

UNDERSTANDING THE PUSH AND PULL MOTIVATIONS AND ITINERARY
PATTERNS OF WINE TOURISTS

By

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ABSTRACT

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This research was designed to identify the wineries and other locations that wine tourists visit during a day trip to Michigan's Leelanau Peninsula and the motivations contributing to travel decisions. Though wine tourist motivation has been examined in varying contexts, the observation of travel patterns in an emerging wine region such as the Leelanau Peninsula has yet to be understood either independently or in relation to motivation. The research questions of this study sought to identify itinerary patterns of wine tourists, the information sources that impact wine tourist itineraries, the factors that motivate wine tourists, and the relationship between motivations of wine tourists and itinerary patterns.

This study was implemented over a period of seven days at wineries in the region. To effectively identify both wine tourists' motivations and itineraries, survey and map-diary instruments were used. Motivation was identified in terms of push and pull factors.

Maps developed from the results of the map-diaries report visitation to all locations and road use between attractions, revealing distinct patterns. The survey results show that the most important motivations were to taste wine, get away, purchase wine, and relieve stress. Tourists that were highly motivated by both push and pull factors visited the most wineries, and those that more were motivated by factors specific to wine visited more wineries than those motivated by non-wine specific factors. Implications for wine tourism research in emerging wine destinations, and the destination marketing and tourism planning strategies of winery operators result from this study.

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CHAPTER 1

Introduction

Wine tourism is a rapidly growing sector of Michigan's tourism industry, enhancing the already prominent tourism destinations in the southwest and northwest areas of the state, while contributing to development in rural areas. This emergence of wineries and wine tourism is not limited to Michigan, as each of the United States has a wine industry on some level. Though there is much known about wine tourists worldwide, little is known about the nature of wine tourists to an emerging region and their behavior within a destination, specifically in terms of the relationship between the motivation and behavior of wine tourists. The goal of this research was to learn more about the characteristics of wine tourists in the Leelanau Peninsula wine region by exploring their motivations and the geographic attributes of their trips. The results of this study hold practical implications for developing wine tourism industries beyond Michigan.

The problem catalyzing this research was to identify the relationship between wine tourist motivations and itinerary patterns in Michigan's Leelanau Peninsula. This was addressed by mapping wine tourism travel through the Leelanau Peninsula, while identifying tourist motivations to participate in wine tourism based on push or pull factors. Since there are numerous marketing or promotion strategies a winery can produce, the information sources used as resources by tourists to plan their trip are analyzed in terms of their relationship with the travel behavior exhibited through itinerary mapping.

Understanding the behavior of wine tourists in the Leelanau Peninsula will aid Michigan wine industry stakeholders in making better marketing and management decisions in order to strengthen their individual businesses and the Michigan wine industry as a whole, while creating

a better destination and experience for tourists. This study provides: 1) descriptive data about the itineraries of wine tourists in the Leelanau Peninsula, 2) insight on the motivations that push and pull tourists to the region and 3) data to inform the marketing and promotion strategies put forth by the wineries. Relationships between the variables of wine tourism travel patterns, motivation, and trip planning resources are identified and used to form recommendations to winery operators in emerging regions and to future researchers.

Previous studies have shown that increasing wine tourism knowledge is especially important for an emerging and developing wine industry like that of Michigan (Dodd & Bigotte, 1997). Communities and state governments also realize the importance of having these flourishing wine industries within their regions (Dodd & Bigotte, 1997). Since Michigan is a developing wine tourism destination, it is important for industry stakeholders to continue developing knowledge about wine tourism and understanding the tourists. The Michigan wine industry has shown growth in size and improvement in quality of product over the past decade. A recent estimate of total tasting room visitors to Michigan wineries exceeds 2 million (Holecek, McCole, & Popp, 2013) which more than triples the previous estimate of 600,000 (Mahoney, Holecek, Styne, Rummel, Kim, Kim, & Chang, 2003).

The Leelanau Peninsula is located in the northwestern part of Michigan's Lower Peninsula and borders Lake Michigan while composing the western shore of the Grand Traverse Bay. Two counties make up its southern border, Benzie County and Grand Traverse County. Leelanau County and Grand Traverse County are two of Michigan's primary producers of wine grapes (Michigan Grape & Wine Industry Council, 2012). Leelanau County is a Federally Approved Viticultural Region (AVA), and is one of Michigan's four AVAs. For an area to obtain an AVA endorsement, at least 85% of the grapes used to create the wine must be grown

and harvested from that region (Michigan Grape & Wine Industry Council, 2012). This practice insures the quality and reputation of the product, and is commonplace throughout the world. At the time of this study, there were 22 wineries in the Leelanau Peninsula AVA. The other AVAs in Michigan are the neighboring Old Mission Peninsula of Grand Traverse County, Fennville, and Lake Michigan Shore in southwest Michigan.

Michigan wineries rely on tasting room visits for 73% of their wine sales (Ross, 2012), which affirms the importance of their ability to attract visitors to the winery or tasting room. Understanding the motivation of tourists to pursue wine tourism is the key to providing a tourism experience that will appeal to and attract tourists. Though motivation is complex, it can be used to segment tourists according to their differences. Push and pull motivation is a common way of deciphering tourist motivation. Tourists are expected to vary in how they are motivated by push and pull factors. Also, tourists may have differing levels of interest in wine and wine-related activities. Some may be highly focused on wine tasting or purchasing, while others are more focused on the other aspects of wine tourism such as viewing scenery or socializing with others.

Attracting visitors to a tasting room may take place during a tourist's trip planning phase, or may occur as a result of on-site factors at the destination. This distinction deals with planned and unplanned visits to wineries by tourists. For this reason, identifying when and how a tourist decides to visit a winery has important implications. An understanding of the factors that attract tourists to wineries will aid wineries in promoting themselves to potential tourists in order to increase visitation to their location. Marketing and promotion of wineries may occur through brochures/maps or a wine trail organization, or it could be as simple as roadside signage or a recommendation through word-of-mouth. Activities beyond wine tasting, such as special events or food tasting, may also be offered at an establishment to attract visitation.

Itinerary mapping is a tool to examine and inform marketing approaches, collaboration between members of the tourism system, wine routes, and management planning in a destination. The differences in travel between tourists that used differing information sources may speak to the impact of strategies wineries may use. Collaboration initiatives between wineries and other tourism businesses can benefit from having a better understanding of the travel behavior of the tourists they are targeting. Travel information may also be of use to public sector agencies for infrastructure and capacity planning in the region (Connell & Page, 2008).

The members of the largest wine trail in Leelanau Peninsula, the Leelanau Peninsula Vintners Association (LPVA), anticipated that this research will improve management and marketing within their wine trail, by using the information this study provides to better understand their visitors, what impacts their itinerary choices, and what kind of factors attract them to wineries. In addition to wine tourist characteristic profile data (e.g. origin, group composition, purpose of travel), information to be made available to the industry will be the locations that tourists visit, the routes tourists are taking between these locations, and what factors pushed them to make these decisions. This will allow the industry to see which roads or routes on which to focus, what type of marketing and information outlets are of the most importance, and which are less pertinent to the needs of tourists. Further, recommendations were developed from the results which suggest approaches to train staff members to specifically identify and customize their behavior based on the motivations of tourists on the individual level.

Research Questions and Hypotheses

The research questions and hypotheses of this research were developed to understand wine tourist motivations and their itinerary patterns. First, the overall travel itineraries of wine tourists are identified from which the number of total stops to different attractions in the region is extracted. A contributor to the development of itinerary patterns is the information sources that wineries provide through marketing and promotion initiatives, which is measured by the second research question. These are identified and observed in how they impact both planned and unplanned stops in the itinerary.

The degree to which a tourist is motivated by push, pull, or wine specific items is identified by the third research question. Segmentations based on the level (high or low) of push/pull motivation and focus on wine were developed. These categories allow for trip and travel behavior to be compared between motivations to observe any potential differences which inform the approach of winery operators in attracting visitors to their tasting room.

Finally, the last research question deals with the relationship between tourist motivation and itinerary patterns. Differences in behavior based on motivation are identified, which can then be used to predict and accommodate the needs of tasting room visitors.

Research Question 1: What are the travel patterns of tourists in Michigan's Leelanau Peninsula?

Research Question 2: Which information sources impact wine tourist itineraries?

H1: Wine trail information will be the most used information source to plan the trip in advance.

H2: Roadside signage will be the most used information source during the trip.

H3: Word of mouth and signs will have the greatest impact in causing unplanned stops at wineries.

Research Question 3: What are the factors that motivate wine tourists to travel to Michigan's Leelanau Peninsula?

H4: Push motivation will increase as pull motivation decreases indicating a negative linear relationship.

H5: An individual that is highly motivated by pull factors will participate in more winery activities than one who is not.

Research Question 4: Is there a relationship between motivations of wine tourists and itinerary patterns?

H6: A visitor who is influenced more by pull factors than push factors will have more total stops on his/her itinerary.

H7: Wine tourists whose primary purpose of trip is to visit wineries, will visit the highest number of wineries.

H8: Wine focused tourists will make more total stops than non-wine focused tourists.

H9: There will be significant differences in the total stops and itinerary patterns of wine tourists based on their motivation categorization.

Delimitations

The scope of this study is delimited by three items. The first is that the time and resources allocated for the research did not allow for data collection at all 22 Leelanau Peninsula wineries. Another delimitation is that the push and pull motivations were identified based on a reduced number of items adapted from the motivation literature. The scope of the itinerary patterns observed are limited strictly to the confines of the Leelanau Peninsula; this delimits itinerary pattern analysis by excluding information that took place outside of the region. The choice to observe activity within the peninsula, rather than to the region, was made in an effort to gather detailed intra-destination travel information.

Definition of Terms

The following terms are defined in order to provide clarity for their use throughout this study:

Focus Category	A variable created for this study, categorizes wine tourists based on level of motivation by items specific to wine. There are two categories: wine focused and non-wine focused.
Itinerary	A route with one or more stops that a traveler takes (Lew & McKercher, 2002).
Itinerary Attributes	Features of an itinerary, which include roads or routes traveled and visits to wineries, towns, and other attractions.
Total Stops:	The total stops variable is defined by the number of stops a tourist makes during their itinerary. This includes the total number of stops made during the trip to wineries, towns, and other attractions.
Motivation Categorization	A variable created for this study, categorizes wine tourists based on level of motivation by push or pull factors. There are four categories: high-push/high-

pull, high-push/low-pull, low-push/low-pull, or low-push/high-pull.

Motivation: The impelling and compelling force behind all behavior (Berkman & Gilson, 1978), often analyzed in terms of "push" or "pull" in a tourism context (Crompton, 1979).

CHAPTER 2

Review of the Related Literature

This review of literature seeks to identify literature relevant to wine tourism motivation and itinerary patterns. The purpose of this study is to contribute to the understanding of Leelanau Peninsula wine tourists for the betterment of the wine tourism industry in the region. To appropriately analyze wine tourism itineraries in the Leelanau Peninsula, previous research on tourism travel patterns in local or intra-destination travel regions was consulted. The information identified in this chapter is organized into the following topical areas: wine tourism, push and pull motivation, wine tourist profiles, marketing and promotion strategies, travel patterns and itinerary mapping. Of these five areas, numerous sub-topics will be covered to enhance the understanding of wine tourism.

Wine Tourism

Wine tourism is defined as “visitations to vineyards, wineries, wine festivals and wine shows for which grape wine tasting and/or experiencing the attributes of a grape wine region are the prime motivating factors for visitors” (Hall, Cambourne, Macionis, & Johnson, 1997, p. 6; Hall, 1996; Macionis, 1996). As previously stated, increasing wine tourism knowledge is especially important for emerging and developing wine industries (Rasch, 2008; Dodd & Bigotte, 1997).

Robinson and Novelli (2005) identify two types of macro-niche tourism activities, niche tourism and mass tourism. Niche tourism refers to a small number of tourists in authentic settings based on special interests, culture, and/or activities (Robinson & Novelli, 2005), while the authors define mass tourism as a large number of tourists in staged settings. Between mass and niche tourism there are five micro-niches: cultural, environmental, rural, urban, and other. Wine tourism is considered a micro-niche of rural tourism (Robinson & Novelli, 2005). Aside from

wine tourism, other rural tourism activities may include farms/barns, camping, gastronomy, sport, festivals and events, and arts and crafts. Wine tourism is also a type of beverage tourism, where tourists pursue experiences related to beverages (Plummer, 2005).

Leiper (1979) identified three geographical elements of tourism: the generating region, transit, and the destination regions. Wine tourism takes place in the tourist destination region which refers to the destination that attracts tourists to stay based on its particular features (Leiper, 1979). Wine tourism is an intra-destination travel activity (Lau & McKercher, 2006), where travel typically occurs between multiple attractions within the destination. Understanding how tourists move through time and space has both practical and important implications for destination planning, product development, and planning of new attractions (McKercher & Lew, 2004). Despite its natural fit to the analysis of wine tourism travel patterns and geographic destination management, itinerary mapping as a research method has not been widely used (Ryan & Gu, 2007), as described later in the chapter.

Push and Pull Motivation

Push and pull factors motivate potential tourists to pursue a tourism experience of a specific kind. When an individual is making travel decisions, wine may have impacts on destination choice in the form of push and pull factors. Push factors are internal and intrinsic (Crompton, 1979), based on a perceived need to satisfy disequilibrium, or anomie, by pursuing tourism (Dann, 1977). Examples of push factors may include prestige, socialization, or the need for a change of scenery or escape from a mundane environment (Crompton, 1979). Pull factors are characteristics of the destination that arouse the desire for travel in the potential tourist (Crompton, 1979) and attract tourists to specific destinations. These are attributes such as unique natural landscapes, specific activities, or events at a destination.

Motivation is a multidimensional concept in which tourists have many needs and desire varied experiences in a destination (Baloglu & Uysal, 1996). Push and pull motivation is a common way of approaching this issue in tourism behavior research (Baloglu & Uysal, 1996). Further, it is considered a necessity in destination marketing to understand the relationship between push and pull motivations of a potential tourist (Baloglu & Uysal, 1996). The relationship between push and pull factors has been found to be linear, where demographic variables have been found to affect the strength of the correlations (Kim, Lee, & Klenosky, 2003; Uysal & Jurowski, 1994).

Wine tourism destinations provide attractions that are pull factors for potential wine tourists. In the case of the wine tourism product, on-site wine tasting is one of the primary motivations, or pull factors, that bring consumers to wineries (Barber, Donovan, & Dodd, 2008). The same study suggests that a diverse range of experiences provided by the winery will attract new tourists and repeat visitors. Perceived quality of wines or production of preferred wines in a destination (Marzo-Navarro & Pedraja-Iglesias, 2010) are also considered important pull factors.

Relaxation and having a unique experience were found to be important push factors in rural tourism (Pesonen, Komppula, Kronenberg, & Peters, 2010). Push motivation is an indicator of destination loyalty (Yoon & Uysal, 2003), which has strong marketing implications. Factors that have been determined to motivate tourists toward wine tourism are: to taste new wine and food, enjoy an event, enhance social status, escape, socialize, and to meet notable individuals (Park, Reisinger, & Kang, 2008). Another study identified social interaction, self-improvement, variety seeking, logistics (organization and location of destination) of travel, products offered on-site, knowledge expansion, adventure, and travel attractions as motivations for tourists to attend a wine festival (Rivera, Chandler, & Winslow, 2009).

The existence of wine routes and trails in a destination is an important pull factor for tourism as well. Wine routes are defined as tourist trails that connect several wineries/vineyards in a region (Bruwer, 2002). Collaboration between vineyards and wineries to form a wine route are a way to make the region more attractive to tourists (Jago, Issaverdis, & Graham, 2000). This is enhanced when the route or trail is characterized by “natural attractions (mountains and other scenery), physical attractions (facilities such as wineries on wine estates), vineyards, and roads and markers (signposts) directing the tourist to the individual wine route estate enterprises” (Bruwer, 2002, p. 424). As will be further discussed in the marketing and promotion strategies section of this chapter, wine route information and roadside signs are essential for attracting tourists to wineries. Wine trail membership is a promotion strategy for wineries.

Wine tourism in Michigan has not yet been analyzed based on push and pull motivation factors, though it has been conducted successfully in other wine and beverage tourism contexts. For this reason it is appropriate and important to compare the similarities and differences of wine tourists in the Leelanau Peninsula to that of other regions for both practical and academic reasons.

Wine Tourist Profiles

Wine tourists cannot be considered a homogeneous group because of the differences in their characteristics and motivations. Since wine tourism occurs in many different locations (Getz & Brown, 2006) wine tourist characteristics may vary depending on the destination where wine tourism takes place. There has been a noted lack of literature by many researchers relating to wine tourist profiles, motivations, and characteristics (Hojman & Hunter-Jones, 2012; Kolyesnikova & Dodd, 2009; Marzo-Navarro & Pedraja-Iglesias, 2010; Wargenau & Che, 2006; Brown & Getz, 2005; Getz & Brown, 2006; Charters & Ali-Knight, 2002; Hall, Cambourne,

Macionis, & Johnson, 1997).

Profiles have been based on demographic characteristics such as origin, age, education, and family, as well as psychographic characteristics which consist of values, attitudes, and lifestyles choices (Marzo-Navarro & Pedraja-Iglesias, 2010). The following table, Table 2.1, was adapted from the work of Marzo-Navarro and Pedraja-Iglesias (2010) to summarize the classifications of wine tourists that are present in the current literature. The studies that segment tourists based on motivation related to push and pull factor motivations (Hall, 1996; Johnson, 1998; Charters & Ali-Knight, 2002) generally do so according to interest and motivation specific to wineries. These studies inform the approach to segmenting Michigan wine tourists based on motivation.

Table 2.1: Profiles of Wine Tourists		
Authors/ Country	Classification	Description
Hall (1996) New Zealand	Wine lovers	<ul style="list-style-type: none"> – Great interest in everything related to wine. Wineries is the main reason for a visit – High income and high level of education – They read specialized magazines on gastronomy and wine – They would like to visit other production regions – High probability of purchasing wine at a winery
	Wine-interested	<ul style="list-style-type: none"> – Great interest in this product, but it is not the only reason for a visit – Moderate level of income and university studies – They regularly purchase specialized magazines – Familiar with wine production processes – Probability of visiting other production regions – High probability of purchasing wine at a winery
	Wine-curious	<ul style="list-style-type: none"> – Moderate interest in wine – They are not familiar with wine production – Visits to wineries are activities that are similar to others that they can participate in during a trip – Moderate income and medium level of education – They may visit other production regions in the future – They perceive activities related to wine as an opportunity to maintain social relations
Corigliano (1996) Italy	Professional	<ul style="list-style-type: none"> – Between 30 and 35 years of age – Knows wine and the world around it – Can establish technical conversations about wines – Interested in novelties and takes the necessary time to discover them
	Passionate newcomer	<ul style="list-style-type: none"> – Between 25 and 30 years of age – Moderately high level of income – Likes wine that serves to establish relationships – Likes gastronomy and discovering new places – Normally travels with friends – Consults wine guides – Likes to learn about wine, although somewhat less serious than Professionals
	Follower	<ul style="list-style-type: none"> – Between 40 and 50 years of age – High income – Attracted to wines, given that he considers it a sign of distinction to know about them – Content with knowing the basics about wines – Impressed by famous names of wines and appearances –

Table 2.1 (cont'd)		
	Drinker	<ul style="list-style-type: none"> – Between 50 and 60 years of age – Usually visits wineries on Saturdays with a group of visitors and sees the visit as an alternative to going to the bar – Tastes wine and asks for more – Likes to buy wine in bulk
Johnson (1998) New Zealand	Specialist	<ul style="list-style-type: none"> – Visits a vineyard, winery, wine festival or wine show for the purpose of recreation and whose primary motivation is a specific interest in grape wine or grape wine-related phenomena
	Generalist	<ul style="list-style-type: none"> – n. likely to be primarily motivated to visit a wine region for other reasons
Di-Gregorio & Licari (2006) Italy	Opinion leaders	<ul style="list-style-type: none"> – Passionate about wine – They usually write for magazines in the sector
	Wine tourists	<ul style="list-style-type: none"> – Their objective is to increase their knowledge about wine through guided visits and explanations by experts – They like to taste quality wines and are willing to purchase
	Occasional tourists	<ul style="list-style-type: none"> – Their interest is more centered on leisure services and restaurants than on the wine product
Brown <i>et al.</i> (2006) Canada	Demanding gourmet	<ul style="list-style-type: none"> – Men, self-employed – They plan their wine tourism trips – They regularly consume wine, and on trips they would like meet the winery directors and establish friendly relations with them, go to wine-related festivals and eat at good restaurants
	Hedonic aficionados	<ul style="list-style-type: none"> – Men – They consume wine very regularly
	Prudent enthusiasts	<ul style="list-style-type: none"> – Women, work outside the home – They consume less wine than the two preceding categories – They take pre-designed trips
	Functional differentiator	<ul style="list-style-type: none"> – Women, retired
Galloway <i>et al.</i> (2008) Australia	Higher sensation seekers	<ul style="list-style-type: none"> – Men, high personal annual incomes – High monthly expenditure on wine, purchase more bottles – Engaged in more visits to wineries during the last 12 months – Likely to use the internet as a source of information – Participated in more activities during a visit to a wine region – Rated wine-related learning, stimulation, indulgence experiences, and emotions as strong incentives travel decision
	Lower sensation seekers	<ul style="list-style-type: none"> – Women, this group shows a lower level of presence in the remainder of the characteristics shown by the high sensation seekers
<i>Adapted from Marzo-Navarro & Pedraja-Iglesias, 2010.</i>		

Hall (1996) defined wine tourists in three segmentations based on perceptions of winery operators: wine lovers, wine-interested, and wine-curious. (Charters & Ali-Knight, 2002). Wine lovers (Hall, 1996) have a great interest in everything related to wine. Wineries are the main reason, or pull factor, for their trip because they are motivated to taste wine, buy wine, and learn about wine (Charters & Ali-Knight, 2002). Wine-interested and wine-curious tourists have an interest in wine (Hall, 1996), but are also motivated by other factors or attractions in the region. Wine interested tourists enjoy the process of wine tourism (Charters & Ali-Knight, 2002). Hall (1996) describes wine-curious tourists as regarding wineries as an attraction among many in a destination. To the wine-curious, visiting wineries is a social activity rather than the sole reason for their trip (Hall, 1996).

Charters and Ali-Knight expanded on these categories in 2002 by adding a sub-category to wine lovers, the connoisseur, who is both highly interested in and knowledgeable of wine. They also re-labeled the wine-curious tourist segmentation to wine novice (Charters & Ali-Knight, 2002) in order to better convey the group's interest in wine. These tourists were found to be motivated more by the activities provided by a winery (e.g. vineyard tour or winery tour), than wine tasting.

Another distinction used to classify wine tourists was applied by Johnson (1998). This defines tourists as being either a specialist or a generalist. A specialist is interested in grape wine and is motivated to visit vineyards, wineries, festivals, or shows for recreation (Johnson, 1998). A generalist is primarily motivated to visit a destination for reasons other than wine (Johnson, 1998).

Two studies have sought to profile the typical Michigan wine tourist. Chang (2003)

segmented tourists based on three behavioral variables: number of wineries visited in the last five years, purchase of wine from wineries they had visited, and typical wine consumption.

Approximately 40% of the tourists were between the ages of 41-60, while 20% were in the 21-40 age range. This study did not address trip behavior at wineries or tasting rooms.

A statewide tasting room visitor study (Holecek, McCole, & Popp, 2012) developed a rounded view of the behavior and preferences of tasting room visitors according to travel party, winery experience, trip purpose, importance of wineries to travel decision, trip activities, interest in local foods, and knowledge of super cold hardy grapes or wine varieties. Only 8% of tourists indicated that learning about wine was the primary reason for their visit while 65% cited reasons related to leisure experience. In this study, there was approximately 40% of the sample in both the 21-40 and 41-60 age groups (Holecek, McCole, & Popp, 2012) which suggest an increased prevalence of younger wine tourists since the results found in 2003.

The wine tourist profiles that have been developed in Michigan provide important baseline data to be compared to that of the Leelanau Peninsula tourists, in order to monitor differences or changes in characteristics. As stated in terms of push and pull motivation, Michigan wine tourists have not been characterized based on these motivation factors.

Marketing and Promotion Strategies

The aim of marketing is to identify a customer's needs and to meet those needs so well that the product 'sells itself' (Barber, Donovan, & Dodd, 2010). Since Michigan wineries rely on tasting room visitors to sell the majority of their wine (Ross, 2012), wine tourism itself becomes a product that must be marketed and promoted. The determination of tastes, desires, preferences, and the intrinsic and extrinsic motivators of wine tourists will help to develop suitable marketing and promotion strategies for wineries (Marzo-Navarro & Pedraja-Iglesias, 2010), allowing them

to more effectively target their promotional materials to reach appropriate consumers (Dodd & Bigotte, 1997). Barber, Donovan, and Dodd (2008) found that wineries face the challenge of attracting consumers' attention to their products, which are primarily sold at the winery. On-site marketing is also an important consideration because winery visits are often viewed as a secondary reason in the selection of a destination, providing an interesting aside from the primary trip focus (Carlsen, 2004). Examples of on-site marketing are roadside signage, brochures in leaflet displays or at nearby attractions, or word-of-mouth from other wineries.

Direct marketing through websites, newsletters, brochures, and word of mouth is a common marketing technique in the wine tourism industry. Websites are instrumental for promoting wine tourism because internet use among wine tourists is common (Sellitto, 2005). Wine tourists are likely to spread information about their experiences to others via word of mouth marketing (Dodd, 1997), which was found to be one of the most important sources of wine tourism information (Dodd, 1995) and occurs before or during the trip. Brochures are also an important marketing medium for potential tourists living more than 30 miles away (Brown & Getz, 2005).

Promotional efforts to attract tourists include wine routes/ trails, wine events, or other on-site features. Wine trails are a result of winery collaboration to market on the destination's behalf instead of individually. As found at a wine trail in southwest Michigan by Telfer (2001), each winery on the route ensures that visitors have a trail map in hand and another winery in mind. In this scenario, providing the trail's information is a beneficial promotion strategy for wineries because visibility on established wine routes attracts visitors (Mansker, Way, & Harrington, 2011). The visibility or awareness of a winery's location is essential, as Carlsen suggests that most tourists visit a winery because of its location in relation to other attractions (Carlsen, 2004).

Research has shown that winery marketing is generally poorly developed, and establishing marketing strategies without a clear understanding of the tourist is hasty and unproductive (Carlsen, 2004). A reason for this is that tourism and marketing often comes as a secondary activity to winery operators whose primary focus is on grape and wine production (Macionis, 1999). Wine tourism marketing strategies are commonly established without a complete understanding of the consumer's motivations (Carlsen, 2004). With this lack of understanding of tourist market segments and types, marketing and promotion efforts may be ineffective and a waste of resources (Dodd, 1999).

Attracting visitors to tasting rooms is vital to the success of wineries in the Leelanau Peninsula and other emerging wine tourism destinations. Since many of these wineries rely on limited budgets for marketing and promotion, it is important that the most is made of these opportunities.

Tourism Itineraries and Travel Patterns

Itinerary mapping consists of the modeling and analysis of itineraries (McKercher & Lew, 2004), which exhibit the “tourist flows, spatial patterns of tourist movements between destinations and within a destination” (McKercher & Lew, 2004, p.36). Tourist itinerary patterns have commonly been interpreted in terms of itinerary models based on their characteristics. Models have been developed based on the general flow of travelers between destinations and variation in the form or pattern of the itinerary (Lew & McKercher, 2002). McKercher and Lew (2004) identified more than 26 model patterns, which they then categorized into four broader itinerary types. These itinerary models are a single destination with or without side trips, transit leg and circle tour at a destination, circle tour with or without multiple access points in which the transport mode may vary, and hub-and-spoke (from home community or destination area).

Itinerary mapping may be applied to tourism regions of any size, but has primarily been used for inter-destination itineraries between regions, states, or countries. On the national scale, the New Zealand government funded the development of a travel flow model to monitor tourist travel to and within the country (Becken, Vuletick, & Campbell, 2007). Other large-scale destination studies have used itinerary mapping to identify the impact of transportation on infrastructure, the timing of tourist visits in terms of seasonality and peak use, transportation management planning, and for the development of sustainable tourism strategies (Connell & Page, 2008).

McKercher and Lew (2004) found that tourist itineraries within a regional destination are a function of market access, the travel time budget of tourists, income and cost, trip characteristics, first time vs. repeat visitors, and the distance of an attraction in relation to its perceived appeal. Intra-destination movement patterns in Hong Kong were found to be impacted by some of the aforementioned factors (Lau & McKercher, 2006). Itinerary attributes were collected from trip diaries completed by Hong Kong tourists, from which movement patterns were mapped and compared based on time budget, income, cost, and the other trip characteristic factors identified. Diversity in movement patterns was found between first time and repeat visitors, and in relation to length of stay (Lau & McKercher, 2006).

Wall (1971) observed pleasure trips taken by car owners in Kingston-upon-Hull, England. Through personal interviews Wall (1971) identified the destinations visited by tourists and the distance traveled from Hull to reach them. A proportional symbols map identifying frequency of visits to destinations was produced to assess differences in socio-economic attributes of car owners.

Similarly, Connell and Page (2008) examined car-based travel within Scotland's Loch Lomond and Trossachs National Park. Through use of a map-based questionnaire, itinerary patterns within the park were identified. The data collected allowed for a proportional symbols map to be produced based on stops at park sites and a proportional lines map based on road traffic. These maps were used to identify travel in the region for the use of the park management agency and based on the four itinerary models identified by McKercher and Lew (2004).

Itinerary mapping is an appropriate way to observe travel patterns in the Leelanau Peninsula because of the high number of wineries and the proximity between them and other attractions which creates notable intra-destination travel.

Summary

The relationship between push and pull motivation factors serves as a basis for segmenting wine tourists (Baloglu & Uysal, 1996), to be applied to the Leelanau Peninsula in accordance with other wine tourist profiles. In order to identify these factors, the decisions of tourists must be understood. Itinerary mapping can aid the understanding of wine tourist behavior and motivations, by identifying common geographic patterns of their behavior. Itinerary mapping for this research will be able to show where wine tourists stop within the Leelanau Peninsula wine region. The studies reviewed suggest the utility of mapped descriptive data to identify tourism patterns within a local tourism destination. The research questions developed were based on the absence in the literature of tourism route mapping and the factors that motivate wine tourists to visit Michigan wineries.

CHAPTER 3

Methods

The problem of this research aims to identify the relationship between wine tourist motivations and itinerary patterns in Michigan's Leelanau Peninsula. This was achieved by making the tourism travel patterns through the Leelanau Peninsula evident, while identifying tourist motivations to participate in wine tourism based on push or pull motivation factors. Additionally identified were the wineries and other tourist attractions tourists visited and the routes they used between them. This chapter presents a detailed description of the methodology used to collect and analyze the data. The study design is outlined, data collection procedures and administration are discussed, and the procedures for data analysis are presented in accordance with the research questions and hypotheses guiding the study. The findings of a pilot study are also described.

Leelanau Peninsula was selected as the study region. The Leelanau Peninsula is home to two wine trails; the Leelanau Peninsula Vintner's Association (LPVA) and the Northern Wine Loop. At the time of the study, there were 22 wineries in the Leelanau Peninsula which provided an ideal geographic dispersion to explore the research questions. This study included wineries, towns, and other tourism attractions in the peninsula.

The first step to the design of this research was to consult with representatives of the Michigan wine industry in order to be sure that the study design was appropriate for the Leelanau Peninsula wineries. These representatives were the Chair of the Michigan Grape and Wine Industry Council and the Director of the LPVA, both of whom provided insight and advice for the development of the study and its objectives.

The study population examined is comprised of summer wine tourists in the Leelanau Peninsula. A sample was developed based on the population parameter that participants visited at least one winery during their trip to the region. The general approach to collecting data was to intercept tasting room visitors at on-site locations in the region. Due to the limited time and resources of this study, data collection was limited to a seven day period, August 11-17, 2012. One winery was selected as an intercept site for each day, totaling seven wineries.

The seven wineries that served as intercept sites were randomly selected to represent the wineries of Leelanau Peninsula for generalizability purposes. A simple random sampling technique was used to select wineries one by one. The order of selection designated which day data would be collected at that winery. The wineries that were selected are presented in order by the date they were selected to be an intercept site:

Gill's Pier Vineyard & Winery (8-11)

Ciccone Vineyard & Winery (8-12)

Black Star Farms (8-13)

Cherry Republic Winery (8-14)

Leelanau Cellars (8-15)

Chateau de Leelanau (8-16)

Forty Five North Vineyard & Winery (8-17)

To further increase the generalizability of the results, a random selection procedure was implemented for interception of potential participants. This procedure consisted of approaching visitors at five-minute intervals, as they exited the tasting room. One participant was selected per interval, meaning that up to twelve participants could be selected per hour. If an intercepted visitor declined, additional intercepts were made within the same interval until a willing

participant was identified. Volunteers were allowed to participate and were tracked separately from the random sampling procedure.

The average hours of operation for the identified wineries on both weekends and weekdays are approximately 11:00 AM-5:00 PM. There was some variance in the times that the wineries preferred to have data collected, but in general, four hours of collection were conducted at each winery, typically between noon and 6:00 PM. Since 12 intercepts could be made per hour, the maximum sample size was 336 tourists (7 days x 4 hours x 12 intercepts/ hour).

To intercept tourists, the researcher set up a station outside the main entrance of each winery. The station consisted of an approachable and appealing display with a table and chairs. A sign advertising the study was placed on the table which read “MSU Wine Tourism Study”. A research assistant was present through the entire data collection process, whose duties were to prepare data collection packets, keep notes on interceptions, declines, and volunteers, and address questions or concerns of participants if the primary researcher was unable to. The assistant did not intercept any potential participants, but was trained on the principles of human subject research as outlined by the Michigan State University Institutional Review Board (IRB).

Development of Survey Instrument

Data were collected through two survey instruments, a standard questionnaire and a map-diary. The questionnaire was comprised of general questions that identified the information sources used to plan respondents’ travels or during the trip, trip behavior, and demographic characteristics.

The survey included 12 questions related to the development of itineraries and trip planning, five regarding travel behavior, and three identified demographic attributes. The

motivation scales included 19 items which were presented in three separate question blocks as 5-point Likert scales: items important to the travel decision to visit wineries, planned winery activities and their importance, and wine tourism travel preferences. Items were adapted from previous wine tourism research (Park et al., 2008; Plummer et al., 2005; Rivera et al., 2009, Francioni, 2012), in order to develop scales measuring push and pull motivation.

The map-diary (Appendix B) was designed to identify the itinerary attributes of wine tourist routes in the Leelanau Peninsula. The diary was composed of a base map of the Leelanau Peninsula, including the road network, hydrology features, and towns. Wineries and other attractions were identified on the map as additions to the base features. An extensive legend was included which listed each winery, town, or attraction with a blank space next to it. This strategy allowed for visits to all wineries to be observed. The instrument was printed in black and white on 11x17-sized paper to accommodate the unique shape of the Leelanau Peninsula and provide the utmost clarity to the roads and other map features. In order to complete the map-diary, participants were instructed by the researcher to trace the route of their day trip along the roads, and mark or number each of their stops in the legend using the blank spaces provided. The software used to create the map was Arc Map 10.

The instruments were compiled in a data collection packet to be distributed on-site. This included the questionnaire, map-diary, consent form and instruction sheet, a MSU pen, and a crayon (to complete the map-diary). These items were contained in a post-marked envelope for the participant to mail to the researcher after completion.

The responses of participants were completely anonymous, and the survey did not include any information that could be used to identify respondents at a later time. For this reason,

there is no record of which participants responded and no reminders were sent. The instrument was approved to be used by human subjects by the Michigan State University IRB.

Pilot Test

To establish face validity of the questionnaire and map-diary, a pilot test was conducted on July 21, 2012 at Chateau de Leelanau. This pilot also served as a way to identify any flaws in the instruments, specifically with the map-diary. Using the five-minute interval approach to intercept tasting room visitors as they were leaving, 20 participants were intercepted. The pilot included the questionnaire and map-diary previously described, as well as a third instrument. The third instrument asked the tourists to identify why they visited each stop on their itinerary.

Many lessons were learned from the pilot that contributed to the success of the research overall. The primary change resulting from the pilot was the elimination of the third instrument, which proved to be a confusing and lengthy step to the process that deterred potential participants. Upon re-examination of the research questions, the data collected were not essential to the study. For this reason, tourist motivation to visit wineries was examined in terms of the entire Leelanau Peninsula destination rather than on a winery-by-winery basis. In an effort to provide insight into the motivations of tourists to visit specific wineries, an on-site question was added to the interception procedure. Potential participants of the study were asked: “Why did you visit this winery today?”.

Data Collection Procedure

Upon arrival at the specified winery each day, the researcher made contact with the winery operator to confirm procedures such as set-up location and other logistics of the research. Each winery operator was asked to have his/her tasting room staff members notify visitors of the study, endorse the objectives, and encourage them to consider participating. Notes about the set-

up, timeframe, and weather were taken at the beginning of each study period.

The data collection packets were administered through intercepts during 5-minute intervals, as tourists were departing. Upon interception, the researcher asked the potential participant for a moment of their time, and if granted, asked the on-site question: why did you visit this winery today? The response to this was recorded by the research assistant. Next, the researcher explained that the study was for a thesis at Michigan State University about wine tourism in the Leelanau Peninsula. At this point a brief description of the survey instruments and procedures for participation were described. A successful intercept resulted in the tourist accepting the data collection packet. The number of refusals and volunteers was tabulated for each day.

Special cases sometimes arose during intercepts. As mentioned, volunteers were allowed to participate. However, they were treated separately from the randomly selected participants. In the case of a volunteer participant, their post-marked envelope was marked with a small 'V' to identify it when returned to the researcher. This allowed the volunteers to be compared to the randomly selected participants in order to identify any possible differences between the two. Also, it is common for wine tourists to travel in groups. Groups were allowed to complete the study together, as long as they were traveling in the same car or other method of transportation.

At the end of each day, the researcher updated the winery operator with details about data collection. At this time, contact information was provided as well as strong appreciation for use of their site.

Treatment of Data

A variety of statistical and thematic maps were used to address the research questions and corresponding hypotheses. To analyze the quantitative data collected from this study the Statistical Package for Social Sciences (SPSS) was used. Geographic Information Systems (GIS) was used to analyze the map-diaries, and ArcMap10 was the primary software used. The first step in the data analysis process was to compute the descriptive and frequency statistics of all survey questions and variables. The independent variables in this study are tourist motivation, information sources used by tourists, and trip behavior. The dependent variable is itinerary pattern, which is comprised of total stops and visitation to attractions (e.g. wineries, towns, other attractions). The responses to the on-site intercept question (why did you come to this winery today?) were analyzed and categorized based on similarity of responses how often they occurred.

To analyze tourist motivation, two variables were created based on the push and pull motivation data that were collected. These are ‘motivation categorization’ and ‘focus category’. Motivation categorization was developed based on nine push/pull scale items. The four categories of this variable attempt to define the level of push or pull motivation felt by the tourist as being high or low, based on the 5-point Likert scale values where values closest to ‘5’ indicate the motivation item as being ‘Very Important’. The categories are: high-push/ high-pull, high-push/ low-pull, low-push/ high-pull, and low-push/ low-pull. Mean push and pull scores were calculated between all of the items in each category. Scores refer to the value selected on the Likert scale, ranging from one (low, not important) to five (high, very important). The push items were: to increase wine knowledge, to be with friends/family, to meet people with similar interests, and to relieve stress or relax. The pull items were: to taste wine, to buy wine, for food tasting, and to enjoy the fun and entertainment. Scores above the mean were considered to be high, and scores below were considered to be low.

Similarly, focus categories were developed based on aggregated scores for motivation items that were or were not specific to wine. The two categories are wine focused and non-wine focused. Items used to determine wine focus were: to taste wine, to buy wine, to increase wine knowledge, tour a winery, and the importance of wine varieties, winery location, and distance traveled to visit a winery. Non-wine focused items were: to be with friends and family, for food tasting/sampling, to purchase food, to meet people with similar interests, to get away or escape, to be entertained, to relieve stress/ relax, and the importance of a variety of attractions offered in a destination. As done to identify motivation categorization, a tourist was considered to be either wine focused or non-wine focused based on his/her mean score among the items identified.

Hypotheses to address the research questions and purpose of the study were developed. Research question one does not have an associated hypothesis because it deals with the exploratory component of the research. Hypotheses of this study were explored through descriptive statistics, directionality testing between variables, and comparison of means.

Variables were created from the motivation scale items and the map-diary data to test relationships. Mean values were calculated for the push factor items and pull factor items grouped separately as two scales, as well as all together as one scale. The means for the push factor group and pull factor group were analyzed to form the motivation categorization variable (high or low scores for push and pull items). Similarly, the same items were used but grouped differently to observe wine focus. The mean value for items that were specific to wine was calculated, as well as that of the non-wine specific items. The means for these two groups were used to designate a tourist as either wine focused or non-wine focused.

Research Question 1: What are the travel patterns of wine tourists in Michigan's Leelanau Peninsula?

The data collected with the map-diary instrument address this question. From the map-diaries, itinerary attributes were tabulated. Itinerary attributes refer to the total number of stops, visits to wineries, visits to towns, and visits to other attractions. The roads that tourists traced in the map-diary depict their route, which is another itinerary attribute. Frequency data were used to calculate the number of visits to all locations and the number of times a road was traveled.

Three thematic maps were created through GIS based on the frequency data. These maps used proportional symbols (e.g. points and lines) to show the itinerary attributes. The itinerary pattern is observed on a map that combines all of the itinerary attributes. The information shows the relationship between the most visited locations and routes traveled through the peninsula.

Research Question 2: Which information sources impact wine tourist itineraries?

H1: Wine trail information will be the most used information source to plan the trip in advance.

H2: Roadside signage will be the most used information source during the trip.

H3: Word of mouth and signs will have the greatest impact in causing unplanned stops at wineries.

To address H1-H2, frequencies were tabulated for each information source to discern which were used the most by wine tourists. Possible information sources were wine trail information, recommendation from others, brochures/maps, smartphones, the internet, roadside signage, guidebooks, and GPS.

H3 is based on responses from tourists that report adding an unplanned winery visit to their trip. Items that may have impacted the decision to make an unplanned stop are: signs, passing the winery during travel, recommendation from someone else, reading about the winery, proximity to another stop, or name recognition. These items were presented in a 5-point Likert scale, where '5' indicates a great deal of impact and '1' indicates none. The mean scores for each item were calculated in order to see which were most impactful.

Research Question 3: What are the factors that motivate wine tourists to travel to Michigan's Leelanau Peninsula?

H4: Push motivation will increase as pull motivation decreases indicating a negative linear relationship.

H5: An individual that is highly motivated by pull factors will participate in more winery activities than one who is not.

H4-H5 examines the relationship between the push and pull motivation of tourists. Pearson's correlations were calculated to test these hypotheses using the mean values calculated for the push motivation item and pull motivation item groups.

Research Question 4: Is there a relationship between motivations of wine tourists and itinerary patterns?

H6: A visitor who is influenced more by pull factors than push factors will have more total stops on his/her itinerary.

H7: Wine tourists whose primary purpose of trip is to visit wineries, will visit the highest number of wineries.

H8: Wine focused tourists will have longer routes than non-wine focused tourists.

H9: There will be significant differences in the total stops and itinerary patterns of wine tourists based on their motivation categorization.

Mean comparisons based on the push and pull motivation items were employed to test the independent variables in H6-H9 in relation to itinerary attributes. These hypotheses examine the relationship between tourist motivation and the itineraries they observe.

Assumptions

This research works on three main assumptions. The first assumption is that individuals that are intercepted in the act of leaving a winery are wine tourists, when in fact they may have had unknown characteristics differentiating them from tourists. The second assumption, based on the relevant literature, is that push and pull motivation are not sole cause of itinerary patterns or trip behavior but may be indicators. Third, it is assumed that tourists understood and followed the instructions of the study in an honest manner.

CHAPTER 4

Analysis of Data

This research identifies wine tourist motivations and itinerary patterns in Michigan's Leelanau Peninsula (LP). The data obtained in this study include 1) descriptive and cartographic data about the day itineraries of wine tourists in the Leelanau Peninsula; 2) the information sources they used before and during their trip; 3) the most important motivations for their travel; and 4) the relationship between their motivations and itinerary patterns. The analysis of the data is presented according to the following topics: responses, profile of respondents, analysis of research questions and hypotheses, and an exploratory principal components analysis of tourist motivation factors. From this point the term participants will be used synonymously with wine tourists that returned completed survey packets.

Responses

The sample of prospective participants in this study consisted of 227 randomly selected visitors to tasting rooms in the Leelanau Peninsula during mid-August. There were 227 interceptions and nine refusals which left 218 potential subjects who stated that they would return the survey and map-diary. However, only 110 completed and returned both research instruments yielding a response rate of 50.4%. Details of the interceptions may be found in Table 4.1.

Itinerary data regarding number of visits to locations within the peninsula were gleaned from 110 map-diaries. For analysis of routes used for travel, only 87 map-diaries were deemed to have viable information. The rejected map-diaries were typically flawed in ways that prevented the necessary route data from being assessed. The most common reasons for rejection were that the participants failed to trace their route pattern, indicate which locations they visited, or both.

Table 4.1 Distribution of Instruments at Each Intercept Winery				
Winery	Date	# Refusals	# Distributed	
			n	Percent
Gill's Pier	8/11/2012 Saturday	0	29	13.30
Ciccone	8/12/2012 Sunday	0	24	11.00
Black Star Farms	8/13/2012 Monday	3	51	23.39
Cherry Republic	8/14/2012 Tuesday	3	38	17.40
Leelanau Cellars	8/15/2012 Wednesday	1	23	10.55
Chateau de Leelanau	8/16/2012 Thursday	1	29	13.30
Forty Five North	8/17/2012 Friday	1	24	11.00
Total	8/11-8/17	9	218	100.00

**Response rates for each winery were not observed.*

The Kolmogorov-Smirnov and Shapiro-Wilk tests for normality were used to test the distribution of the data. The observed variables in the data did not exhibit a normal distribution. In order to conduct parametric testing, all of the interval/ratio data were normalized by transformation to z-scores. The variables that were transformed are those of the motivation items and quantitative route attributes. Z-scores standardize skewed data based on the standard normal distribution where the mean value of the variable is 0 and standard deviation is 1 (Cronk, 2012), so that the number of standard deviations above or below the mean value will be represented. This allows the rest of the data analysis and hypothesis testing to take place under the assumption of normally distributed data.

Profile of Respondents

Basic information regarding demographics and trip characteristics was collected to best understand the population (i.e. summer wine tourists in the Leelanau Peninsula). The majority of participants were from the United States (92.9%), with 65.6% from Michigan. Residents of the region made up 8.4% of the total sample. The region was defined as residence within 20 miles of the county. There were nine residents, living in the following locales: Traverse City (5), Suttons Bay (2), Omena (1), and Elk Rapids (1). The non-resident group accounted for 91.6% of the tourists to the area. Out-of-state residents were from Illinois (4.4%), Ohio (3.5%), Colorado (2.7%), Indiana (2.7%), and Wisconsin (2.7%). There were three international visitors (2.7% of the sample); two were from Canada and one was from Australia. The average age of the participants was 49 years, and 60% of the sample was female. Over two-thirds (73.1%) of the participants had earned a degree at the Bachelors level or higher. Demographic information can be found in Tables 4.2, 4.3, and 4.4.

Table 4.2 Age of Respondents and Their Travel Party				
Age Groups	Respondents		Travel Party	
	n	Percent	n	Percent
0 to 6	0	0	3	1.27
7 to 11	0	0	7	2.97
12 to 20	0	0	17	7.20
21 to 30	10	9.3	28	11.90
31 to 40	10	9.3	25	10.60
41 to 50	15	14	27	11.40
51 to 60	40	37.4	57	24.20
61 to 70	27	25.2	58	24.60
71+	5	4.7	14	5.90
Total	107	100	236	100.00

Table 4.3 Residence of Respondents		
State/ Province	n	Percent
CA	1	0.90
CO	3	2.70
CT	1	0.90
FL	1	0.90
GA	1	0.90
IL	5	4.40
IN	3	2.70
MA	1	0.90
MD	1	0.90
MI	74	65.50
MO	1	0.90
NJ	1	0.90
OH	4	3.50
Ontario	2	1.80
PA	1	0.90
TN	1	0.90
TX	1	0.90
VA	1	0.90
WA	1	0.90
WI	3	2.70
Missing	3	5.30
Total	110	100.00

Table 4.4 Education of Respondents		
Highest Level of Education Attained	n	Percent
High School	15	13.30
Associate Degree	14	12.40
Bachelor's Degree	36	31.90
Graduate Degree	36	31.90
Doctorate	7	6.20
Missing	2	4.40
Total	110	100.00

To better understand the nature of wine tourism and travel behavior in the Leelanau Peninsula, information relating to the trip planning and behavior of the participants was collected. The most common primary purpose of trip cited by participants was to have a vacation or weekend getaway in the area (59.1%). As shown in Table 4.5, this was the most significant trip purpose by a large margin. Over half (53.8%) of the participants regarded visiting wineries as somewhat or very important to their decision to travel to the region while only 2.8% of the wine tourists reported visiting wineries as their only reason (Table 4.6).

Table 4.5 Primary Purpose of Trip to the Northwestern Michigan Region		
	n	Percent
Vacation/ weekend getaway in area	65	59.10
Visiting friends or relatives	15	13.60
Visiting wineries	12	10.90
Other	11	10.00
Family event	7	6.40
Total	110	100.00

Table 4.6 Importance of Visiting a Winery to Decision to Travel to Northwestern Michigan		
	n	Percent
It was the only reason	3	2.80
Very important	29	26.90
Somewhat important	29	26.90
Not very important	24	22.20
It was not a reason	23	21.30
Total	108	100.00

Approximately 45% of the participants agreed that they typically spend a lot of time researching their destination prior to traveling. Most of the respondents reported involvement in the planning of trip itineraries either by themselves (48.6%) or with others (44%), while very few observed an itinerary that was planned by someone else completely (7.3%). Nearly two-thirds (61.7%) of the participants visited wineries that they had not planned to prior to the day's travels, which are considered unplanned stops. The average traveling party size was 3 people, and 95% of these groups used a privately owned vehicle to tour the region. Wine tourists that reported avoiding tasting rooms that charged a fee for sampling wine comprised 22.2% of the group.

The majority of participants (52%) indicated that they visited wineries only on one day out of their entire trip. Those who visited wineries on two or three separate days accounted for 43% of the participants. Apart from visiting wineries and tasting wine, approximately half of the sample participated in each of the following activities during their entire trip: sightseeing, visited the beach, fine dining, small-scale retail shopping, or visited a national/state/local park or lakeshore. Less than half of the respondents reported visiting friends and relatives, visiting a gallery/ art studio, hiking, visiting a historical/ cultural site, visiting specialty food shops, or going to the Leelanau Sands casino. Refer to Table 4.7 for exact participation percentages.

Table 4.7 Participation in Activities During the Entire Trip		
Trip Activity	n	Percent of Cases (N=110)
Sightseeing	88	80.00
Shopping (small retail)	73	66.00
Beach	62	56.00
National/state/local park or lakeshore	60	55.00
Fine dining	57	52.00
Specialty food shops	45	41.00
Visiting friends and family	39	35.00
Visit gallery/ art studio	33	30.00
Visit historical/ cultural site	31	28.00
Hiking	29	26.00
Brewery/cidery/distillery	27	25.00
Wildlife/ nature viewing	25	23.00
Boating (motor/sailing)	24	22.00
Road-side food stand	23	21.00
Farmer's market	20	18.00
Boating (kayak/canoe/ paddle board)	19	17.00
Shopping (other)	17	15.00
Golf	15	14.00
Shopping (antique)	12	11.00
Festival event	11	10.00
Fishing	10	9.00
Museum	10	9.00
Casino	10	9.00
Bicycling	9	8.00
Concert/ theater	9	8.00
Visit local food grower/ maker	7	6.00
Spa/ massage	5	5.00
Shopping (real estate)	3	3.00
Motorcycling	2	2.00
Sporting Event	1	1.00
"You-pick" produce	1	1.00
Amusement/theme/water park	1	1.00
Total	778	707.00

Motivation Scales

As described for the treatment of data in the previous chapter, the motivation items were analyzed and grouped to be used for analysis. Mean values were calculated for the push factor items and pull factor items grouped separately as two scales (i.e. push motivation scale, pull motivation scale), as well as all together as one scale (i.e. push/pull motivation scale).

There were 15 scale items in the survey questions related to motivation which were used to test the relationships between motivation and other variables. Table 4.8 includes each of the items used to create the motivation variables and the mean values based on a five-point Likert scale from 'Not Important' (1) to 'Very Important' (5).

Table 4.8 Importance of all Motivation Scale Items to Wine Tourists			
Item	n	Percent	Mean
To taste wine	108	95.60	4.36
It is important for a winery to provide a variety of wine types	108	95.60	4.29
I like destinations with a variety of activities and attractions	107	94.70	4.14
The setting of the winery is important	108	95.60	4.05
To buy wine	107	94.70	3.80
To increase my wine knowledge	107	94.70	3.03
To get away/ escape for the weekend/ day	107	94.70	3.85
To relieve stress and relax	109	920	3.75
To enjoy the fun and entertainment	106	93.80	3.73
I will drive more than an hour from my home/ lodging to visit a winery	106	93.80	3.72
So I can be with friends/ family	104	92.00	3.62
Food purchasing	61	54.00	2.67
Winery tour	57	50.40	2.56
For food tasting	105	92.90	2.12
So I can meet people with similar interests	105	92.90	1.66

A number of new variables needed to be created from the 15 items to properly test the hypotheses related to motivation. The variable titled ‘motivation categorization’ was derived from the mean value of the push and pull motivation scales. Based on these values, each participant was placed in one of four categorizations: high push/ high pull, high push/ low pull, low push/ high pull, or low push/ low pull. Using the z-score values, scores above the mean (0) were considered high while scores below the mean were low. By comparing high and low scores of average push and pull factor scores, participants were assigned to one of the four motivation categories in Table 4.9. The largest categorization group is high-pull/high-push, which includes 41.7% of the sample. Low-pull/low-push is the second largest group with 27.8% of the sample included. High-pull/low-push accounts for 17.6% of the tourists, while low-pull/high-push is the smallest group at 13%.

Table 4.9 Motivation Categorization		
Category	n	Percent
High-Pull/ High-Push	44	41.90
Low-Pull/ Low- Push	29	27.62
High-Pull/ Low-Push	18	17.14
Low-Pull/ High-Push	14	13.33
Total	105	100.00

Much like motivation categorization, the variable titled ‘focus category’ was developed based on mean scores for motivation scale items that were specific to wineries (e.g. to taste wine, to purchase wine, to increase wine knowledge). Based on the mean scores of winery specific items, participants were classified as being wine focused or non-wine focused as illustrated in Table 4.10. Wine focused tourists were the majority, accounting for 58% of participants, while non-wine focused tourists represented 42%.

Table 4.10 Focus Category		
	n	Percent
Non-Wine Focused	45	41.66
Wine Focused	63	58.33
Total	108	100.00

A Cronbach's alpha value was calculated to estimate the internal consistency of the motivation scale items used to determine motivation and focus categorizations. The group of all push/pull motivation items had a reliability value of .731 which is accepted at the minimum reliability alpha level of 0.7 (Nunnally, 1978). The push motivation item group had an alpha level of .637 and the pull motivation item group had an alpha level of .527. Neither met the minimum reliability level but both are accepted as moderately reliable for this study, especially since they were reliable when combined. The wine focus scale items also had a moderate reliability alpha level of .671.

Analysis of Research Questions and Hypotheses

The first research question was explored using descriptive information collected through the map-diaries to develop thematic maps indicating routes and visits to attractions in the Leelanau Peninsula. Research question two was answered through descriptive analysis of the questionnaire items regarding the use of information sources used to plan before and during the trip. Pearson's correlation coefficients were calculated to test the third research question, along with frequency and descriptive statistical analysis. Finally, research question four was addressed through an analysis of variance (ANOVA) between the groups formed by motivation categorization. Corresponding hypotheses to each research question will be listed and analyzed in this section.

Research Question 1: What are the travel patterns of wine tourists in Michigan's Leelanau Peninsula?

To explore and observe the travel patterns of wine tourists in the LP, the map-diary data were used to identify itinerary attributes and to develop a series of thematic maps relating to travel patterns of wine tourists. Itinerary attributes identified included: the total number of stops made during the trip, and the number of visits made to wineries, towns, and other attractions.

The average number of total stops (Table 4.11) for the participants was 6.68. Winery visits (Table 4.12 and Table 4.13) accounted for an average of 3.91 of these, towns accounted for 2.09 visits, and other attractions accounted for less than one per each trip (.58). This data is represented in Figure 4.1. Black Star Farms received visits from 54 of the 110 respondents, which was the highest recorded visitation at any one winery. Forty Five North and Leelanau Cellars both received visits from 34 respondents. Though Blustone was not open at the time of data collection, 3 of the tourists reported visits to the location. Suttons Bay (22.9%), Leland (17%), and Glen Arbor (16.6%) were the most visited towns (Table 4.14), and Sleeping Bear Dunes National Lakeshore was the only other attraction (Table 4.15) that exhibited notable visitation (26%).

Table 4.11 Average Number of Stops in Itineraries			
Location	Minimum	Maximum	Mean
Wineries	1	15	3.91
Towns	0	10	2.09
Other Attractions	0	4	0.58
Total Stops	1	26	6.68

Table 4.12 Visits to Wineries as Recorded in Map-Diaries		
Winery	n	Percent
Black Star Farms*	54	49.10
Forty Five North*	34	30.90
Leelanau Cellars*	34	30.90
Chateau de Leelanau*	31	28.20
Ciccione *	28	25.50
L. Mawby	27	24.50
Cherry Republic*	25	22.70
Circa Estate	21	19.10
Good Harbor	21	19.10
Willow	19	17.30
Shady Lane	19	17.30
Gill's Pier*	18	16.40
Verterra	15	13.60
Chateau Fontaine	15	13.60
Bel Lago	12	10.90
Boathouse	12	10.90
Silver Leaf	10	9.10
Brengman Brothers	9	8.20
Longview	7	6.40
Good Neighbor Organic	7	6.40
Boskydel	6	5.50
Raftshol	6	5.50
Blustone	3	2.70
Total	433	393.60

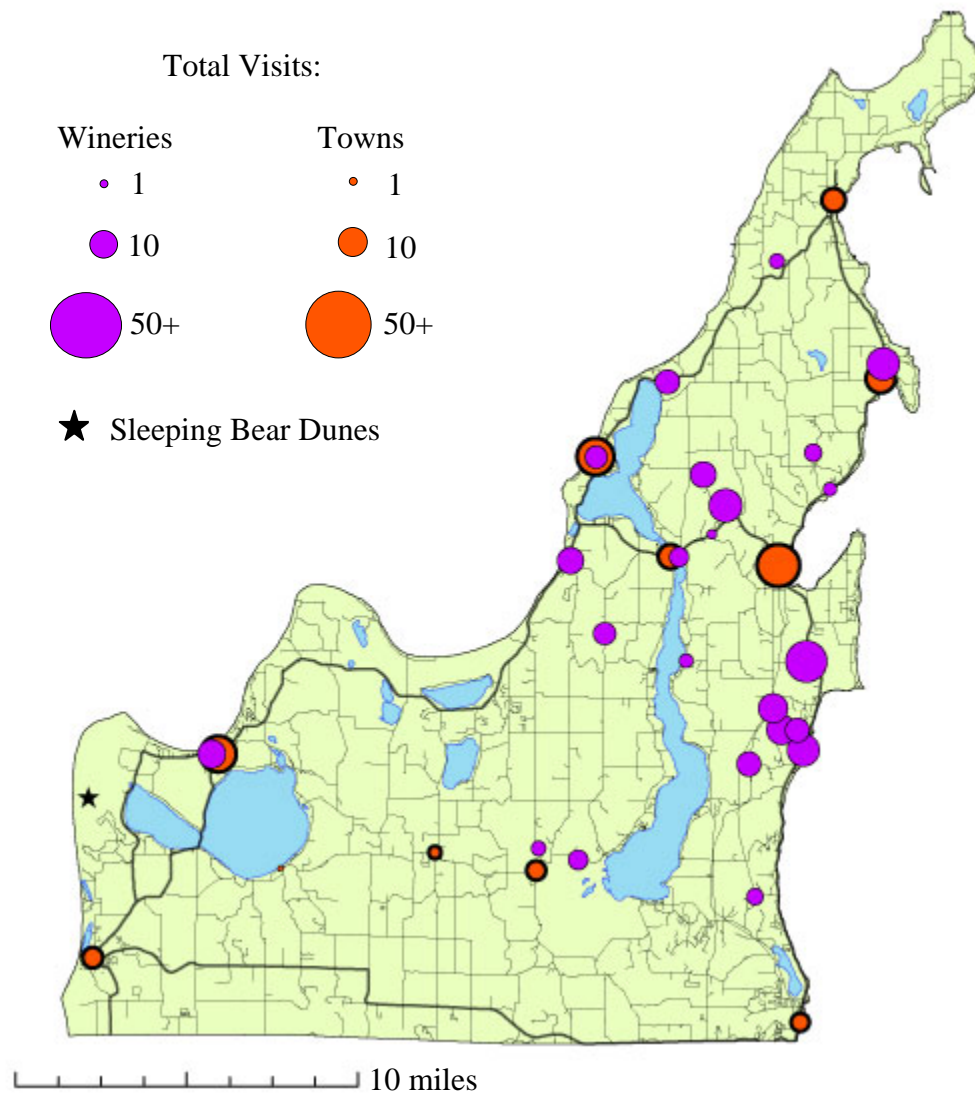
**Indicates a winery used to recruit study participants*

Table 4.13 Number of Winery Visits in Itineraries		
Visits	n	Percent of Cases (N=110)
1	23	20.90
2	12	10.90
3	18	16.40
4	17	15.50
5	9	8.20
6	13	11.80
7	3	2.70
8	4	3.60
9	2	1.80
10	3	2.70
11	2	1.80
15	1	0.90
Total	110	100.00

Table 4.14 Visits to Towns		
Town	n	Percent of Cases (N=110)
Suttons Bay	51	46.36
Leland	38	34.55
Glen Arbor	37	33.64
Omena	25	22.73
Lake Leelanau	17	15.45
Northport	16	14.55
Empire	12	10.91
Cedar	11	10.00
Greilickville	10	9.09
Maple City	5	4.55
Burdickville	1	0.91
Total	223	202.73

Table 4.15 Visits to Other Attractions		
Attraction	n	Percent of Cases (N=110)
Sleeping Bear Dunes Nat'l Lakeshore	29	26.40
Leelanau State Park and Grand Traverse Lighthouse	10	9.10
Tandem Ciders	7	6.40
Leelanau Sands Casino	6	5.50
Peterson Park	2	1.80
CO RD 669 Beach Park	1	0.90
Good Harbor Beach	1	0.90
Kehl Lake	1	0.90
Schneider's Beach Park	1	0.90
Total	58	52.73

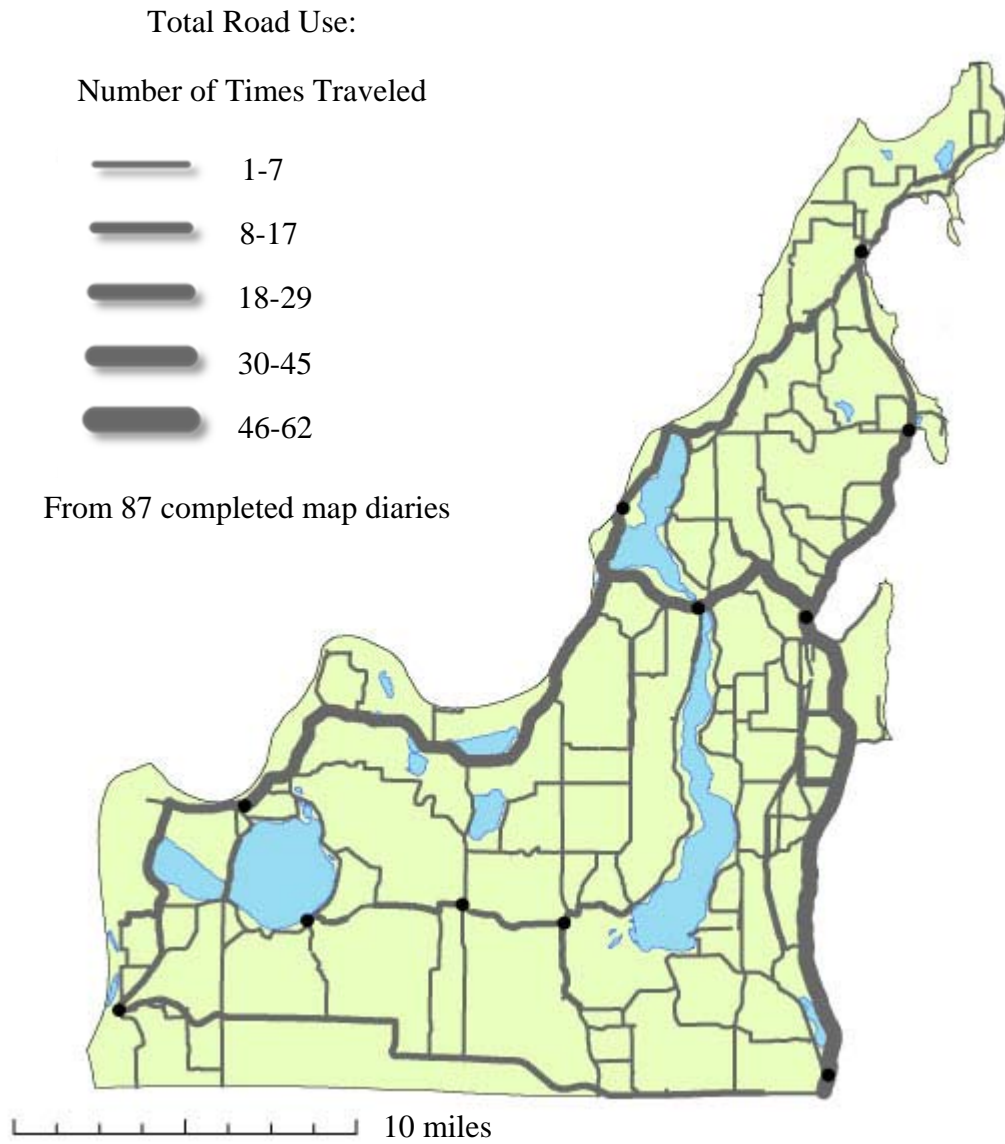
Figure 4.1 Visits to Wineries and Towns



For interpretation of the references to color in this and all other figures, the reader is referred to the electronic version of this thesis.

Tourist itinerary routes were compiled according to the roads that were traced on the map-diaries. Frequency of road travel was tabulated in order to produce a graduated symbols road map of the county. The roads indicated as being traveled by participants are illustrated in Figure 4.2, where thickness of line increases with number of uses. The data represent one-way traffic, as two-way information could not be assumed based on the map-diary data collected. Only road segments that were traveled at least one time are included in Figure 4.2.

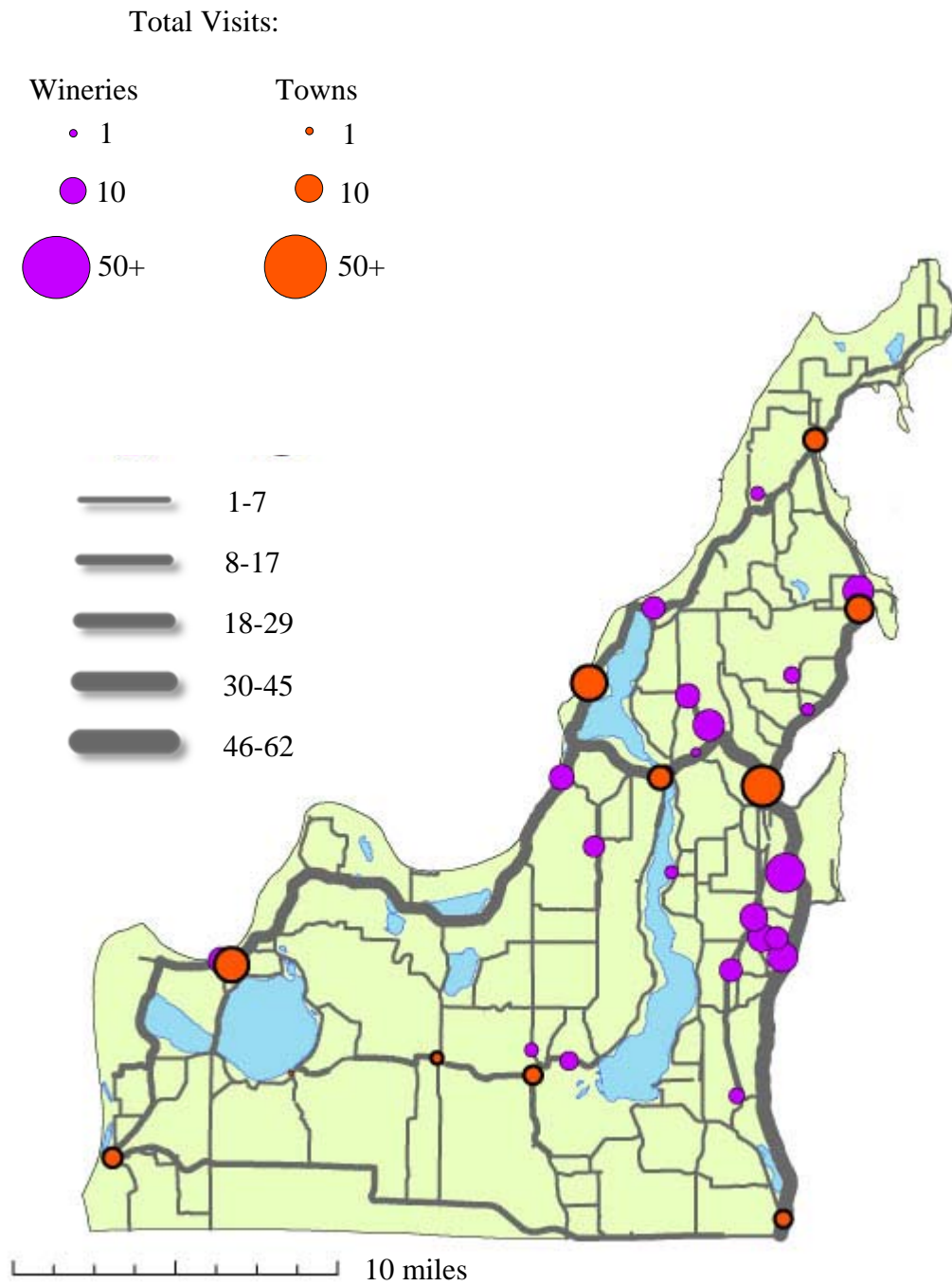
Figure 4.2 Wine Tourism Travel Flows



Roads that were used the most often are visibly salient by their thickness in Figure 4.2. The north/west state trunkline highway M-22/West Bay Shore Drive between Traverse City and Suttons Bay was the most frequently used road way. It was used by 70% of respondents. M-22 is also heavily used in travel between Suttons Bay and Omena. The most heavily traveled east/west road is M-204 (also known as Race Street, Philip Street, or Duck Lake Road) between Suttons Bay and the western shore of the peninsula. Segments of this road were traveled by a maximum 50 parties (57%). Along the western shore of the LP, Manitou Trail was used by 47% of respondents. This is the primary route between Glen Arbor and Leland and is the most commonly used road on the western side of the Leelanau Peninsula.

In order to fully assess the travel patterns of wine tourists in the LP, a map depicting both the proportional symbols of winery and town visits, as well as the graduated linear symbols for roads was generated and is presented in Figure 4.3. The more heavily traveled road segments align with the wineries and towns that received the most visits. Black Star Farms and Suttons Bay were the most visited winery and town, respectively. These are located in close proximity to one another and are linked by M-22/West Bay Shore Drive, the road used most frequently. Located on the northern segment of M-22/West Bay Shore Drive is Leelanau Cellars, which is one of the second most visited wineries (tied with Forty Five North at 31%). The most direct road to Forty Five North from M-22/ West Bay Shore Drive is M-204, which was the second most traveled road in the aggregated map data of Figure 4.3. Similarly, Glen Arbor and Leland were the second most frequently visited towns and are both located off of Manitou Trail.

Figure 4.3 Wine Tourism in Leelanau Peninsula



There may be bias in the number of visits to the wineries that served as intercept locations, where more visits may have been recorded than may be accurate. This is exemplified by the fact that the five wineries that received the highest number of visits were intercept locations (Table 4.12). To atone for this probable bias, adjusted numbers for winery visits at the seven partner tasting rooms were calculated. Since the response rates for each winery were not tracked, the overall response rate of 50.4% was assumed to be an appropriate estimated rate. It was assumed that 50.4% of the tourists intercepted at each tasting room completed the study and returned the survey instrument. Therefore, the number of visits to each tasting room was reduced by 50.4% which dramatically shifted the order of wineries by visits received (Table 4.16). Tables 4.12 and 4.16 provide a side-by-side comparison of the number of visits to the wineries, before and after the adjustment was applied. As is evident, the adjusted number of visits changed the order of wineries according to number of visits.

Black Star Farms remained the winery with the most visits (28). L. Mawby (27) became the second most visited, as opposed to its prior place at sixth. Leelanau Cellars remained third in number of visits with 23, while Forty Five North dropped to the fourth (22) most visited. Chateau de Leelanau dropped from the fourth position to the ninth (16), a place it now shares with Ciccone. Cherry Republic (6) and Gill's Pier (3) were reduced to the 19th and 22nd positions respectively. To further exemplify the difference in winery visits caused by the adjustment, Figure 4.4 and 4.5 have been produced to replicate the proportional symbols and route patterns maps created with the observed data. With the adjustment, town visits were found to occur more frequently than winery visits in general. There remains a pattern between the most visited attractions and highest traveled roads where frequencies are related.

Table 4.16 Adjusted Number of Visits to Wineries Based upon Overall Response Rate		
Winery	n	Percent
Black Star Farms*	28	25.50
L. Mawby	27	24.50
Leelanau Cellars*	23	20.90
Forty Five North*	22	20.00
Circa Estate	21	19.10
Good Harbor	21	19.10
Willow	19	17.30
Shady Lane	19	17.30
Chateau de Leelanau*	16	14.50
Cicccone *	16	14.50
Verterra	15	13.60
Chateau Fontaine	15	13.60
Bel Lago	12	10.90
Boathouse	12	10.90
Silver Leaf	10	9.10
Brengman Brothers	9	8.20
Longview	7	6.40
Good Neighbor Organic	7	6.40
Cherry Republic*	6	5.50
Boskydel	6	5.50
Raftshol	6	5.50
Gill's Pier*	3	2.70
Blustone	3	2.70
Total	323	293.60

**Indicates a winery used to recruit study participants*

Figure 4.4 Adjusted Visits to Wineries and Towns

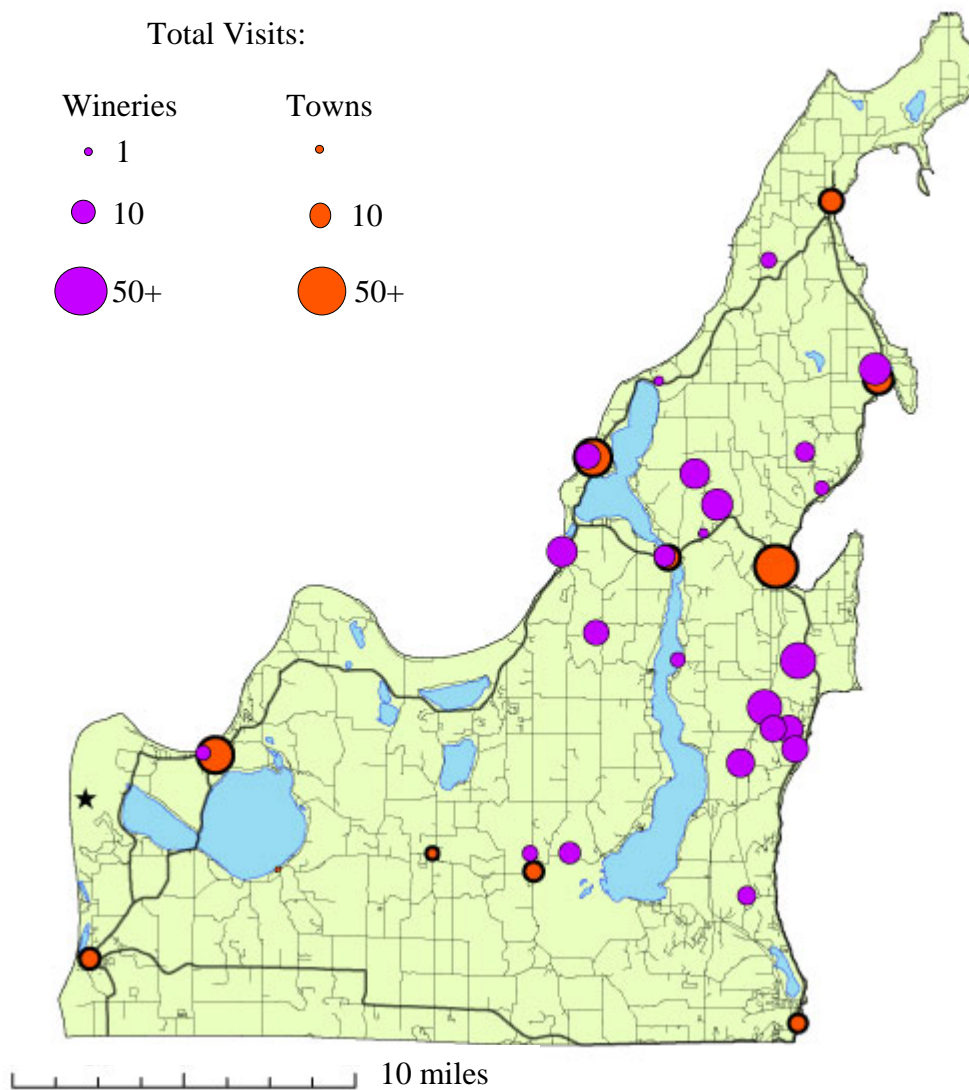
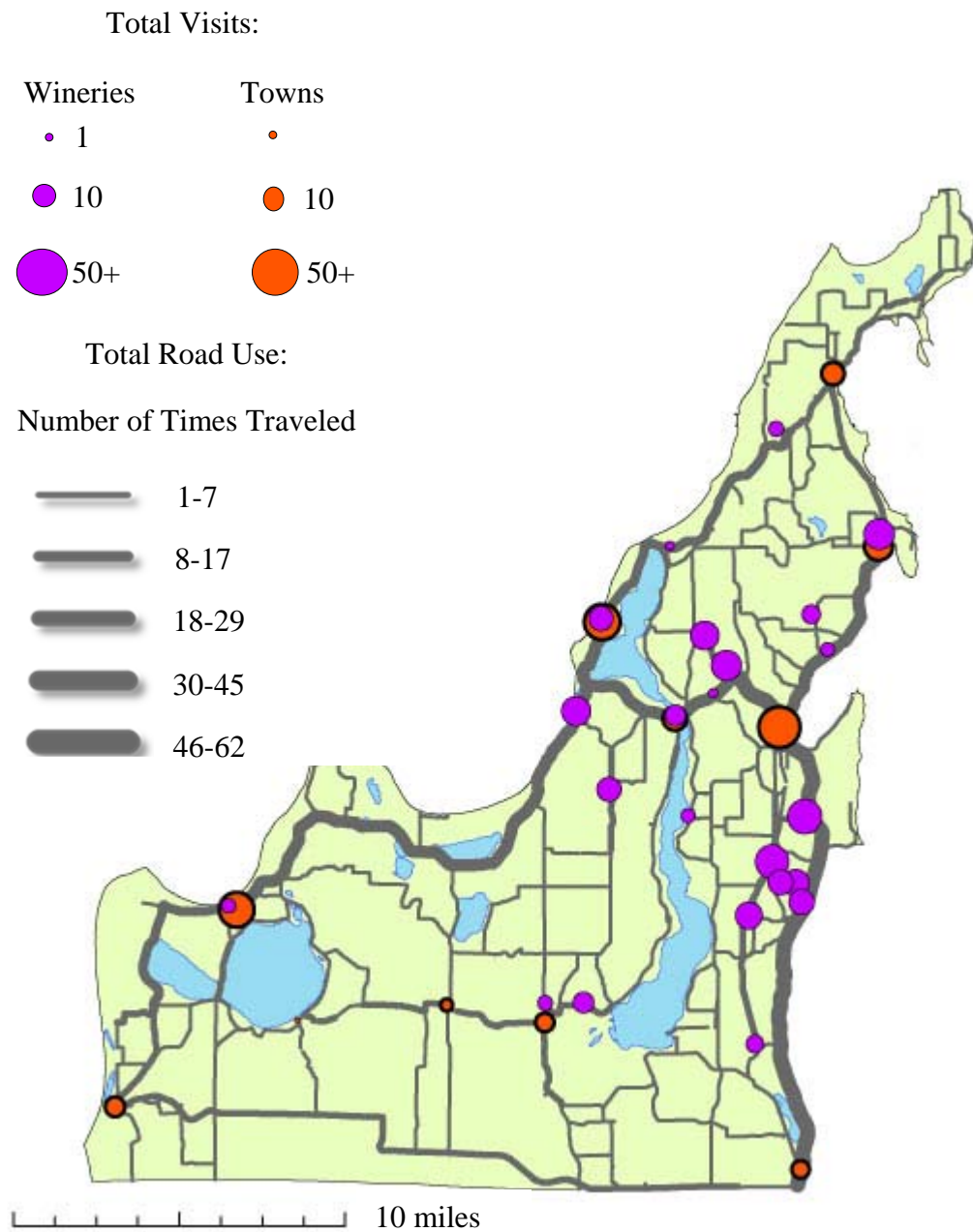


Figure 4.5 Adjusted Wine Tourism in Leelanau Peninsula



Research Question 2: Which information sources impact wine tourist itineraries?

In order to determine which information sources impact tourist itineraries, descriptive and frequency statistics were employed. Information sources used both in planning and during travel were identified, and their importance in relation to one another was determined. Additionally, the information sources that were most likely to cause a tourist to make an unplanned stop are presented. The impact of the information sources on tourist itineraries is measured in terms of the total stops or number of visits to wineries.

To provide further context to how tourists use information to develop their itineraries, it was found that leaflet displays are the most common place tourists obtain information during their trip (40% used leaflet displays). The ‘other’ option was the second most common choice (30%), which consisted mainly of specific wineries or lodging establishments being identified. These were the most prevalent of the responses in the ‘other’ category as can be seen in Table 4.17.

Table 4.17 Locations From Which Tourism Information Was Collected During Trips		
Location	n	Percent of Cases (N=110)
Leaflet Display	43	39.10
Other	33	30.00
None	19	17.30
Restaurant	17	15.50
Attraction	16	14.50
Convention and Visitors Bureau	11	10.00
Tourist Business	9	8.20
Chamber of Commerce	3	2.70
Total	151	137.30

H1: Wine trail information will be the most used information source to plan the trip in advance.

The information sources that were most used by tourists to plan their trips were brochures/maps (56%) and wine trail information (48%). The hypothesis that wine trail information would be the most used information source was rejected because brochures/maps were found to be the top used source. However, wine trail information was the second most used information source in trip planning and was associated with the highest average number of winery visits for those that used it. The average number of winery visits for those that used wine trail information to plan their trip was 5.08, which was greater than the value for those who used differing information sources (Table 4.18).

Table 4.18 Information Sources Used by Wine Tourists to Plan Trip and the Average Number of Wineries Visited by Source			
Information Source	n	Percent	Mean Winery Visits
Brochures/Maps	61	56.00	4.53
Wine trail information	52	47.70	5.08
Mobile Apps/ Smartphone	6	5.50	4.30
Guidebook	14	12.80	4.07
Roadside Signage	25	22.90	4.04
Other	9	8.30	4.0
Internet	23	21.10	3.73
Recommendation from others	23	21.10	3.70
GPS	15	13.80	3.40
None	7	6.40	2.67
Total	235	215.60	

H2: Roadside signage will be the most used information source during the trip.

As was found for trip planning, brochures/maps (56.4%) and wine trail information (45.5%) ranked first and second as information sources used during the trip. Roadside signage was the third most commonly used information source by tourists at 44.5%. Thus, the hypothesis that roadside signage would be the most used source is rejected. Data in Table 4.19 also indicate that wine trail information remains the information source associated with the highest average number of winery visits (5.14) used during a trip. Roadside signage is the second with 4.41 average stops, and brochures/maps are the third with 4.31.

Table 4.19 Information Sources Used by Wine Tourists During Trip and the Average Number of Wineries Visited by Source			
Information Source	n	Percent	Mean Winery Visits
Brochures/ Maps	62	56.40	4.31
Wine trail information	50	45.50	5.14
Roadside Signage	49	44.50	4.41
GPS	29	26.40	3.86
Mobile Application/ Smartphone	16	14.50	4.07
Recommendation from others	15	13.60	3.67
Internet	13	11.80	3.77
Guidebook	10	9.10	4.30
None	8	7.30	2.25
Other	5	4.50	4.20

H3: Word of mouth and signs will have the greatest impact in causing unplanned stops at wineries.

Though many tourists research a destination before their trip, 61% visited wineries they had not planned to visit before embarking on their travels for the day. The top reasons for these unplanned stops at wineries were found to be proximity to another stop, the tourist saw the sign, or they passed the winery during travel provoking an unplanned stop. Thus, the hypothesis that word of mouth will have the greatest impact in causing unplanned stops is rejected, because recommendations from others were the least impactful items. This is presented in Table 4.20.

Table 4.20 Degree of Impact of Items on Decision to Make Unplanned Stops at Wineries	
Item	Mean*
Close Proximity to Another Stop	4.07
Signs (road, other)	3.56
Passed during travel	3.47
Read about it	2.50
Recognized the name	2.43
Recommendation from someone else	2.04
Recommendation from a winery	1.42

**Means are based on 5-point Likert Scale. 1- No impact, 5- A great deal of impact*

Research Question 3: What are the factors that motivate wine tourists to travel to Michigan's Leelanau Peninsula?

The motivation of wine tourists to travel to the Leelanau Peninsula was examined as push and pull motivation factors. Descriptive statistics and Pearson's correlation coefficients were calculated to investigate the motivation of wine tourists in the LP. The importance of push and pull motivation items was calculated based on the average score of each item based on a five-point Likert scale, where 5 indicated the highest importance. The mean importance scores for each motivation item are found in Table 4.21.

Table 4.21: Importance of Push and Pull Motivation Items in Decision to Visit Wineries	
Motivation Item	Mean*
To taste wine ¹	4.36
To get away/ escape for the weekend/ day ²	3.85
To buy wine ¹	3.80
To relieve stress and relax ²	3.75
To enjoy the fun and entertainment ¹	3.73
To be with friends/ family ²	3.62
To increase wine knowledge ²	3.03
To taste food ¹	2.12
To meet people with similar interests ²	1.66

1- Pull factor, 2- Push factor

**Means are based on 5-point Likert Scale. 1- Not Important, 5- Very Important*

Based on responses to the scale items measuring motivation, participants were grouped in two ways for analysis. The first was motivation categorization. Based on the mean z-scores of aggregated push and pull items, tourists were classified as high-push/ high-pull (42%), high-push/ low-pull (13%), low-push/ high-pull (17%), and low-push/ low-pull (28%).

A secondary categorization based on the trip focus of the tourists was developed. This is referred to as focus category, where tourists that were motivated by items specific to wine were considered wine focused (42%), and those that were motivated by more general items were designated as non-wine focused (58%).

To further understand the motivation driving tourists to visit wineries, each participant was asked the following question upon interception: why did you come to this winery today? This was posed as an open-ended question, to which similar answers were coded generally. The most commonly reported reasons for visits to the winery were that the tourist had been before (20%) or that they saw the winery and decided to stop (12%). Other reasons that were cited were that the winery was part of a wine trail (8%), recommended to them (7%), had a reputation for good wine (6.8%), provided other services such as food (6.4%), they had never been (3%) and for the scenery or view (1.8%).

H4: Push motivation will increase as pull motivation decreases indicating a negative linear relationship.

The hypothesis that there would be a negative relationship between push and pull motivation was rejected. A two-tailed Pearson correlation coefficient was calculated to test the relationship. A moderate positive correlation was found ($r(106) = .557, p < .001$), which indicated a significant linear relationship between the push motivation scale and pull motivation scale as shown in Table 4.22. This suggests that as one of the motivation variables gets larger, the other grows as well. The correlation coefficient of 0.557 is significant at the 0.001 confidence level, which indicates a reliable relationship. Though the relationship is reliable, the strength of the correlation is moderate.

Table 4.22 Pearson's Correlation of Push and Pull Motivation Scales	
	Pull Motivation Scale
Push Motivation Scale	0.557**

*** Correlation is significant at the 0.01 level (2-tailed)*

H5: An individual that is highly motivated by pull factors will participate in more winery activities than one who is not.

A moderate positive correlation was found between pull factors and participation in winery activities ($r(111,106) = .323, p < .01$), which indicates a significant linear relationship (Table 4.23). This means that the wine tourists with stronger pull motivation can be expected to participate in more activities at wineries. This correlation is significant at the .01 confidence level of a 2-tailed test. Of the tourists that participated in winery activities (Table 4.24), 56.6% participated in one activity, 20.4% participated in two activities, and 16% participated in three or more. The remainder of the group (7.1%) did not report participation in any activities. The two most popular winery activities were wine tasting (99%), and food sampling (27.6%).

Table 4.23 Pearson's Correlation Pull Motivation Scale and Participation in Winery Activities	
	Participation in Winery Activities
Pull Motivation Scale	.323**

*** Correlation is significant at the 0.01 level (2-tailed)*

Table 4.24 Participation in Activities at Wineries		
Winery Activity	n	Percent of Cases (N=110)
Wine tasting	104	94.55
Hors d'Oeuvres/ food sampling	29	26.36
Animal viewing/ petting	9	8.18
Listen to live music	8	7.27
Vineyard tour	5	4.55
Winery tour	4	3.64
Art Show	3	2.73
Pre/ new-release/ barrel sampling	2	1.82
Picnic/ BBQ	2	1.82
Winemaker dinner	2	1.82
Cooking/ food pairing class	1	0.91
Wine related class	1	0.91
Total	170	154.55

Research Question 4: Is there a relationship between motivations of wine tourists and itinerary patterns?

This research question was addressed by using the motivation information previously identified (RQ3), and the itinerary attributes identified in the map-diaries. Descriptive statistics, Pearson's correlation, and ANOVA were used to explore the relationship between motivation and itinerary patterns of Leelanau Peninsula wine tourists.

H6: A visitor who is influenced more by pull factors than push factors will have more total stops on his/her itinerary.

A Pearson correlation coefficient was calculated to examine the relationship between the total stops, and overall pull motivation. A weak positive correlation that was not significant was found between pull motivation scores and total stops ($r(103) = .151, p > .05$), as well as number

of visits to other attractions ($r(91) = .035, p > .01$). A weak positive relationship that was significant was found for number of wineries visited ($r(103) = .255, p < .01$). The relationship between number of town visits and pull factor scores had a weak negative relationship and was not significant ($r(102) = -.053, p > .05$). Results are presented in Table 4.25. Though the hypothesis is supported, the correlations do not show a strong relationship between pull factor scores and total stops. However, the relationship between pull factor scores and winery visits is reliably correlated.

Table 4.25 Pearson's Correlation of Pull Motivation and Itinerary Stops				
	Total Stops	Winery Visits	Town Visits	Other Attraction Visits
Pull Motivation Scale	0.151	0.255**	-0.053	0.035

*** Correlation is significant at the 0.01 level (2-tailed)*

An ancillary analysis of push factor scores was conducted to further explore these relationships. A weak positive relationship was found between push factor scores and total stops, winery stops, and other stops. Like the pull factor analysis, a negative relationship was found between push factor scores and town visitations. None of the correlations calculated were significant.

H7: Wine tourists whose primary purpose of trip is to visit wineries, will visit the highest number of wineries.

The hypothesis is supported. The mean number of wineries visited by tourists that identified visiting wineries as the primary purpose of their trip was 5.67, which is nearly two wineries more than the average number visited by all groups (3.87). However, this difference was not found to be statistically significant and this group of respondents only represented 10.9%

of respondents. Vacation/ weekend getaway was cited as being the most common purpose of trip, representing 59.1% of respondents. Visiting friends and relatives was the second most common trip purpose at 13.3%, making visiting wineries the third most common purpose for tourists to visit the region. However, these differences in winery visits between groups are not significant as shown by a one way analysis of variance, $F(4, 102) = 1.822, p > .05$. Trip purpose and the ANOVA of corresponding winery visits are shown in Table 4.26.

Table 4.26 Visits to Wineries Between Tourists Grouped by Primary Purpose of Trip		
Primary Purpose of Trip	n	Mean Winery Visits
Visiting friends or relatives	15	3.53
Visiting wineries	12	5.67
Vacation/ Weekend getaway in area	63	3.76
Family event	6	2.33
Other	11	3.82
ANOVA of Mean Winery Visits		
		$p=.130$

Sixty-two respondents were categorized as wine focused. Of this group, 19.4% identified the primary purpose of their trip as being to visit wineries. To ‘vacation/ weekend getaway in area’ was the top choice for the non-wine focused group and the wine focused group, 68.1% and 51.6% respectively. The second largest purpose of trip cited was to visit friends or relatives, which accounted for 14.9% of the non-wine focused group and 12.9% of the wine focused group.

H8: Wine focused tourists will make more total stops than non-wine focused tourists.

A comparison of the number of stops at wineries between the non-wine focused group and the wine focused group showed that wine focused tourists made an average of 1.28 (Table 4.27) more stops than non-wine focused tourists, which is a statistically significant difference.

This confirms the hypothesis that wine focused tourists would visit more total attractions. A Pearson correlation coefficient was calculated (Table 4.28) to analyze the relationship between wine focus score and number of winery stops. A weak positive correlation was found, that was significant at the 0.01 confidence level for a two-tailed test. The correlation equation is as follows: $(r(107) = .263, p < .01)$.

Table 4.27 Visits to Wineries Between Focus Category Groups	
Category	Mean Winery Visits
Wine Focused	4.48
Non-Wine Focused	3.20

Table 4.28 Pearson's Correlation Wine Focus Scale and Winery Visits	
	Winery Visits
Wine Focus Scale	.263**

*** Correlation is significant at the 0.01 level (2-tailed)*

H9: There will be significant differences in the total stops and itinerary patterns of wine tourists based on their motivation categorization.

Participants were categorized by their scores for the motivation scale items as being high-push/ high-pull, high-push/ low-pull, low-push/ low-pull, or low-push/ high-pull. The mean values for total stops for wine tourists were analyzed according to motivation categories in two ways: total number of stops (Table 4.29) and winery visits (Table 4.30). A one-way ANOVA was used for each comparison. There was no significant difference $F(3,101) = 1.309, p(.276) > .05$ found in the number of total stops among tourists in the four motivation categories. Also,

there are no significant differences $F(3,101) = 2.047, p(.112) > .05$ in the number of winery stops between the groups. Thus, the hypothesis H9 is rejected.

Table 4.29 Total Stops Between Motivation Categorizations	
Category	Mean Winery Visits
High-pull/ High-push	7.43
Low-push/ Low-pull	6.31
High-pull/ Low-push	6.56
Low-pull/ High-push	5.07
ANOVA of Mean Total Stops	$p=.276$

Table 4.30 Visits to Wineries Between Motivation Categorizations	
Category	Mean Winery Visits
High-pull/ High-push	7.49
Low-push/ Low-pull	6.50
High-pull/ Low-push	6.09
Low-pull/ High-push	4.80
ANOVA of Mean Winery Visits	$p=.112$

CHAPTER 5

Discussion of Findings

The rapid growth of wineries in Michigan has provided the state with a niche industry opportunity in wine tourism, which also contributes to the growth and success of Michigan's overall tourism product. A recent study estimated Michigan wineries hosting over 2 million total wine tourists annually (Holecek, McCole, & Popp, 2013). The present study sought to further the understanding of wine tourists in the Leelanau Peninsula (LP) in order to aid the marketing and management decisions of winery operators. This was achieved by examining the motivations of wine tourists in relation to their travel behavior and development of itinerary patterns in the region. This chapter will discuss the findings, conclusions, theoretical and practical implications of the data, limitations of the study, and make suggestions for future research.

This study was designed to identify motivation and itinerary attributes of tourists in the LP through questionnaire and map-diary instruments. The study had a sample size of 110 wine tourists who were intercepted during the 2012 summer tourism season at one of seven tasting room locations in the peninsula. Thematic maps were created based on the map-diary data collected to identify any existing travel patterns. Descriptive statistics, Pearson's correlation, and comparison of means were employed to address the research questions and subsequent hypotheses.

This study analyzed four research questions which provided useful insight on tourist motivation to pursue wine tourism, trip planning information that impacts itineraries, and the relationship of these variables to itinerary patterns and attributes. A discussion of the findings relating to each of the research questions is presented in the following section.

Addressing the Research Questions

Research Question 1: What are the travel patterns of wine tourists in Michigan's Leelanau Peninsula?

The thematic maps produced based on the map-diary data depicted the roads traveled and the stops tourists made during their day trip in the Leelanau Peninsula. There are clear distinctions between roads in terms of frequency of travel, and the wineries that received the most visits were located on or near those roads. Itinerary attributes such as the length of route, visits to wineries, towns, other attractions, and road segments used for routes were able to be gleaned from the map-diaries. This allowed for the attributes to be used as variables in hypothesis testing and for the frequency data to create the thematic maps.

The adjusted numbers of visits for the wineries that were data collection sites were calculated to reduce the bias that was introduced. This bias was the possibility of an inflated number of visits to each of the wineries, based on the fact that each winery was guaranteed visits from the participants that were intercepted there. The results of the adjustment confirmed that Black Star Farms received the highest number of visits of all 23 wineries in the LP, and that Leelanau Cellars was third. The other five wineries each dropped below wineries that were not used for data collection, some dramatically. In an attempt to understand how the adjusted numbers compare to reality, they were compared to visitation estimates provided by a representative from the Michigan Grape and Wine Industry Council. These estimates are in terms of high, medium, or low visitation. Three wineries were expected to experience high visitation: Black Star Farms, Leelanau Cellars, and Cherry Republic. This confirms the position of Black Star Farms and Leelanau Cellars both before and after the adjustment. However, this estimation contradicts the lower position of Cherry Republic after the adjustment. The reason for

this is likely because Cherry Republic is an attraction that provides many products and services that are family-oriented, making wine tasting hold less appeal. For this reason, it is likely that some participants intercepted at Cherry Republic were not the same type of wine tourist that may have been found at other wineries.

The wineries that were estimated to have a medium level of visitation were Forty Five North and Chateau de Leelanau, which supports their adjustment. Ciccone and Gill's Pier were considered low in visitation. This confirms Gill's Pier as being the second to last in number of visits, but might suggest that Ciccone receives more visits than it is currently expected to. The rest of the wineries were either considered to have medium or low visitation, and did not present any surprises in their position after the adjustment.

The most traveled roads, most visited wineries, and most visited towns were aligned with or in close proximity to one another as shown by Figure 4.3 in the previous chapter. The village of Suttons Bay was the attraction that received the most visits overall, and is near Black Star Farms (the most visited winery). Both are located off of the most frequently traveled road, M 22/ West Bay Shore. This road is the most direct route linking approximately half of the wineries and towns in the peninsula, which explains the high rate of travel. Another probable reason for M 22/ West Bay Shore being the most traveled road is that it is the primary and most convenient road between Traverse City and the attractions in the LP. Though Traverse City is not located on the Leelanau Peninsula, it is a prominent tourism destination in northern Michigan where many wine tourists seek lodging and accommodations.

One interesting finding was that Blustone Vineyards was not open to the public during the data collection period, but three respondents reported visiting. There are a few reasons for

why this might be. The first is that the respondents might have made the mistake (as did the researcher) of thinking that the winery was open. Another possibility is that the respondents who did visit were interested in seeing the facilities and grounds even though it was not yet in business. Since the map-diary included Blustone, tourists may have decided to stop at the winery after seeing it on the map. This third reason alludes to the possibility that the design of the map-diary and the features that were included may have had an impact on how itineraries were developed and which attractions were visited.

Sleeping Bear Dunes National Lakeshore was the only other attraction that saw a noteworthy number of visits. This result simultaneously met expectations but also brought surprise. It was expected that Sleeping Bear Dunes would be the most commonly visited attraction in the LP, because it is a widely renowned and popular summer tourism destination in northern Michigan. There are numerous activities and attractions on the Lakeshore's property which, if visited in the same day, would likely take the entire day to complete. Some of these attractions are the Pierce Stocking Scenic Drive, the Dune Climb, or the Maritime Museum.

Approximately one quarter of the sample visited the Lakeshore, contradicting the assumption that it was one stop during a day trip including winery visits. It was not expected that tourists would have time in a day trip to visit Sleeping Bear Dunes and other attractions. There could be a few explanations for this. The first is that the tourists that visited the Lakeshore simply did not spend a large amount of time there, or at other attractions on their itinerary. Another possibility is that many of the tourists that visited were camping or staying overnight near the property, which is corroborated by the number of times the road segments leading to and from were traveled. The third explanation is that tourists misunderstood the instructions of the instrument and recorded data for multiple days rather than a single day out of their entire trip,

possibly including a day at Sleeping Bear Dunes. Considering the other activities available at the Lakeshore and the time tourists would be expected to commit to them, it is likely that this confusion was present.

Research Question 2: Which information sources impact wine tourist itineraries?

The most used information sources by tourists to plan their trip were brochures/ maps and wine trail information. During their trips, tourists used both of these information sources as well as roadside signage the most. Tourists that used these sources were also found to visit the most wineries on average. It should be noted that these two categories are not necessarily mutually exclusive, in that wine trail information could be provided in the form of a brochure and/or map. Tourists cited leaflet displays, wineries, and lodging establishments as the locations where they most often gather tourism information.

It came as a surprise that only 15% of the tourists used smartphones during their trip. A possible reason for this may be that the location and distance from population centers of numerous LP wineries prevented reliable cell phone service, which has been cited as a problem by winery operators in the region. Thus, the use of smartphones during trips was limited.

Over half of the participants added unplanned stops to their itinerary during their trips. The main causes of an unplanned stop were that it was on the way to another stop, they saw the sign, or the winery was visible from the road, prompting an unforeseen stop. Each of these are on-site factors that arise during the tourist's travel for that day, which leads to the assumption that an information source such as roadside signage may impact wine tourist itineraries the most. This is supported by 20% of the respondents to the on-site question.

Research Question 3: What are the factors that motivate wine tourists to travel to Michigan's Leelanau Peninsula?

Motivation was assessed through push/pull motivation or wine focus using items in the questionnaire's motivation scales. The most important factor was to taste wine (pull factor), while the second was to get away/escape (push factor). The rest of the items identified fell in the following order of importance : to buy wine (pull), to get away/ escape for the weekend/ day (push), to relieve stress and relax (push), to enjoy the fun and entertainment (pull), to increase wine knowledge (push), to taste food (pull), and to meet people with similar interests (push).

The majority of the participants were classified as being highly motivated by both push and pull factors (high-push/high-pull motivation categorization), between which a significant linear relationship existed. This means that as motivation grows for one type of factor, the other can be expected to increase as well. There is a significant linear relationship between pull motivation and the number of activities in which a tourist participates at the winery. The more a tourist is motivated by pull factors, the more activities they can be expected to participate in at wineries. Over half of the sample was classified as having non-wine focused motivations. Both the wine focused and non-wine focused groups indicated the primary purpose of their trip as being to have a vacation or weekend getaway.

Research Question 4: Is there a relationship between motivations of wine tourists and itinerary patterns?

Push and pull motivation was compared to the various itinerary attributes. There is a significant relationship between pull motivation and the number of wineries a tourist visited. Pull motivation was not found to have a significant correlation with any other itinerary attribute.

There were no significant relationships between push motivation and number of total stops, visits to wineries, towns, or other attractions. There were no significant differences between the motivation categorization groups in the number of visits to any type of attraction.

Wine tourists that reported visiting the region specifically to go to wineries visited the most wineries on average. The most common reason specified, however, was to have a vacation or weekend getaway. There were no significant differences between the trip purpose groups and number of winery visits. Further, of the tourists categorized as wine focused based on their motivations, the most common primary purpose of trip was to have a vacation or getaway. This suggest that even those who are very motivated by wine specific factors are still seeking a leisure experience.

Wine focused tourists visited more wineries, on average, than non-wine focused tourists. Tourists that indicated visiting wineries was their primary trip purpose averaged the most winery visits, but there were no significant differences in number of wineries visited between the other groups. This information exemplifies the importance of the leisure experience in wine tourism that is provided by factors other than wine tasting and purchasing. Though wine tasting is by far the most popular activity and motivation item (push or pull), by itself it does not fulfill the needs of a tourist to the Leelanau Peninsula. Recommendations will be provided later in the chapter to aid winery operators in applying the findings.

It was determined that the segmentations and categories based on motivation were not mutually exclusive and are not the most appropriate way to describe tourists. Separating push and pull factors for the motivation categorization was useful to compare itineraries, but not pertinent to describe the motivations of wine tourists generally. Also, the focus categories were

highly interrelated with push and pull factors, as wine focus is compiled from pull factors and non-wine focus is comprised of push factors. For this reason, and for the purposes of the rest of the discussion, the terms wine focused and leisure focused will be used to describe tourists based on their motivations. Wine focused will generally describe tourists that are motivated by wine specific pull factors, while leisure focused will refer to the previously labeled non-wine focused tourists as well as those that are motivated by push factors.

Comparison to Michigan Wine Tourism Literature

As stated in Chapter 2, there are no previous studies that specifically examine the relationship between the motivations and itinerary patterns of wine tourists. However, there can be comparisons to findings from other studies attempting to profile Michigan wine tourists and wine tourism motivation.

Though few studies have sought to profile a wine tourist specific to Michigan, it is important to understand the differences between findings to evaluate progress and change in the industry. The two studies identified in Chapter 2 (Chang, 2003; Holecek, McCole, & Popp, 2012) can be compared to the current findings regarding Leelanau Peninsula wine tourists . Results that can be compared between the studies are the ages of tourists, trip purpose, and importance of visiting wineries to travel decisions.

The present study and that of Chang (2003) found that nearly half of the wine tourists were between the ages of 41-60 while one-fifth of the sample was in the 21-40 age range. In the 2012 statewide study each of these age groups accounted for approximately forty percent of the sample (Holecek, McCole, & Popp, 2012). Based on the statewide results, wine tourists may be getting younger or there may be an increased interest in wine tourism in the millennial age group and other age groups.

The primary trip purpose for travel to Michigan or northwestern Michigan was to have a vacation in all three studies. Chang (2003) and Holecek (2012) found quite similar results hovering around 40%, while the current study also identified 60% of tourists as having vacation or getaway as their primary trip purpose. Both the present and 2012 statewide studies found that wineries were important factors in the travel decision to the destination for half of the samples (Holecek, McCole, & Popp, 2012). Wineries were the only reason for travel of nearly 20% of the statewide tourists (Holecek, McCole, & Popp, 2012), but this was only the case for 2.8% of the LP visitors. The importance of wineries on travel decision was not addressed by Chang's study (2003).

The comparisons between age, trip purpose, and the importance of wineries in trip decisions suggest that Leelanau Peninsula wine tourists may differ from statewide visitors. One possible explanation for the similarity of tourists' ages between 2003 (Chang) and the present study is that the Leelanau Peninsula is geographically further from most population centers. This distance might require a tourist to have discretionary income, which is typically characteristic of an older demographic such as the 41-60 age group. This may be less of an issue for the wine regions in other parts of Michigan, which are closer to population centers.

The differences in trip purpose between the studies may be related to the popularity of the greater Traverse City region as a tourism destination apart from the wineries. Where other regions in the state may attract more passers-by or travelers with other trip purposes many of the tourists in the Leelanau Peninsula may have selected the region based on its ability to accommodate vacationers of varying interests. Accordingly, wineries may have had less of an impact in destination selection of Leelanau Peninsula tourists because of the numerous other attractions in the Traverse City area.

Comparison to Wine Tourism Push and Pull Motivation Literature

The motivation scale items used to develop the push and pull motivation factors in the survey instrument were adapted from a number of tourism motivation studies which found them to be reliable. Since the present study also found the scales to have acceptable internal consistency, the reliability of the instrument is consistent with the other literature described in Chapter 2.

The motivation categorization and focus category attempted to group tourists based on their motivation, in a similar way to previous wine tourism researchers, resulting in the wine focus and leisure focus designations. Hall (1996) classified wine tourists as being wine lovers, wine-interested, or wine-curious. These categories align with the motivation and focus categorization developed in the present study. Wine lovers (Hall, 1996) have a great interest in everything related to wine, which are similar to wine focused tourists. Wine-interested and wine-curious both have an interest in wine (Hall, 1998), but also are motivated by other factors much like the leisure focused tourists. Wine-curious tourists are specifically motivated more by push factors and view visiting wineries as a social activity, also like the leisure focused tourists and their interests in socialization.

Another distinction used to classify wine tourists was developed by Johnson (1998). This defines tourists as being either specialists or generalists. A specialist would be similar to a wine focused tourist because of motivations related to participating in activities and having interest in grape wine (Johnson, 1998). A generalist is very similar to a leisure focused tourist in that they are primarily motivated to pursue wine tourism for reasons other than wine (Johnson, 1998).

The similarities between previous research and the characteristics of wine tourists in the Leelanau Peninsula show promise that wine tourists in other regions and situations are motivated

by similar factors. This opens the door for further research to better understand Michigan wine tourists.

The linear correlation between push and pull factors found by the present study has been supported by previous research (Kim, Lee, & Klenosky, 2003; Uysal & Jurowski, 1994). Though the difference between push and pull factors is distinct in the literature, it is unclear to what extent an item might be considered to be both. For example, learning about wine is considered a push factor in wine tourism because of the internal nature of knowledge expansion (Rivera, Chandler, & Winslow, 2009). However, the desire to learn specifically about wine may pull a tourist to a tasting room. Education about wine is commonly expected to take place during wine tasting, which is the most important pull factor cited by both the present study and prior literature (Barber, Donovan, & Dodd, 2008).

Another example of the possible overlap between push and pull motivation is that of desiring a unique experience. Having a unique experience is an important push factor for wine tourism (Pesonen, Komppula, Kronenberg, & Peters, 2011). However, the uniqueness of a wine tourism experience may vary based on the previous experiences of the individual. While someone visiting a winery may perceive it as completely new and different, a repeat visitor will be less likely to consider it unique. In this example, the unique experience a winery offers can be considered a pull factor to an inexperienced wine tourist. Still, there are ways a winery can offer a unique experience to the repeat visitors that also desire a unique experience. This will be further described as a practical implication for winery operators.

Academic Implications

There are two primary areas in which this study contributes to future academic research of wine tourism. The first is the use of itinerary mapping as a tool to study wine tourism and the

second is the identification of the most important push and pull motivation factors for wine tourists to Leelanau Peninsula.

This study confirms that wine tourism can be analyzed spatially through itinerary mapping and contributes to the literature by being the first to use it to analyze wine tourism. Wine tourism typically involves travel between multiple wineries over the period of one or more days, which qualifies as intra-destination travel.

In addition to being an appropriate method of collecting data, map-diary instruments may have other benefits. The first of these benefits is that the map-diary may aid in the recall of trip characteristics for tourists that did not complete the instrument on location (completed instruments were returned up to six weeks after the data collection period) by providing visual cues. For example, by tracing the route they took through the LP, participants may see the marker for another attraction that they may not have remembered visiting.

Another benefit is that the instrument offered a survey approach different from the standard questionnaire format, which provided an activity for the participants. Observations during the interceptions showed that tourists were intrigued by the activity and many thought it would be an enjoyable addition to their trip. A number of participants viewed their role in completing the map-diary as being fun. This may have contributed to the enthusiasm of the participants to complete the study as well as the overall likelihood of a strong response rate. The use of map-diaries to collect data was successful and should be repeated in future wine tourism research.

The intent of identifying and categorizing tourists based on push and pull factors was in an effort to observe the differences in itinerary patterns as they related to tourist motivation. The

only significant difference between motivation category groups and itinerary attributes was that a positive correlation was found between wine focus and winery visits. Pull motivation was significantly correlated with winery visits as well as number of activities participated in at a tasting room.

It is logical that pull motivation and wine focus are both correlated to winery visits, because the motivations causing the behavior are drawing them to specific locations, these motivations likely are to taste or purchase wine. Winery activities are pull factors, so the correlation between activities and pull factor motivation is a natural finding as well.

Further, push and pull motivation scores were significantly correlated. This is demonstrated by the fact that the high-push/ high-pull motivation categorization group was the largest, and the low-push/ low-pull group the second largest in terms of number of tourists in the category. This suggests that a wine tourist is not solely motivated by push or pull factors, but experiences a mixture of both which lead them to pursue a wine tourism experience.

The push and pull motivations provide a descriptive outlook on wine tourism in Michigan for future academic research, but there are important lessons from this study for winery operators in the Leelanau Peninsula.

Practical Implications and Recommendations

The meaning of this study for the Michigan wine industry (specifically in the Leelanau Peninsula) will be presented in accordance with the following managerial areas of concern: improving the tasting room experience for winery visitors and the allocation of marketing and promotion dollars. Recommendations for winery operators based on this study will be provided in each area.

In order to improve the tasting room experience based on the results of this study, winery operators must understand the motivation and behavior of their visitors and train their staff to do the same. Satisfaction with the tasting room experience has been found to be the biggest indicator of increased tasting room sales (Gomez, 2011). For this reason, it is vital that winery operators provide the best experience possible to tourists. The most important point for winery operators to impart to their tasting room staff is that most visitors are seeking a leisure experience. This interesting fact was present in all motivation groups meaning that visiting wineries is considered a social activity first. This shows that even the most wine focused tourists have an over-arching desire to vacation and getaway.

Training staff to be able to assess the motivation of the visitor in front of them will allow them to customize their actions for that individual. If they can determine the type of experience the tourist expects, they can take the appropriate actions. This may be to suggest the tourist have a glass of wine and relax on the patio, engage them in an educational discussion about the wines, or recommend another winery or attraction.

This process will provide the tourists an experience that is tailored to them without their knowledge. This may encourage fond memories and a return trip or recommendation from the tourist to a friend or relative in the future. If the staff member observes that the tourist is wine focused and determined to visit more wineries, they should provide brochures/ maps and wine trail information for the tourist to use during the rest of their trip and to plan future trips.

To further customize the experience of a wine tourist based on their motivation, it is important to recognize that some motivations may be both a push and a pull factor depending on the individual tourist. Success may be found by using different approaches to promoting the wine

tourism experience to those with who perceive push and pull motivations differently. In the example of the desire for a unique experience, wineries may emphasize that as a quality specific to their location to create a pull factor for first time wine tourists. To promote a unique experience for more experienced wine tourists, wineries may need to offer experiences that satisfy other push factors such as socialization or relaxation, and pull factors like a large variety in types of wine.

Recommendations:

- Recognize the leisure experience that each winery provides to visitors.
- Train staff to be aware of and identify the motivations and expectations of tourists.
- Assess motivations of each tourist by asking evaluative questions to determine if they are wine or leisure focused, and which push or pull factors they are most motivated by.
- Evaluative questions to assess the tourist's focus or motivation may be easily developed based on the important push and pull motivation items identified by this study. Some examples of questions staff can use are:

What brought you to the region?

Why did you come to this winery today?

Do you have an interest in learning about how we make the wines?

Have you been to the region before, if so what did you do?

Do you have or did you meet friends and family in the region/winery?

- Accommodate the visitors' interests based on their motivation. If they are wine focused, recommend specific wines, activities, or other wineries. If they are leisure focused, suggest they take a walk through the vineyard, sample a food/wine pairing, or relax with a glass of their favorite wine.

As is the case with many small businesses, many Michigan wineries do not have large budgets for marketing and promotion of their winery. As identified by Research Question 2, wineries should provide brochures/maps and wine trail information at leaflet displays in the region at other wineries and lodging establishments first in order to have the greatest impact on travel behavior. Wineries with a limited budget for creating promotional items may be best served by placing their information sources in the most visited nearby towns rather than locations that are further away. In the LP, these towns are Suttons Bay, Leland, and Glen Arbor.

Membership of a wine trail may be one of the most important implications of this study. This is due to wine trail information being one of the most commonly used information sources in trip planning and during the trip. Also, tourists that used wine trail information visited the highest average number of wineries during their trip which will presumably increase the business to all wineries that are part of a trail. Only one winery in the Leelanau Peninsula was not a member of a wine trail, which may make this a more important implication in other regions where wine trail membership is less common.

Unplanned stops at wineries are commonplace for wine tourists in the peninsula. This means that attracting tourists when they are already on-site is essential for wineries. On-site awareness of the winery may be improved the most easily and by effective roadside signage to attract a tourist during their tour.

Recommendations:

- Provide obvious and clear roadside signage advertising the winery from the closest and highest traveled road.
- Invest in brochures/maps in lieu of other tourism information mediums (e.g. guidebooks, smartphone apps), especially if working with a limited budget. This may not apply to regions that have strong cell phone reception.
- Join a wine trail and publicize wine trail information.
- Place brochures/ maps in leaflet displays, wineries, lodging establishments, and other popular destinations in the region (towns).

Limitations

There are limitations present in this study. First, it should be noted that this was not an experimental study, meaning that the significant correlations between tourism motivation and winery visits are not indicative of a cause and effect relationship. The small sample size of this study is a notable limitation, as it represents such a small portion of the tourists to the Leelanau Peninsula and even less of the estimated 2 million visitors to Michigan wineries during the past year. This limits strong comparisons to prior research as well as the generalizability of the results.

Generalizability is one of the foremost limitations of this study. The sampling design attempted to reduce bias through random selection of the seven winery locations as well as the potential participants. However, there is potential for bias in the sample because tourists from only those seven of the twenty-two wineries in the region were intercepted. The intercepts relied on a convenience sample of visitors to these wineries. Since the data collection took place exclusively in the Leelanau Peninsula, the results will not be generalizable to other wine

destinations. However, valuable information may still be taken by other wine regions from the example of Leelanau Peninsula. The seven wineries where data collection took place represent a small portion of the Michigan wine industry and even less of the national or international wine tourism industries.

Participants were intercepted at varying points in both their day trip and their entire trip to the region, which may have affected their perspectives when completing the instruments. This research does not account for trips extending for more than one day, which could exclude other types of travel taking place in the region. For example, the entire itinerary for individuals participating in tourism activities on the Leelanau Peninsula over a period of days cannot be accounted for. Rather, a typical day trip itinerary of a wine tourist is all that can be assessed based on the current data, which may exclude important details about multi-day wine tasting trips.

Further, the data were collected during a very short time frame (one week) of the summer tourism season. Because of this, results are only applicable to the Leelanau Peninsula's summer wine tourist traffic. Tourists during the summer months may be fundamentally different from other months, and the same tourists may have different itinerary patterns and motivations in different seasons. Anecdotal evidence gathered from Michigan winery operators has suggested that wine tourists in the summer have different preferences than their counterparts in other seasons.

The approach to intercepting potential participants as they were exiting the tasting rooms may have presented a problem depending on the itinerary plans of the individual tourist. Some visitors may have planned to visit a multitude of wineries/attractions in one day, causing them to

feel rushed between locations. This type of tourist may have accepted the survey materials, but did not take the extra time to complete the map-diary and questionnaire. Due to this kind of behavior there is a possibility of non-response bias from poor representation of visitors that visited a high number of attractions.

The map-diary instrument used to collect itinerary information also presents limitations. Though the instrument was found to have face validity in the pilot test, the reliability has not been verified because the map is original to this study. Related to the administration of the map-diary, potentially important information to the study was disregarded. Hindsight suggests that it would have been useful for tourists to indicate the start and end points of their itinerary, as well as the directionality of their route to reflect a more accurate travel pattern. It also would have been useful to record the winery and date of each interception on the map-diary in order to learn more about the characteristics of the responses.

The results and analysis of the adjustment procedure applied to winery visits of data collection sites suggests a limitation in the accuracy of the geographic information collected in this study. Further research must be conducted in order to ensure that the travel patterns and stops that comprise the itineraries would not be significantly different if the data were collected from different attractions or in a different manner.

Though the approach of on-site intercepts allowed for a strong response rate at 50.4%, it still imposes a limitation on the generalizability of the findings since it does not include the entire population of wine tourists in the peninsula. Further research would be required in order to address the limitations of this study.

Recommendations for Future Research

The first suggestions for future research are to address the limitations already identified in this study. Future research can improve upon the current study by using an experimental design to establish the cause and effect relationships between tourist motivation and itinerary patterns. Also, the scope of the study may be broadened to include all LP wineries, other Michigan wine regions, or similar destinations nationwide. Since this study was limited to day trips during the summer season, expanding the study to all seasons and including multi-day trips would provide a more complete understanding of wine tourists.

For future research using a similar map-diary instrument, there are ways that the instrument could be improved to be more useful. These improvements are to include identifiers of the date and location of the intercept. The ability of a map-diary to aid in recall of an individual's itinerary pattern was previously mentioned as a potential benefit of the approach. Future research may measure the ability of a map-diary to aid in recall of the itinerary pattern as compared with that of a standard survey instrument.

As has been described, the distribution of the map-diary at only seven of the 23 wineries in the peninsula limits the results. The adjustment applied to the number of visits to the seven wineries seems to be an appropriate way of handling an issue of this nature when compared to the visitation estimates provided by an industry representative. To avoid this problem in future research, it would be best to eliminate bias by distribution of instruments at all wineries in the region or at other neutral attractions (e.g. gas station, hotel, or other tourism businesses). If this is not possible, tracking response rates by each winery or attraction would allow for an improved adjustment procedure to take place.

There are many variables that could impact the tourist itineraries besides motivation, which additional research could address. For example, there may be differences between the itinerary patterns of first time tourists to a region and repeat visitors, based on the preferences of the tourist, or between regions (Old Mission Peninsula, southwest Michigan, statewide, etc.).

Motivations may also vary between seasons and other regions, especially in situations where other services are offered. Specific to the Leelanau Peninsula, tourist motivation may differ distinctly for those that are attending a festival or event hosted in the destination.

Conclusion

The growth of the Michigan wine industry demands increased attention to all areas of the industry. This study examined the Michigan wine industry through tourist motivation and travel behavior. Michigan tasting rooms rely on tasting room visits to sell their product, which makes understanding the motivation and behavior of wine tourists essential to the success of the industry. Winery operators did not necessarily enter the industry to provide a tourism or leisure experience to their customers; however this has emerged as the primary factor driving Michigan wine tourism. Understanding the tasting room visitor will contribute to the success of the Michigan wine tourism industry.

This study analyzed 110 questionnaires and map-diaries to identify the motivation of wine tourists in the Leelanau Peninsula, and their itinerary pattern while navigating the region. Push and pull motivation factors were identified and aggregated into motivation categories, which are best described as wine focus and leisure focus. These groups were then used to observe differences in itinerary patterns, most often based on the number of visits to wineries.

Products of this research were a series of thematic maps based on route patterns and visits to wineries, towns, and other attractions. Findings of this study were that push and pull motivations are highly interrelated, motivation to visit wineries goes beyond tasting or purchasing wine to leisure related items, and unplanned stops based on on-site promotion factors are common in the LP. The most important pull factors identified were to taste and buy wine, while the most important push factors were to get away or escape and to relieve stress or relax.

Numerous studies have been conducted to identify characteristics of wine tourism and profiles of wine tourists, but a study of this nature had never before been conducted in unison with an intra-destination analysis of tourist travel patterns. When compared to the literature relevant to Michigan wine tourism and wine tourist motivation, the results of the current study tend to support past findings. The choice to visit wineries has consistently been shown to be an act of leisure, and further the existence of wineries is confirmed as an important factor in destination choice. However, certain demographic variables suggest that there may be differences in wine tourists between wine regions in Michigan.

In the context of push and pull motivation in wine tourism research, the distinction between wine focused and non-wine focused tourists supports the segmentation of tourists based on their interest in wine which has been developed based on worldwide research. However, the results of this study provide further understanding to the differences between segmentations of tourists in terms of travel behavior (i.e. number of winery visits). Further, the positive relationship between push and pull motivation found in prior research is corroborated. It is clear that these motivation factors work together to attract a tourist to a destination, although there may be overlap between push and pull factors for wine tourism such as unique experience or learning about wine, as was suggested by the current study.

This study contributes to academic knowledge of wine tourism by successfully demonstrating the use of map-diaries and itinerary mapping to investigate wine tourism. Also, it was found that push and pull motivation are more suited to being analyzed individually or all together for wine tourism, as opposed to through segmented groups.

The results provide insight to winery operators to better address their visitor's needs as tourists, rather than wine drinkers or customers. Implications for winery operators include training staff to recognize motivations to customize each visitor's experience, invest in brochures/maps and roadside signage, join a wine trail, and above all to remember that visiting tasting rooms is a leisure experience first for visitors to Leelanau Peninsula.

APPENDIX

APPENDIX: SURVEY INSTRUMENT

Leelanau Peninsula Wine Tourist Motivations and Trip Behavior

Please answer the following questions about the route and stops that you chose during today's trip to the Leelanau Peninsula:

1. Think about all the wineries you visited during today's trip to the Leelanau Peninsula. Did you visit any wineries that were not planned stops when you began your travels for the day?
☐ Yes ☐ No
2. If yes, please indicate the degree to which each of the following impacted your decisions to make an unplanned stop:

Item	Not at all	Not very much	Neutral	A fair amount	A great deal
Signs (road, other)	1	2	3	4	5
Passed during travel	1	2	3	4	5
Recommendation from another winery	1	2	3	4	5
Recommendation from someone else	1	2	3	4	5
Read about it	1	2	3	4	5
Close proximity to another stop	1	2	3	4	5
Recognized the name	1	2	3	4	5

3. Please select which of the following best describe how your route between attractions was planned:
☐ I planned the route by myself
☐ Someone else planned the route
☐ I planned the route with others

4. Which of the following information sources did you use to plan your trip? (Select all that apply)
- ☐ Wine trail information
 - ☐ Recommendation from others
 - ☐ Brochures/Maps
 - ☐ GPS
 - ☐ Mobile Application/Smartphone
 - ☐ Guidebook
 - ☐ Internet
 - ☐ Roadside signage
 - ☐ None
 - ☐ Other
5. Which of the following information sources did you use during your trip? (Select all that apply)
- ☐ Wine trail information
 - ☐ Recommendation from others
 - ☐ Brochures/Maps
 - ☐ GPS
 - ☐ Mobile Application/Smartphone
 - ☐ Guidebook
 - ☐ Internet
 - ☐ Roadside signage
 - ☐ None
 - ☐ Other
6. Which of the following sources did you pick up tourist information from during your trip to the area? (Select all that apply)
- ☐ Convention and Visitor Bureau
 - ☐ Chamber of Commerce
 - ☐ Leaflet display
 - ☐ Tourist business
 - ☐ Restaurant
 - ☐ Attraction
 - ☐ None
 - ☐ Other_____

Please answer the following questions about your entire trip to the northwestern Michigan area:

7. How would you describe the *primary* purpose of your entire trip to northwestern Michigan?

<input type="checkbox"/> Business trip	<input type="checkbox"/> Visiting friends or relatives	<input type="checkbox"/> Shopping trip
<input type="checkbox"/> Visiting wineries	<input type="checkbox"/> Vacation/Weekend getaway in area	<input type="checkbox"/> Passing through
<input type="checkbox"/> Family event	<input type="checkbox"/> Other: _____	

8. What type of transportation did you use to travel to the winery/wineries?

- ☐ Privately owned vehicle
☐ Hired driver service from home (car/van/limo)
☐ Hired driver service from destination (car/van/limo)
☐ Bus tour from home
☐ Winery tour from lodging location
☐ Other

9. How important was visiting a winery/wineries to your decision to travel northwestern Michigan?

It was the only reason

☐

Very important

☐

Somewhat important

☐

Not very important

☐

It was not a reason

☐

10. Do you typically avoid tasting rooms that charge a fee?

☐ Yes

☐ No

If yes, why? _____

11. During this trip, on how many different days did you visit at least one winery? _____

12. In which of the following activities did you participate at wineries during this trip? (Check all that apply)

- ☐ Wine tasting
☐ Vineyard tour
☐ Winery tour
☐ Grape stomp
☐ Wine class

- ☐ Winemaker dinner
☐ Cooking/pairing class
☐ Listen to live music
☐ Art show

- ☐ Animal viewing/petting
☐ Barrel sampling
☐ Food sampling
☐ Picnic/BBQ

13. During your entire trip, in what other activities did you participate? (Select all that apply)

- | | | |
|---|---|--|
| <input type="checkbox"/> Sightseeing | <input type="checkbox"/> Beach | <input type="checkbox"/> Boating (motor/sailing) |
| <input type="checkbox"/> Fine dining | <input type="checkbox"/> Fishing | <input type="checkbox"/> Boating (kayak/canoe/etc) |
| <input type="checkbox"/> Visit friends/ family | <input type="checkbox"/> Golf | <input type="checkbox"/> Visit gallery/art studio |
| <input type="checkbox"/> Shopping (antique) | <input type="checkbox"/> Bicycling | <input type="checkbox"/> Museum |
| <input type="checkbox"/> Shopping (retail) | <input type="checkbox"/> Hiking | <input type="checkbox"/> Sporting event |
| <input type="checkbox"/> Shopping (real estate) | <input type="checkbox"/> Wildlife/nature viewing | <input type="checkbox"/> Motorcycling |
| <input type="checkbox"/> Shopping (other) | <input type="checkbox"/> Visit historical/cultural site | <input type="checkbox"/> National/state/local park |
| <input type="checkbox"/> Specialty food shops | <input type="checkbox"/> Horse riding | <input type="checkbox"/> Festival/event |
| <input type="checkbox"/> "You-pick" produce | <input type="checkbox"/> Amusement/theme park | <input type="checkbox"/> Farmer's market |
| <input type="checkbox"/> Road-side food stand | <input type="checkbox"/> Concert/theater | <input type="checkbox"/> Visit local food grower |
| <input type="checkbox"/> Spa/massage | <input type="checkbox"/> Casino | <input type="checkbox"/> Brewery/Cidery/Distillery |

Please answer the following questions about your motivations to come to the Leelanau Peninsula and visit winery/wineries:

14. How important are each of the following reasons in making your decision to visit a winery/tasting room?

Items	Not Important	2	Neutral	4	Very Important
To taste wine	1	2	3	4	5
To buy wine	1	2	3	4	5
To increase my wine knowledge	1	2	3	4	5
So I can be with friends/ family	1	2	3	4	5
For food tasting	1	2	3	4	5
So I can meet people with similar interests	1	2	3	4	5
To get away/escape for the weekend/day	1	2	3	4	5
To enjoy the fun and entertainment	1	2	3	4	5
To relieve stress and relax	1	2	3	4	5

15. Please check the activities you planned to participate in at the wineries in the Leelanau Peninsula and indicate how important these activities are to you. Check all that apply.

Items	Not Important	2	Neutral	4	Very Important
<input type="checkbox"/> Winery tour	1	2	3	4	5
<input type="checkbox"/> Wine tasting	1	2	3	4	5
<input type="checkbox"/> Wine purchasing	1	2	3	4	5
<input type="checkbox"/> Food Sampling	1	2	3	4	5
<input type="checkbox"/> Food purchasing	1	2	3	4	5

16. How much do you agree or disagree with the following statements?

Items	Strongly disagree	2	Neutral	4	Strongly Agree
It is important for the winery to provide a variety of wine types	1	2	3	4	5
The setting of the winery is important.	1	2	3	4	5
I will drive more than an hour from my home/lodging to visit a winery.	1	2	3	4	5
Before traveling, I spent a lot of time searching for information of where I am traveling	1	2	3	4	5
I like destinations with a variety of activities and attractions	1	2	3	4	5

Please answer the following questions about yourself:

17. What is the highest level of education you have attained?

- ☐ High school
- ☐ Associate degree
- ☐ Bachelor's degree
- ☐ Graduate degree
- ☐ Doctorate

18. Beginning with yourself, please provide the gender (M/F) and age of all persons in your travel party on this trip: (for example: F/55)

Yourself ____/____

Person #1 ____/____

Person #2 ____/____

Person #3 ____/____

Person #4 ____/____

Person #5 ____/____

19. Where do you live?

Country

City

State/Province

Zip Code

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