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Use of a Winery's website for wine tourism development: Niagara region

Wil Martens¹

¹ National Sun Yat-Sen University

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Abstract

This study explores the integration of digital marketing strategies by wineries in the Niagara Region to bolster wine tourism. Through an analysis of website content and functionality across 89 wineries, we uncover how these entities leverage digital platforms to engage potential visitors. Our findings reveal significant digital engagement with foundational online presence, yet highlight areas for enhancement, particularly in providing comprehensive tourism experiences and utilizing interactive features. The research underscores the importance of a multifaceted digital approach, including improved online content, strategic use of visual elements, and the potential of virtual tours to enrich the wine tourism experience. By drawing on successful digital marketing examples within the industry, this study offers actionable insights for wineries and tourism organizations to refine their online strategies, aiming to captivate a wider audience and stimulate regional economic growth through wine tourism.

Keywords: Tourism development, Tourism management, Survey research, Niagara region.

1. Introduction

The Niagara region, renowned for its transition from a scenic marvel to a global tourist powerhouse, offers a fertile ground for investigating wine tourism's impact on regional development against the backdrop of its rich history and unique geography. This exploration is particularly poignant in an era where digital marketing reshapes how destinations engage with potential visitors. The Niagara Peninsula, leveraging its strategic focus on tourism and online platforms, underscores wine tourism's pivotal role in providing wineries with a direct sales channel and elevating brand recognition. In this competitive landscape, the digital era has magnified the importance of wineries' online presence, enabling them to attract a broader visitor base through their websites (Martínez-Falcó et al. 2024; Yousaf and Xiucheng 2018). The distinct geographical and climatic conditions of the region enhance its allure, offering a myriad of wine experiences that appeal to both domestic and international tourists (Dawson et al. 2011; Janzen 2010).

This research delves into the strategies that wineries in the Niagara Region use to harness their websites to promote wine tourism. It aims to illuminate the online marketing strategies that beckon wine enthusiasts, evaluating how these digital platforms facilitate the wine tourism experience through interactive communication, e-commerce, and detailed information about wines and the region. The study assesses winery website content and functionality, aiming to uncover improvements that could magnify the Niagara Region's appeal as a wine tourism destination. The insights from this study are set to offer actionable guidance for wineries and regional tourism bodies to refine their digital marketing approaches, aiming to captivate tourists more effectively and enrich their visitation experiences. This guidance is enriched by examining successful digital marketing cases within the wine industry that have effectively harnessed international markets through innovative partnerships and unique value propositions, as documented in the literature (Remeňová, Skorková, and Jankelová 2019; Carlsen and Charters 2006).

By investigating the digital promotion of wine tourism in the Niagara region, this research enriches the field of wine tourism development with nuanced insights into how wineries leverage online platforms to engage potential visitors. Through a detailed examination of the online marketing strategies of Niagara wine producers and an evaluation of winery websites' content and functionality, this study sheds light on the digital mechanisms that enhance the visitor experience and draw tourists to the region. It underscores the significance of interactive communication, e-commerce capabilities, and comprehensive information provision on winery websites as pivotal elements in promoting wine tourism. The findings promise to offer actionable recommendations for wineries and tourism organizations seeking to refine their online presence for visitor engagement and to stimulate economic growth through wine tourism, supported by the backdrop of the Niagara region's competitive wine industry and the global shift towards a digital marketplace (Sigala and Robinson 2019; Nowak and Newton 2008).

The structure of this paper is organized as follows: Section 2 reviews pertinent literature, setting the contextual backdrop. Section 3 elaborates on the research methodology, laying the groundwork for empirical analysis and formulating guiding research questions. Section 4 unveils the study's findings, prefacing comprehensive discussion and analytical exploration in Section 5. The conclusion in Section 6 encapsulates critical insights, articulates limitations, and suggests avenues for future inquiry, thereby bridging theoretical and empirical dimensions.

2. Literature Review

2.1. *Overview of the Niagara Wine Region*

With its rich viticultural tapestry, the Niagara Wine Region serves as the cornerstone of Canada's wine production, embodying a blend of historical tradition and innovative practices. This fertile enclave is home to over 135 wineries distributed across a landscape of over 10,000 acres dedicated to vineyards, asserting its position as Canada's largest wine-producing area (W. G. Ontario 2023). Nearly 90% of grape production in Ontario occurs in the Niagara region, highlighting its critical role in the province's viticulture (Development 2022). The region's winemaking lineage, traceable to the 19th century, has endured through the fluctuations of temperance and prohibition, blossoming anew in the 20th century with Inniskillin's establishment in 1975, a watershed moment that reinstated commercial winemaking in Ontario after a lengthy hiatus (Middleton et al. 2009). The subsequent growth has been robust, with the wine industry contributing a staggering \$4.4 billion annually to Ontario's economy, of which the Niagara Peninsula is a pivotal driver, accounting for about 80% of this impact (Canada 2023).

The Niagara region's geographical and climatic advantages are foundational to its viticultural success, with the moderating influence of the Great Lakes fostering a microclimate conducive to grape cultivation. The area's diverse soils and the unique topography offered by the Niagara Escarpment impart distinct characteristics to the wines, nurturing varieties such as Chardonnay, Riesling, Pinot Noir, and the prestigious Icewine, which has become a hallmark of the region's output (Johnson and Mehrvar 2020). The economic ramifications of these natural endowments are significant, with the wine and grape industry providing 6,800 to 8,500 full-time equivalent jobs in the region and attracting over 2.4 million visitors annually, who contribute notably to the local economy through wine tourism (Vintners 2023).

Despite climate change and environmental sustainability challenges, the Niagara Wine Region's prospects appear favourable. The economic activity generated by the industry is considerable, with retail sales of VQA wines from the Peninsula valued at \$582 million in 2021, marking an 11% increase from the previous year (Canada 2023). Furthermore, the ongoing investments in educational and research facilities, like the Niagara College Teaching Winery, underscore a commitment to advancing the industry's growth through innovation and education (Vintners 2023). As the region's wine industry continues to evolve, the symbiotic relationship between the natural landscape, the wine producers, and the influx of tourists will remain integral to the Niagara region's cultural and economic vibrancy. Figure 1 presents a map of Canada's wine regions with the Niagara wine region highlighted.



Canada | Wine Regions

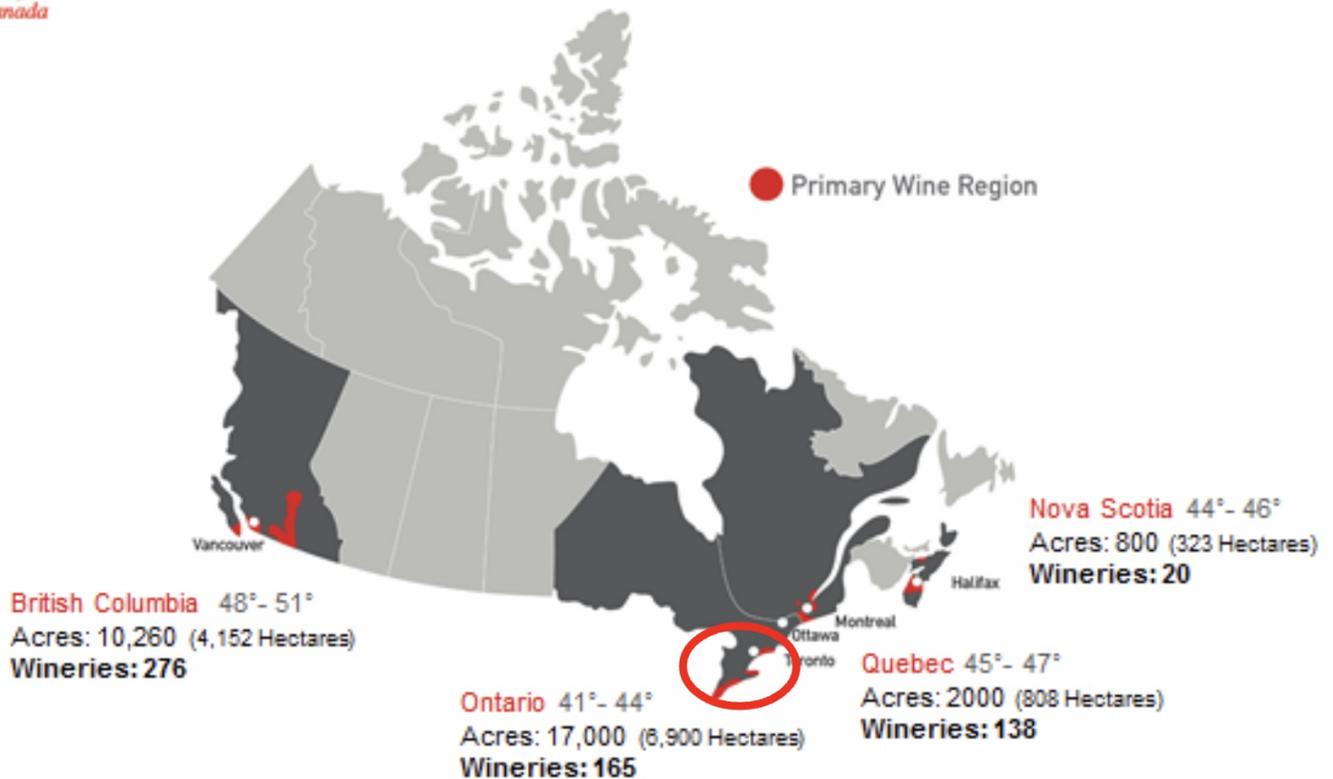


Figure 1. Map of Canada's wine regions with the Niagara region highlighted. Adapted from CanadaMap360.com

2.2. Economic Impact of Wineries

The economic impact of wine tourism in the Niagara region is a pivotal driver of regional economic development, showcasing the industry's potential to catalyze growth and job creation. The wine sector's contributions are multi-faceted, ranging from direct economic activity to broader employment opportunities. For instance, aligning Ontario's market share with British Columbia's could increase Ontario's GDP by an impressive \$800 million over a decade (Deloitte 2023). Moreover, the wine sector in Ontario significantly bolstered the Canadian economy by contributing \$1 billion in 2023 (Deloitte 2023); this highlights the transformative potential of the wine tourism industry in supporting economic outcomes.

Niagara's wine industry significantly contributes to economic metrics and plays a vital role in environmental stewardship and sustainable agricultural practices. The industry's efficient use of arable land within Ontario's Greenbelt underscores a commitment to high-value crop cultivation, marrying environmental sustainability with tourism (Carter-Whitney and Esakin 2010). This approach suggests a promising avenue for Niagara, with the potential to witness an \$8 billion rise in real GDP over a generation, marking a 35% growth. (Deloitte 2023). Such an uplift would underscore the wine tourism sector's capability to reshape the region's economic landscape.

Challenges such as enhancing domestic market share and overcoming distribution barriers remain. However, Niagara stands at a threshold of economic transformation, buoyed by its rich infrastructure and growing acclaim for quality wines. By addressing these challenges and adopting strategic policy initiatives, Niagara is poised to reinforce its stature as a

leading destination for wine tourism, fostering economic growth and setting a benchmark for wine regions globally.

Delving into Table 1 provides a granular view of the wine industry's economic and employment contributions within Niagara, Ontario, and Canada at large. With direct investments yielding \$1,968 million in GDP impact for Niagara, the region benefits significantly from the wine sector's activities. Indirect and induced effects complement this direct contribution, further amplifying the sector's economic role. Overall, the wine industry's total GDP impact in Niagara amounts to \$3,615 million, alongside the support of over 51,000 jobs, illustrating the sector's critical role in promoting economic vitality. These contributions testify to the wine industry's importance in regional development and highlight the sector's expansive potential for further economic growth and job creation. With strategic enhancements and industry innovations, Niagara's wine sector can achieve unparalleled growth, enhancing the region's economic prosperity and the well-being of its communities.

Table 1. Summary GDP and Jobs Impact

	GDP Impact (\$ Millions)			Jobs Impact (FTEs)		
	Canada	Ontario	Niagara	Canada	Ontario	Niagara
2-4 (Ir)5-7 Contribution						
Direct¹	657	657	1,968	4,183	4,183	35,507
Indirect²	198	162	962	1,835	1,551	10,420
Induced³	155	130	685	1,204	990	5,212
Total	1,010	949	3,615	7,222	6,725	51,138

Notes: [1] Direct Contribution: the economic value added directly related to the wine sector's capital investments and operating expenditures. [2] Indirect Contribution: the economic value added from the demand for materials and services that the wine sector generates in supplier industries. [3] Induced Contribution: the general income effects associated with the expenditure of wages earned as a result of direct and indirect economic contribution. FTE (Full-Time Equivalent) is a unit measuring employment equivalent to the workload of one full-time employee for a year.

2.3. The Role of Online Information in Wine Tourism

The current state of research in the field of wine tourism development, particularly concerning the utilization of winery websites for promotional purposes, reflects a growing recognition of the importance of digital marketing strategies in enhancing visitor experiences and driving economic growth in wine-producing regions (Hall, Johnson, and Mitchell 2009). Recent studies have highlighted the increasing reliance of tourists on online information sources for trip planning and decision-making, underscoring the pivotal role that winery websites play in shaping visitor perceptions and facilitating engagement with potential tourists (Xu, Yan, and Mak 2022; Sebby, Jordan, and Brewer 2022; Shu, Ishak, and Yamin 2022; McAdams, Elliot, and LeBlanc 2021). Scholars have emphasized the need for wineries to leverage their online platforms to provide comprehensive information about their offerings, enhance interactive communication, and improve e-commerce functionalities to attract and retain visitors (Khan 2023; Costopoulou, Ntaliani, and Ntalianis 2019; Iaia et al. 2017; Duarte Alonso et al. 2013)

Moreover, the literature indicates that regional-based marketing and collaborative efforts among wineries can significantly enhance the destination's image and attract more visitors. Studies like those by (Molina, Gómez, and Martín-Consuegra 2010) and (Lewis, Kerr, and Burgess 2019) have established the importance of destination image over product brand image alone, suggesting that wineries in the Niagara region could benefit from a unified approach to digital marketing that emphasizes the unique characteristics of the area. Additionally, the spatial movement of wine tourists, as explored by (Alant and Bruwer 2010), underscores the influence of knowledge and previous experience, pointing to the need for wineries to share engaging stories and experiences through their websites to foster a deeper connection with potential visitors.

Wineries with well-developed websites that offer detailed information on wine products, visitor experiences, and interactive features tend to attract more tourists and enhance their competitiveness in the wine tourism market (Neilson and Madill 2014). This is further supported by the work of (Cohen and Ben-Nun 2009), which highlights the diverse motivations behind winery visits, including the desire for educational experiences and the atmosphere of the winery, suggesting that winery websites should cater to these varied interests to draw in a broader audience. The importance of social media integration, personalized communication, and the inclusion of visual elements, as identified in studies by (Zaharia et al. 2021; Szolnoki et al. 2018) and (Capitello et al. 2014), cannot be overstated in creating engaging online experiences for wine tourists. However, there remains a gap in the literature regarding the optimal strategies for wineries to maximize the potential of their websites in promoting wine tourism and differentiating themselves in a competitive market.

Overall, the current state of research underscores the significance of digital marketing and online presence for wineries in the context of wine tourism development. The evidence points to the crucial role of web-based marketing in driving winery retail sales and influencing visitor spending patterns, highlighting the need for Niagara region wineries to adopt comprehensive digital marketing strategies. By addressing the gaps in knowledge and exploring innovative approaches to website optimization, future research in this field can provide valuable insights for wineries, tourism organizations, and policymakers seeking to enhance the wine tourism experience and drive sustainable economic growth in wine regions globally. The exploration of integrated rural tourism models and the examination of the effects of personal experience and word-of-mouth referrals on winery visitations offer promising avenues for further study, particularly in the context of the unique wine tourism landscape of the Niagara region.

2.4. *Gaps in Existing Literature*

Despite significant strides in understanding the role of winery websites in promoting wine tourism, considerable gaps remain in the literature, particularly concerning the specific features and functionalities of these websites that effectively attract and engage visitors. Studies have underscored the importance of comprehensive information, interactive communication, and e-commerce capabilities; however, in-depth research into the precise elements of website design, content, and user experience that foster a positive wine tourism experience is scant. This oversight suggests a need for empirical studies that examine how wineries can optimize their online presence through tailored website functionalities, drawing inspiration from successful examples such as the Niagara region's wineries, which have significantly benefited

from strategic online and offline marketing efforts, including effective website design and content strategies tailored to enhance wine tourism (Telfer 2000; Ontario 1999).

Furthermore, the existing literature lacks a comprehensive analysis of the efficacy of social media integration and digital marketing strategies in augmenting the visibility and reach of winery websites (Alebaki et al. 2022; Duarte Alonso, Martens, and Ong 2022). Given the growing impact of social media on consumer behaviours and decision-making, it's pivotal to explore how wineries can leverage these platforms to bolster wine tourism and interact with potential visitors. Insights from the Niagara region, where wineries have successfully employed social media and digital marketing to attract over 450,000 visitors annually, highlight the potential benefits of integrating these tools into a winery's marketing strategy (W. C. of Ontario 1998; Ontario 1999)

Moreover, the potential of emerging technologies, such as virtual reality tours and augmented reality experiences, in promoting wine tourism through winery websites remains largely unexplored (Garibaldi 2022). Investigating the impact of these technologies on providing immersive and interactive experiences could unveil new opportunities for enhancing the online presence of wineries and broadening the audience base. The rapid growth of wine tourism in areas like the Niagara region, supported by innovative marketing strategies and technological integration, is a prime example of the untapped potential in this domain (Telfer 2000).

The integration of corporate identity (CI), corporate personality (CP), and corporate expression (CE) into wineries' online and offline strategies presents another under-researched area with significant implications for competitive advantage. CI, encompassing an organization's unique characteristics and values, CP, reflecting the human aspects of a brand; and CE, involving all forms of communication to convey uniqueness, are crucial for developing a strong corporate brand (Greyser and Urde 2019). The success of wineries in the Niagara region can be partially attributed to their effective management of CI, CP, and CE, which has not only improved wine quality but also enhanced their market position and visibility (Greyser and Urde 2019; Telfer 2000; Chapman 1994).

Addressing these gaps through empirical research and case studies, mainly focusing on successful models like the Niagara region's approach to wine tourism and the strategic application of CI, CP, and CE for competitive advantage, can offer invaluable insights for wineries and tourism organizations aiming to optimize their online strategies, improve visitor engagement, and stimulate economic growth in wine tourism destinations.

2.5. *Theoretical Framework*

The theoretical framework for this research paper on the use of winery websites for wine tourism development, specifically in the Niagara region, is anchored in Digital Marketing Theory and Experience Economy Theory. These theories provide a dual lens through which the strategies employed by wineries to enhance online visibility and attract wine tourists can be analyzed. Digital Marketing Theory offers insights into the effective use of digital platforms for promoting tourism destinations, encompassing a variety of tactics, including search engine optimization (SEO), social media marketing (SMM), content marketing, and email marketing, tailored to engage potential visitors and convert their interest into actual visits (Chaffey and Ellis-Chadwick 2019; Ryan 2016). This theory supports the examination of how Niagara wineries utilize

their websites to communicate their brand, showcase their offerings, and interact with their target audience, thereby facilitating the consumer decision-making process in the context of wine tourism.

Experience Economy Theory, on the other hand, focuses on the significance of creating memorable experiences for consumers. Introduced by (Pine, Gilmore, et al. 1998), this perspective is crucial for understanding how wineries can transform their websites into platforms that offer more than just information about their products and services. By providing virtual tours, interactive tastings, and engaging storytelling about the vineyard's history and winemaking processes, wineries can immerse potential visitors in the wine tourism experience even before they physically visit. This theory illuminates how wineries in the Niagara region can leverage their online presence to sell not just wine but an entire wine tourism experience, thereby enhancing the perceived value of their offerings and encouraging physical visits (Tussyadiah 2014; Pine, Gilmore, et al. 1998).

Integrating Digital Marketing Theory with Experience Economy Theory allows for a comprehensive analysis of winery websites' role in developing wine tourism in the Niagara region. This research sheds light on the most effective strategies in promoting wine tourism by examining how these websites serve as a crucial touchpoint between wineries and potential tourists. This includes understanding how these websites' design, content, and functionality contribute to a compelling online presence that complements the physical wine tourism experience (J. Kim and Fesenmaier 2017; Hudson and Thal 2013). Through this theoretical framework, the paper aims to contribute to the broader knowledge of tourism development, offering practical insights for wineries looking to optimize their online marketing strategies in the competitive landscape of wine tourism. Figure 2 depicts the relationship between Digital Marketing Theory and Experience Economy Theory as they contribute to Wine Tourism Development.

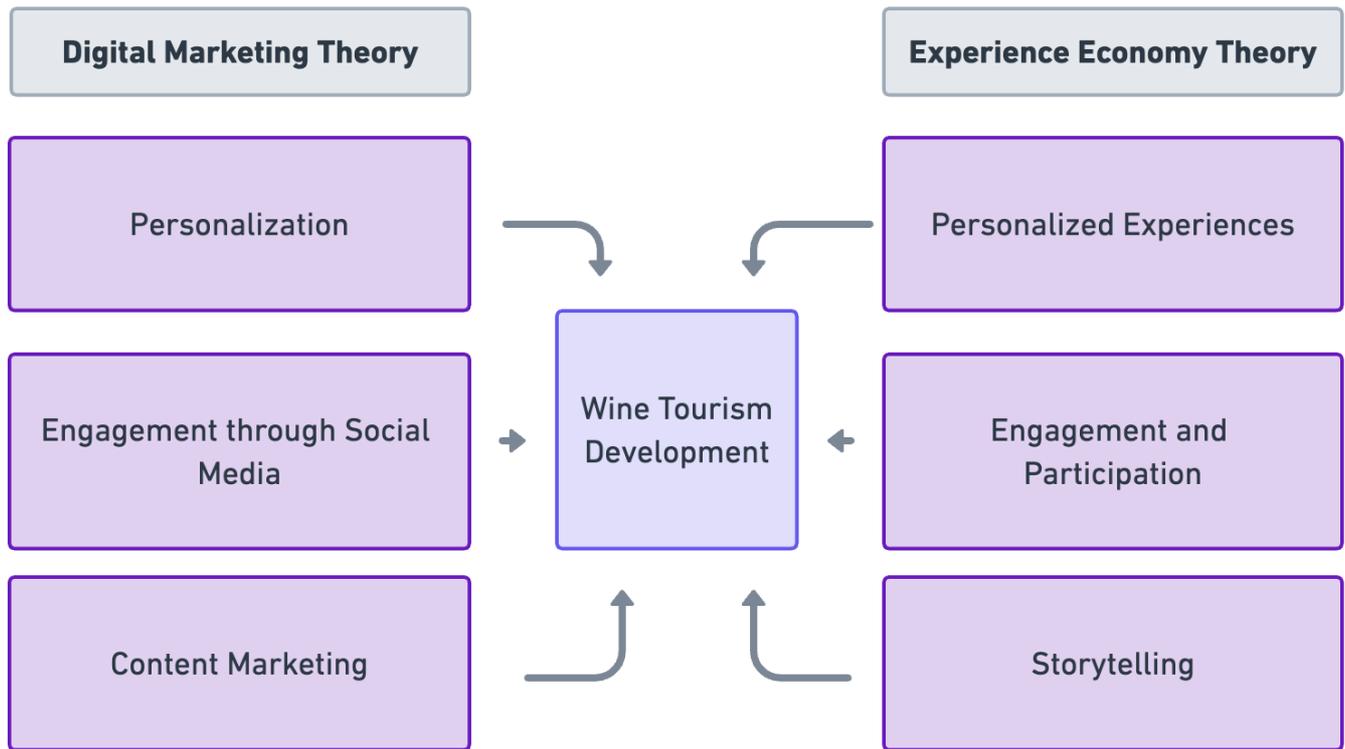


Figure 2. Integration of Digital Marketing and Experience Economy Theories for Enhancing Wine Tourism Development

3. Methodology

3.1. Research Design, Approach, and Data Collection Methods

The study's research design and approach focused on a systematic analysis of the content and functionality of winery websites within the Niagara Region, adopting a qualitative methodology to dissect online marketing strategies and their role in promoting wine tourism. By conducting a detailed examination of website elements in July 2023, this research aimed to identify opportunities for enhancing wineries' online visibility and attractiveness to potential visitors. The analysis scrutinized various aspects of digital engagement, including interactive communication, e-commerce capabilities, and the provision of comprehensive information about wines and the region, across a representative sample of 89 wineries identified through Google Maps and visually presented via Figure 3.

This endeavour explored the primary categories of online marketing utilized by Niagara wineries and employed a comparative analysis to differentiate between websites based on their emphasis on wine tourism. Such a comparison sheds light on the websites' integration, interactivity, and communication features, offering a nuanced understanding of how effectively these digital platforms facilitate wine tourism experiences and promote the Niagara Region as a premier destination.

Incorporating a broad spectrum of producers within the Niagara designation of origin, the study's inclusive approach provided a panoramic view of the digital marketing tactics and wine tourism practices prevalent across the region. The

qualitative content analysis, bolstered by a comprehensive sampling strategy, enabled the research to deliver insightful findings and actionable recommendations. These recommendations are aimed at empowering wineries to optimize their online presence, attract more visitors, and contribute to the economic vitality of Niagara's burgeoning wine tourism sector, leveraging innovative digital strategies to enhance the wine tourism experience.

3.2. Coding Classification

To ensure the impartiality of the content analysis, a binary (*Yes/No*) methodology was employed for evaluating the criteria seen in Table 2, where *Yes* signifies content presence and *No* its absence. Additionally, the assessment of information was quantified using percentages to ascertain the aggregate prevalence (instances where a criterion was met divided by the total evaluated websites). This objective approach allows for a systematic examination of the extent to which wineries engage in wine tourism through their digital presence. It provides a clear demarcation between those actively promoting tourism experiences and those that do not.

The categorization of wineries into "Tourism" and "Non-Tourism" groups hinges on the presence or absence of specific characteristics, features, and content on their websites indicative of a commitment to promoting wine tourism experiences. "Tourism" wineries are distinguished by their provision of information on winery visits, wine-tasting opportunities, on-site activities (e.g., restaurants, lodging), interactive communication tools, and e-commerce options catering to wine tourism products and services. Conversely, "Non-Tourism" wineries are characterized by a paucity or complete absence of content related to wine tourism activities on their websites, often focusing primarily on showcasing their wines, vineyards, production processes, and product offerings without a significant emphasis on wine tourism experiences, visitor services, or online engagement opportunities.

3.3. Hypothesis

This study posits a series of hypotheses to explore wineries' digital presence and strategies in the Niagara region. These hypotheses focus on assessing the extent of information provision, interactive communication, e-commerce functionalities, and the promotion of regional wine tourism through their websites, reflecting the multifaceted approach wineries take to engage with visitors and promote their offerings online. These are listed below.

- **H₁**: Winery websites in the Niagara region provide extensive information about their wines, facilities, contact details and other relevant basics for visitors.
- **H₂**: Interactive communication tools like chatbots and forums enable customer engagement on Niagara winery websites.
- **H₃**: E-commerce functionalities like online purchasing and delivery are implemented by most wineries in the Niagara region.
- **H₄**: Regional wine tourism promotions and suggested itineraries featured on Niagara winery websites highlight opportunities in the surrounding area.

4. Results

The data presented in Table 2 below delineates a comprehensive analysis across various categories, detailing the presence and penetration of digital strategies among wineries in the context of tourism versus non-tourism orientation. It encompasses a range of metrics, including Total Percentage, Percentage of Tourism-oriented Websites, and Percentage of Non-Tourism-oriented Websites, alongside the statistical significance denoted by χ^2 values. This structured approach facilitates a nuanced understanding of the digital landscape as it pertains to the promotion of wine tourism within the Niagara Region.

Table 2. Evaluation of the proposed model: Tourism vs. non-tourism outcomes.

Category	Details	Total (%)	Tourism Y (%)	Tourism N (%)	χ^2
Basic Info	Email	85.39	90.16	75.00	3.538
	Address	94.38	98.36	85.71	5.788
	Phone#	93.26	96.72	85.71	3.698
	Fax#	24.72	21.31	32.14	1.210
	Map	69.66	70.49	67.86	0.063
	Opening Hours	84.27	93.44	64.29	12.307***
	Canada	95.51	100.00	85.71	9.124**
Wine Information	List of Wines	91.01	96.72	78.57	7.728**
	Wine Awards	39.33	44.26	28.57	1.980
	Organic Production	25.84	26.23	25.00	0.015
	Disturb bots and points of sale	65.17	72.13	50.00	4.141
	Newsletter	56.18	65.57	35.71	6.950*
Visual Elements	Google maps	66.29	70.49	57.14	1.53
	Photos of winery	71.91	90.16	32.14	31.984***
	Wine Photos	87.64	98.36	64.29	20.571***
	Wine label photos	86.52	95.08	67.86	12.194***
	Videos	14.61	18.03	7.14	1.825
	Virtual Tours	5.62	8.20	0.00	2.432
	Downloadable	11.24	13.11	7.14	0.686
Internal Integration	Business Description	80.9	88.52	64.29	7.297**
	Winery visits	66.29	83.61	28.57	26.013*
	Wine tasting	69.66	81.97	42.86	13.890***
	Duration of the activity	71.91	91.80	28.57	37.986***
	Museum	2.25	1.64	3.57	0.326
	Restaurant	32.58	42.62	10.71	8.895**
	Accommodation	15.73	18.03	10.71	0.775
	Meeting rooms	4.49	4.92	3.57	0.081
	Other products offered	49.44	59.02	28.57	7.116**
	Other activities offered	41.57	50.82	21.43	6.825**

External Integration	Info on restaurants in region	28.09	36.07	10.71	6.106
	Info on accommodations in region	19.1	22.95	10.71	1.86
	Info on the area	14.61	19.67	3.57	3.989
	External links to destinations	12.36	11.48	14.29	0.140
	External link to regulatory board	5.62	8.20	0.00	2.432
	External link to wine moderation	5.62	8.20	0.00	2.432
	External links to restaurants	11.24	11.48	10.71	0.011
	External links to accommodations	8.99	8.20	10.71	0.149
	External link to tourism sites	6.74	9.84	0.00	2.953
Transactional	Online purchases	84.27	96.72	57.14	22.678*
	Reservation of activity	64.04	73.77	42.86	7.964**
	Shopping cart	80.9	96.72	46.43	31.413*
	Delivery time	12.36	95.84	17.86	1.140
	Online Payment	79.78	95.08	46.43	28.156***
	Privacy	80.9	96.72	46.43	31.413***
Interactive	Contact section	84.27	91.80	67.86	8.302**
	Wine club	64.04	81.97	25.00	27.046
	Personal profile	57.3	68.85	32.14	10.571**
	Specific area for members	48.31	57.38	28.57	6.377*
Social Networks	Blog	22.47	27.87	10.71	3.2416
	Facebook	84.27	95.08	60.71	17.099*
	Twitter	60.67	70.49	39.29	7.833**
	Instagram	80.9	95.08	50.00	25.241
	Pinterest	6.74	6.56	7.14	0.0105
	G+	2.25	1.64	3.57	0.3261
	YouTube	13.48	14.75	10.71	0.269
	Trip Advisor	13.48	14.75	10.71	0.269
	Possibility of sharing	83.15	93.44	60.71	14.669**
Browsing Design: Technical	Site map	64.04	68.85	53.57	1.946
	Search engine	37.08	45.90	17.86	6.469*
	Homepage button	53.93	60.66	39.29	3.528
Browsing Design: Languages	1 language (English)	93.26	100.00	78.57	14.016***
	2 languages (English + French)	3.37	4.92	0.00	1.4251
	2+ languages	2.25	1.64	3.57	0.326
Logo	Copyright	71.91	80.33	53.57	6.802**
	.com/net	74.16	77.05	67.86	0.846

Note: Tourism (Y) entities promote wine tourism alongside sales, while Tourism (N) focus solely on wine production and distribution. χ^2 values indicate statistical significance: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

5. Discussion and Analysis

The examination of winery websites in the Niagara Region, conducted in July 2022, involved a rigorous content analysis to discern the digital strategies employed to promote wine tourism. The sample comprised 89 wineries, with a detailed evaluation rooted in a coding scheme designed to mitigate bias—akin to methodologies employed in seminal studies (Ahrens and Coyle 2011; I. Kim and Kuljis 2010; Salleh, Hashima, and Murphy 2015). This approach facilitated an impartial assessment, revealing significant insights into these entities' online presence and promotional tactics.

The analysis unveiled that a substantial proportion of wineries in the Niagara Region have embraced the digital realm to varying extents. Specifically, basic contact information such as email (85.39%), address (94.38%), and phone numbers (93.26%) featured prominently across websites, indicating a foundational level of digital engagement aimed at facilitating visitor inquiries. Notably, the presence of maps (69.66%) and detailed opening hours (84.27%) on the websites underscores their role as essential tools for attracting tourists by providing practical information. The chi-square tests further substantiate the significant disparities in the provision of basic information between tourism-focused (Y) and non-tourism-focused (N) wineries, particularly in opening hours and Canada-specific content, highlighting a strategic emphasis on accessibility and local relevance.

Visual elements on the websites emerged as critical components in crafting engaging online experiences. The high incidence of wine and winery photos (above 70%) alongside the notable utilization of Google maps (66.29%) aligns with the objective of visually captivating the audience and simplifying navigation to the wineries. However, the underutilization of virtual tours (5.62%) and downloadable content (11.24%) suggests untapped potential in enhancing the interactive and informative aspects of the websites.

Internal integration, reflecting the wineries' efforts to offer a holistic tourism experience, presented a mixed landscape. Descriptions of business history and offerings were prevalent (80.9%), yet specific tourism activities like winery visits (66.29%) and wine tastings (69.66%) indicated room for growth in promoting immersive experiences. The marked difference in content related to tourism activities between tourism-oriented and non-tourism-oriented websites, as evidenced by χ^2 values, underscores the strategic focus on tourism as a differential factor in website content.

In synthesizing these findings, the study delineates a landscape where Niagara Region wineries exhibit a foundational commitment to digital engagement, with notable variances in the depth and breadth of content related to wine tourism. The discernible gaps in integrating comprehensive tourism experiences, detailed wine information, and advanced interactive features present opportunities for strategic enhancement. By bolstering these aspects, wineries can better harness digital platforms to captivate a broader audience, enrich the wine tourism experience, and foster economic growth within the Niagara Region's wine tourism ecosystem.

6. Conclusion

Incorporating broader insights from the literature into our conclusion enriches the narrative. It situates the findings within a

larger context of wine tourism development, leveraging theories and empirical evidence to underscore the multifaceted nature of this phenomenon. The importance of regional-based marketing, as elucidated by (Molina, Gómez, and Martín-Consuegra 2010) and (Lewis, Kerr, and Burgess 2019), aligns with the findings from both the Niagara and Rioja regions, highlighting the pivotal role of destination image in attracting visitors. This collective approach to branding, emphasizing the need for collaborative efforts among regional stakeholders, mirrors the opportunities for Niagara wineries to engage in coordinated marketing efforts that elevate the region's overall appeal to wine tourists, underscoring the potential benefits of economies of scale and the enhanced attractiveness of wine tourism destinations through a unified regional identity.

The exploration of spatial movement and winery selection by (Alant and Bruwer 2010), along with (Cohen and Ben-Nun 2009)'s investigation into motivations beyond wine tasting, further complements our study's implications. These studies suggest that personal experiences with a brand and various visitor motivations—including educational opportunities and the overall atmosphere—play crucial roles in shaping wine tourism behaviours. This insight supports the necessity for Niagara wineries to adopt a multifaceted marketing approach that transcends the wine itself, such as by incorporating educational tours that cater to visitors' desire for knowledge and leveraging the unique atmosphere of each winery to provide memorable experiences.

Within the broader digital landscape, our analysis situates wineries' current use of online platforms, acknowledging contributions from (Duarte Alonso et al. 2013) and (Pang, Martens, and Bui 2022). The study highlights an essential transition for wineries towards utilizing more advanced digital and social media strategies to enhance engagement and visibility. It points towards an imperative for wineries to adopt dynamic and interactive online content strategies to better connect with audiences. This strategic digital enhancement, including rich visuals and sharing capabilities, is crucial for both tourism-focused and other wineries aiming to tap into the evolving opportunities within digital marketing.

The exploration of marketing activities' impact on spending by (Capitello et al. 2014) and (Szolnoki et al. 2018) prompts wineries to reassess their marketing resource allocation, especially given the increasing importance of web-based marketing. This highlights the need for Niagara wineries to adapt their digital marketing strategies in response to shifts in consumer behaviour driven by technological advancements. Concurrently, the necessity for cooperative endeavours among wineries and related industries is emphasized, aiming to enhance tourism amidst challenges such as divergent interests and the requirement for improved infrastructure. This approach advocates for a comprehensive strategy that integrates digital and physical enhancements in tourism, aligning with the conclusion that Niagara wineries have significant potential to augment their offerings through coordinated, innovative marketing and infrastructure improvements.

In weaving these insights into the fabric of our conclusion, it becomes evident that the development of wine tourism in the Niagara region, and indeed globally, requires a harmonized strategy that incorporates effective digital marketing, experiential offerings, and regional collaboration. By addressing these areas, wineries can attract a broader audience and contribute to the sustainable growth of wine tourism, creating a compelling narrative that draws visitors to explore the unique viticultural landscapes and experiences offered by wine regions worldwide.

6.1. *Limitations and Future Research*

The study's limitations include its regional focus on the Niagara area, potentially affecting the generalizability of findings to other wine regions. The sample size of 89 wineries offers a substantial but not exhaustive view, suggesting that a larger, more randomized sample might enhance the findings' representativeness. The reliance on qualitative content analysis and a binary coding scheme introduces subjectivity. It simplifies the complexity of digital marketing strategies into "yes/no" categories, which could be nuanced with a multi-point scale. Additionally, the cross-sectional design limits the study to a one-time observation, omitting the dynamic nature of digital marketing evolution. The exclusion of winery perspectives and the broader digital ecosystem, including social media and e-commerce platforms, alongside the sole focus on content analysis without direct measures of tourist behaviour or outcomes, points to areas for deeper exploration. Future research could benefit from incorporating longitudinal studies, direct feedback from wine marketers, an omnichannel analysis, and comparisons with other wine regions to address these limitations and adapt to the fast-paced advancements in digital technology.

Future research in the Niagara region's wine tourism could focus on assessing the impact of winery websites on tourist behaviour through pre- and post-visit surveys to understand the influence on visitation intentions and experiences. Interviews with wine marketers could offer deeper insights into digital marketing strategies while exploring emerging technologies like augmented/virtual reality and AI chatbots present opportunities to enhance the online visitor experience. Comparative analyses across various wine regions could identify diverse and effective digital marketing practices, and the development of best practice benchmarks and optimized website design guidelines could improve online tourist engagement. Integrating digital marketing with complementary offline efforts and adopting a holistic approach to the wine tourism ecosystem, including regional collaborations and infrastructure, alongside longitudinal studies tracking changes in digital marketing, would provide a comprehensive view of evolving strategies and their effectiveness in wine tourism development.

Appendices

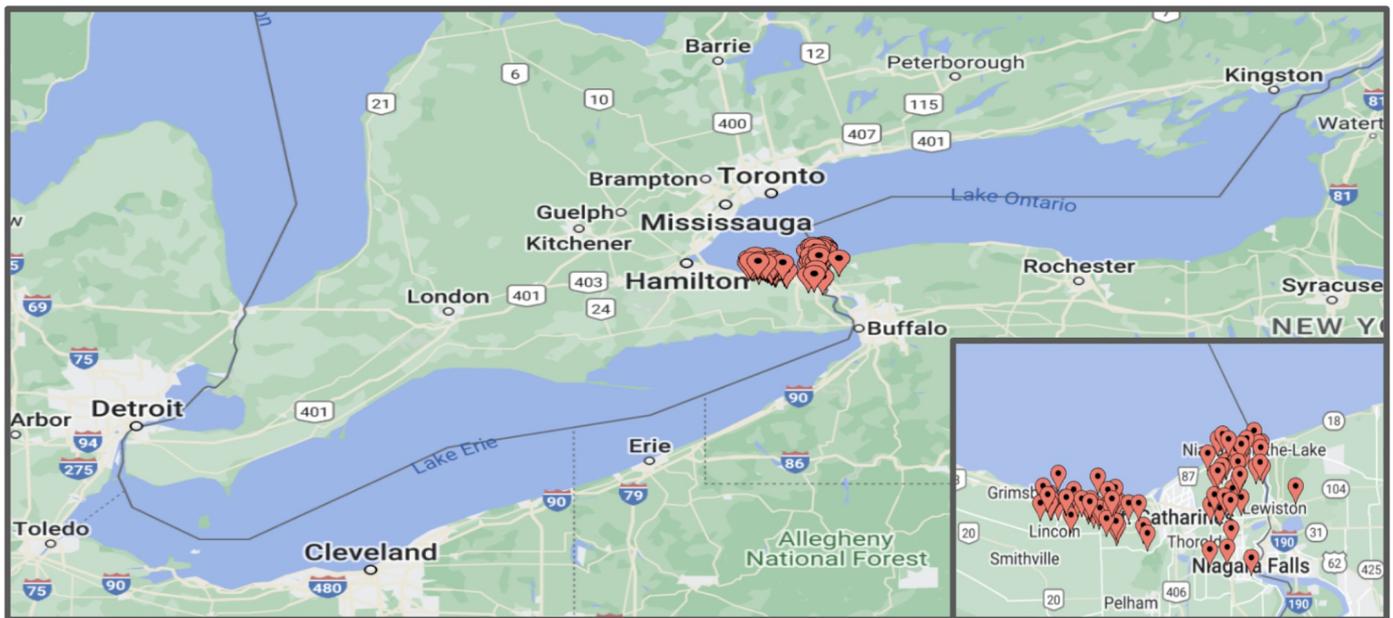


Figure 3. Distribution of Wineries in the Niagara Wine Region within Study.

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