pierce, 2022; Tovmasyan, 2021). However, revenue instability and environmental pressures from nature-based tourism necessitate evidence-based fiscal strategies that balance economic interests with ecological preservation (Agrusa et al., 2021; Schuler & Pearson, 2019). This study builds on global frameworks, including the United Nations Sustainable Development Goals (SDGs), to explore how tourism taxation in Juneau can foster

sustainable growth and enhance resilience against fiscal and environmental vulnerabilities. This research aimed to provide actionable policy recommendations to address Juneau's unique socioeconomic and environmental challenges by synthesizing empirical and conceptual insights.

Search Process

The literature review process involved collecting and analyzing relevant information from academic and non-academic sources. This review aimed to achieve two primary objectives: first, to analyze the role of tourism taxation in enhancing municipal revenue stability and funding public infrastructure in Juneau; second, to evaluate how fiscal policies align with sustainability principles to ensure that tourism-driven growth benefits local communities while safeguarding environmental resources. By fulfilling these goals, the review identified gaps in the current body of research and established a basis for creating customized policy recommendations.

To systematically examine the role of tourism taxation in municipal revenue, the literature review was organized into thematic sections that bridge conceptual insights with practical applications. By examining the direct and indirect impacts of tourism taxation on Juneau's fiscal health, the literature review provided insights for policymakers on aligning economic development with sustainability principles, ensuring that tourism remains a viable revenue source without compromising the social and environmental fabric of the community. The literature review examined how tourism taxation impacts municipal revenue generation and economic sustainability in CBJ, a city heavily reliant on tourism revenue to fund public services and maintain infrastructure. Juneau's economic landscape is shaped by its dependence on seasonal tourism, particularly cruise ship tourism, which, while economically beneficial, imposes pressures on local resources and infrastructure.

The literature review began with establishing conceptual frameworks centered on fiscal management and sustainable tourism principles, setting the foundation to understand tourism taxation as both an economic and a sustainability tool. This framing illustrated the potential alignment of fiscal strategies with sustainable development objectives. Following this, the review explored the historical context of tourism taxation, detailing the evolution of policies that shape current tourism economics. Various types of tourism taxes and their mechanisms, such as bed taxes, environmental levies, and sales taxes, were investigated with a focus on their fiscal and environmental impacts. Subsequent sections delved into the economic implications of tourism taxes on local economies, synthesizing case studies and empirical analyses that reveal both advantages and limitations for municipal budgets and economic stability. This discussion extended to fiscal policy and municipal revenue structures, examining how tourism taxes fit within broader fiscal strategies, particularly for tourism-dependent regions.

Further sections examined the unique economic impacts of tourism in small and remote cities, specifically in environmentally sensitive areas like Juneau, assessing how these unique fiscal dynamics influence local revenue sustainability. Challenges and criticisms of tourism taxation, such as tourist burden and potential deterrence, were examined, alongside strategies to balance economic growth with sustainability. Best practices in tourism tax utilization were researched to highlight existing literature on approaches supporting economic goals and sustainable tourism.

Additionally, the review investigated existing literature that discussed the socioeconomic equity of tourism taxes and their impact on local communities, including contributions to equitable development. The final sections of the literature review focused on legal and political considerations, outlining regulatory requirements and stakeholder interests essential for effective

implementation. The review concluded by synthesizing the literature search process, establishing a cohesive foundation for the research design and methodology in subsequent chapters, particularly concerning remote and environmentally sensitive tourism destinations.

The research leveraged specific databases to ensure access to high-quality, peer-reviewed academic sources. ProQuest and EBSCOhost, available through the National University Library, were chosen due to their extensive collections of scholarly articles, dissertations, and professional publications. These databases are renowned for their comprehensive coverage of diverse academic disciplines, making them ideal for locating peer-reviewed content relevant to the research topic.

The Roadrunner tool was also utilized to streamline the search process within the National University Library. Its integration with multiple databases allowed for efficient cross-platform searches, ensuring comprehensive coverage while minimizing redundancy. Roadrunner's filtering options, such as "Full text" and "Scholarly and peer-reviewed," further refine results to meet the criteria of academic rigor.

Google Scholar was chosen as a supplementary resource because of its accessibility and breadth of scholarly articles. Its ability to trace citations through the "cited by" feature enabled the identification of highly referenced works and more recent research connected to the topic. This feature was particularly valuable for discovering emerging trends and ensuring the inclusion of current data. Governmental websites were consulted for reliable, region-specific data, including those of the State of Alaska, CBJ, Alaska Department of Administration (DOA), and Juneau.org. These sites provided primary sources and official documentation that added contextual depth and credibility to the research.

Search terms employed in this review included the following: *municipal fiscal policy and revenue sources, the role of tourism in Juneau's economy, taxation and tourism in Juneau, impacts of tourism taxation on municipal revenues, strategies for maximizing tourism-related revenue, challenges and opportunities in tourism taxation, sustainability considerations in tourism taxation, coordination with regional tourism initiatives, leveraging tourism revenues for public investments, policy recommendations for tourism taxation in Juneau, balancing tourism growth and municipal fiscal stability, enhancing the visitor experience through tourism taxation,* and *evaluating the effectiveness of tourism taxation*. These terms facilitated comprehensive topic exploration, emphasizing credible and academically rigorous sources.

Tourism Taxation and Municipal Revenue

Sisneros-Kidd et al. (2019) emphasized the critical role of tourism taxation as a key component of fiscal policy in municipalities reliant on tourism. In CBJ, tourism is a significant economic driver, contributing over 30% to the local economy (Sisneros-Kidd et al., 2019). Despite its economic benefits, the seasonal nature of tourism and dependence on cruise ship visitors introduce fiscal volatility, posing challenges to municipal planning and sustainability efforts. Exploring the relationships between tourism taxation, municipal revenue, and sustainable development within the context of Juneau provides valuable insights into balancing economic growth with social equity and environmental sustainability.

Guettabi (2017) and Falk and Hagsten (2020) highlighted the critical importance of tourism as a source of municipal revenue, particularly in Juneau, where key revenue streams, such as the CPV excise tax and bed taxes, play a central role. Their research underscored the fiscal contributions of tourism-related taxes to local economic stability. Tovmasyan (2021) and Sarver (2020) further explored the design and implications of various tax models, including

environmental levies, which are essential for advancing sustainability initiatives. In Juneau, fiscal policies are closely aligned with sustainable development goals (SDGs), as evidenced by investments in environmentally conscious infrastructure projects like dock electrification. This initiative, which allows cruise ships to use shore power, significantly reduces environmental impact (Pierce, 2022). Such efforts illustrate Juneau's commitment to environmental sustainability and resource equity, aligning with global sustainability standards promoted by the United Nations World Tourism Organization (Group NAO. 2020)

Sisneros-Kidd et al. (2019) discussed the economic benefits and vulnerabilities associated with Juneau's reliance on nature-based tourism, particularly in the context of global environmental changes. In response, city officials and tourism stakeholders emphasized implementing sustainable tourism practices to mitigate environmental impacts and maintain the city's unique character and ecological integrity. These efforts align with similar pro-sustainability approaches seen among rural tourism operators in British Columbia, Canada, which reflect a shared commitment to balancing economic interests with environmental stewardship (Agrusa et al., 2021). Such initiatives resonate with the principles of sustainable development goals (SDGs), where preserving natural assets is critical for long-term viability.

Cruise (2022) and Mak (2008) provided comparative analyses of tourism taxation models, such as those implemented in Greater Victoria, which offer valuable insights for potential policy adjustments in Juneau. These studies emphasized the importance of tailoring taxation frameworks to local contexts to balance economic growth and sustainability. However, significant gaps remain in the literature, particularly in longitudinal studies and community-centered research that explore the long-term impacts and socioeconomic dynamics of tourism taxation. Addressing these gaps could enhance the applicability of conceptual frameworks to

Juneau's unique challenges, advancing the understanding of how tourism taxation fosters sustainable development and supports local economic growth.

Durbarry and Sinclair (2021) underscored the dual role of tourism taxation as a tool for economic stabilization and resource management, arguing that strategically structured taxes can generate essential revenue for public services without compromising a destination's competitiveness. However, Nepal and Nepal (2021) cautioned that poorly calibrated tourism taxes may inadvertently exacerbate social inequalities or deter visitors, highlighting the complexity of achieving optimal taxation models.

Schuler and Pearson (2019) highlighted the challenges tourism-dependent municipalities like Juneau face in managing revenue instability due to fluctuations in visitor numbers. This volatility can undermine local economic resilience and social equity, posing long-term fiscal planning and sustainable development risks. The instability threatens economic sustainability and exacerbates social disparities, making strategic fiscal policy essential. Schuler and Pearson (2019) emphasized the need for evidence-based strategies to stabilize municipal revenue, ensure equitable economic growth, and support sustainable development in tourism-reliant regions. These approaches are particularly relevant in addressing the unique socioeconomic challenges of tourism dependency in municipalities such as Juneau.

City and Borough of Juneau (n.d.) underscored the significant role of tourism in the interplay between fiscal policy, tourism taxation, and municipal revenue within the unique context of Juneau, Alaska. As a central tourism hub, Juneau is celebrated for its natural beauty, cultural heritage, and diverse activities. Located within the Tongass National Forest, the city attracts millions of visitors annually, substantially boosting its economy. Tourism accounts for over 30% of Juneau's economic output, contributing to employment opportunities and shaping

the socioeconomic structure of the community (Sisneros-Kidd et al., 2019). These dynamics exemplify how tourism is a cornerstone for Juneau's economic and social development.

Higgins-Desbiolles et al. (2019) emphasized the importance of aligning tourism strategies with the United Nations' sustainable development goals (SDGs), prioritizing community well-being and resource sustainability over unregulated growth. This framework is particularly relevant in Juneau, where preserving natural assets such as the Tongass National Forest and Mendenhall Glacier is critical for long-term viability. Practical applications of these principles include environmentally focused tourism taxes, such as fees allocated for shore power infrastructure to reduce cruise ship emissions (Pierce, 2022). By reinvesting tourism tax revenue into conservation efforts and public infrastructure, Juneau exemplifies how tourism growth can be managed without compromising ecological health.

Several research studies underscore tourism taxation's revenue-generating potential, exemplified by Saudi Arabia's tourism industry, which spurred regional development and economic activity (Naseem, 2021). Beyond revenue generation, tourism taxation facilitates infrastructure improvements across sectors such as water and sewage, roads, electricity, and public transport, collectively enhancing the quality of life for residents and visitors alike (Zeng et al., 2022). Moreover, sustainable tourism operators commonly commit to local job creation, contributing to regional economic growth (Zeng et al., 2022).

Fiscal Policy

Şengel et al. (2023) highlighted the importance of fiscal policy in addressing tourism's economic impacts through taxation and strategic budget allocation. This approach channels revenue into community services and infrastructure, enhancing visitor experience and resident welfare while fostering sustainable economic growth. For tourism-dependent municipalities like

Juneau, tourism taxes serve as critical tools for creating stable revenue streams and mitigating challenges such as resource strain, overcrowding, and environmental degradation (Borges et al., 2020; Chugunov et al., 2021). These strategies align with broader sustainability frameworks and emphasize balancing economic growth with environmental preservation.

Durbarry and Sinclair (2021) and Falk and Hagsten (2020) emphasized the importance of tourism taxes, levied on accommodations, excursions, and other related activities, enabling municipalities to fund infrastructure and public services without imposing financial burdens on residents. In Juneau, for instance, taxes on hotels, cruises, and tourism-related activities provide essential funding for local development, ensuring high-quality services and economic resilience. Properly calibrated taxes can generate significant revenue for infrastructure investments without deterring visitors (Borges et al., 2020; Swenson, 2022). Research further highlights that the transparent allocation and reinvestment of these revenues into projects such as sustainable transportation, environmental conservation, and public spaces are crucial for fostering support from the community and visitors (Adedoyin et al., 2023; Borges et al., 2020).

Juneau's implementation of tourism-specific taxes, such as the CPV excise tax, exemplifies the alignment of fiscal strategies with community and municipal priorities. Revenue from these taxes is reinvested into critical infrastructure projects, including the Seawalk and dock electrification, which address congestion, improve mobility, and support environmental sustainability (Nepal & Nepal, 2021; Sarver, 2020). These initiatives illustrate fiscal policy's dual role in mitigating tourism's environmental impacts while fostering long-term economic stability, aligning with sustainable development goals (Chugunov et al., 2021; Swenson, 2022).

Visitor demand sensitivity to tourism taxation varies depending on the destination and the tax structure. Excessively high taxes may deter inbound tourism, particularly in competitive

markets, while well-calibrated taxes reinvested into visible community benefits often gain public and visitors' acceptance (Adedoyin et al., 2023; Mak, 2008). Sustainability remains a central objective in tourism taxation, with environmental fees funding conservation efforts and visitor management strategies. For instance, Juneau's CPV excise tax supports initiatives such as air quality monitoring and implementing daily caps on cruise ship arrivals to mitigate environmental strain (Nepal & Nepal, 2021; Sarver, 2020). These measures align with broader sustainability goals, but their long-term success is contingent on effective community education and engagement (Riendeau, 2023).

Tourism taxes also enhance fiscal stability by diversifying revenue streams and addressing seasonal economic fluctuations (Durbarry & Sinclair, 2021; Guettabi, 2017). In Juneau, reinvesting these funds into public services and infrastructure, such as waste management systems and improved transportation, maximizes tourism's socioeconomic benefits (Zeng et al., 2022). Transparent and strategic allocation of tourism-generated revenue builds public trust and ensures that tourism remains a sustainable and integral component of the local economy (Nepal & Nepal, 2021).

Tourism Taxation

Tourism taxation is critical in fiscal policy, particularly for municipalities heavily reliant on tourism, such as Juneau. These taxes provide a framework for leveraging visitor-generated revenues to support sustainable development. Tourism-specific taxes, including bed taxes and environmental fees, contribute significantly to municipal revenues while fostering socioeconomic stability in high-traffic destinations (Tovmasyan, 2021). Fiscal policies in these regions aim to stimulate economic growth and ensure sustainable resource management by allocating tourism tax revenues to infrastructure development, public services, and community

welfare (Durbarry & Sinclair, 2021; Falk & Hagsten, 2020). For example, in Juneau, tourism taxes are strategically reinvested in local projects to mitigate environmental impacts associated with high visitor volumes (Naylor, 2020).

Tourism taxation is also a pivotal mechanism for addressing the socio-environmental challenges of high tourism demand. The interplay between tourism, taxation, and fiscal policy enables municipalities like Juneau to use visitor-generated revenues to promote sustainable growth. This approach integrates fiscal decentralization, sustainable tourism frameworks, and efficient administrative practices, aligning economic benefits with environmental and social equity goals. Fiscal decentralization empowers local governments to manage revenue sources tailored to their regional economic structures, enhancing their responsiveness to tourism dynamics (Chugunov et al., 2021). Empirical studies support this approach; for instance, Guettabi (2017) demonstrated that Alaskan municipalities reliant on tourism taxes maintained fiscal stability during state-level economic fluctuations, highlighting the value of localized fiscal control in tourism-dependent areas.

Sustainable tourism development frameworks further advocate balancing economic, environmental, and social goals to ensure long-term viability. Policies emphasizing community well-being and resource conservation align with these principles, often through reinvesting tourism tax revenues into green infrastructure and conservation initiatives (Higgins-Desbiolles et al., 2019; Swenson, 2022). Juneau provides a compelling example, with projects like dock electrification and trail maintenance mitigating tourism's ecological impacts while delivering community benefits. However, concerns about over-reliance on taxation persist. Poorly calibrated taxes risk deterring visitors, particularly in competitive tourism markets, underscoring the need for careful policy design (Nepal & Nepal, 2021).

Economic externality management concepts, rooted in Pigouvian principles, position tourism taxes as tools for internalizing the costs of tourism-related externalities, such as congestion and waste (Pigou, 1920). Environmental fees shift the financial burden of these externalities from residents to visitors, addressing ecological and social impacts without undermining tourism demand (Durbarry & Sinclair, 2021; Falk & Hagsten, 2020). Juneau's CPV excise tax exemplifies this approach by funding infrastructure improvements and environmental conservation. Nonetheless, equity concerns remain. Higgins-Desbiolles et al. (2019) cautioned against disproportionately affecting budget-conscious travelers or neglecting benefits for local communities, emphasizing the importance of equitable policy design.

Tourism taxation fosters economic stability, environmental sustainability, and social equity in tourism-dependent regions. Revenues from taxes, such as environmental fees, offset ecological degradation and enhance the value of tourism destinations through reinvestment in conservation projects (Sarver, 2020). Equitable tourism taxation policies promote fair wages, local employment, and community access to shared spaces, creating cohesive and resilient communities (Higgins-Desbiolles et al., 2019). In addition, reinvesting revenues into public amenities that benefit both residents and visitors, such as parks and community centers, improves the quality of life for local populations while ensuring the long-term viability of sustainable tourism practices (Lusiana et al., 2021).

Types of Tourism Taxes and their Mechanisms

In Alaska, tourism taxation became crucial after a drastic decline in oil revenue, with local governments turning to tourism taxes to stabilize budgets, especially in places like Juneau. Tourism taxes, as assessed by Guettabi, have kept local revenues steady despite state budget cuts, helping fund essential services and reinvestment in local infrastructure (Guettabi, 2017). The

economic impact is particularly significant in Juneau, where cruise-related fees generated approximately $22 million and sales taxes $18 million in 2023 (McDowell Group 2017, October). Juneau's CPV excise tax, or "head tax," captures revenue directly from cruise visitors, funding services strained by high visitor numbers, such as waste management, safety, and transportation infrastructure. This model ensures that the cost of maintaining city infrastructure is shared with the tourists who use it, rather than falling solely on residents (City and Borough of Juneau, n.d.).

Historical Context of Tourism Taxation

The development of tourism taxation in Alaska, particularly in Juneau, reveals how local governments have adapted fiscal strategies to harness new revenue streams as tourism has grown. Initially, Alaska's revenue depended largely on natural resources; however, as tourism expanded, especially with the growth of cruise tourism, taxation policies evolved to capture additional income to support municipal budgets and infrastructure (Naylor, 2020). As traditional industries, such as resource extraction, have become increasingly volatile, many municipalities have recognized the potential of tourism to provide a more reliable and resilient source of income. (Sharpley & Harrison, 2019; Shmygol et al., 2021). Alaska's experience illustrates a broader movement where visitor-based revenue strengthens local economies and supports sustainable practices.

This study draws extensively on sustainable tourism frameworks and fiscal decentralization concepts to explore tourism taxation's role in managing socioeconomic and environmental challenges. Pigou's (1920) foundational concept of externalities provided a basis for using tourism taxes to address congestion and environmental degradation. These principles are reflected in practical applications, as demonstrated by Zeng et al. (2022) and Swenson

(2022), who showed that targeted taxes fund infrastructure improvements and mitigate tourism's ecological footprint. In municipalities like Juneau, these taxes exemplify how fiscal tools can align with sustainable tourism development principles to promote long-term viability.

Fiscal decentralization further enriches this perspective, emphasizing the importance of local governance in managing tourism revenue effectively. Chugunov et al. (2021) highlighted that decentralization allows municipalities like Juneau, which heavily rely on self-generated revenue, to tailor tourism taxes to local needs. For example, the CPV excise tax directly supports public services and environmental projects, demonstrating how decentralization ensures that tourism revenue addresses infrastructure and community priorities. This localized approach reflects the interplay between fiscal policy and municipal governance in tourism-dependent economies.

Tourism taxation also evolves from economic concepts that regard taxes as tools for managing externalities while generating municipal revenue. Pigou's (1920) concept of taxing non-residents, such as tourists, remains relevant in addressing external costs without overburdening residents. Recent studies, such as those by Durbarry and Sinclair (2021), underscored the effectiveness of tourism taxes in supporting local development and mitigating environmental and social impacts. Additionally, Gooroochurn and Sinclair (2005) emphasized the importance of carefully calibrated tax policies to maintain destination competitiveness, a critical consideration for tourism-reliant economies like Juneau. Together, these frameworks highlight how tourism taxation can balance economic growth with sustainability and equity goals.

Challenges and Criticisms of Tourism Taxation

Tourism taxes significantly boost Juneau's municipal revenues, but community views on tourism reveal a nuanced balance between benefits and drawbacks. A 2023 survey in Juneau showed that 46% of residents felt both positive and negative tourism impacts, with crowding and congestion, especially downtown and at Mendenhall Glacier, cited as key concerns (McKinley Research Group, 2022). In response, Juneau has capped large cruise ships to five per day and developed visitor management strategies, with residents favoring tourism practices that reduce congestion and are funded through targeted tourism taxes.

However, challenges arise with balancing tax levels to avoid deterring visitors, as overly high taxes could harm competitiveness (Tovmasyan, 2021). Ensuring effective tax collection, particularly from transient lodging providers such as short-term rentals, like Airbnb, is another hurdle, where streamlined policies and robust compliance are essential (Guettabi, 2017). Additionally, ethical concerns highlight the need for community engagement in tourism tax decisions to ensure fair distribution of funds, supporting projects that align with local priorities and visibly benefit the community. Transparent use of tax revenue can foster public support and accountability, addressing critiques of tourism taxation policies.

Economic Impact of Tourism Tax Policy

Juneau's tourism tax revenue is crucial for supporting infrastructure, environmental sustainability, and community welfare, effectively balancing the economic benefits of tourism with residents' quality of life. Much of this revenue is directed toward infrastructure improvements, including trail maintenance, public transportation, and waste management, to handle high visitor volumes, particularly at attractions such as Mendenhall Glacier (McKinley Research Group 2024, January). With increased foot traffic and congestion, maintaining the

physical integrity of natural areas and urban infrastructure is essential to both visitor experience and resident quality of life. Public transportation improvements help alleviate road strain by providing efficient tourist options and reducing congestion in high-traffic areas. Waste management systems funded by tourism revenue ensure that popular sites remain clean and environmentally sustainable, addressing one of the main challenges of high tourism volumes in sensitive natural areas. These strategic investments enhance Juneau's infrastructure to accommodate visitors without compromising resident access to public spaces and services.

Juneau has also prioritized environmental initiatives through tourism tax revenue, notably by implementing shore power for docked cruise ships. This infrastructure enables ships to connect to local power sources, reducing the need to idle engines and thereby cutting air pollution significantly. Shore power projects respond to community concerns over emissions and align Juneau's tourism model with sustainable practices by reducing the environmental footprint of cruise ships in the city (City and Borough of Juneau, n.d.). Beyond shore power, other environmental projects funded by tourism taxes include air quality monitoring, expanded recycling facilities in high-tourism areas, and initiatives for water quality preservation. These investments in environmental infrastructure position Juneau as an eco-conscious destination, attracting environmentally aware travelers and setting a standard for responsible tourism. By directing tourism revenue into environmental sustainability projects, Juneau protects its natural resources, ensuring they remain an asset for future generations and strengthening its appeal to tourists who prioritize sustainability.

The CPV excise tax, often called the "head tax," is a critical revenue stream supporting public services and infrastructure heavily impacted by tourism. Each cruise passenger contributes directly to funding essential services, including road maintenance, public safety, and waste

management, through this tax (City and Borough of Juneau, n.d.). These funds ensure that the infrastructure and services required to meet high visitor demand do not burden residents with an undue financial burden. Additionally, revenue from the head tax has facilitated public projects like the Seawalk, a waterfront pathway that improves pedestrian access to downtown, reducing congestion and enhancing the tourism experience. By channeling head tax revenue into projects that benefit residents and visitors, Juneau demonstrates a balanced approach to tourism revenue, enriching community infrastructure while enhancing the visitor experience.

Tourism taxes contribute significantly to Juneau's economic resilience by diversifying revenue sources, which helps reduce the city's dependence on volatile state funding. The city reinvests these funds in public services, cultural preservation, environmental initiatives, and community health, benefiting residents directly while enhancing Juneau's appeal as a sustainable destination (McKinley Research Group 2024, January). This revenue stability enables Juneau to fund essential services and adapt to economic fluctuations, ensuring consistent support for public needs. By building a diversified financial base through tourism taxes, Juneau can plan and fund long-term projects that benefit the broader community, such as healthcare facilities, emergency response services, and recreational amenities. This economic resilience strengthens Juneau's capacity to sustain services and quality of life, irrespective of external economic pressures.

When strategically utilized, tourism tax revenue supports economic resilience and facilitates a development strategy that fosters diverse industries and sustainable growth. This approach ensures year-round economic stability and strengthens the community's foundation for long-term success (Capocchi et al., 2020; Spencer & Nsiah, 2012). Community-centered projects funded by tourism revenue, such as local arts initiatives, cultural programs, and small business

support, foster economic stability and reduce dependency on seasonal tourism cycles (Capocchi et al., 2020).

The arts and culture sector underscores the economic potential of community-driven initiatives. For example, nonprofit arts and culture organizations and their audiences generated $151.7 billion in economic activity in 2022, supporting 2.6 million jobs and $29.1 billion in tax revenue in the United States (Americans for the Arts 2023). Similarly, the United States (U.S.) Bureau of Economic Analysis (2024) reported that arts and cultural economic activity grew by 4.8% in 2022, outpacing the broader economy's growth of 1.9%. Furthermore, the Arts and Culture in Economic Development Policy report by the Congressional Research Service (2023) noted that arts and cultural activity accounted for 4.4% of U.S. GDP in 2021, equivalent to $1.02 trillion.

Pierce (2022) illustrated the strategic use of tourism taxes in Juneau to fund environmental stewardship initiatives, including habitat restoration, pollution control, and eco-friendly infrastructure. For example, the dock electrification project supplies shore power to cruise ships, significantly reducing idling and air pollution. These initiatives address community concerns regarding environmental impacts while reinforcing Juneau's identity as an eco-conscious destination. By channeling tourism revenue toward environmental protection, the city exemplifies a sustainable model that integrates economic growth with ecological preservation, ensuring the long-term viability of its natural assets (Pierce, 2022).

Tourism, S. (2022) highlighted the role of tourism taxes in fostering cultural and educational tourism in Juneau by supporting museums, cultural centers, and interpretive programs that emphasize local history, indigenous cultures, and natural landscapes. These initiatives offer immersive experiences that enhance visitors' understanding of local traditions

while fostering community pride. Investments in cultural tourism appeal to culturally oriented visitors and generate income and employment opportunities for local artisans, historians, and educators, aligning tourism growth with preserving heritage and community development (Tourism, 2022).

City and Borough of Juneau (n.d.) illustrated the use of tourism taxes to fund strategic public transportation improvements, including expanded bus services, shuttle routes to popular attractions, and eco-friendly transit options. One is the Seawalk, a pedestrian pathway connecting downtown attractions. These investments reduce traffic congestion and enhance mobility, benefiting residents and tourists. By prioritizing sustainable transit options, Juneau addresses the logistical and environmental challenges associated with tourism growth, aligning infrastructure development with sustainable tourism goals (City and Borough of Juneau, n.d.).

McKinley Research Group (2022, December) emphasized the role of tourism revenue in supporting waste management systems to address the increased waste generated by tourists, particularly in high-traffic public and natural areas. Initiatives such as increased waste collection frequency, recycling stations, and expanded disposal facilities are critical for preserving Juneau's natural beauty and ensuring a positive visitor experience. These efforts reflect Juneau's commitment to sustainable tourism practices that effectively mitigate environmental impacts while supporting long-term environmental integrity (McKinley Research Group, 2022, December).

McKinley Research Group (2024, January) highlighted using tourism taxes to strengthen Juneau's emergency preparedness and disaster management capabilities. Investments in public safety infrastructure, including emergency response equipment, first-responder training, and advanced communication systems, enhance resilience during peak tourist seasons. These

measures address the increased demand on emergency services caused by higher visitor volumes, ensuring community safety while reinforcing Juneau's ability to manage tourism responsibly (McKinley Research Group, 2024, January).

Juneau has integrated sustainable tourism initiatives into its tax framework, ensuring that tourism growth aligns with long-term community and environmental health. Revenue supports projects mitigating tourism's impact on natural areas, such as trail maintenance, ecosystem monitoring, and sustainability-focused infrastructure. These projects, informed by community input, prioritize balance between tourism and ecosystem preservation. By funding sustainability, Juneau strengthens its eco-friendly image and supports tourism that respects local resources, promoting a tourism model focused on responsible development and conservation.

In addition to infrastructure and environmental investments, Juneau directs tourism revenue to community health and social services, addressing the increased demand on these resources from seasonal visitors. High visitor numbers strain healthcare and emergency services, which tourism taxes help alleviate by funding healthcare staffing, emergency training, and social services (McKinley Research Group 2022, December). These investments maintain service quality for residents and enhance Juneau's appeal as a secure destination. By funding health initiatives, Juneau ensures that tourism supports community resilience and well-being.

Tourism taxes support local business development and economic diversification in Juneau, reducing reliance on tourism by funding alternative sector growth through small business grants, entrepreneurship programs, and local arts initiatives (McKinley Research Group 2024, January). These programs provide year-round employment and income opportunities, strengthening economic stability. By fostering a diversified economy, Juneau builds resilience

against seasonal tourism fluctuations, benefiting residents and creating a sustainable, well-rounded economic landscape.

Tourism tax revenue in Juneau also funds cultural and educational projects that enhance the visitor experience while promoting local heritage. This includes support for museums, cultural sites, and educational programs emphasizing Juneau's natural and cultural assets (McDowell Group 2017, October). These initiatives attract culturally oriented tourists and benefit local artisans and educators economically. By investing in cultural tourism, Juneau promotes an enriched tourism experience while ensuring its heritage and identity remain central to tourism development.

To meet the demands of high visitor volumes, Juneau uses tourism tax revenue for infrastructure upgrades, including expanded road networks, improved public transit, and upgraded port facilities. Projects like pedestrian pathways and enhanced signage make high-traffic areas safer and more accessible (City and Borough of Juneau, n.d.). These improvements benefit residents and tourists by managing congestion and maintaining public safety. By integrating infrastructure upgrades with tourism revenue, Juneau builds a responsive, resilient tourism model that balances visitor needs with local quality of life.

Environmental conservation projects funded by tourism taxes, such as habitat restoration, pollution control, and eco-friendly infrastructure, protect Juneau's natural resources. Dock electrification, which enables ships to use shore power, significantly reduces emissions (City and Borough of Juneau, n.d.). These conservation efforts, aligned with community priorities, enhance Juneau's reputation as a sustainable destination. By focusing on environmental projects, Juneau is committed to preserving its ecosystems, ensuring that tourism remains compatible with environmental health.

Finally, passenger fees are a critical funding source for public safety and infrastructure maintenance in Juneau. These fees support essential services like increased police presence, emergency medical response, and maintenance of heavily used infrastructure, ensuring a high quality of public spaces (City and Borough of Juneau, n.d.). By funding public safety with passenger fees, Juneau addresses the immediate demands of tourism while maintaining service standards for residents, creating a balanced approach to tourism-driven infrastructure.

Municipal Revenue

Municipal revenue, including general funds and tourism-specific sources, is crucial for maintaining essential services like healthcare, education, and infrastructure. In regions where tourism is a significant economic driver, these taxes significantly contribute to municipal budgets, helping to maintain public services and support sustainable growth initiatives (Niekerk, 2014; Nzama, 2010). Effectively managed through fiscal policy, tourism taxation stabilizes local economies by providing a reliable revenue stream, even during economic fluctuations, reinforcing tourism's role as a central component of Juneau's economy (Falk & Hagsten, 2020).

This framework posits that fiscal policies are crucial for bolstering municipal services and fostering economic growth. Şengel et al. (2023) underscored the significance of effectively managing tourism revenue, especially during economic recession. While inadequately designed tax policies risk lowering visitor rates, Falk and Hagsten (2020) suggested that well-calibrated tax approaches can stimulate growth without negatively impacting tourist interest. This study's conceptual framework emphasizes tourism taxation's fiscal and economic implications within Juneau's municipal structure. While alternative frameworks, such as sustainable tourism development and fiscal decentralization, focus on environmental or administrative autonomy, the chosen framework highlights tourism taxation's direct financial impact on municipal revenue and

infrastructure development. This approach enables a targeted analysis of how tourism taxes, including hotel and cruise levies, support public services and infrastructure, aligning with the study's applied focus (Durbarry & Sinclair, 2021; Falk & Hagsten, 2020; Şengel et al., 2023). The framework is guided by a gap in the literature on the interplay between tourism taxation, fiscal policy, and municipal revenue, shaping research questions on tourism tax revenue's influence on economic growth in Juneau.

The Relationships between Concepts

The core of this study's framework lies in the interaction between tourism taxation, municipal revenue, and fiscal policy. Research by Durbarry and Sinclair (2021) indicated that tourism taxes bolster municipal revenue, while sound fiscal policies ensure these taxes do not adversely affect the tourism industry. Falk and Hagsten (2020) highlighted the necessity of balancing tax levels to avoid deterring tourists while ensuring adequate municipal funding. Maintaining this balance is essential to economic stability for cities like Juneau, where tourism is a vital revenue source. According to Group NAO. (2020), a well-managed tourism tax system can substantially contribute to municipal finances. Leveraging tourism revenue through prudent fiscal policy allows for sustainable growth and minimizes over-taxation risks. This framework thus provides a comprehensive approach for examining the role of tourism taxation in municipal revenue and economic stability, particularly in a tourism-dependent region like Juneau, where careful fiscal planning supports sustainable development (Falk & Hagsten, 2020; Şengel et al., 2023).

Tourism taxation offers a multifaceted approach to addressing economic, environmental, and social challenges in tourism-dependent regions. By carefully balancing tax levels, reinvesting in visible and sustainable infrastructure, and involving local communities,

destinations like Juneau can foster a sustainable tourism economy that supports residents and visitors. Aligning tourism tax policies with sustainable development goals enhances resilience, promotes equitable growth, and preserves natural resources essential for future tourism. Ultimately, effective tourism taxation contributes to a balanced local economy, sustainable community development, and a positive visitor experience.

Relevance of the Framework to the Study

The conceptual framework for this study examines the relationship between fiscal policy, tourism taxation, and municipal revenue within the unique socioeconomic context of Juneau, Alaska. This framework is a foundational lens to investigate how tourism taxation influences municipal revenue, funds critical infrastructure, and supports sustainability in a tourism-dependent economy. Juneau's reliance on tourism is well-documented (Sisneros-Kidd et al., 2019). The industry fuels over a third of the city's economy, driven primarily by cruise ship visitors who comprise most of the annual tourists (McKinley Research Group 2024). A Juneau Economic Development Council report highlighted tourism as one of the largest employment sectors, supporting thousands of seasonal and permanent jobs (Juneau Economic Development Council, 2024).

The CPV excise tax, commonly called the "head tax," is a vital revenue stream supporting public services and infrastructure impacted by tourism. Each cruise passenger contributes to essential services funding, including road maintenance, public safety, and waste management through this tax (City and Borough of Juneau, n.d.). These funds help ensure that the infrastructure and services needed to meet high visitor demands do not burden residents financially. Revenue generated from the head tax has also enabled public projects. One is the

Seawalk, a waterfront pathway that improves pedestrian access to downtown, alleviating congestion and enhancing the tourism experience.

Furthermore, the Alaska Department of Commerce data indicates that over 1.3 million cruise visitors typically arrive in Juneau annually, generating significant revenue in lodging, dining, retail, and tour operations (McKinley Research Group, 2024). This dependency underscores the importance of a specialized fiscal approach recognizing tourism taxes as a substantial funding source for essential public services and infrastructure. The framework emphasizes the direct link between tourism-generated revenue and the municipality's economic resilience. Given the environmental sensitivity of Juneau, sustainable tourism practices are also crucial. This framework incorporates sustainable tourism as a central element, demonstrating Juneau's commitment to balancing economic growth with environmental conservation, especially as the city faces challenges related to climate change and natural resource management.

This framework aids in defining the study's problem statement by identifying a research gap. Specifically, the problem centers on the lack of comprehensive empirical analyses on the impact of tourism taxation on municipal revenue in tourism-dependent communities. By pinpointing tourism taxes as an underexplored factor in municipal fiscal sustainability, the framework shapes a problem statement that addresses this empirical gap, focusing on how Juneau could leverage tourism taxes for economic stability. Additionally, the framework's focus on fiscal policy as a mechanism for economic and sustainable management sheds light on the specific challenges Juneau faces. These challenges include sustaining public services and infrastructure while addressing environmental impacts and framing the problem statement within the complex fiscal and ecological intersections of tourism and municipal revenue.

The framework provides a structured rationale for the study's purpose: to examine the relationship between tourism taxation and municipal revenue. It underlines explicitly the importance of targeted tourism taxes, such as hotel and visitor fees, as tools for generating funds essential to Juneau's fiscal health and infrastructure development. Economic and environmental sustainability are emphasized within this framework, guiding the purpose statement to address not only revenue generation but also the role of sustainable tourism taxes in achieving long-term fiscal stability for Juneau. This approach is intended to resonate with the interests of residents and policymakers who are invested in the city's fiscal and environmental health.

The framework supports research on fiscal policy's role in local development, focusing on the contributions of tourism taxes to Juneau's budget and the impact of tourism revenue on public services. The research questions will explore tourism revenue's financial, infrastructural, and community benefits, emphasizing balancing economic gain with environmental sustainability. By situating tourism taxation within a fiscal policy context, this study aligns with empirical evidence supporting the role of tourism taxes in promoting economic resilience. Previous research (e.g., Naseem, 2021; Zeng et al., 2022) illustrated that well-designed tourism taxes can generate substantial funds necessary for municipal needs, thus reinforcing the framework's relevance to Juneau's context as a model of effective fiscal policy. Additionally, the study is grounded in sustainable development principles promoted by global tourism management organizations, such as UNWTO. This connection emphasizes the dual role of tourism taxes as revenue sources and instruments of environmental stewardship and socioeconomic balance.

In summary, the selected conceptual framework offers a robust structure for evaluating the multi-dimensional impacts of tourism taxation in Juneau. By merging fiscal policy analysis

with sustainability principles, the framework effectively guides the study toward addressing tourism's interconnected economic, environmental, and social dimensions. This approach strengthens the study's relevance and provides a comprehensive basis for its problem statement, purpose, and guiding research questions.

Agreements and Divergences

The literature reveals agreements and divergences regarding tourism taxation's design, implementation, and impacts. A central area of divergence concerns optimal tax structures. Nepal and Nepal (2021) cautioned that high visitor fees may deter tourists, especially in competitive markets sensitive to price fluctuations. In contrast, Higgins-Desbiolles et al. (2019) advocated progressive taxation models prioritizing equity and community benefits, even at the potential expense of market competitiveness. For Juneau, the challenge lies in balancing sustaining visitor demand and addressing local economic, social, and environmental priorities. This underscores the importance of tailored taxation strategies that align with regional needs and goals.

Debates also extend to the role of tourism taxes in promoting social equity. While most studies emphasize economic and environmental impacts, Higgins-Desbiolles et al. (2019) highlighted their potential to support fair wages and enhance community access to tourist spaces. This contrasts with Falk and Hagsten's (2020) traditional focus on economic efficiency over distributive outcomes. Juneau navigates these competing perspectives through a hybrid approach incorporating public engagement in tax allocation decisions, blending equity considerations with fiscal imperatives (City and Borough of Juneau, n.d.).

Methodological divergences emerge in assessing the long-term impacts of tourism taxation. Meyer and Neethling (2024) proposed financial health indices to evaluate municipal performance, while Riendeau (2023) underscored the value of qualitative community insights.

These differing approaches highlight the complexity of analyzing the relationship between tourism taxation and municipal revenue, necessitating advanced tools such as PLS-SEM.

Despite these divergences, there is convergence on the utility of sustainable tourism frameworks and fiscal decentralization in informing effective fiscal strategies. Investments in green infrastructure and local autonomy in managing tourism revenue highlight the potential of tourism taxes to foster balanced growth and resilience. There is a consensus on the effectiveness of tourism taxes in stabilizing municipal revenue, funding essential services, and addressing environmental externalities (Durbarry & Sinclair, 2021; Guettabi, 2017; Sarver, 2020). Transparency and public involvement are critical for successful tourism tax policies (Higgins-Desbiolles et al., 2019; Zeng et al., 2022).

However, tensions persist between prioritizing conservation efforts versus broader infrastructure funding (Chugunov et al., 2021; Swenson, 2022). Similarly, while progressive taxation models promote equity (Higgins-Desbiolles et al., 2019), others emphasize economic efficiency (Falk & Hagsten, 2020). The debate over whether high tax rates deter visitors reflects conflicting findings, with Nepal and Nepal (2021) expressing caution, while Durbarry and Sinclair (2021) found minimal impact on demand. Synthesizing these agreements and disagreements provides a foundation for developing nuanced, context-specific tourism tax strategies in Juneau that balance fiscal priorities with sustainability and equity.

Best Practices

Juneau's strategy to diversify tourism revenue streams strengthens its economic resilience, reducing reliance on seasonal income and stabilizing funding for public services (McKinley Research Group 2024). Revenue sources, including sales taxes and fees on tourist activities, ensure consistent income, enabling flexible budgeting and sustainable growth. This

financial strategy supports continuous investment in long-term projects that benefit residents and tourists.

Allocations from tourism taxes are directed toward education and workforce development, funding training in hospitality, environmental management, and cultural tourism. This empowers residents with relevant skills, fostering local employment opportunities and contributing to economic diversification (City and Borough of Juneau, n.d.). Juneau also dedicates tourism revenue to sustainability projects, funding trail maintenance, erosion control, and habitat preservation to mitigate visitor impacts on local ecosystems. Public education campaigns promote responsible tourism, reinforcing the city's commitment to environmental stewardship (City and Borough of Juneau, n.d.).

Visitor management strategies funded by tourism taxes aim to preserve residents' quality of life by controlling tourist density and educating visitors on respectful behavior. Limiting daily cruise ship arrivals and creating designated pathways are examples of efforts to reduce congestion (McKinley Research Group, 2022). Additionally, tourism taxes fund public space enhancements like parks, waterfronts, and scenic viewpoints, improving the experience for residents and visitors alike.

Technology and digital infrastructure investments help improve visitor services by offering real-time information on attractions and transportation. Enhanced connectivity and data collection aid CBJ in monitoring visitor patterns, managing peak times, and adapting to changing tourism demands sustainably (City and Borough of Juneau, n.d.). Tourism revenue also supports cultural heritage projects, preserving historical sites, supporting indigenous communities, and promoting local arts. This focus on cultural preservation enriches the visitor experience and strengthens Juneau's appeal to culturally motivated tourists (McKinley Research Group 2022).

In response to climate change, Juneau uses tourism tax revenue for climate resilience projects, such as stormwater management and shoreline reinforcement, which protect community assets and tourism infrastructure (City and Borough of Juneau, n.d.). Tourism taxes are also allocated to visitor facilities, such as restrooms, signage, and seating areas, improving comfort and reducing congestion (McKinley Research Group 2024, January). Waste reduction initiatives funded by tourism taxes, including recycling and promoting reusable materials, mitigate tourism's environmental footprint and appeal to eco-conscious visitors (McKinley Research Group 2022, December).

Effective use of tourism revenue maximizes community benefits and promotes sustainable tourism. Best practices emphasize reinvestment in infrastructure, environmental conservation, and marketing to support long-term growth. Transparent allocation, community engagement, and legislative support are essential to maintaining public trust and ensuring socioeconomic equity, benefiting tourists and residents (Guettabi, 2017; Tovmasyan, 2021).

Authority, Audience, and Bias

The literature reviewed in this study encompasses peer-reviewed journal articles, government reports, and institutional publications, each reflecting distinct levels of authority. Peer-reviewed studies, such as those by Higgins-Desbiolles et al. (2019) and Nepal and Nepal (2021), provide rigorous methodologies and academic validation, establishing their credibility within sustainable tourism and fiscal policy analysis. These sources are highly authoritative due to their empirical foundations and contributions to theoretical or conceptual advancements. Government reports, including the McKinley Research Group 2024), offer localized and empirical data specific to Juneau, presenting valuable insights into municipal governance and tourism impacts. However, their authority may be influenced by a tendency to emphasize data

that supports existing policies or funding priorities. Similarly, institutional publications, such as those from Group NAO. (2020), present globally recognized frameworks for tourism management. While these are authoritative on an international scale, their generalized findings may limit applicability to the unique socioeconomic and environmental conditions of Juneau.

The intended audience of these sources significantly influences their focus and presentation. Academic articles primarily target scholars and students, emphasizing theoretical and conceptual models, empirical methodologies, and critical analyses. These works often employ technical language and assume a baseline familiarity with fiscal policy and sustainable development concepts. Conversely, government and municipal reports are designed for policymakers, local stakeholders, and residents. Their accessible format and practical focus aim to inform decisions and garner public support, often prioritizing actionable insights. Institutional publications cater to a broader audience, including global policymakers and tourism professionals, offering best practices and policy recommendations. However, these works may lack the specificity to address localized challenges in municipalities like Juneau.

The sources reviewed also exhibit varying biases and points of view shaped by their origins and objectives. Academic sources often reflect their authors' theoretical or conceptual leanings, such as the progressive emphasis on social equity and environmental sustainability seen in Higgins-Desbiolles et al. (2019). While valuable, this perspective may understate the importance of economic efficiency, as highlighted by Falk and Hagsten (2020). Similarly, Nepal and Nepal (2021) emphasized caution against high tourism taxes to maintain market competitiveness, reflecting a bias favoring economic considerations over sustainability goals.

Policy-driven biases are evident in municipal reports like the CBJ Cruise Impacts Report, which often justify current policies or advocate for additional funding. These reports highlight

tourism taxation's benefits while underexploring potential resident opposition or alternative fiscal strategies. Institutional publications, such as UNWTO's, advocate for global sustainable development principles. Although useful, they may overlook smaller municipalities' socio-political and economic nuances, including Juneau. Regional context biases are also evident in case studies like Tovmasyan's (2021) analysis of Armenia and Naseem's (2021) examination of Saudi Arabia. These studies provide insights into the effectiveness of tourism taxes within specific cultural and economic contexts. However, they may risk oversimplifying the complexities of Juneau's fiscal dynamics when applied without contextual adaptation.

The varying authority, audience, and biases in the sources necessitate a critical synthesis to address their limitations effectively. While government and institutional sources provide practical insights, their findings should be balanced with peer-reviewed studies to ensure theoretical robustness and methodological rigor. Integrating the academic depth of scholarly articles with the accessibility of government reports enhances the study's relevance for academic and policy-oriented audiences. Addressing biases in global frameworks, local reports, and academic perspectives is essential for a nuanced analysis that aligns tourism taxation policies with Juneau's unique socioeconomic and environmental priorities. Ultimately, the diverse sources reviewed provide a comprehensive foundation for the study, and careful contextualization ensures the development of practical, equitable, and sustainable fiscal policy recommendations tailored to Juneau. This approach balances academic rigor with practical application, ensuring the study's relevance and impact.

Summary

The literature review investigates the multifaceted impact of tourism taxation on municipal revenue, sustainability, and economic growth in Juneau, Alaska. Tourism, a critical economic driver contributing over 30% of Juneau's economy, heavily relies on seasonal cruise ship visitors, creating fiscal volatility and environmental pressures. Tourism taxes, such as the CPV excise tax, are vital in stabilizing municipal revenue and funding public infrastructure while addressing ecological concerns. Studies highlight the alignment of Juneau's fiscal policies with the United Nations Sustainable Development Goals (SDGs), focusing on environmental conservation and infrastructure improvements like dock electrification and trail maintenance. These initiatives exemplify the city's efforts to balance economic growth with sustainability and community well-being. Challenges, such as potential deterrence of visitors by high tax rates and socioeconomic inequities, underscore the need for strategic and community-centered fiscal policy frameworks.

The analysis emphasizes the importance of fiscal decentralization and sustainable tourism principles in shaping effective tourism tax strategies. Best practices include reinvesting revenue in environmental projects, public services, and community development, enhancing resident quality of life and the visitor experience. Transparent allocation of funds toward projects such as waste management, transportation, and cultural preservation strengthens public trust and supports equitable growth. The review also underscores integrating technology and visitor management to address congestion and environmental strain. Methodological gaps, including the need for longitudinal studies and equity-focused research, provide avenues for further exploration. The study demonstrates that well-designed tourism taxes can effectively support

Juneau's economic resilience, infrastructure development, and environmental stewardship when aligned with sustainability and fiscal stability.

Conclusion

The literature underscores the critical role of tourism taxation as a fiscal tool for balancing economic, environmental, and social priorities in tourism-dependent regions like Juneau. Key themes include the stabilizing influence of tourism taxes on municipal revenue, their potential to fund infrastructure and environmental conservation, and their ability to promote equitable community development. Frameworks such as fiscal decentralization, sustainable tourism development, and economic externality management provide conceptual grounding for understanding how targeted taxes can enhance financial stability while addressing tourism's environmental and socioeconomic impacts. The reviewed studies emphasize the importance of carefully calibrated tax policies that align with local priorities, demonstrating their effectiveness in fostering long-term sustainability and resilience.

Agreements in the literature point to the effectiveness of tourism taxes in stabilizing municipal budgets, funding critical infrastructure, and addressing externalities. However, divergences remain regarding optimal tax structures, with debates centering on balancing equity and economic efficiency. While progressive taxation models emphasize fairness, others prioritize market competitiveness, particularly in sensitive tourism markets. Methodological variations also highlight the need for diverse analytical tools like financial indices to assess tourism taxes' multifaceted impacts. Despite these debates, best practices reveal the value of transparent revenue allocation, community engagement, and reinvestment in visible projects that benefit residents and visitors.

In Juneau, tourism tax revenues support initiatives ranging from dock electrification and trail maintenance to cultural preservation and public transportation. These projects demonstrate the dual role of tourism taxes in managing visitor impacts and enhancing the quality of life for residents. By integrating revenue diversification, sustainability-focused investments, and community-centered strategies, Juneau is a model for leveraging tourism taxes to achieve balanced economic growth and environmental stewardship.

This chapter sets the stage for Chapter 3, "Research Method," by establishing the conceptual and empirical context for the study. The identified gaps in the literature, such as the lack of comprehensive analyses on the impacts of tourism taxation on municipal revenue and sustainability in Juneau, inform the research design and methodology. Chapter 3 will outline the data collection and analysis methods employed to explore these gaps, providing a structured approach to evaluating tourism taxation's effectiveness in enhancing Juneau's financial and environmental sustainability.

Chapter 3: Research Method

The purpose of this quantitative study was to explore the statistical relationships between the variance in tourist taxation, volume, and spending, and the variance in municipal revenues in CBJ, Alaska, between 2010 and 2024. Confounding by covariates (e.g., tourism-linked employment, business growth) and interruptions (e.g., taxation changes) and the COVID-19 pandemic) were taken into account. Research based on quantitative data analysis collected over time should ideally be underpinned by a PICOT (population - interventions - comparison - outcomes - time) question (McLinton, 2022). The PICOT-inclusive research question for this study was "Based on the archived records for CBJ, Alaska (Population) to what degree does the variance in tourism-related taxation, tourist volume, and tourist spending after controlling for covariates (Interventions) before and after taxation policy changes and the COVID-19 epidemic (Comparisons) predict the variance in municipal revenues generated by taxes (Outcomes) between 2010 to 2024?" The sub-questions were

RQ1: To what degree does the variance in tourism-linked taxation contribute to the variance in municipal revenue generated by taxes on tourists in CBJ, after controlling for covariates?

RQ2: To what degree does the variance in tourist volume contribute to municipal revenue generated by taxes on tourists in CBJ, after controlling for covariates?

RQ3: To what degree does the variance in tourist spending contribute to the variance in municipal revenue generated by taxes on tourists in CBJ, after controlling for covariates?

Research Methodology and Design

Using the definitions of the terms by Long, (2025), the research design was retrospective, longitudinal, correlational, comparative, and exploratory. The research design was retrospective because answering the PICOT and sub-questions involved collecting and analyzing secondary data (i.e., information concerning events that have already occurred in the past and which have already been stored in archival records by other researchers). In a retrospective design, the researcher often attempts to link events that occur in the present with those that occurred in the past.

The research design was longitudinal because it involved analyzing a 15-year time series of secondary collected data from 2010 to 2024 inclusive. The research design was correlational because it required analysis of the statistical relationships between the outcome variables (i.e., municipal revenues); predictor variables (i.e., tourism taxation, volume, and spending), and covariates (i.e., tourism-linked employment, business growth) as they existed in reality, without experimental manipulation. The research design was comparative because an analysis compared the outcomes before and after known events (i.e., taxation policy changes and the disruption caused by the COVID-19 pandemic). The research design was exploratory because the methods of data analysis did not involve tests to confirm or reject predefined null or alternative hypotheses, the data collection processes, PICOT, and sub-questions were challenging, and no previous research has been conducted to explore the statistical relationships between the variance in tourism taxation, volume, and spending, and the variance in municipal revenues in CBJ, Alaska.

This research design was applicable because (a) it focused on the collection and analysis of specific variables and (b) the variables were collected by purposive non-random sampling

which allowed the researcher to focus on specific data sources (e.g., official financial documents capturing historical and current municipal income from tourism taxes, and additional data from entry point registers, municipal policy documents, and credible sources, including the Chamber of Commerce and the state of Alaska). The weakness of this research design is that the inferential statistical analysis of secondary data extracted from historical records could not directly measure the impact, influence, or effects of tourist taxation, volume, and spending on municipal revenues because correlation does NOT imply causation (Lee, 2021). To prove a cause-and-effect relationship in the context of tourism research would require a proper experimental design, in which the predictor variables are manipulated systematically by the researcher(s), prior to measuring the subsequent changes in the outcomes (Butcher & Yodsuwan, 2024; Dolnicar et al., 2024).

Qualitative Design

A qualitative research design would involve collecting in-depth, descriptive data through interviews, focus groups, or case studies to explore the stakeholders' perspectives on tourism taxation policies (Long, 2025). This approach emphasizes subjective understanding and contextual insights through identifying themes but is limited by its inability to explore numerical relationships. Additionally, qualitative findings are often context-specific and derived from small, non-representative samples, which limit their generalizability. Moreover, qualitative research is more suited to exploring "how" or "why" questions rather than questions about the relationships between variables (Clarke & Braun, 2021).

Mixed Methods Design

A mixed methods design, which integrates both qualitative and quantitative approaches, was also considered. This design combines statistical analysis with descriptive insights from

interviews or focus groups. However, mixed methods are resource-intensive, requiring significant time and effort to collect, analyze, and integrate both data types. Given the study's focus on quantifiable relationships, incorporating a qualitative component would unnecessarily complicate the research design without directly contributing to the research objectives. Further, integrating qualitative and quantitative findings can introduce analytical complexity and hinder methodological consistency (Creswell & Creswell, 2018).

Case Study

A case study approach was also considered, involving an in-depth examination of Juneau's tourism taxation policies and their effects on municipal revenue. While case studies provide rich, contextual detail and may include comparisons with other municipalities, they lack the breadth needed for large-scale, generalizable quantitative analysis. Case studies typically rely on qualitative or descriptive data, which do not support inferential statistical analysis (Yin, 2017). Additionally, although the present study focuses on Juneau, the findings aim to provide broader insights into tourism taxation policies, making the narrow and localized focus of a case study approach less appropriate.

Cross-sectional Survey

A cross-sectional survey to collect data at a single point in time to evaluate relationships between variables (Creswell & Creswell, 2018) was not appropriate because it could not capture temporal trends, such as seasonal tourism fluctuations or changes in municipal revenue over time. The study's objective was to assess tourism taxation policies' immediate and long-term impacts, which requires a longitudinal perspective. The static nature of cross-sectional data would be insufficient for analyzing the dynamic relationships inherent in tourism and taxation.

Experimental Design

An experimental design, which involves manipulating variables (Creswell & Creswell, 2018) such as tourism tax policies in a controlled environment to observe their effects, was impossible in practice. Manipulating tax policies raises ethical and practical concerns, as such actions would have real-world economic and social consequences. Even if a controlled experimental setup were possible, the findings might lack external validity, as results from artificial settings may not generalize to real-world contexts.

Population and Sample

The most appropriate population for this study was archived data and documents. This approach aligned with the study's correlational design, which requires historical and longitudinal data to address the PICOT and sub-questions. Municipal financial reports, tax records, tourism statistics, and economic indicators provide the necessary measurable variables for analyzing the impacts of taxation policies. Additionally, archived data ensured objectivity and avoided introducing variability associated with populations such as individuals or organizations, which was less suited to the study's focus on empirical analysis.

The population of archived municipal financial reports, tax records, tourism statistics, and economic indicators related to CBJ. The data were drawn from government agencies, state records, municipal departments, tourism bureaus, and relevant economic institutions. The estimated size of this population spans 2010 to 2024, encompassing records that allow for a detailed longitudinal analysis of trends before and after changes in tourism tax policies. Key characteristics of the population include detailed annual revenue data from tourism-related taxes, such as sales taxes, hotel occupancy taxes, and cruise ship passenger fees, which reflect the primary independent variables of interest. Additionally, visitor spending patterns, measured

through indicators like per capita tourist expenditure and total visitor arrivals, provided critical context for understanding the dynamics of tourism-driven revenue. Broader economic indicators, such as employment rates, local business growth percentages, and promotional activities, are potential control variables to account for confounding factors.

The selected population of archived municipal financial reports, tax records, tourism statistics, and economic indicators was appropriate because it directly addresses the study's problem, purpose, and research questions. These archived records provide precise, quantifiable data on revenue trends, tax policies, and economic activity, essential for evaluating tourism-related taxation's financial and economic effects. The longitudinal nature of this data allows for an in-depth examination of temporal trends, such as pre- and post-policy changes and the disruptions associated with COVID-19. Using archived data ensured objectivity and reliability, reducing the potential for bias while enabling robust statistical analysis.

The purposive sample provided a data sample that allowed for comprehensive analysis using statistical methods, which require sufficient observations over time to detect trends. Additionally, archived records ensured objectivity and reliability, avoiding biases associated with subjective data collection methods, and provided the structured, quantifiable data necessary for the study's quantitative methodology. Purposive sampling was justified to select archived municipal financial and tourism data from CBJ, the State of Alaska, and other relevant sources. Purposive sampling was appropriate to ensure that the variables required to address the research question and sub-questions were collected. This sampling method allowed the researcher to deliberately target historical and financial records relevant to evaluating the impact of tourism taxation on municipal revenues and sustainability, avoiding irrelevant or extraneous data. While traditionally associated with qualitative research, purposive sampling can be effectively utilized

in quantitative studies when specific criteria relevant to the research objectives are required, and when the study seeks depth or targeted insights, ensuring alignment with the research goals (Campbell et al., 2020).

Study Procedures

The secondary data were extracted from the sources defined in Table 1. The variables used to address the PICOT, and sub-questions are defined in Table 2. Before the statistical analysis, the data were aggregated initially and stored in an MS Excel worksheet (see Appendix A). Table 3 summarizes the conclusions of the literature review, providing the information required to choose the most appropriate statistical analysis methods. Table 4 presents a stepwise description of the methods chosen to analyze the relationships between the outcome variables, predictor variables, and covariates.

Instrumentation

The sources, reliability, and validity of the secondary data are outlined in Table 1. The instruments included municipal financial records, tourism statistics, economic indicators, and policy implementation timelines. The data were assumed to be reliable and valid to accurately reflect the trends over time because they were aggregated from official, municipal, and government sources.

Table 1

Sources, Reliability, and Validity of Secondary Data

Instrument	Source	Reliability	Validity
Municipal Financial Records	CBJ Finance Department	Audited annually; GAAP standards	Accurately reflect municipal revenue trends
Tourism Statistics	JCVB, ATIA	Aggregated from official sources	Cross-validated accurate sources
Economic Indicators	BLS, Alaska Department of Labor	Federally standardized indicators	Accurate confounding factors
Policy Implementation Timelines	Legislative archives, municipal documents	Government-issued; official records	Accurate definition of intervention periods

Operational Definitions of Variables

The variables defined in Table 2 encompass the annual trends in the outcome, predictor variables, and covariates for 15 years from 2010 to 2024. A complete set of seasonal data (e.g., to compare peak season in summer and off-peak season in winter) was not available for 15 years, so the seasonal data were compounded to provide the annual data. The outcomes, predictors, and covariates were measured with interval/ratio scales (i.e. continuous quantitative variables, with an equal difference between each point on the scale, and an actual zero value. The five interruptions were

1 = New commercial passenger vessel tax in 2013.

2 = COVID-19 (During 2020, no large cruise ships came to Alaska. As a result, no tourism tax revenue was collected that year (Dunleavy et al., 2023).

3 = Increase in bed tax from 5% to 9% in 2020.

4 = Application of higher sales tax if a transaction spans both in-borough and out-of-borough components in 2021.

5 = All sales of goods and services on cruise ships within CBJ boundaries were exempt from sales tax in 2022.

6 = Increase in sales tax cap base from $12,800 to $14,300 in 2024.

Table 2

Definitions of Variables

Variable	Functional definition	Operational definition
Municipal revenue	Outcome	The total annual revenue collected by the CBJ is measured in $US.
Tourism linked taxation	Predictor	Tourism related taxation collected in CBJ including cruise ship taxes, sales taxes, and hotel occupancy (bed) taxes; measured in $US.
Tourist volume	Predictor	The total number of visitors arriving in CBJ across all modes of entry including air, sea and land entry points.
Tourist spending	Predictor	Average spending on consumer goods, services, and activities by tourists in Southeast Alaska measured in $US per capita per month.
Tourism linked employment	Covariate	Number of people employed in the tourist industry in Southeast Alaska.
Business growth	Covariate	Percentage growth of businesses (e.g., property development; retail trade) in Southeast Alaska
Tourism tax policies	Inter-ruption	Juneau's tax codes are modified on five occasions to reflect changes in inflation, digital commerce, to clarify exemptions, and to refine sales tax, bed tax, and cruise ship tax.
External events	Inter-ruption	Catastrophic economic disruption caused by COVID-19 pandemic in 2020.

Data Analysis

Prior to choosing the most appropriate methods of data analysis to address the PICOT and sub-questions using the variables defined in Tables 1 and 2, a review of the methodological literature was conducted (Abadie, 2021; Altman et al., 2020; Aubacher et al., 2024; Batti & Kim, 2021; Imbens, 2021; Kucharska-Stasiak, 2023; Paldam et al., 2021; Shojaie & Fox, 2022). This review demonstrated that many researchers in econometrics and applied economics have, during the last five years, implemented traditional research designs and analytical methods developed in the 20th century that generate potentially misleading and irreproducible results in the 21st century, for the following reasons.

- Null hypothesis significance tests (NHST), commonly recommended in economics textbooks (e.g., Hanson, 2022), have been frowned on or abandoned by many statisticians in the last decade because they often generate misleading or meaningless results (see quotations in Appendix A).
- Interpreting the results of inferential test statistics to decide if the coefficients of an empirical model are significant or not significant using an arbitrary p-value (typically $p < .05$) does not provide meaningful answers to research questions or confirm or reject predefined hypotheses.
- A declaration of statistical significance based on the flawed and obsolete Neyman-Pearson dichotomous decision rule devised over 100 years ago is nothing more than a myth (Acree, 2021; Hurlbert & Lombardi, 2009).

- The authors of over 100 articles published in peer-reviewed journals between 2019 and 2025 (see Bibliography in Appendix B) have asserted that statistical significance derived from the p values of hypothesis tests cannot possibly evaluate or prove the effect, impact, or influence of one variable on another variable in the real world, and that alternative methods (e.g., effect sizes) are more appropriate. This assertion was highlighted by the statements of the American Statistical Association (ASA), summarized by Matthew (2021, p. 16):
- "P-values – cannot do what researchers ask of them. Despite the impression created by countless research papers, lecture courses and textbooks, p-values below 0.05 do not prove the reality of anything. Nor, come to that, do p-values above 0.05 disprove anything. As ASA's statement pointed out, statisticians have been trying to make this clear for decades without success. By bringing the issue to public attention, the board of the world's largest professional association of statisticians hoped to draw renewed and vigorous attention to changing the practice of science with regard to the use of statistical inference."

Moreover, all the data in the present study were collected by purposive sampling; hence, a representative sample selected from a defined population by chance using random numbers was not applicable (Hossan et al., 2023). All the data collected between 2010 and 2024 were included in the analysis, representing an entire population; however, the interpretation of p-

values and confidence intervals to determine if the results of inferential tests based on econometric data are statistically significant, assumes that all the data were collected from a defined population by random sampling (Hirschauer et al., 2021). “Statistical inference in the observational data study concerns random sampling error. When p-values or confidence intervals are displayed, a plausible argument should be given that the studied sample meets the underlying probabilistic assumptions (i.e., it is or can be treated as a random sample). Otherwise, there are no grounds for using these inferential tools” (Hirschauer et al., 2020, p. 71).

Choice of Model

Some traditional econometric models, including the widely used Granger causality models (Granger, 1969, 1980), are based on the ordinary least squares (OLS) regression analysis of archival time-series data. A time-series consisting of one independent predictor variable (X) is assumed to Granger-cause one outcome or dependent variable (Y), assuming (through a series of t-tests and F-tests on lagged values of X and Y) that the X values provide statistically significant information about future values of Y. The Granger model is underpinned by the assumption of "Post hoc, ergo propter hoc" or "After this, therefore because of it"; however, this simple subjective reasoning is almost always a logical fallacy (Costello, 2017; Grouse, 2016; Pinto, 2021). If one event follows another, the first event does not automatically cause the second event. For this reason, traditional models assuming that a single time-series of economic data collected in the past is the only direct cause of another single time-series of economic data collected in the future are misleading (Hendry, 2017; Maziarz, 2015; Shojaie & Fox, 2022).

In reality, the relationships between predictors and outcomes in an OLS regression model are often controlled by one or more confounding variables, and omitting these variables may cause the model to be biased (Busenbark et al., 2022). However, including confounding variables

in a regression model does not necessarily provide evidence for an impact, influence, or effect of a predictor on an outcome. A model based on regression analysis constructed from empirical time-series data cannot prove causality if (a) no underlying theory exists to explain the causal mechanisms; (b) the underlying assumptions concerning autocorrelation, homoscedasticity, and residual normality are violated; (c) the model consists of aggregated data that does not account for all levels of spatial and temporal heterogeneity and/or (d) the sample size is too small to provide sufficient statistical power to identify meaningful effects (Baird & Barber, 2024; Wijesekara et al., 2022).

The predictions of a model based on an interrupted time series design (ITSD) or a regression discontinuity design (RDD) to compare the trajectories of the empirical time-series data collected before and after a prescribed intervention may also be compromised for similar reasons to Granger causality models (Ewusie et al., 2020; Wuepper & Finger, 2023). To create an accurate ITSD or RDD model, the sample size must be at least 12 pre-intervention time points and at least 12 post-intervention time points, assuming that the effect size is moderate, and the confidence intervals are narrow; otherwise, the OLS regression analysis is underpowered (Hawley et al., 2019). Autoregressive integrated moving average (ARIMA) models are commonly applied to analyze univariate time-series data. Still, they should only be applied to construct econometric models to evaluate the outcomes of population-level interventions if the longitudinal sample size is large (preferably at least 30 to 50 points along a time series). The confidence intervals of each point are narrow (Shumway & Stoffer, 2017).

Partial Least Squares Structural Equation Modeling (PLS-SEM)

PLS-SEM was chosen to address the research questions. PLS-SEM can validate complex models by analyzing multiple relationships between predictors, outcomes, and covariates or confounding variables (Hair et al.,2022). Table 3 lists the advantages of using PLS-SEM with SmartPLS (PLS) software over traditional modeling approaches, including regression, ITSD, RDD, and covariance-based SEM using ordinary least squares (OLS).

Table 3

Differences between Ordinary Least Squares (OLS) and Partial Least Squares (PLS)

OLS Models	PLS-SEM
OLS models, developed in the 20th century, are rarely applied for business, marketing, and management research in the 3rd decade of the 21st century.	PLS is a modern approach, developed in the 21st century, that is currently the most frequently applied user-friendly cutting-edge method for business, marketing, and management research (Hair et al., 2022).
OLS models are not very flexible with respect to the characteristics, model complexity and specifications of the empirical data (Field, 2024)	PLS is more flexible than OLS with respect to empirical data characteristics, model complexity, and data specifications (Hair et al., 2022).
OLS assumes residual normality. The differences between the observed and predicted values must be normally distributed. (Field, 2024).	PLS-SEM is a non-parametric method does not assume residual normality (Hair et al., 2022)
A linear regression model constructed using OLS consists of a single outcome/dependent variable and a limited number of predictor/independent variables (Field, 2024). Covariance-based SEM, however, may include multiple outcomes and a larger number of predictors (Hair et al., 2017)	A structural model constructed using PLS consists of one or more exogenous variables or outcomes which can be connected in various ways to an infinite number of endogenous variables or predictors of the outcomes (Hair et al., 2022).
A linear regression model constructed using OLS predicts a single dependent variable/outcome	PLS-SEM predicts multiple outcome variables using an infinite number of

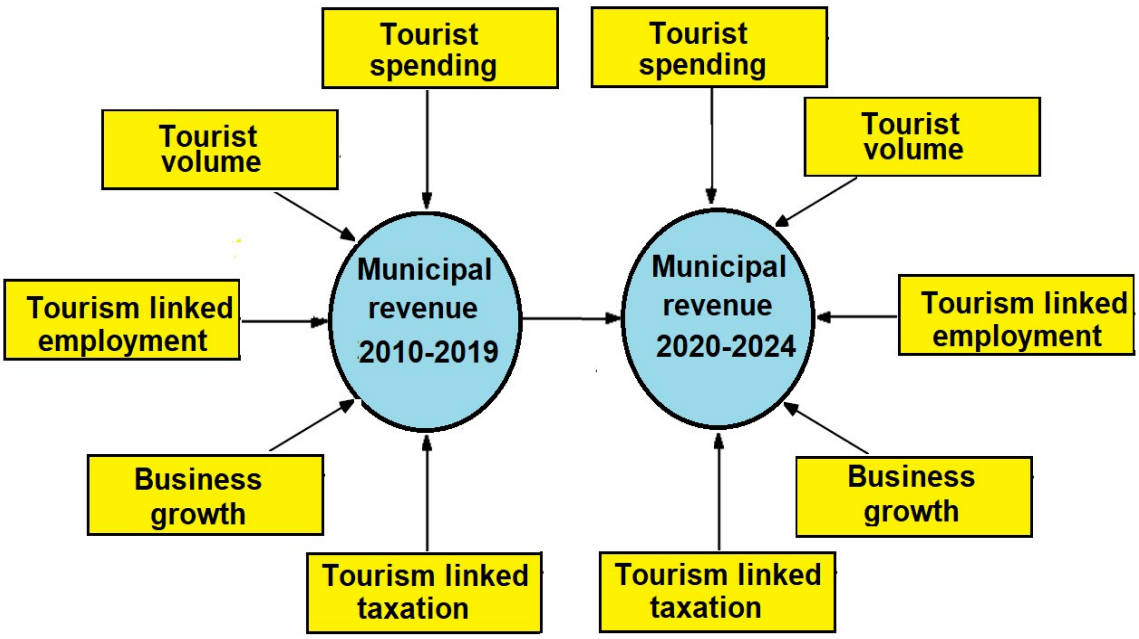
OLS Models	PLS-SEM
measured at the interval/scale level. Two or more independent/predictor variables must be measured at the interval/scale, ordinal, or nominal level (Field, 2024).	predictor variables, which are operationalized as congeneric measures (i.e. exact weighted combinations of multiple indicators. The variables may be measured at the interval/scale, ordinal, or nominal level (Hair et al., 2022).
The construct validity of a regression model constructed using OLS does not have to be validated using factor analysis (Field, 2024).	The construct validity of a model constructed using PLS-SEM must be validated using factor analysis (Hair et al., 2022).
An OLS regression model can predict relationships between reflective constructs, or latent variables with inter-correlated indicators (Field, 2024).	PLS-SEM can predict relationships between reflective and formative constructs, or latent variables with either correlated or non-correlated indicators (Hair et al., 2022).
An OLS regression model assumes linearity between the dependent and independent variables (Field, 2024).	PLS-SEM does not assume linearity between the variables. Non-linear (e.g., quadratic) relationships can also be predicted (Hair et al., 2022).
The single effect size of a regression model constructed using OLS is the coefficient of determination (R^2) defined as the proportion of the variance in a single dependent (outcome) variable explained by two or more independent (i.e., non-correlated) predictor variables (Field, 2024).	The effect sizes of a model constructed using PLS-SEM are the coefficients of determination (R^2) representing the proportions of the variance explained by the multiple indicators of each latent variable (Hair et al., 2022).
A model constructed using OLS does not optimize the explained variance (R^2) or measure the average variance explained (AVE) or the internal consistency reliability (Field, 2024).	PLS-SEM uses an iterative algorithm (i.e., many repeated calculations) to optimize the explained variance (R^2) and to measure the average variance explained (AVE) and internal consistency reliability (Hair et al., ,2022).
The estimation of the model parameters using OLS assumes independent probability sampling, implying that all the variables are selected by random chance (Field et al., 2024).	PLS-SEM does not assume independent random sampling. The original sample data are re-sampled by bootstrapping (i.e., 3000 random samples are drawn from the data with replacement) before estimating the model parameters (Hair et al., 2022).

OLS Models	PLS-SEM
MLR requires the interpretation of p-values to determine if the model parameters are statistically significant (i.e., $p < 0$ .05) even though "…p-values below 0.05 do not prove the reality of anything. Nor, come to that, do p-values above 0.05 disprove anything." (Matthews, 2021, p. 16). Models constructed using OLS generally require a large sample size ($N \geq 300$) to provide enough statistical power to create a valid population model (Bujang et al, 2017). The minimum sample size to achieve a specific p-value and effect size must be computed by power analysis (Faul et al., 2009).	PLS-SEM estimates the 95% confidence intervals (CI) of the model parameters by bootstrapping using the Monte Carlo algorithm. The CI are interpreted to determine if the model parameters are greater or less than zero for 95% of the time. (Hair et al., 2022). The minimum sample size for PLS-SEM cannot be estimated by power analysis (Hair et al., 2022).
Models constructed using OLS have not been very frequently applied to create predictive empirical models in the context of hospitality and tourism during the last ten years.	PLS-SEM has been very frequently been applied to create predictive empirical models in the context of hospitality and tourism during the last ten years (e.g., Abbasi et al., 2024; Al Badi et al., 2020; Ali et al., 2018; Assaker & O'Connor, 2023; do Vallle et al.,2016, Elshaer et el., 2023; Hallak & Assker, 2016; Kock, 2018; Latan, 2018; Seyfi et al., 2024).
In the last five years, modes constructed using OLS have not been frequently applied to create predictive empirical models in the context of economics and taxation.	PLS-SEM is the most frequently applied method in the last five years to create predictive empirical models in the context economics and taxation (e.g., Ahmed, 2024, Basco et al., 2022; Bhalla et al., 2022; Borkowski, 2023; 2024; Dey et al., 2022; Fedajeve et al., 2023; Hayat et al., 2022; Iqbal et al., 2023; Leal-Rodriguez et al. 2023; Martínez et al., 2021; Olaniye et al., 2023; Putra et al., 2024; Williams et al., 2024).

The stepwise protocol used to construct the model to address the PICOT-research and sub-questions using PLS-SEM with SmartPLS software is outlined in Table 4. Figure 3 illustrates the path diagram of the structural equation model.

Figure 3

Path Diagram of Structural Equation Model



This model consisted of two sets of latent variables, which were measured at 15 different points along a time series between 2010 and 2024. The first set of latent variables consisted of empirical data collected during the ten years from 2010 to 2019, before the COVID-19 pandemic. The second set of latent variables consisted of empirical data collected during the five years from 2020 (during the pandemic, when tourism was severely disrupted due to national lockdown) up to 2024, during the recovery period after the pandemic.

Table 4

Stepwise Protocol for Conducting PLS-SEM

1. A descriptive analysis of the variables in Table 2 was conducted. The time-series trajectories were visualized using time-series graphs drawn with Minitab v. 17 software.
2. The data were imported into SmartPLS v. 3 to conduct PLS-SEM.
3. All the ratio level variables in Table 2 were standardized by SmartPLS into a single common scale by transformation into Z-scores, where Z = distance of the variable from the mean, divided by the standard deviation.
4. The path diagram illustrated in Figure 3 was drawn to define the structural model
5. The rectangular symbols represent the predictor variables (i.e., Tourist linked taxation; Tourist spending, Tourist volume) and the covariates (i.e., Tourism linked employment and Business growth) defined in Table 2. The circular symbols represent the endogenous latent variables (i.e., the Municipal revenue before (2010-2019) during, and after the COVID-19 pandemic (2020-2024) whose variance is explained by the exogenous predictors. The reason for splitting the model into two in 2019-2020 was that COVID-19 was the main source of interruption between 2010 and 2024. COVID-19 caused a massive reduction in tourist linked activities and confounded the much smaller effects of the five tax policy changes between 2013 and 2024.
6. The statistical relationships between all the variables are illustrated by arrows in Figure 3.

7. Construct validity was tested by composite factor analysis. The loading coefficient for each indicator of a latent variable (λ) should ideally be > .5.
8. Convergent validity was tested by determining the average variance explained (AVE). Ideally the AVE should be at least 50%.
9. Bootstrapping was conducted with the Monte-Carlo algorithm using 5000 random samples drawn with replacement from the raw data. The data were shuffled like a pack of cards between each sample. The point estimates and 95% confidence intervals (CI) of each path coefficient were estimated using the bootstrapped data. The signs and relative magnitudes of the coefficient reflected the direction and strength of the correlation between two latent variables after the effects of all the other variables in the model were controlled (i.e., held statistically constant)
10. The strength of each path coefficient ± 95% CI was evaluated as follows: <.10 = negligible; .10 to .30 = weak; .31 to .49 = moderately; .50 to .79 = strong; ≥ .80 very strong (Hair et al., 2022).
11. The point estimates of the coefficients of determination (R^2) represented the proportions of the variance explained in the two outcome variables (i.e., the Municipal revenues before and after 2019) by the predictors and covariates. R^2 values of 75%, 50%, or 25%, were respectively defined as substantial, moderate, or weak (Hair et al., 2022).
12. The 95% CI of the point estimates of the path coefficients and R^2 were interpreted. The true relationship between the predictor and outcome variables in the population was assumed to be captured within the lower and upper limits of the CI. If the 95% CI did not capture zero, then in 95 out of 100 random samples, the path

coefficient did not deviate from zero, and the relationship was certain. If the 95% CI captured zero, then in 95 out of 100 random samples, the path coefficients included zero and the relationship was uncertain. (Gelman & Greenland, 2019).

Assumptions

The underlying assumptions of PLS-SEM are outlined in Table 5

Table 5

Assumptions of PLS-SEM

1. The outcome variables, predictor variables, and covariates are assumed to be valid and reliable (Hair et al. 2022).
2. Both linear and non-linear (e.g., quadratic) relationships between the variables can be analyzed. Scatterplots should be plotted to determine if the relationships are linear or non-linear (Hair et al., 2022).
3. PLS-SEM is a non-parametric method. Tests to determine if the variables are normally distributed are not necessary (Hair et al., 2022).
4. Multicollinearity (i.e., very strong correlations between the composite variables) may compromise the results. Multicollinearity issues may arise when the Variance Inflation Factor (VIF) is > 5 (Hair et al., 2022).
5. If R^2 < 25% then the relevance of the model in the real world is assumed to be negligible (Hair et al., 2022).
6. PLS-SEM can potentially create valid and reliable models with small sample sizes < 30 (Hair et al., 2022; Kock & Hadaya, 2016; Tam et al., 2024)

Limitations

Secondary data provides advantages because existing data that are readily available from online sources can usually be collected and analyzed quickly and more cheaply than primary

data; however, secondary data may sometimes be invalid and unreliable. If the secondary data has been incorrectly reported or transcribed, then the quality of the results and conclusions of research are compromised (Johnston, 2014; Mohajari, 2017; Olabode et al., 2019). An assessment of the reliability and validity of secondary data requires an appraisal of the sources of the data and the sampling methods (Dale et al., 2025).

Delimitations

The conditions set intentionally by the researcher for the population and sample include the aggregation of data collected between 2010 and 2024 from valid and reliable official, municipal, and government sources.

Ethical Assurances

This study received approval from the University's Institutional Review Board (IRB) before any data collection activities. All research activities complied with ethical guidelines set forth by the IRB to ensure the study was conducted responsibly and ethically. Confidentiality was maintained throughout the study using archived, publicly available data that did not include personally identifiable information. Since the study focused on aggregated data such as municipal financial records, tourism statistics, and economic indicators, no individual-level data were collected, ensuring the study adheres to anonymity and confidentiality standards. Data from publicly accessible databases, municipal archives, or government records were used solely for this study.

Data were stored in accordance with IRB requirements. Electronic data was stored on a password-protected computer and backed up on an encrypted external drive. Any hard copy materials, such as printed reports or notes, were stored in a locked cabinet accessible only to the researcher. Upon completion of the study, data were securely archived to be maintained for a

minimum of three years, after which they will be permanently deleted or destroyed in compliance with IRB protocols.

The role of the researcher in this was to objectively collect, analyze, and interpret the data. While the researcher has no direct personal or professional ties to CBJ, there is an awareness of potential biases stemming from professional experiences in tourism-related research or preconceptions about the impacts of taxation policies. To mitigate these biases, the researcher relied on transparent, systematic data collection and analysis procedures. Statistical software was used to ensure objective analysis, and diagnostic tests were conducted to verify the validity of the models. Additionally, findings were interpreted strictly within the context of the data and aligned with the conceptual framework and research questions.

Summary

Appropriate methods were justified to collect secondary data and conduct statistical analysis to predict municipal revenues in CBJ, Alaska between 2010 and 2024, using tourist taxation, volume, spending as the predictors, and taking covariates (e.g., tourism linked employment, business growth, taxation changes, and the disruption caused by the COVID-19 pandemic in 2020) into account. The research was underpinned by the PICOT question: Based on the archived records for CBJ, Alaska (Population) to what degree does the variance in tourism-related taxation, tourist volume, and tourist spending after controlling for covariates (interventions) before and after taxation policy changes and the COVID-19 epidemic (comparisons) predict the variance in municipal revenues generated by taxes (outcomes) between 2010 to 2024? The advantages of using PLS-SEM over traditional modeling approaches, including regression, ITSD, RDD, and covariance-based SEM based on ordinary least squares,

were considered. The use of SmartPLS software to analyze the relationships between predictors, outcomes, and covariates or confounding variables was described.

Chapter 4 presents the findings of this study, detailing the results of the statistical analyses and their alignment with the research questions. By examining the impact of tourism taxation policies on municipal revenue, the findings provide critical insights into the effectiveness of these policies and their implications for fiscal sustainability and economic development.

Chapter 4: Findings

The purpose of this quantitative study was to explore the relationships between the variance in tourism taxation, volume, and spending patterns and the variance in municipal revenues in CBJ, Alaska. The central problem addressed in this research is the absence of empirical data-driven analysis on how tourism taxation impacts revenue generation, urban development, and economic sustainability in Juneau. Given Juneau's strong dependence on tourism, particularly from cruise ship traffic, evaluating how tax policy supports long-term economic objectives is critical.

Secondary archival data sources on tourism tax policies, municipal revenue, and key economic indicators were examined. A structural equation model was developed to address the PICOT-research question: Based on the archived records for CBJ Alaska (population), to what degree does the variance in tourism-related taxation, tourist volume, and visitor spending, after controlling for covariates (interventions), before and after taxation policy changes and the COVID-19 pandemic (comparisons), predict the variance in municipal revenues generated by taxes (outcomes) between 2010 and 2024 (Time)? Confounding by covariates (e.g., tourism-linked employment and business growth) and interruptions by disruptive events (e.g., taxation changes and the COVID-19 pandemic in 2020) were included.

Three research sub-questions extend this inquiry.

RQ1

To what degree does the variance in tourism-linked taxation contribute to the variance in municipal revenue generated by taxes on tourists in the CBJ, after controlling for covariates?

RQ2

To what degree does the variance in tourist volume contribute to municipal revenue generated by taxes on tourists in the CBJ, after controlling for covariates?

RQ3

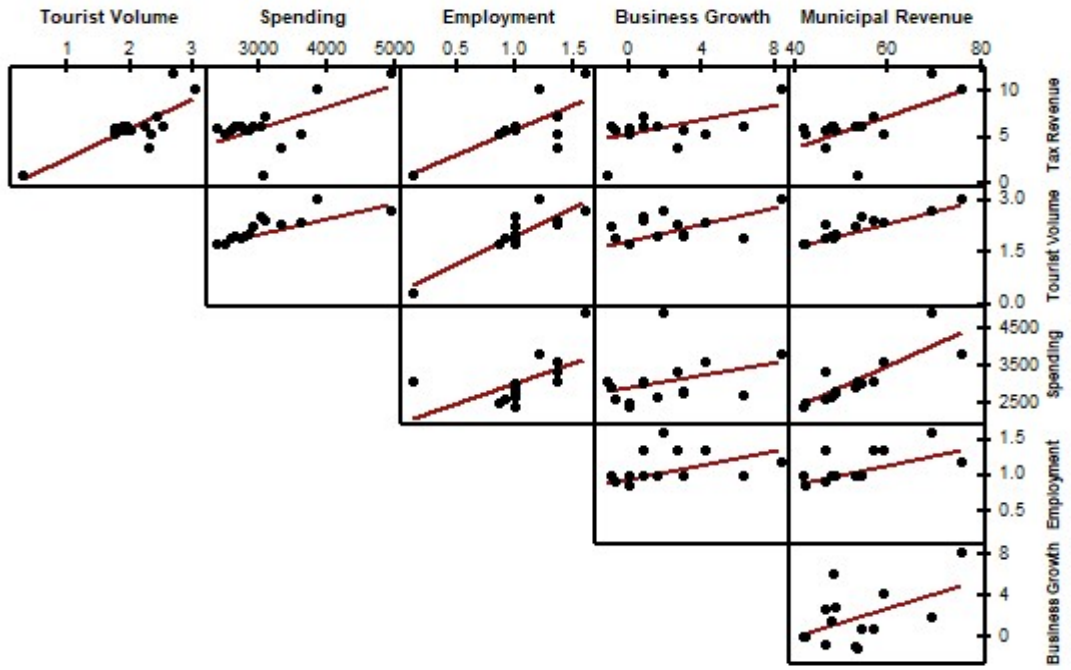
To what degree does the variance in tourist spending contribute to the variance in municipal revenue generated by taxes on tourists in the CBJ, after controlling for covariates?

Validity and Reliability of the Data

An assessment of the reliability and validity of secondary data required an appraisal of the sources of the data and the sampling methods. The outcome variables, predictor variables, and covariates were assumed to be valid and reliable to accurately reflect the trends over time because they were aggregated from official, municipal, and government sources. The matrix plot in Figure 4 indicated that the relationships between the six variables were approximately linear; therefore, a linear, not quadratic, structural equation model was applicable.

Figure 4

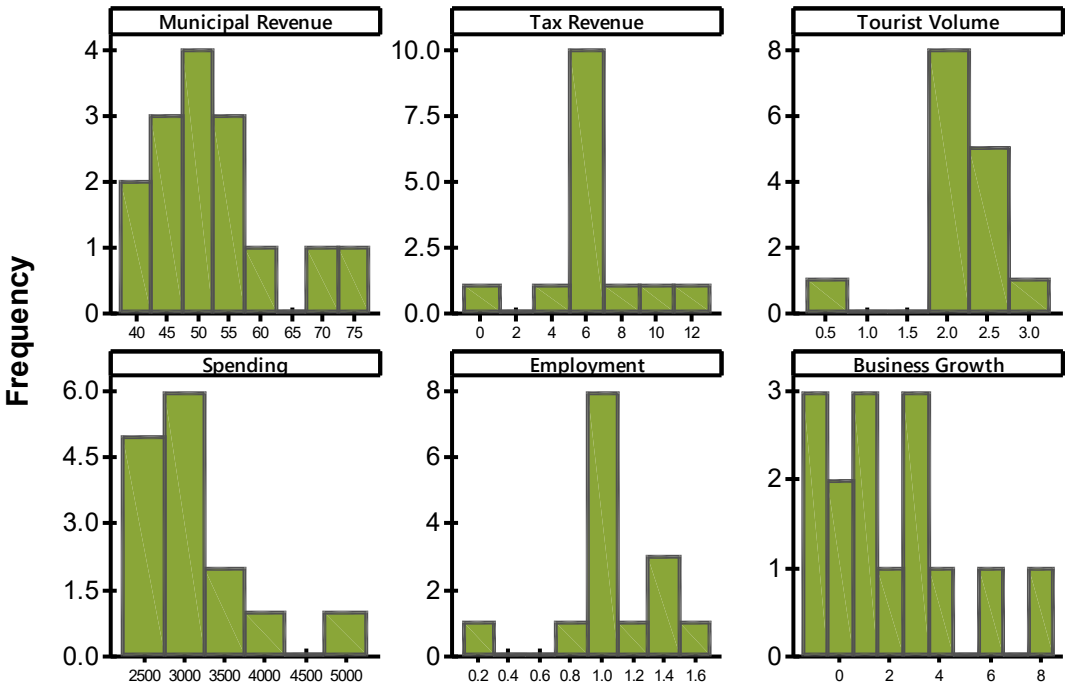
Matrix Plot



PLS-SEM is a non-parametric method; therefore, tests to determine whether the normally distributed variables were not essential. Figure 5 shows that the shapes of the frequency distribution histograms representing the six variables deviated from symmetrical bell-shaped curves; therefore, parametric statistics were not appropriate.

Figure 5

Frequency Distribution Histograms



Strong multicollinearity among the six predictors of municipal revenue may compromise the results of PLS-SEM. Multicollinearity was indicated by the high variance inflation factor (VIF) > 10 for tourist volume (i.e., tourist volume was linearly related to all the other four predictors of municipal revenue). The VIF values for the other predictors were < 10; consequently, the model was still considered valid and reliable predictor of municipal revenue.

Table 6

Test for Multicollinearity

Predictor of Municipal Revenue	VIF
Tourism Linked Tax	4.73
Tourist volume	13.79
Average tourist spending per capita	2.46
Tourism linked employment	7.64
Business growth	2.17

Results

Based on the archived records for CBJ, Alaska, statistical evidence was provided to explore the degree to which the variance in tourism-related taxation, tourist volume, and visitor spending, after controlling for covariates, before and after taxation policy changes, and the COVID-19 pandemic, predicted the variance in municipal revenues generated by taxes between 2010 and 2024. The first section of the results describes the fluctuations in the six variables over time. The second section addresses the PICOT and associated sub-questions. PLS-SEM was considered the only modeling approach that could be applied to address the PICOT and sub-questions using the limited amount of available data.

Descriptive Analysis

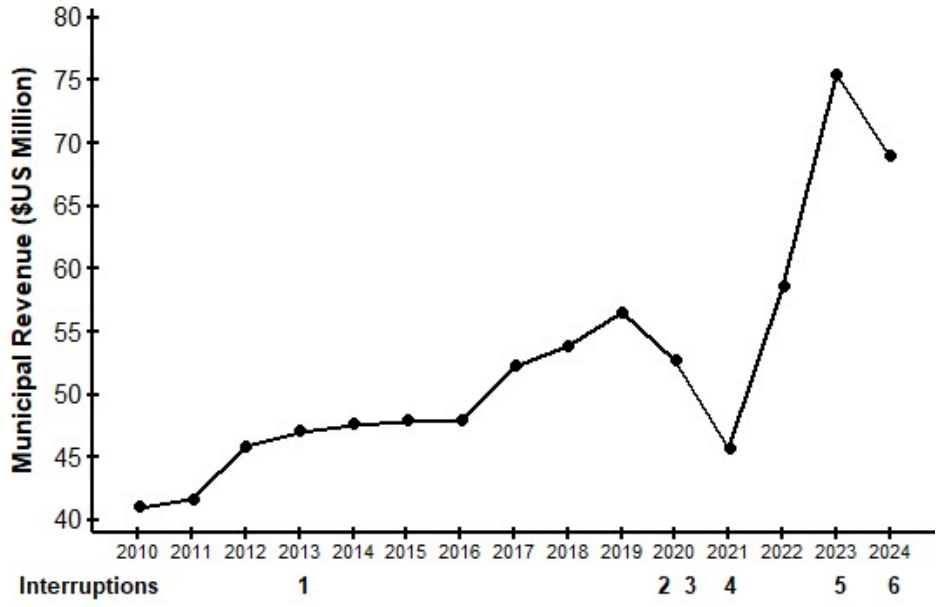
Figures 6 to 11 are time-series plots illustrating the trajectories of the six variables defined in Table 2. Each time-series plot consists of 15 points measured annually from 2010 to 2024. The points were serially correlated, as indicated by Durbin-Watson (D-W) statistics. The

six interruptions are identified by the arrows on the horizontal axes (i.e., 1 = Changes to commercial passenger vessel tax in 2013; 2 = Disruption to tourist activities caused by COVID-19 in 2020; 3 = Increase in bed tax from 7% to 9% in 2020; 4 = Application of higher sales tax (> 5%) if a transaction spans both in-borough and out-of-borough component in 2021; 5 = All sales of goods and services on cruise ships within CBJ boundaries were exempt from sales tax in 2022; 6 = Increase in sales tax cap base from $12,800 to $14,300 in 2024).

The time-series plot in Figure 6 displays a negative serial correlation (D-W = 1.3), which indicates that municipal revenue increased from USD 41.0 million in 2010 to USD 56.5 million in 2019. During the COVID-19 pandemic in 2021, the municipal revenue declined to USD 45.7 million. The revenue recovered and increased to a maximum of $75.6 million USD in 2023. The revenue increased after the first tax policy interruption in 2013. The revenue also increased after the fourth interruption in 2021, but this increase was confounded by the phase of rapid recovery from COVID-19 associated with other factors.

Figure 6

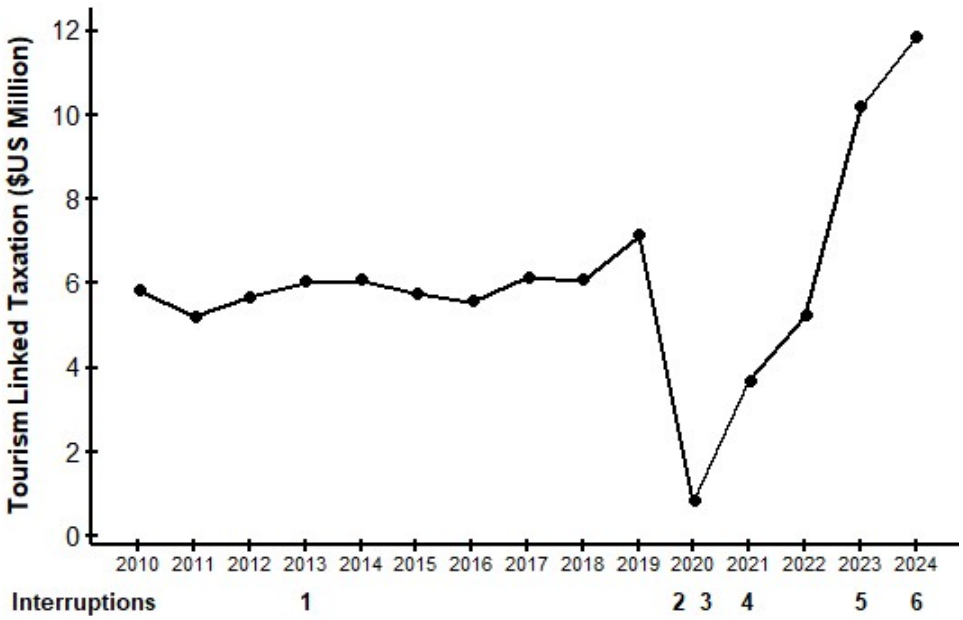
Time-series Plot of Municipal Revenue



The time-series plot in Figure 7 displays a negative serial correlation (D-W = 0.99), which indicates that the tourist tax revenue increased from USD 5.8 million in 2010 to USD 7.1 million in 2019. During the COVID-19 pandemic in 2020, the tax revenue declined to USD 0.83 million. The revenue recovered and increased to a maximum of $11.8 million USD in 2024. The revenue remained stable immediately after the first tax policy interruption in 2013. The Tourist tax revenue increased rapidly after the fourth tax policy interruption in 2021, but this increase was confounded by the phase of rapid recovery from COVID-19 associated with other factors.

Figure 7

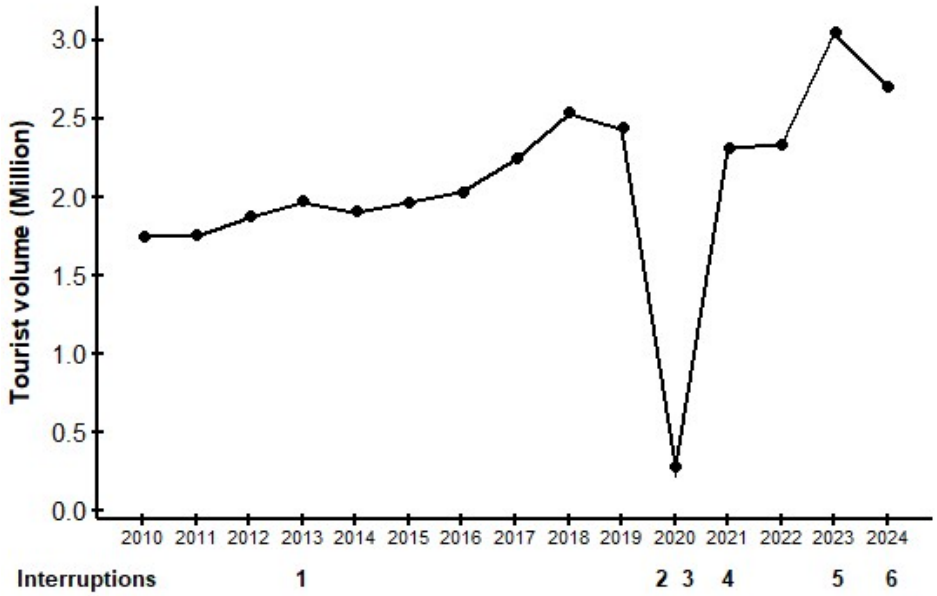
Time-series Plot of Tourism Linked Taxation



The time-series plot in Figure 8 displays a negative serial correlation (D-W = 1.77), which indicates that the tourist volume increased from 1.8 million in 2010 to 2.4 million in 2019. During the COVID-19 pandemic 2020, the tourist volume declined to 0.3 million. Thereafter, the volume of tourists recovered and increased to a maximum of 3.0 million in 2024. The volume remained stable immediately after the first tax policy interruption in 2013. The Tourist volume increased rapidly after the fourth tax policy interruption in 2021, but this increase was confounded by the phase of rapid recovery from COVID-19 associated with other factors.

Figure 8

Time-series Plot of Tourist Volume



The time-series plot in Figure 9 displays a negative serial correlation (D-W = .72), which indicates that the average tourist spending per capita increased from USD 2,378 in 2010 to USD 3,073 in 2019. During the COVID-19 pandemic between 2019 and 2020, tourist volume decreased to 0.3 million, and spending tanked. However, Figure 9 does not display a precipitous decline in 2020 for the reasons reported by the McKinley Research Group (2020). The Alaska Travel Industry Association and the Destination Management Organizations promoted more in-state travel within Alaska, resulting in increased spending by Alaska residents.

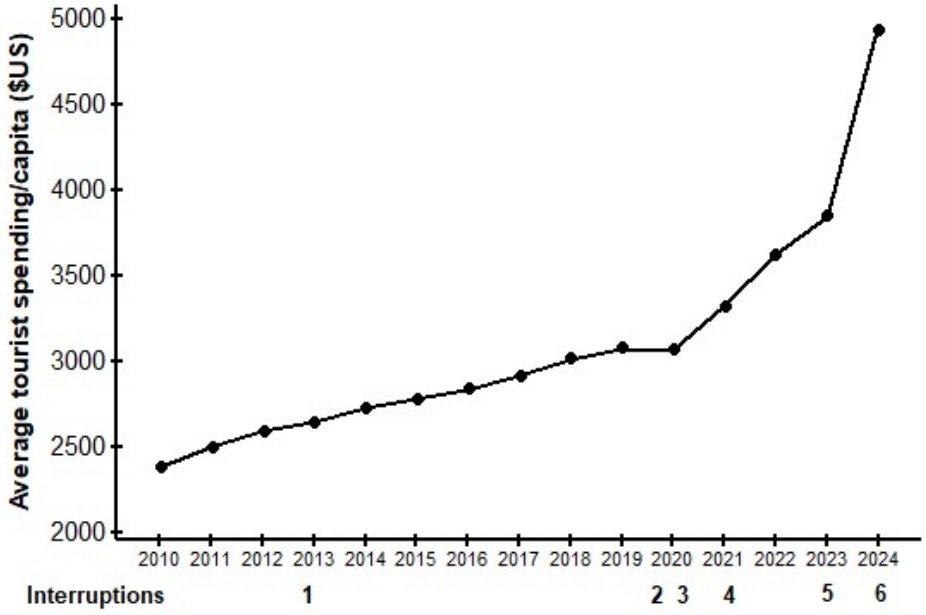
The Alaska Travel Industry Association and the Destination Management Organizations also provided financial assistance for struggling businesses that relied on tourism. Most Alaskan businesses that depended on tourism applied for government assistance and were compensated by funding to offset their financial losses caused by low tourist volume during the pandemic.

This compensation is included in Figure 9, so that tourist spending in 2020 was similar to that in 2019.

After the pandemic, the volume of tourists recovered and increased to a maximum of 3.0 million in 2024, increasing average tourist spending per capita to $4 932 million USD in 2024. The tourist volume remained stable immediately after the first tax policy interruption in 2013. The Tourist volume increased rapidly after the second, third, and fourth tax policy interruptions in 2020 to 2021. However, this increase was confounded by the rapid recovery phase from COVID-19, which was associated with other factors.

Figure 9

Time-series Plot of Tourist Spending

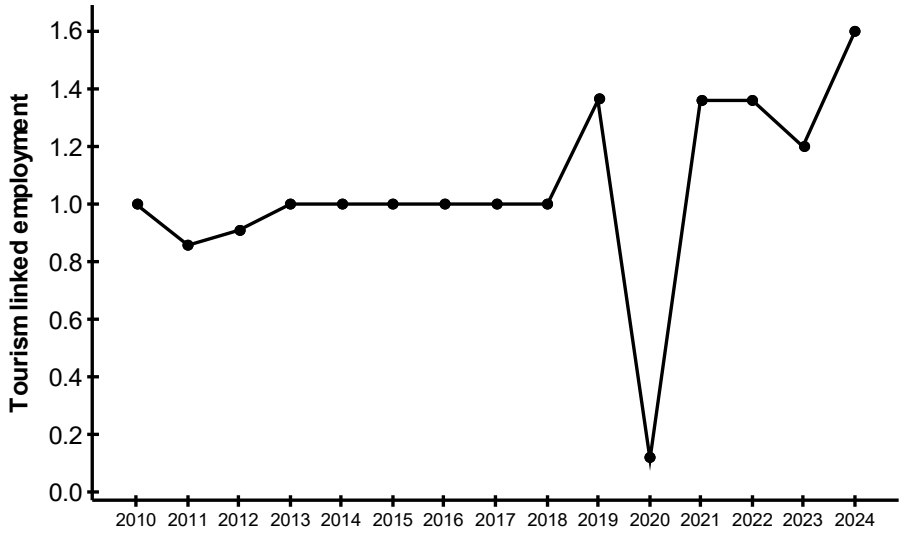


The time-series plot in Figure 10 displays a positive serial correlation (D-W = 2.6), which indicates that the approximate number of people employed in the tourist industry in southeast Alaska increased from about 1.0 million in 2010 to about 1.4 million in 2019. During the

COVID-19 pandemic in 2020, the number of people employed in the tourist industry in this region declined to about 100,000. The employment rate rapidly recovered and increased to a maximum of about 1.6 million in 2024. Employment in the tourist industry remained stable immediately after the first tax policy interruption in 2013. Employment increased after the second, third, fourth, and fifth tax policy interruptions in 2020 to 2024, but this increase was confounded by the phase of rapid recovery from COVID-19 associated with other factors.

Figure 10

Time-series Plot of Tourism Linked Employment

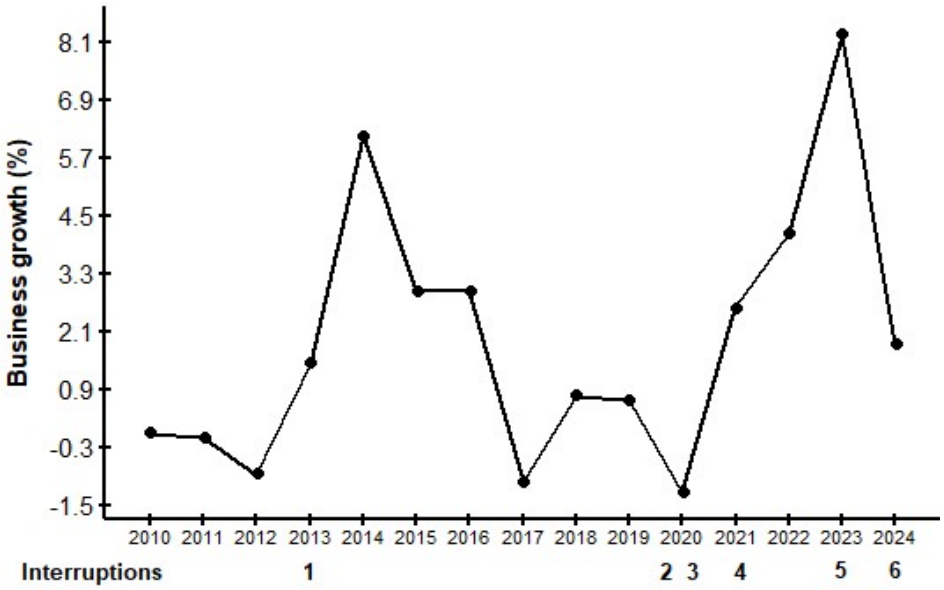


The time-series plot in Figure 11 displays negative serial correlation (D-W = 1.5), showing that business growth per year in southeast Alaska between 2010 and 2019 fluctuated widely from 6.2% in 2014 to about -1.0% in 2017. During the COVID-19 pandemic in 2020, business growth in this region declined to -1.2%. Thereafter, the business growth rapidly recovered and increased to a maximum of about 8.3% in 2023 but dropped to 1.8% in 2024. Business growth was stable immediately after the first tax policy interruption in 2013, but

increased after the second, third, fourth, and fifth tax policy interruptions in 2020 to 2024. The increase in business growth was, however, confounded by the phase of rapid recovery from COVID-19 associated with other factors.

Figure 11

Time-series Plot of Business Growth



Research Question and Sub-Questions

Figure 12 displays the PLS-SEM path diagram with the values of the path coefficients located next to the arrows. The second section of the model predicts the municipal revenues during the five years from 2020 (during the pandemic, when tourism was disrupted) up to 2024, during the recovery period after the pandemic.

Figure 12

Model Constructed by PLS-SEM

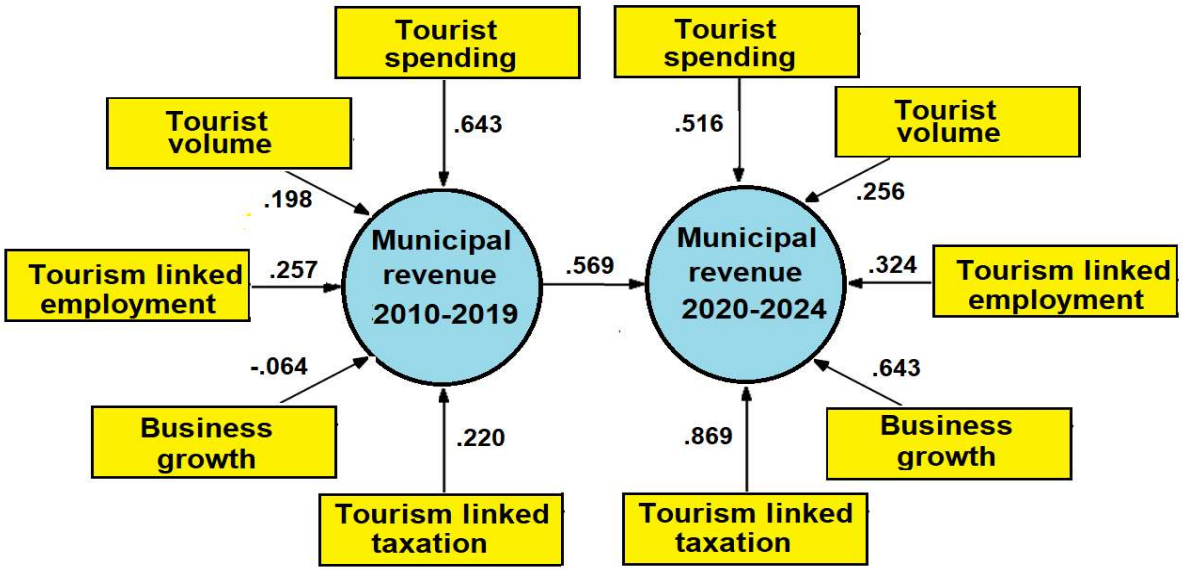


Table 7 reiterates the data in Figure 12, but with the addition of 95% CI and an indication of the strength of the path coefficients, ranging from negligible to very strong. The model built using PLS-SEM demonstrated strong practical relevance, as it explained a substantial portion of the variance in municipal revenue across both time periods. The data collected from 2010 to 2019 accounted for a notable share of this variance, with an even greater share explained by the data from 2020 to 2024. Additionally, the model showed adequate construct validity, with all path coefficients showing meaningful influence, except for business growth prior to 2020, which had minimal impact.

Table 7

Confidence Intervals and Strengths of Path Coefficients

Year	Predictor of Municipal revenue	Path coefficient (Point estimate)	95% CI		Strength
			Lower	Upper	
2010 to 2019					
	Tourism linked taxation	.220	.185	.255	Weak
	Tourist volume	.198	.128	.268	Weak
	Tourist spending	.643	.576	.711	Strong
	Tourism linked employment	.257	.221	.294	Weak
	Business growth	-.064	-.048	.080	Negligible
2019 to 2020					
	Municipal revenue	.569	.421	.742	Strong
2020 to 2024					
	Tourism linked taxation	.869	.713	.998	Very strong
	Tourist volume	.256	.004	.508	Weak
	Tourist spending	.516	.264	.768	Strong
	Tourism linked employment	.324	.063	.584	Moderate
	Business growth	.643	.421	.847	Strong

The practical relevance of the model constructed with PLS-SEM was reflected by the significant average variance explained (AVE = 68.6%) and the strong R2 values. A large proportion (R2 = 61.5%) of the variance in Municipal revenue was explained by the data collected between 2010 and 2019. An even larger proportion (R2 = 73.0%) of the variance in municipal revenue was explained by the data collected between 2020 and 2024. Moreover, the model's construct validity was adequate, because all the path coefficients exceeded .10 except for Business growth before 2020 (-.064).

Before the COVID-19 pandemic, from 2010 to 2019, tourism-linked taxation, tourist volume, and tourist-linked employment were weak predictors of municipal revenue, whereas tourist spending was a strong predictor of municipal revenue. The 95% CI did not capture zero,

reflecting the certainty of the path coefficients. From 2010 to 2019, the strength of the relationship between business growth and municipal revenue was negligible, and the 95% CI captured zero, reflecting the uncertainty of this relationship.

The municipal revenue collected between 2010 and 2019 positively correlated with the revenue collected between 2020 and 2024, reflected by a strong path coefficient (.569) with 95% CI not capturing zero. After the COVID-19 pandemic in 2020 (when the municipal revenue and all the predictors and covariates were at their lowest value) until the end of the time-series in 2024 (when the municipal revenue and all the predictors and covariates had increased rapidly from their 2020 levels), all the path coefficients increased in magnitude. Tourist-linked taxation, spending, tourist employment, and business growth were strong predictors of municipal revenue, whereas tourist volume remained weak. The 95% CI of all the path coefficients did not capture zero, reflecting their certainty.

Evaluation of the Findings

The analysis was limited by insufficient data points, with only 15 observations in the time series. This made it impossible to conduct a meaningful interrupted time series analysis or estimate reliable moving averages. As a result, the PLS-SEM model could not distinguish between the effects of the COVID-19 pandemic and tax policy changes on municipal revenue.

The research and sub-questions were answered. Based on the archived records for CBJ, Alaska, the variance in tourism-related taxation, tourist volume, and visitor spending after controlling for covariates before and after taxation policy changes and the COVID-19 epidemic predicted the variance in municipal revenues generated by taxes between 2010 and 2024. The matrix plot in Figure 4 confirmed that the bivariate relationships between the seven variables defined in Table 2 were approximately linear. The other assumptions of PLS-SEM were not

violated, except for multicollinearity, referring to excessive intercorrelation between the predictor variables.

When multicollinearity is high, each path coefficient's standard error (SE) is inflated, increasing the widths of the confidence intervals, computed using the product of the t statistic and the SE. Multicollinearity is a problem when the research purpose includes causal or path modeling because it may be challenging to evaluate the significance of multicollinear predictor variables. There is no irrefutable objective test to determine the extent to which collinearity is deleterious. Variance Inflation Factor (VIF) is the most commonly used statistic, but there are no formal criteria for interpreting VIF values. Several arbitrary cut-off criteria have been proposed, and VIF values exceeding 5 to 10 or even higher may be applied in practice (Kim, 2019; O'Brien, 2007).

It is up to the researcher to decide the VIF criteria, depending upon how rigorous he/she wants to be and the purpose of the model. Excluding multicollinear variables from a model is not recommended (O'Brien, 2017). The strong correlation between tourist volume and the other four predictors of municipal revenue, indicated by VIF > 10, may compromise the interpretation of the 95% confidence intervals; however, multicollinearity does not necessarily compromise the predictions of PLS-SEM (Hair et al., 2022). The implications are that, even though the model has predictive value, it does not necessarily reflect the relative importance of tourist taxation, tourist volume, and tourist spending to the municipal revenue of Juneau.

Answers to Research Questions

This study examined how variance in tourism-linked taxation, tourist volume, and tourist spending influenced municipal revenue generated by taxes on tourists in CBJ, Alaska. Using data from 2010 to 2024 and controlling for covariates, findings showed that tourist spending had the

strongest and most consistent contribution to municipal revenue, followed by tourism-linked taxation and tourist volume. These results align with prior research emphasizing the importance of tourism taxation and spending as key fiscal mechanisms for funding public services in tourism-dependent municipalities (Addison et al., 2018; Durbarry & Sinclair, 2021; Green, 2024).

Research Question 1 (RQ1)

The answer to RQ1 is that the variance in tourism-linked taxation contributed to the variance in municipal revenue generated by taxes on tourists in CBJ, after controlling for covariates. The path coefficient was weak (198) between 2010 and 2019 but became much stronger (.869) between 2020 and 2024. The results were consistent with existing research and theory. The finding that the variance in tourism-linked taxation contributed to the variance in municipal revenue generated by taxes on tourists was consistent with previous research. Tourism taxation generates municipal revenues by capturing a portion of the economic benefits from tourism, which is vital for funding public services and infrastructure in Juneau (Addison et al., 2018; Halim & Rahman, 2022; Sisneros-Kidd et al., 2019). Durbarry and Sinclair (2021) and Falk and Hagsten (2020) similarly concluded that tourism-related taxes provide municipalities with much-needed funds for infrastructure and public services without deterring tourists. Tourism taxation is a crucial revenue source for local governments dependent on seasonal tourism, such as Juneau.

Research Question 2 (RQ2)

The answer to RQ2 is that the variance in tourist volume contributed to municipal revenue generated by taxes on tourists in CBJ, after controlling for covariates. The path coefficient was weak (.220) between 2010 and 2019 and remained weak (.256) between 2020

and 2024. The finding that the variance in tourism volume contributed to the variance in municipal revenue generated by taxes on tourists was consistent with previous research. Durbarry and Sinclair (2021) and Falk and Hagsten (2020) concluded that tourism-related taxes provide municipalities with much-needed funds for infrastructure and public services without deterring tourists. Tourism taxation is a crucial revenue source for Juneau, where seasonal tourism generates taxes that bolster public service provision and economic growth without negatively impacting the tourism sector (Şengel et al., 2023).

Research Question 3 (RQ3)

The answer to RQ3 is that the variance in tourist spending contributed to the variance in municipal revenue generated by taxes on tourists in CBJ, after controlling for covariates. The path coefficient was strong (.711) between 2010 and 2019 and remained strong (.768) between 2020 and 2024. The finding that the variance in tourist spending contributed to the variance in municipal revenue generated by taxes on tourists was consistent with previous research. Tourism spending helps fund services in Alaska and benefits all Alaskan residents and businesses (Green, 2024). The findings were consistent with the conclusion that the injection of money into the local economy that takes place when a visitor purchases any good or service inside Alaska is essential to support municipal revenues; moreover, the findings confirm that Alaska's tourism industry has experienced a steady rebound from the COVID-19 pandemic where tourist spending continues to be a significant economic driver (Alaska Travel Industry Association, 2023, 2025).

Summary

The role of tourism taxation in bolstering municipal revenues and promoting sustainable economic development in Juneau, Alaska, was explored using time-series plots and PLS-SEM. Based on the archived records for CBJ, Alaska, the variance in tourism-related taxation, tourist volume, and visitor spending after controlling for covariates before and after taxation policy changes and the COVID-19 epidemic predicted the variance in municipal revenues generated by taxes between 2010 and 2024. The overall conclusion is that since 2010, the tourism industry has played a pivotal role in the economy of Juneau. After the disruption to the economy caused by the COVID-19 pandemic, in 2020, the contribution of tourist taxation, tourist volume, and spending on municipal revenues in Juneau increased. The findings of this study, covering the disruptions associated with the COVID-19 pandemic and multiple tax policy changes, confirm the economic benefits and vulnerabilities associated with Juneau's reliance on tourism. Assessing tourism tax roles in Juneau informed the city's financial sustainability, economic development, and investment decisions. The findings may help devise taxation frameworks that promote tourism growth and ensure stable municipal income. Chapter 5 presents more detailed implications, recommendations, and conclusions.

Chapter 5: Implications, Recommendations, and Conclusions

The purpose of this quantitative study was to explore the statistical relationships between the variance in tourist taxation, volume, and spending, and the variance in municipal revenues in CBJ, Alaska, between 2010 and 2024. Confounding by covariates (e.g., tourism-linked employment, business growth) and interruptions (e.g., taxation changes and the COVID-19 pandemic) were included. The PICOT-research question for this study was "based on the archived records for CBJ, Alaska (Population) to what degree does the variance in tourism-related taxation, tourist volume, and tourist spending after controlling for covariates (Interventions) before and after taxation policy changes and the COVID-19 epidemic (Comparisons) predict the variance in municipal revenues generated by taxes (Outcomes) between 2010 to 2024?"

The research design was retrospective, longitudinal, correlational, comparative, and exploratory. Answering the PICOT-research and sub-questions involved collecting and analyzing longitudinal data consisting of a 15-year time-series of secondary data collected from 2010 to 2024 inclusive. The correlational design involved analysis of the statistical relationships between the outcome variables (i.e., municipal revenues), predictor variables (i.e., tourism-related taxation, volume, and spending), and covariates (i.e., tourism-linked employment, business growth). The outcomes were compared before and after known events (i.e., taxation policy changes and the disruption caused by the COVID-19 pandemic). The exploratory method of data analysis using PLS-SEM did not involve tests to confirm or reject predefined null or alternative hypotheses using p values, complying with the policy of the American Statistical Association that "p -values below 0.05 do not prove the reality of anything. Nor, come to that, do p-values above 0.05 disprove anything." (Matthews, 2021, p. 16).

After controlling for covariates, the answer to the PICOT question was that the variance in tourist volume and spending contributed to the variance in municipal revenue generated by taxes on tourists in CBJ. The practical relevance of the model constructed with PLS-SEM was reflected by the significant average variance extracted, explaining the strong R2 values. The findings were consistent with the conclusion that the injection of money into the local economy when a visitor purchases any good or service inside Alaska is essential to support municipal revenues. The limitation of the research design was that the retrospective analysis of secondary data could not directly measure the impact, influence, or effects of tourist taxation, volume, and spending on municipal revenues.

Chapter 5 presents (a) a consideration of the implications of the findings, organized around the three sub questions to the PICOT-research question; (b) a discussion of recommendations to predict how the findings of the research may be applied in practice to improve the relationships between, tourist volume, tourist spending and municipal revenue generated by taxes on tourists in the CBJ; (c) some recommendations for future research; and (d) the conclusion.

Implications

The implications of the findings of this study with reference to existing research, and the factors that may have influenced the findings, are organized around the three sub-questions. The most significant implications and consequences to society are considered.

Variance in Tourism-Related Taxation

Research sub-question 1 was: What are the implications of the variance in municipal revenues generated by taxes on tourists in CBJ? The positive path coefficients in the model constructed using PLS-SEM predicted that for 15 years, the variance in tourism-related taxation

was positively correlated with an increase in municipal revenues associated with tourism-linked employment and business growth. The path coefficient was weak (β = .198) between 2010 and 2020 but became much stronger (β = .869) after the COVID-19 pandemic between 2021 and 2024. The implications of this model are consistent with the conclusion that tourism-related taxation in CBJ is crucial to the economy of CBJ, where key revenue streams, such as the CPV excise tax and bed taxes, play a central role (Dunleavy et al., 2023; McKinley Research Group, 2022).

The implications of tourist-linked taxation have been highlighted by other researchers (Falk & Hagsten, 2020; Guettabi, 2017) and emphasize the critical importance of tourism as a source of municipal revenue in Juneau, where key revenue streams, such as the CPV excise tax and bed taxes, play a central role (Andronova & Sakharov, 2022; Dunleavy et al., 2023; Sisneros-Kidd et al., 2019). Tovmasyan (2021) and Sarver (2020) further emphasized the implications of tax models for tourism, including environmental levies, which are essential for advancing sustainability initiatives. The conclusion is that the variance in the fiscal contributions of tourism-related taxes to local economic stability is paramount in CBJ.

The model created by PLS-SEM predicted that the six changes in tax policies during and after the disruption to tourist activities caused by the COVID-19 pandemic (i.e., the increase in bed tax from 7% to 9% in 2020; the application of higher sales tax (> 5%) if a transaction spans both in-borough and out-of-borough component in 2021; the exemption of sales tax from all goods and services on cruise ships within CBJ in 2022, and the increase in sales tax cap base from $12,800 to $14,300 in 2024) may have contributed to the continuous rapid annual elevation in the trajectory of the municipal revenues in CBJ between 2021 and 2024; however, the recovery after the pandemic may also be related to other confounding factors. This study did not

provide evidence to determine if increasing taxes on tourists in CBJ between 2019 and 2024 reduced the inbound tourist demand. This finding was not consistent with other researchers (Adedoyin et al., 2021; Higgins-Desbiolles et al., 2019; Nepal & Nepal, 2021), who concluded that increasing the cost of visiting a tourist destination in a competitive market through increasing the taxes on tourists was associated with a decrease in the inbound tourist demand.

Variance in Tourist Volume

Research sub-question 2 was: What are the implications of the variance in tourist volume contributing to municipal revenue generated by taxes on tourists in CBJ? The positive path coefficients in the model constructed using PLS-SEM predicted that for 15 years, the variance in tourism volume was positively correlated with the variance in municipal revenues, associated with tourism-linked employment, and business growth. The path coefficient was weak ($\beta = .220$) between 2010 and 2019 and remained weak ($\beta = .256$) between 2020 and 2024. The predictions were consistent with the conclusion that in CBJ, the volume of tourism, especially after the COVID-19 pandemic, contributed moderately to the local economy.

The predictions of PLS-SEM were consistent with previous studies concluding that a high volume of tourism in a favorable location is a positive driver of economic development and is correlated with a higher rate of employment and infrastructure investment (Zhuang et al., 2019). There was no evidence to indicate whether or not an excessively high-volume tourism strained local infrastructure and public services (Bouchon et al., 2019). Juneau's reliance on a high volume of tourism is consistent with the broader economic goals of the municipality (Sisneros-Kidd et al., 2019). The findings of this study highlighted that the CBJ policy makers appeared to manage revenues from tourism effectively before and after periods of economic recession, specifically the COVID-19 pandemic.

Variance in Tourist Spending

Research sub-question 3 was: What are the implications of the variance in tourist spending contributing to the variance in municipal revenue generated by taxes on tourists in CBJ? The positive path coefficients in the model constructed using PLS-SEM predicted that for 15 years, the variance in tourist spending (encompassing accommodation, dining, transportation, entertainment, shopping, and other local activities such as whale watching) was positively correlated with the variance in municipal revenues, associated with tourism-linked employment, and business growth. The path coefficient was strong ($\beta = .711$) between 2010 and 2019 and remained strong ($\beta = .768$) between 2020 and 2024. Tourism spending helps fund services in Alaska and benefits all Alaskan residents and businesses (Green, 2024).

The rise in tourist spending after the pandemic was probably caused by increased demand and a rise in consumption, which was common to all businesses during the recovery period (Dean, 2023; Walmsley et al., 2021). Visitor spending, measured as per capita tourist expenditure per year, positively correlated with municipal revenue and visitor volume per year, providing critical context for understanding the dynamics of tourism-driven revenue in CBJ. This finding was consistent with the conclusion that spending by tourists is crucial to sustain municipal revenues in most tourist destinations (Faraji et al., 2021; Getzner, 2022; Luce, 2019; Papcunová et al., 2020; Voltes-Dorta et al., 2014).

Consequences to Society

A strong correlation between tourism-related taxation and municipal revenues highlights the importance of effective fiscal management to ensure the sustainable economic growth of society (Alqadi & Ismail, 2019). Effective taxation policies help to improve public services and infrastructure and enhance residents' quality of life in tourist destinations (Zaei & Zaei, 2013).

Tourism-related taxation is essential for generating municipal revenue to drive future economic growth and social development. (Addison et al., 2018; Halim & Rahman, 2022; Seelkopf & Lierse, 2020).

The indigenous societies in Alaska face increased cultural and economic vulnerabilities (Hakim & Dewi, 2021; Pole & Grizane, 2021; Schuler & Pearson, 2019), highlighting the need for more effective fiscal management in CBJ to prevent resource exploitation and economic instability**.** Policymakers need to understand the challenges and benefits of developing tourism-related taxation frameworks in CBJ to promote tourism growth, which results in beneficial outcomes to their society (Adedoyin et al., 2021; Borges et al., 2020; Swenson, 2022). If the consequences of tourism to society in CBJ are not maintained or are diminished due to reduced tourism appeal, then CBJ could face a collapse in municipal revenues, a long-term economic decline, and a diminished quality of life for the residents.

Equitable tourism-related taxation policies that promote fair wages, local employment, and community access to shared spaces are essential to support cohesive and resilient societies (Higgins-Desbiolles et al., 2019). Moreover, municipal revenues must be used to develop public amenities that benefit both residents and visitors (e.g., parks and community centers) and improve the quality of life of local populations, whilst simultaneously ensuring the long-term viability of sustainable tourism practices (Gnanapala & Sandaruwani, 2016; Lusiana et al., 2021). Environmental degradation, pollution, overcrowding, and other adverse effects of tourism must be mitigated to enhance positive outcomes and promote societal advancement through sustainable tourism (Uslu et al., 2023).

Recommendations for Practice

The findings of this study can be applied to (a) improve the existing practices of managing tourism and enhancing the municipal revenue contributed by tourists in the context of the unique challenges faced by CBJ and (b) expand upon the existing conceptual framework that predicts an interaction between tourism-related taxation, municipal revenue, and fiscal policy. By identifying which tourism-related variables have the strongest impact on municipal revenue, policymakers in Juneau and similar tourism-dependent regions can make more data-informed fiscal and infrastructural decisions. Additionally, the results support ongoing efforts to align local tax policies with broader economic resilience strategies, especially in areas where seasonal fluctuations in tourism activity pose fiscal challenges (Falk & Hagsten, 2020; Şengel et al., 2023).

Improvements to Practice

The ability of the CBJ municipality to maintain fiscal stability during rapid state-level economic fluctuations highlighted the recommendation to maintain localized fiscal control in a tourism-dependent area (Reimer et al., 2017). The findings of this study are consistent with the recommendation that local municipalities that rely on tourism taxes should ideally tailor their revenue sources in response to fluctuations in tourism dynamics (Chugunov et al., 2021). New policies to manage tourism-linked taxes and strategic incentives to boost tourism volume in CBJ in the future are recommended to balance the economic benefits with environmental and social goals (Gorina & Maher, 2018).

Fiscal policies and tourism growth in CBJ must be aligned with sustainability principles to benefit society, protect indigenous heritage, and conserve environmental resources. Increased revenues from tourism taxes in CBJ may help to offset ecological degradation through

investment in conservation projects (Sarver, 2020). Ideally, tourism taxes in CBJ should be strategically reinvested in local sustainability projects to mitigate environmental impacts associated with high visitor volumes (Naylor, 2020). Well-structured fiscal policies are required in CBJ to ensure that tourism taxes bolster public service provision and economic growth without negatively impacting the tourism sector (Şengel et al., 2023; UNWTO, 2020). Ideally, tourism-related taxation in CBJ should be linked to broader municipal revenue strategies to sustain public services and promote sustainable development (Niekerk, 2014; Nzama, 2010).

Expansion of Conceptual Framework

The original conceptual framework proposed was based on the assumption that fiscal policy, tourism-related taxation, and municipal revenues in CBJ could be integrated to construct a statistical model. This framework predicted that the contribution of tourism-linked taxes to municipal revenues would help sustain the local community's economy. The construction of a model to explain how tourism-related taxes predict municipal revenues and promote business and infrastructure development aligned with the applied nature of the research. After the data had been collated and analyzed, however, the disruptions associated with the COVID-19 pandemic had to be inserted into the conceptual framework.

The time series had to be divided into two sections. The first section included the data collected from 2010 to 2019, before the pandemic, followed by the second section, including the data collected from 2020 to 2024, during and after the pandemic. The conceptual framework was also extended by describing the rapid recovery in tourism-linked taxes to municipal revenues after the pandemic.

Recommendations for Future Research

Future researchers might (a) learn from and build upon the findings of this study. (b) improve upon this study, given its limitations; and (c) pursue the next logical step to construct a more robust model that predicts how tourism-related taxation may contribute to municipal revenue in CBJ. Subsequent studies could incorporate additional variables such as policy changes, inflation-adjusted tax rates, or tourism segmentation to refine predictive accuracy and generalizability. Moreover, comparative analyses with other seasonal tourism-dependent municipalities could strengthen the external validity of the model and offer broader policy relevance (Durbarry & Sinclair, 2021; Halim & Rahman, 2022).

Learning from and Building Upon the Findings

Bootstrapping was used in this study to estimate the standard error and hence the 95% confidence interval (CI) of the path coefficients by extracting 5000 sub-samples using the Monte Carlo algorithm from the raw data (Hair et al., 2022). The bootstrapping results depend on the sample size. When the sample size is small (e.g., $N = 15$, as in the present study), then the values of the standard error (SE) and 95% CI computed by bootstrapping may be unstable (because the sub-samples consist mainly of repetitions of the same combinations of raw data). The implications are that the 95% CI computed by SmartPLS in the present study may be unreliable. Unreliability implies that if the bootstrapping is conducted by different researchers, or the same researcher on multiple occasions, then different CI are computed on each occasion.

Moreover, the predictors of municipal revenues in CBJ across the 15 points in the time-series between 2010 and 2024 were multicollinear (i.e., tourist volume was strongly linearly related to all the other four predictors of municipal revenues). The variance inflation factor (VIF) values for the other predictors were < 10; consequently, the model was still considered valid and

a reliable predictor of municipal revenue. The effects of multicollinearity imply that the path coefficients and their 95% CI are compromised, and exact relationships between the five predictor variables, the six tax policy interventions, and the fluctuations in municipal revenues are complex to evaluate critically.

Improving This Study

This study could be improved by constructing more robust empirical models to forecast the future demand for inbound tourist volume in CBJ and its implications. For example, Meng and Fang (2025) constructed a more complex predictive model using time-series data with Fourier analysis to explain how tourist volume, revenue, and regulatory tools (e.g., caps and taxes) can be optimized to minimize environmental impact and maximize economic and social benefits in Juneau. Sensitivity analysis highlighted the importance of environmental and governance factors to sustain local quality of life.

Pursuing the Next Logical Step

The next step is to obtain a longer set of time-series data to construct a predictive model using PLS-SEM with a larger sample size. For example, Méndez-Suárez (2021) constructed a time-series model using PLS-SEM with a multicollinear data set containing 120 points collected weekly to explore the relationships between different advertising campaigns in retailer contexts and web and store sales. Kunal et al. (2025) constructed a time-series model using PLS-SEM to identify the predictors of social and economic advancement, based on secondary data extracted from the Reserve Bank of India's (RBI) handbook of statistics on India, spanning 30 years, from 1990 to 2021. Ma et al. (2025) constructed a time-series model using PLS-SEM to predict variations in the production, import/export volumes, consumption, and inventory of wheat, rice, barley, maize, and other grains in Central Asia for 27 years from 1992 to 2019. This model was

applied to predict crop yields in different regions despite the limited availability of secondary data.

In addition to or instead of PLS-SEM, an interrupted time series or regression discontinuity design (Ewusie et al., 2020; Hawley et al., 2019; Wuepper & Finger, 2023) or an autoregressive integrated moving average (ARIMA) model (Shumway & Stoffer, 2017) could potentially be developed in the future to predict municipal revenues in CBJ using a longer set of longitudinal time-series data (e.g., at least 30 years), assuming that the data did not violate the strict assumptions of parametric statistics. In addition to the collection and retrospective analysis of secondary data, a prospective cross-sectional survey is recommended to obtain empirical data for inclusion in a more detailed predictive model. In order for Juneau to remain a sustainable tourist resort, the city planners need to prioritize how to attract more visitors. Tourist destinations can only succeed in attracting visitors if the location is attractive, accessible, and provides adequate accommodation, amenities, and activities. The survey should therefore be distributed to past, present, and potential visitors to Juneau in order to measure their perceptions of the "5-A's" of tourism, specifically: "Attraction, Accessibility, Accommodation, Amenities, and Activities" (David et al., 2023, p. 157). Another type of cross-sectional survey to collect empirical data for a predictive model should involve measuring the residents' attitudes toward tourist market segments, tourism development, tourist impacts, and the quality of life in Juneau. A similar survey was conducted in Valdez, Alaska (Vogt & Jun, 2005).

This study and the recommendations for future research have focused entirely on analyzing quantitative data; however, qualitative data analysis also has a place in tourism research. Qualitative tourism research is promoted by a movement that challenges the dominating role of quantitative methods that underpin the economic, business, and management-

centered approaches to studying tourism. Qualitative research in tourism aims to “develop an understanding through crafting of 'thick' descriptions or generating other types of rich material, which may become subject to interpretation. It seeks to avoid making generalizations” (Ren, 2023, p. 1). More qualitative research is recommended, involving interviewing tourists, to gain insight into their subjective attitudes and perceptions towards visiting Juneau, which could be incorporated into policies to ensure that Juneau remains a sustainable tourist resort.

Conclusions

The final section presents a summary of (a) the problem addressed and its importance; (b) the “take-home message”; and (c) the practical and theoretical meaning of the findings.

The Problem and Its Importance

The problem addressed by this quantitative study was to evaluate how tourism taxes align with municipal revenues and broader economic goals in CBJ, Alaska, where key revenue streams, such as the CPV excise tax and bed tax, play a central role (Dunleavy et al., 2023, McKinley Research Group, 2022). The problem was addressed through the analysis of archived records using PLS-SEM. The variance in tourism-related taxation, tourist volume, and tourist spending, after controlling for covariates before and after taxation policy changes and the COVID-19 pandemic predicted the variance in municipal revenues generated by taxes between 2010 and 2024. This study highlighted the importance of implementing effective fiscal management to prevent economic instability. The statistical model constructed using secondary data was important because it emphasized that the taxation of tourists is strongly linked to municipal revenue.

Take Home Message

Before the disruption caused by the COVID-19 pandemic in 2020, tourism volume, spending, and municipal revenues in CBJ between 2010 and 2019 increased relatively slowly. After the disruption caused by the COVID-19 pandemic, tourism volume to Juneau rapidly recovered, and tourist-linked taxation, spending and municipal revenues are currently a cornerstone of Juneau's economy, bolstering the growth of local businesses. The seasonal influx of tourists currently drives significant economic activity and tourist-linked employment opportunities in CBJ. These findings provide valuable insights for policymakers attempting to craft equitable fiscal policies to enhance the sustainability of the tourist industry in CBJ. The most crucial recommendation is for policymakers and economic experts to provide appropriate fiscal policies that increase the demand for the tourism industry and pave the way for increased tourism revenues to promote social and economic development in CBJ.

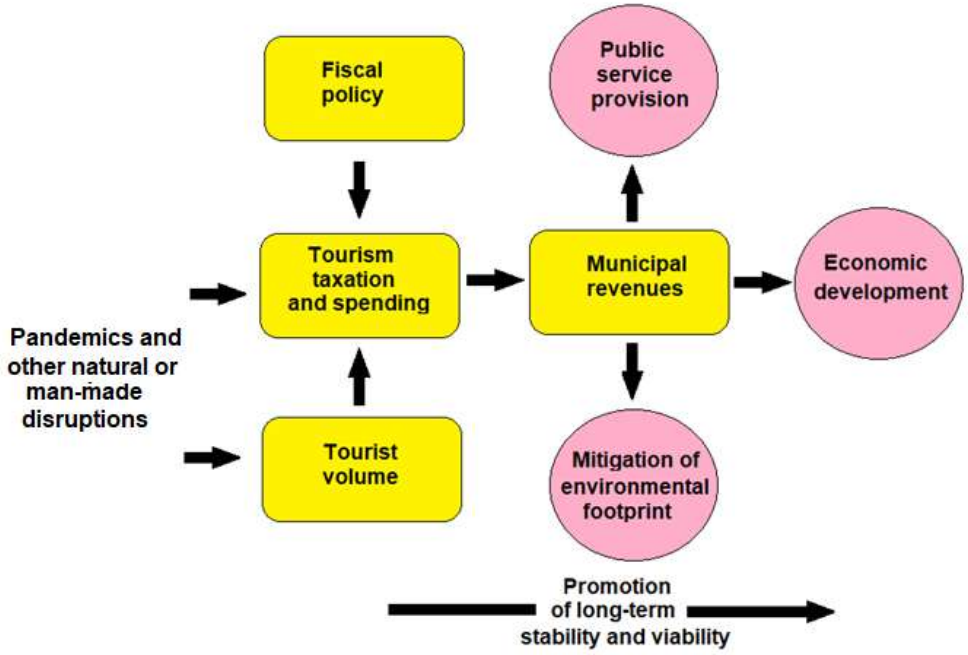
Practical and Theoretical Meaning of the Findings

Highlighting the importance of taxation in CBJ informs policymakers that, to ensure the city's sustainability and economic development, taxation frameworks must be implemented to ensure stable municipal income and promote tourism growth. The close connections between tourism-related taxation, local businesses, and sustainable development in Juneau must be emphasized to policymakers and economic development professionals, who can optimize tourism-related taxation to balance revenue generation and economic growth for business owners and residents in CBJ. Effective tourist-linked taxation policies may help improve public services, infrastructure, and economic growth in the future, thereby ultimately enhancing the quality of life of residents in CBJ (Meng & Tang, 2025).

The initial simplistic assumption underpinning the conceptual framework predicting that integrating tourism-linked taxes, tourist spending, and municipal revenues would sustain the local economy in Juneau for the long term did not account for the disruption caused by the COVID-19 pandemic in 2020. This disruption was inserted into the conceptual framework after the data were collected and analyzed, explaining why the model constructed using PLS-SEM was split into two sections, before and after the pandemic. The implications are that the existing conceptual framework must be expanded for future research. The updated framework, based on the predictions of the model constructed using PLS-SEM, illustrated in Figure 13, not only includes the intrusion of a pandemic, but also incorporates future natural or man-made disruptions in Alaska.

Figure 13

Updated Conceptual Framework



This conceptual framework update leads to other pertinent research questions, for example, what would happen to future economic and social development in Juneau (and other Alaskan tourist resorts) if Canada's cruise ships to Alaska were banned in response to the enactment of the United States tariff strategy against Canada? (Tunney, 2025; Reynolds et al., 2024). Moreover, what would happen to future economic and social development in Juneau (and other Alaskan tourist resorts) if there was another serious pollution incident like the Exxon Valdez oil spill that devastated the Alaskan environment in 1989? (Martín-Cervantes et al. 2023)

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Appendix A: Raw Data

Year	Inter-ruption	Municipal Revenue ($M)	Tourism Linked Tax ($M)	Tourist volume (M)	Average tourist spending per capita ($)	Tourism linked employment (M)	Business growth (%)
2010	1	41.000	5.834	1.751	2378	1.000	0.000
2011	1	41.700	5.205	1.752	2496	0.858	-0.095
2012	1	45.800	5.667	1.874	2587	0.908	-0.859
2013	1	47.000	6.033	1.971	2639	1.000	1.444
2014	1	47.600	6.075	1.906	2720	1.000	6.167
2015	1	47.900	5.757	1.965	2773	1.000	2.949
2016	1	47.900	5.577	2.030	2831	1.000	2.951
2017	1	52.200	6.151	2.243	2911	1.000	-1.012
2018	1	53.800	6.069	2.536	3006	1.000	0.767
2019	1	56.500	7.141	2.437	3073	1.361	0.676
2020	2	52.700	0.833	0.285	3060	0.116	-1.230
2021	2	45.700	3.693	2.316	3315	1.360	2.600
2022	2	58.600	5.225	2.334	3620	1.360	4.143
2023	2	75.600	10.190	3.046	3844	1.200	8.274
2024	2	69.000	11.863	2.703	4932	1.600	1.837

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