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MSU EDA University Center for Regional Economic Innovation
Center for Community & Economic Development
1615 E. Michigan Avenue
Lansing, MI 48912 USA
<http://www.reicenter.org>



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Assessment of the effects of Mountain Biking

Marquette Michigan’s Ecotourism

Scott Jordan, Ph.D.
Northern Michigan University

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MICHIGAN STATE UNIVERSITY | University Outreach and Engagement

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CONTENTS

INTRODUCTION	3
BACKGROUND FOR THIS STUDY	5
LEISURE AND RECREATION	5
ECOTOURISM.....	5
SUSTAINABILITY	6
SOCIAL CAPITAL.....	7
MOUNTAIN BIKING	8
MARQUETTE COUNTY TRIALS SYSTEM.....	8
PLAN OF WORK CONDUCTING ANALYSIS (METHOD).....	15
RESULTS OF THE STUDY	16
MEASUREMENT OF SOCIAL CAPITAL	18
DISCUSSION	20
NTN.....	20
RAMBA	22
TRAVEL MARQUETTE (MCVB)	22
DEPARTMENT OF NATURAL RESOURCES (DNR)	23
LOCAL RETAILERS	23
CONCLUSION.....	25
RECOMMENDATIONS FOR FURTHER RESEARCH	25
CLOSING REMARKS	26
REFERENCES	27

INTRODUCTION

Mountain biking is an ecotourism activity that has been growing in popularity across Michigan's Upper Peninsula and particularly in the Marquette area. As interest in mountain biking has increased, a number of individuals and organizations have contributed in developing and expanding the trail systems in and around Marquette. Furthermore, Marquette was noted as one of America's top mountain biking towns, indicating expansion of the industry (Butcher, 2013). Efforts in developing mountain biking has led Marquette to become named as one of ten ride centers that are internationally recognized by the International Mountain Bicycling Association (IMBA). In July 2014, IMBA declared the trails in Marquette as a Bronze-level ride center, offering a wide range of trails that are suitable for every riding style. The new Bronze-level certification of the Marquette trails makes it an internationally known location where mountain bikers of all skill levels are welcome to ride.

Situated in Michigan's remote Upper Peninsula, Marquette has a history of economic challenges. Individual income is currently dependent on the mining industry, the local hospital and the university, leaving this area with an unemployment rate greater than the national average and over 26% of the population with an annual income of \$15,000 or less (Sterlings, 2014). Consider: These local economic challenges have the potential to be alleviated by the development of an ecotourism industry centered on the attractive natural environment surrounding Marquette. Gaining a deeper perspective of how mountain biking has developed as an ecotourism industry in Marquette can lead to understanding how to sustain the sport as a contributor to the local economy. As well, understanding the process used to develop Marquette's mountain biking industry can serve as a model for the development of ecotourism in other parts of Michigan.



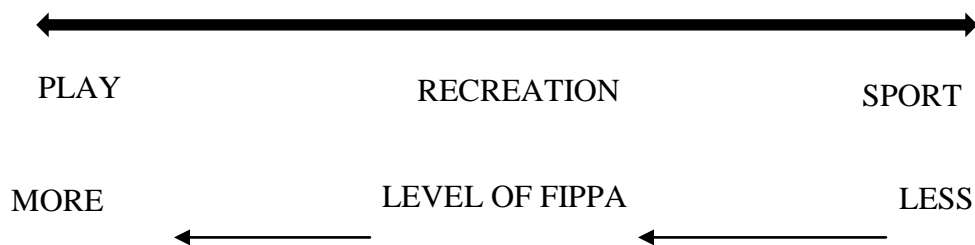
Picture 1: Starting Line Single Track Race Marquette Trails Fest 2015

BACKGROUND FOR THIS STUDY

LEISURE AND RECREATION

In order to best understand Marquette's local mountain bike trail development and its impact on the economy, it is important to understand concepts surrounding leisure, recreation, and ecotourism. Leisure is an aspect of human life that is difficult to define. Aristotle once noted that our lives revolve around leisure and that it is our leisure that defines us (McLean & Hurd, 2012). It involves aspects of freedom, intrinsic interests, personal perception, a positive outcome, and some type of active engagement (FIPPA). Because aspects of FIPPA are multi-dimensional, leisure is viewed as a continuum in which play involves the most FIPPA and on the opposite end of the continuum is sport, which is a leisure experience where FIPPA is constrained. Recreation falls on the center of the leisure continuum making it more constrained than play, and yet like sport, it is tangible and programmable. Because travel, tourism, and ecotourism involve mid-range elements of FIPPA, they can be defined as recreation experiences (McLean & Hurd, 2012). Figure 1 notes the Leisure continuum.

Figure 1: Leisure Continuum



Kelly 2012 describes leisure and recreation as having a large impact on the US economy. He describes that the manufacturing sector of the economy roughly accounts for 9% of the total spending in the US, which leaves 91% of spending accounted for by service industries. Leisure spending accounts for 97% of individual spending towards services. Leisure spending, therefore, does make a large impact on the US economy and creates opportunities for community economic development.

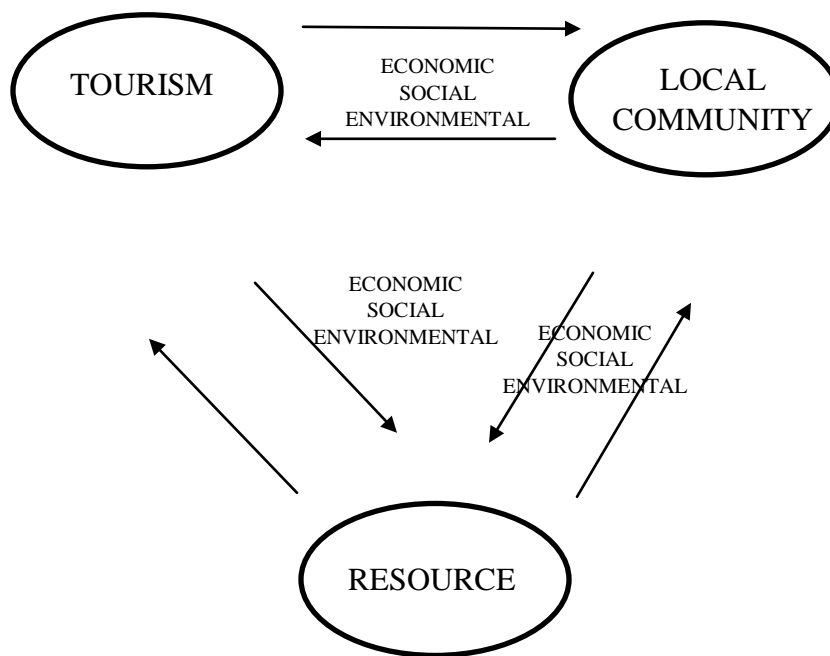
ECOTOURISM

Ecotourism conjures up images of well to do people in pith helmets or traveling to Antarctica, but the reality is that over 40% of the US population participates in some form of ecotourism (Che, 2004). It is the fastest growing segment in the travel and tourism industry. Ecotourism is considered to be more than nature based tourism. The World Conservation Union's Commission on National Parks and Protected Areas defined it as "environmentally responsible travel and visitation to relatively undisturbed natural areas in order to appreciate nature that promotes conservation, has a low negative impact, and provides for beneficially active socioeconomic involvement of local populations." This definition involves the integration of several factors including tourists, residents, and the land managers. Ecotourism also suggests that local populations are incorporated into a symbiotic relationship with natural areas through tourism.

SUSTAINABILITY

Conversations of sustainability are often limited to our relationships with the natural environment and an ability to sustain our earth in its natural state. Although environmental sustainability is important, ecotourism follows a more holistic perspective including economic and social development (Tsaur, 2006). In order for a natural resource to be sustained, it must be viewed by its community as having economic value. For example, if a trails system is developed on community property (city, state, or federally owned), the trail use must be seen by a community as adding to its economic interests or that property may be developed for other capital interests such as housing development. Figure 2 notes the ecotourism perspective of relationships between tourists, the local community, and the natural resource connecting with the involvement of economic, social and environmental engagement.

Figure 2: Ecotourism Evaluation Framework (Ross & Wall, 1999)



Because the definition of ecotourism combines visitations, conservation and local participation it has the potential to generate local cultural, social and economic benefits. These local benefits are critical for long term sustainability. Ecotourism has the potential to contribute to the economic wellbeing of a locality or a region and diversify local economies by providing alternative employment as well as entrepreneurial opportunities (Che, 2004). Entrepreneurial development made by ecotourism often replaces traditional economies that are no longer productive or that had been dependent on natural resurges that have become depleted.

Communities surrounding the Alleghany National Forest in Northwestern Pennsylvania are examples of economies that were based on lumber production from stands of local hardwood forests (Che, 2004). The Alleghany hardwood forests were abundant with desirable species for furniture making and large

scale lumber production. These forests have had a history of clear cut harvesting dating back to the colonization of the US. Many of these species are shade intolerant and were not able to recover from the clear cut process, and yet local economies developed a dependence on this industry. In 1997, the Alleghany National Forest produced 80% of the world's black cherry saw timber and veneer, representing 99% of the local economic base.

Understanding the dependence on an unsustainable resource, the local communities had recognized a new value to the Alleghany continuous old growth hardwood forests as being unique to the country with similar stands existing in the Smoky Mountains and Michigan's Upper Peninsula (Che, 2004). The Center for Rural Pennsylvania highlighted places in the world that had similar forests, such as in New Zealand and countries in Europe, which were able to establish ecotourism economies by attracting tourists to the forests to participate in outdoor recreation activities. The Forest County Action Team (FCAT) was developed by the Forest Service to include local stakeholders in the economic development process. The FCAT implemented an ecotourism plan with the mission of developing an economy utilizing the Alleghany hardwoods while preserving them. As a result, tourism generated \$24.26 million in traveler expenditures, 4.74 million in payroll expenditures, 3.2 million in state and local tax revenues, and 280 jobs in 1997 (Che, 2004).

A key component leading to the success of ecotourism in Pennsylvania was the organization of local stakeholders, stakeholder's efforts to develop entrepreneurial businesses, local economic benefit and sustainability of local natural resources. In order for ecotourism ventures to be considered successful, local communities must have some measure of control and share equity in the benefits (Schevyns, 1999).

SOCIAL CAPITAL

A unique variable of ecotourism is that it is not solely focused on the needs of the tourist. Ecotourism is a community based approach. Social and cultural sustainability relies on investment in the ideas, interests and equity of local communities (Jones, 2004). In order for a community to maintain a long term interest in an ecotourism economy, it must develop buy-in through social and economic gains. Social capital is a model used to explain beneficial relationships within communities.

The core idea of social capital is that social networks gain value as interactions and connections develop towards a common end. It can be defined as connections among individuals, social networks and norms of reciprocity and trustfulness that develops among them (McLean & Hurd, 2012). Social capital is said to refer to the degree of connectedness and the quality and quantity of social relations in a given population or social relations that lead to constructive outcomes for a group (Jones, 2004). Therefore, it relates to how local people feel about issues of reciprocity, support, sharing and trust.

Social capital embedded in participatory groups in rural communities has been central to equitable and sustainable solutions to local development problems (Jones, 2004). As it relates to the qualities that facilitate coordination and cooperation for mutual benefit, it is particularly relevant that non-privately owned resources are managed as common property owned institutions. This can improve a community's ability to sustain and manage resources through generating appropriate norms and rules and enhancing trust and reciprocity. The assumption is that greater social capital leads to stronger efforts towards environmental protection.

Social capital represents more than the franchise business model. Although a franchise has immediate access to capital and can create jobs relatively quickly, a majority of revenue is quickly directed away from the local community. Without social capital, there is little intrinsic gain from employment, constrained trust and interest of employees to invest long term in the business.

MOUNTAIN BIKING

Mountain biking is the fastest growing sector of the bicycling industry. It began in the early 1980s with individuals adapting touring bikes for backcountry travel by adding larger diameter tiers and BMX style handle bars. The National Bicycle Retailers Association (NBRA, 2013) reported that the retail sales of bicycles is a 6.1 billion dollar industry with mountain bike sales at the top of the list with sales accounting for 25% of the industry. Mountain biking has maintained itself as the largest sales aspect of the industry since 2005.

As bike sales have increased so has the development of riding areas. A majority of mountain biking trails are built on public lands. This creates a need for working relationships between cyclists, community members, and land management agencies. IMBA is a community based organization that supports the development of mountain bike riding centers and is structured in a manner that supports ecotourism (IMBA, 2015).

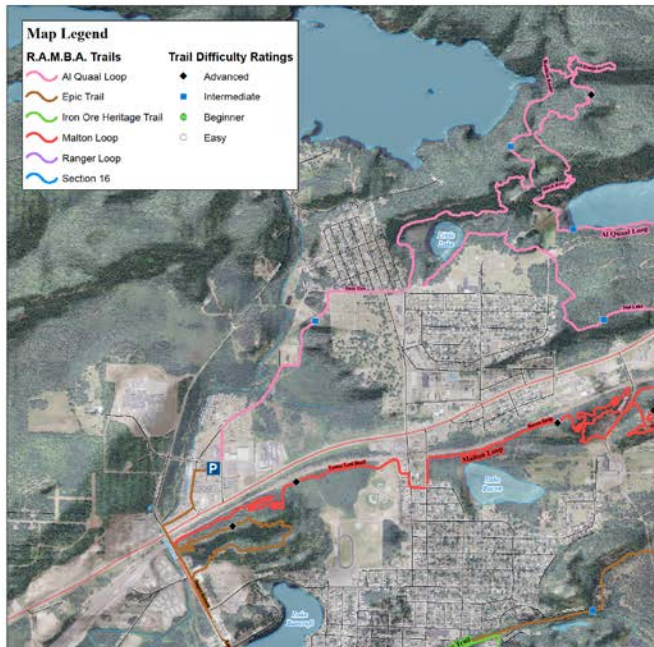
IMBA is a non-profit organization with the mission to create, enhance, and preserve great mountain biking experiences (IMBA, 2015). IMBA organizes members through the development of local chapters, the development of relationships with other stake holders, and through the education of all parties on the best interests of a lasting mountain biking community. One aspect of IMBA's ambassadorship is the recognition of trails. IMBA assesses trails systems on three levels ranging from gold (the highest level), silver, and bronze. IMBA's assessment tool follows a sustainable model including environmentally sound construction, enjoyable riding for all levels, and access for tourists, other recreational opportunities for tourists, and a measure of community support. Because of this, the IMBA assessment model supports the development of social capital and ecotourism.

In July 2014, Marquette's trails system was designated as one of only 13 IMBA Bronze-level trails. With the networking of stakeholders in the Marquette area, they have established a social capital system that will sustain a mountain biking ecotourism industry. This assessment will review the relationships that have developed in the production of this ecotourism venture and define a social capital model that can be used in other Michigan communities.

MARQUETTE COUNTY TRAILS SYSTEM

The Marquette County trails system is primarily supported by two organizations; the Range Area Mountain Biking Association (RAMBA), and the Noquemanon Trail Network (NTN). RAMBA is the older developer and has developed trails near Ishpeming, MI that has resulted in over 60 miles of hand built trails over the past 25 years. Figure 3 is a map displaying the RAMBA developed trail network. These trails are located primarily on Cliffs Mining Company land and have been developed by RAMBA on an informal agreement. This land has been made available for recreational use as part of a public relations effort. Twenty miles of Ishpeming trails are managed by the city at Al Quall City Park.

Figure 3: RAMBA Trails Network



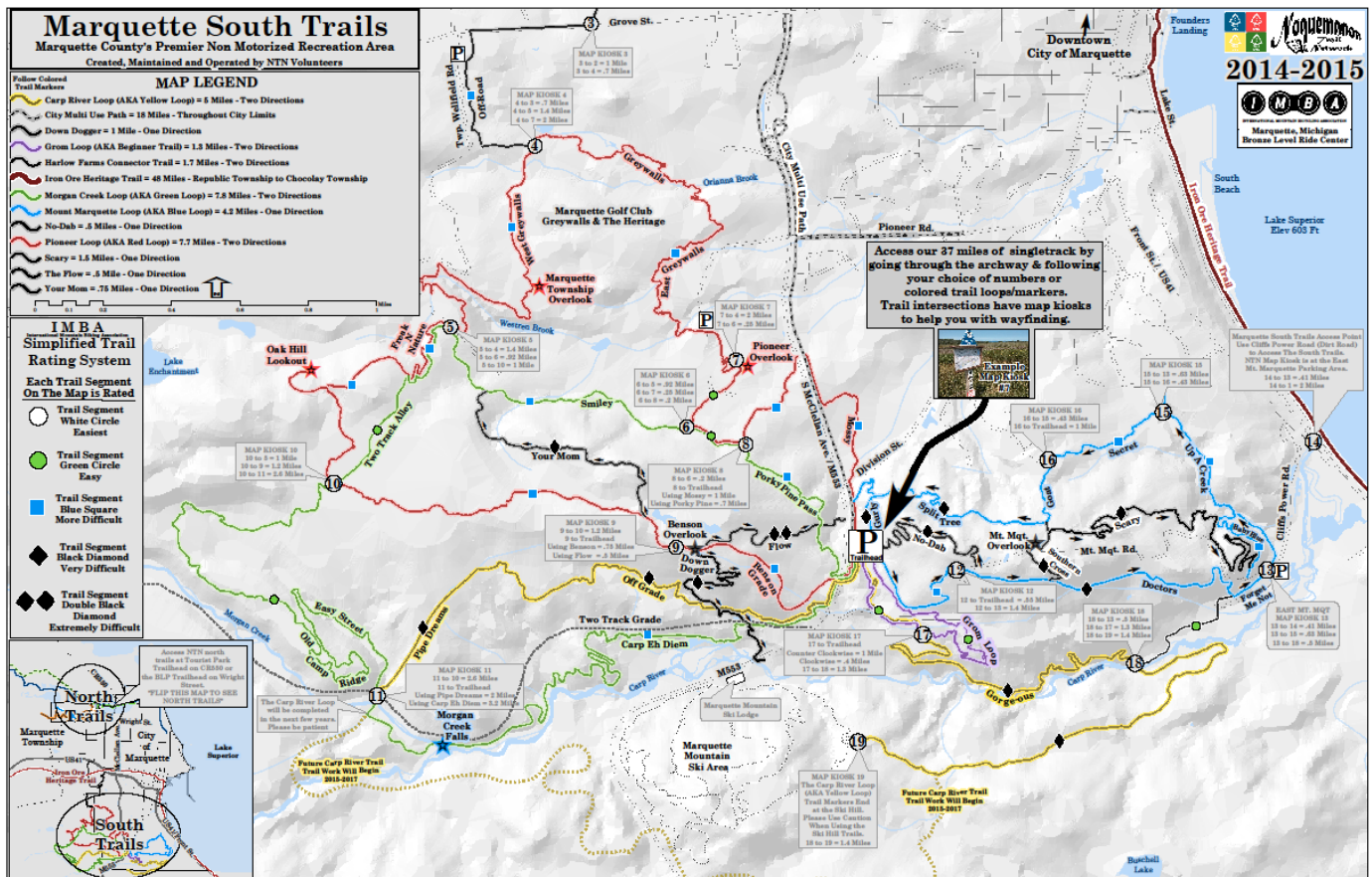
Marquette's trail systems are located in multiple locations within or surrounding the city. These trails are managed by the NTN and are located on city property, township property, some privately owned property, and recently they have developed a relationship with the Michigan Department of Natural Resources to develop land north of Marquette for mountain biking.



Picture 2: Rider on the South Trails Over Under Green Trail sidewalk

The head of the Marquette South Trail is located off Highway M553 east of Marquette Mountain Ski area. Cyclists are able to access these trails by riding up the sidewalk following M553, riding up Division Street, or by accessing the Harlow Creek trail off the Iron Orr Heritage Trail which runs through down town Marquette. These trails have been constructed with the support of machinery which has enabled the builders to create bicycle specific trails. The South Trails consist of more than fifty miles of single track trails and approximately 10 miles of downhill and flow trails. Figure 4 is a map that displays the South Trail network.

Figure 4: Marquette South Trial

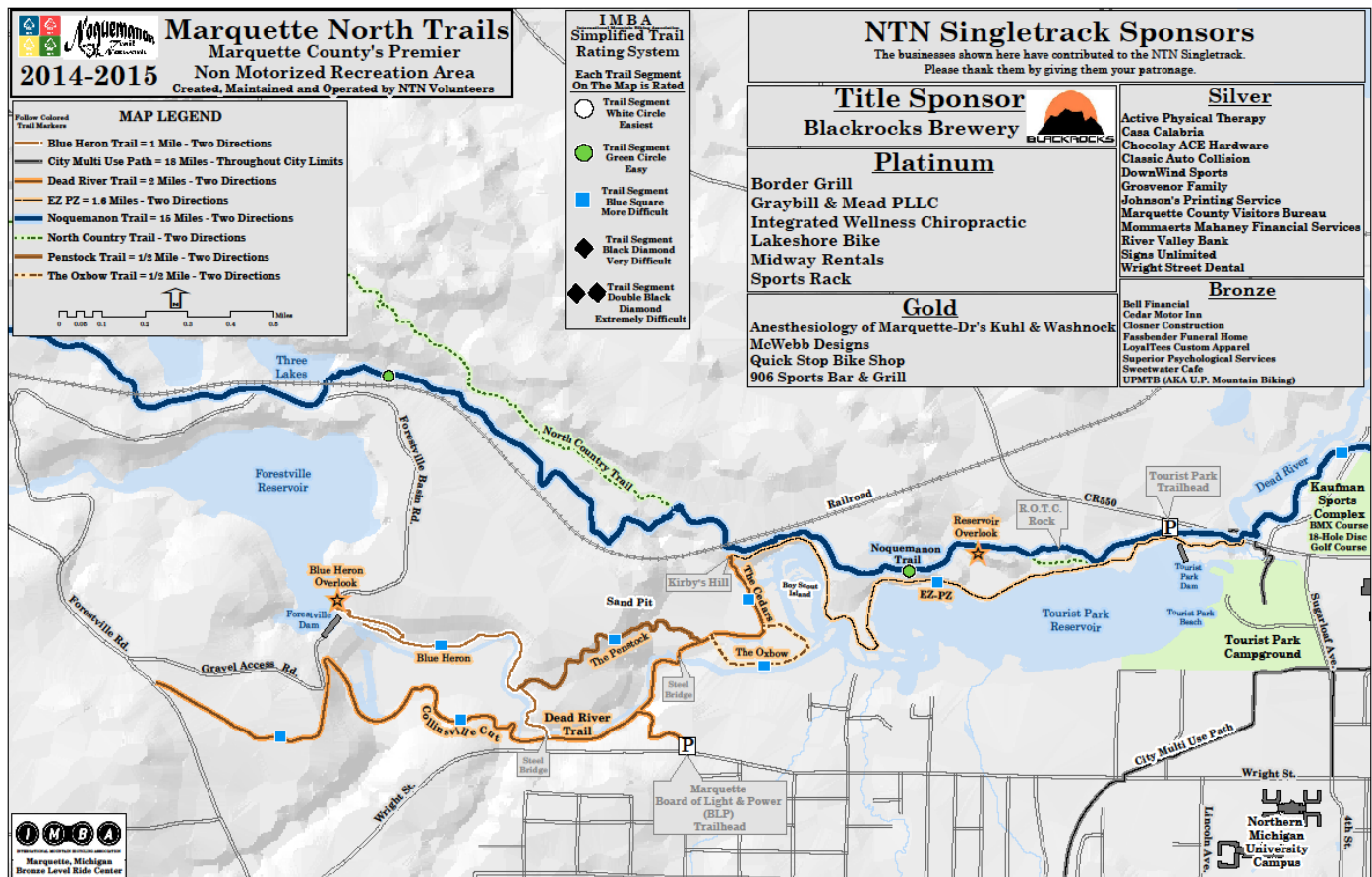


The Marquette North trails are located on Marquette Board of Light and Power (MBLP) property along the Dead River along Wright Street. Cyclists can also ride to these trails and access them from Tourist Park. These trails are primarily hand made with occasional assistance from machinery. These trails have a more natural flow and are not mountain bike specific. Therefore, they are shared with pedestrians. The NTN has an agreement with the MBLP to use this property as an effort of community service. This property extends to NTN owned property off of Forestville Road. Figure 5 displays a map of the Marquette North Trails.



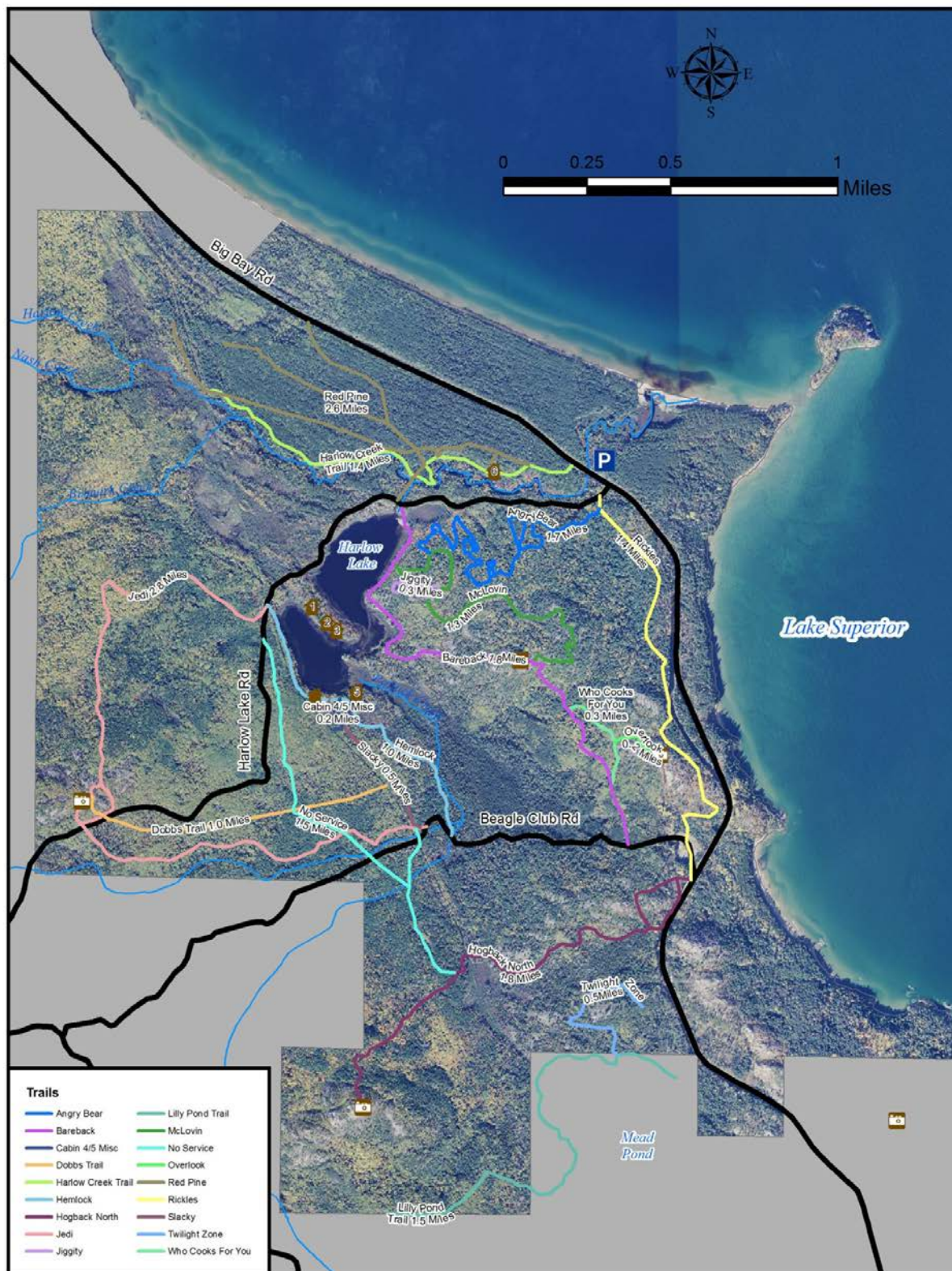
Picture 3: Ore to Shore Racers on the Marquette South Trails

Figure 5: Marquette North Trails



The Michigan department of Natural Resources (DNR) manages land north of Marquette in the Harlow Lake area. These lands were not effectively managed and the trail system was fragmented resulting in lost hikers, destruction of propriety, and illegal trail development. During the winter of 2015 the DNR approached the NTN with a plan to develop a portion of this area for mountain bike use. These trails are rugged hand built trails located approximately six miles north of Marquette on M 550. The trails to the north of the highway are dedicated to pedestrian travel while the trails to the north are developed for mountain biking.

Figure 6: Harlow Lake Trails



PLAN OF WORK CONDUCTING ANALYSIS (METHOD)

Note: Evaluation is pending Northern Michigan University Institutional review Board Approval.

The purpose of this study is to gain an understanding of the economic impact of the recently developed mountain biking ecotourism industry in the Marquette Michigan area. In order to accomplish this, aspects of ecotourism (tourist, local population, and the natural environment) will be examined in a qualitative manner. Marquette receives an average of 200 inches of snow during the winter which eliminates trail use for traditional mountain biking during this time. Qualitative data will be collected from cycling retail stores and organizations during this period of time. There is a smaller “snow bike” (fat tire bicycles) population during this time, but a majority of the tourist population data will be collected during the peak of the season May through June 15th.

The intended product of this analysis will be a model primarily based on the social capital involvement of stakeholders in the Marquette mountain biking development. This community involves, but is not limited to, the city of Marquette, Marquette Township, the Marquette Visitors Bureau, Noquemanon Trails Network, the International Mountain Bike Association, the Range Mountain Bike Association, all local bicycling retailers in Marquette, and the Michigan Department of Natural Resources. Data from qualitative interviews will yield a model displaying the stake that each community unit has in the local mountain biking industry and implications of economic impact. This analysis will serve as a model for development of ecotourism elsewhere in the state of Michigan.

RESULTS OF THE STUDY

Stakeholders in the Marquette trails system were interviewed with the intention of defining the model of social capital responsible for the development of the sport of mountain biking as an ecotourism industry in this area. Members of local organizations as well as biking retailers were interviewed for data collection. The following questions were asked of representatives of organizations:

- What is the mission of your organization?
- What was your role in the development of the trails system?
- What other organizations have you worked with?
- How would you describe your membership?
- How many members are in your organization?
- Where are they from?
- How does your organization use the trail system?
- How has the Marquette trails system effected your organization?
- Describe the interaction that your organization has with the local economy.
- What resources has your organization invested in the development of the trails system?
- Are there any conflicts between your organization and others related to the trails system?
- In what ways do you see that the trails system has impacted this area?

Four organizations were interviewed for this study. The NTN and RAMBA represent nonprofit and membership driven organizations. The stat's DNR and the Marquette County Convention and Visitors Bureau (CVB) represent organizations that old a community or stat interest in the trails system.

Table 1: Organizations Survey Responses on Social Capital

Organization	Mission Focus on Local Trail Development	Focus on Tourism	Focus on Environmental Resources	Trails Community Focus
NTN	High	Moderate	High	High
MCVB	Low	High	Moderate	High
DNR	Moderate	Moderate	High	Moderate
RAMBA	High	Low	High	Moderate

Table 1 displays a level of investment in ecotourism based on the model of ecotourism developed by Ross & Wall, 1999 (see figure 2). Organizations responses to the questions asked were rated based on focus on tourism, the natural environment, and the local community. Each organization has strengths and a weakness in at least one category. The NTM holds the highest degree of investment when reviewing all categories.

Local retailers were also identified as stakeholders in the Marquette area mountain biking trails system. The following is a list of questions asked of the retailers:

- Describe the type of inventory that you sell?
- What was your role in the development of the trails system?
- What other organizations have you worked with?
- How would you describe your customers?
- Where are your customers from?
- What type of items do you sell?
- At what times does your store become most busy?
- How has the Marquette trails system effected your retail operation?
- Describe the interaction that your store has had with other organizations in the area.
- What resources has your store invested in the development of the trails system?
- Are there any conflicts between your organization and others related to the trails system?
- In what ways do you see that the trails system has impacted this area?

Retailers that are represented by this study were identified in a variety of ways. The CVB is funded through local hotel taxes and provides a voice that industry. The NTM solicits financial support from local businesses and identifies those retailers as contributors and the IMBA trails assessment rubric identifies other types of businesses that add to a successful trails system. One type of business noted by IMBA is brew pubs. Therefore, a variety of types of business are noted by this study as stakeholders in the mountain biking tails system. Table 2 summarizes retailers responses based on categories reflecting Ross and Wall's (1999) model for ecotourism.

Table 2: Retailers Survey Responses on Social Capital

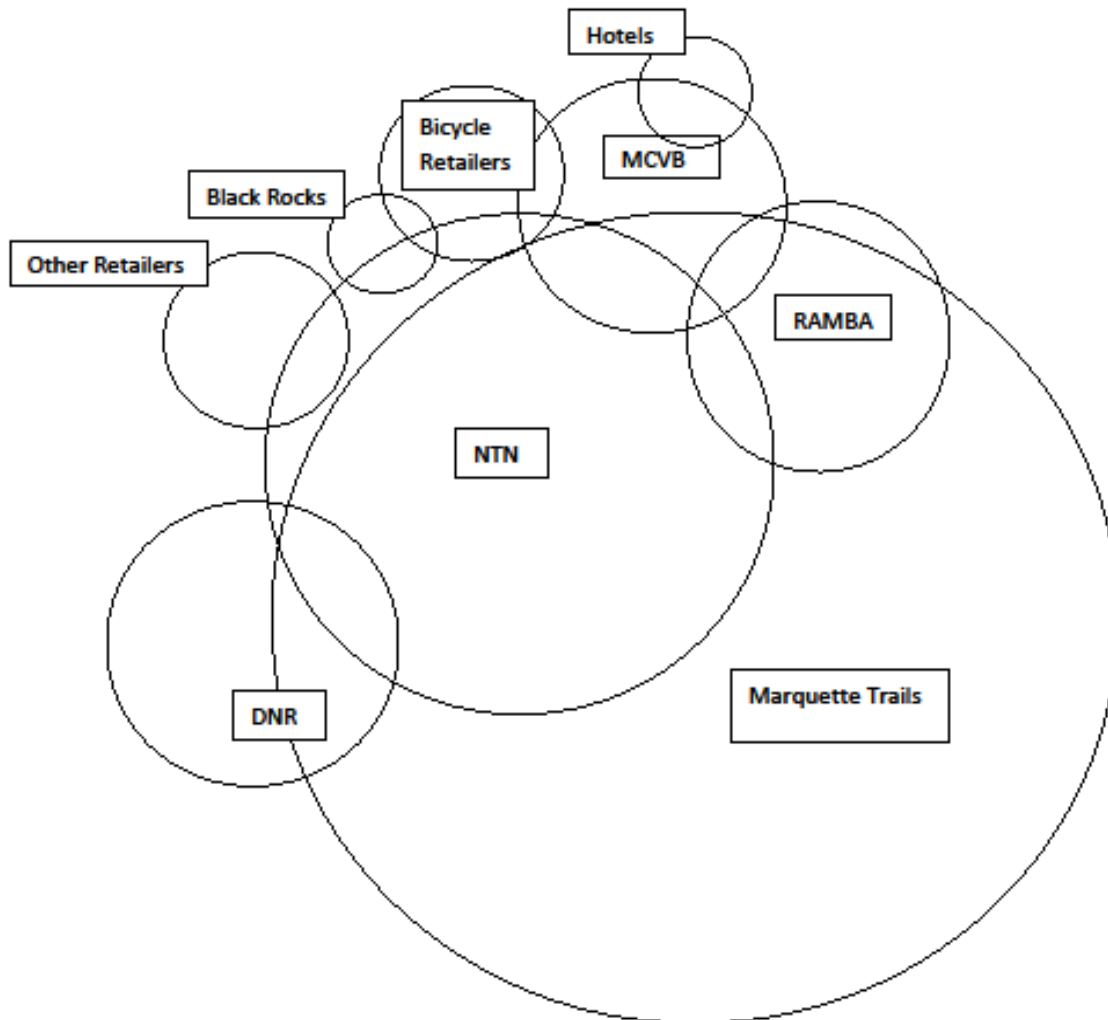
Organization	Mission Focus on Local Trail Development	Focus on Tourism	Focus on Environmental Resources	Trails Community Focus
Local Bike Retailers	High	Moderate	Moderate	Moderate
Black Rocks Brewery	High	High	Moderate	High
Local Hotels	Low	High	Low	Moderate
Other Retailers	High	Low	Moderate	Moderate

Table 2 Displays the investment in the Marquette mountain bike trails system from local retailers. The greatest level of investment is by Black Rocks brew pub which is a local brewery that markets directly to mountain bikers, followed by the bicycle retailers, with the least investment from local hotels.

MEASUREMENT OF SOCIAL CAPITAL

Social capital is the primary model used by this study to describe the development of the Marquette area mountain biking trails system. For the purpose of this study, social capital was measured by the amount of investment in the trails system. Investment is recognized as financial as well as volunteer time and employee time associated with the development of this system. A greater level of investment represents more social capital. It is important while discussing social capital to recall Figure 2, Ecotourism Evaluation Framework (Ross & Wall, 1999). Ecotourism is a relationship between tourism, the local community, and the natural resources. These factors are stimulated by social capital with socioeconomic investment as well as a dedication to develop yet preserve the natural environment. As this process is developed through the stakeholders, an ecotourism environment is created. Figure 7 displays the social capital in the Marquette area mountain biking trails system.

Figure 7: Marquette Area Mountain Bike Trails System social Capital



In figure 7 the size of the circle represents the level of investment in the local trails and the relationship to the center represents the centrality of the organizations mission to the development of the Marquette area mountain bike trails. The overlap of circles represents the strength of the relationship between an organization's focus towards the bike trails.

The NTN is the organization that has the largest investment in the trails system as well as having relationships with many other organizations. RAMBA, the CVB, and the DNR each share large investment, but have missions that are a greater priority than trail development. Hotels in the Marquette area are represented in the trails system social capital by the CVB which receives revenue from local hotel taxes. RAMBA does have a trails development mission with efforts focusing on the Ishpeming area which represent less than one third of the trails network. The DNR manages the Harlow Lake property and has recently approached the NTN to develop and manage trails to the south of M550. The NTN has initiated a trails development fund which represents the investment of a range of retailers from the community.

DISCUSSION

An important component of this study was to identify the relationships that have added to the development of mountain biking as an ecotourism economy in the Marquette area. The sum of these relationships is social capital. Figure 7 is a diagram which displays how heavily local organizations are invested in the Marquette area trails system. It can also be viewed as a model of the trails system development. It is important to examine each organization as a component adding to the success of the trails system.

NOQUEMANON TRAILS NETWORK (NTN)

The NTN is represented in figure 7 as representing the largest investment and the most central organization in relation to the mountain biking trails. The mission of the NTN is to “develop and maintain an interconnected, year round, non-motorized, land and water trails network”. It is a nonprofit organization that employs an executive director and a small office staff. The NTN has a board of directors and two sub committees, one representing Nordic Skiing and the other representing single track mountain biking. Nordic skiing had been the original focus of the NTN, however, in the past 20 years, as the sport of mountain biking has become more established, the organization expanded. The Single Track committee was developed to become responsible for the maintenance and development on a majority of the biking trails in the Marquette area.

The Single Track committee consists of community members who represent various stakeholders, several of which represent organizations noted on figure 7. This committee is responsible for the development of funding, trail work, and managing trail building equipment. Also, on the board is a paid NTN employee in a “trail boss” position who along with his staff is responsible for actual construction and maintenance of the trails.

The NTN Single Track committee maintains a \$50,000 budget for the trails system development. This budget is funded by fundraising campaigns for specific projects, annual fundraisers and by NTN memberships. One recent fundraiser, Marquette Trails Fest, earned around \$18,000 for the NTN single track trails development.

NTN has developed partnerships with community organizations and retailers for partnerships in trails development. Table 3 displays the results of the NTN donor fundraising efforts.

Table 3: NTN Donors

Business Name	Current Sponsor Status
Blackrocks Brewery	2015 Title Sponsor
Aaron Peterson Photography	2015 Silver
Anesthesiology of MQT/ 906 SportsBar	2015 Gold
Border Grill	2015 Platinum (in kind)
First Merit Bank	2015 Silver
Graybill & Mead	2015 Platinum (in kind)
Johnson's Printing	2015 Silver
Midway Rentals	2015 Platinum (in kind)
Quick Stop Bike	2015 Platinum
Trudeau Tiling	2015 Silver
M3 Roofing/ Michael's homes	2015 Bronze

Aubree's PizzA	2015 Bronze
Loyal Tee's Custom Apparel	2015 Bronze
Sweet Water Cafe	2015 Bronze
UP MTB	2015 Bronze
River Valley Bank	2015 Bronze
Superior Fitness	2015 Gold
Fassbender/Swanson-Lundquist Funeral	2015 Gold
Lakeshore Bike	2015 Platinum
Eye Associates of Marquette	2015 Platinum
Buffalo Wild Wings	2015 Bronze
Anderson, Tackman & Co	2015 Bronze
Bell Financial	2015 Silver
Cedar Motor Inn	2015 Bronze
Pasta Shop	2015 Bronze
906 Massage	2015 Gold
Stucko's Pub & Grill	2015 Silver
Downwind Sports	2015 Platinum
Travel Marquette	2015 Platinum
Classic Auto Collision	2015 Silver
Mommaerts-Mahaney	2014 Silver
UP Home Health and Hospice	2015 Bronze
Advanced Center for Orthopedics	2015 Platinum
Downwind Sports	2015 Platinum
Fassbender/Swanson-Lundquist Funeral	2015 Gold
NAPA of Marquette	2015 Silver
Wright St. Dental	2015 Silver
Active Physical Therapy	2014 Silver
Casa Calabria	2014 Silver
Chocolay Ace Hardware/ North Oak	2014 Silver
Integrated Wellness Chiro	2014 Platinum Sponsor
Landmark Inn	2014 Silver Sponsor
McWebb Designs (in kind)	2014 Gold
OreDock Brewing Company	2014 Platinum Sponsor
River Valley Bank	2014 Silver
Signs Unlimited	2014 Silver (in kind)
Sportsrack Unlimited	2014 Platinum Sponsor
Stucko's Pub	2015 Silver
Sunrise Builders/ Harborview Develop	2013 Gold/ Landowner

The NTN has become the central organization for support of the Marquette area trails system. In 2013 mountain biking in the area began to receive recognition on a national level. In hopes of scaling up this attention, the NTN partnered with RAMBA to seek status as an internationally recognized ride center.

RAMBA is represented in figure 7 as a substantial investor in the Marquette area trails system which is moderately centralized. RAMBA is the local area chapter of IMBA the international organization for mountain biking. Through a partnership between the NTN and RAMBA, the trails system was

designated as an IMBA Bronze Level Ride Center. The Marquette area trails are one of 25 trail systems recognized on this level globally.

RANGE AREA MOUNTAIN BIKE ASSOCIATION (RAMBA)

RAMBA maintains approximately one third of the trails in the Marquette area located north in the town of Ishpeming. These trails are not part of the NTN trails but are connected by the Iron Ore Heritage Trail. They are funded through grants from the City of Ishpeming and receive occasional donations from local community members. RAMBA is best known for their Wednesday evening rides.

The RAMBA Wednesday night rides have been a weekly ritual for the past 20 years. Marquette bicycle retailers recommend this ride to customers and visitors because it is well attended and there are rides for different levels of skill abilities. RAMBA's association with IMBA has developed interest from outside of the Upper Peninsula. In early June 2015, IMBA held its Great Lakes and Midwestern Regional symposium in Marquette.

MARQUETTE CONFERENCE AND VISITORS BUREAU (MCVB) – AKA “TRAVEL MARQUETTE”

Travel Marquette also represents a substantial portion of social capital. Formerly known as the Marquette, Travel Marquette is funded by local hotel taxes. The mission of Travel Marquette is to market the city to out of town visitors who will stay in hotels. In past years, activities that brought visitors to Marquette were snowmobiling and hockey. While hockey remains an attraction, snowmobiling in the area has been declining. Recognizing this trait Travel Marquette created a position to represent recreation.

Travel Marquette has begun marketing the local trails system and supporting local mountain biking events by marketing them outside of the local community and providing service during the events. They have also marketed Marquette by using a series of outdoor recreation videos. Mountain biking is the primary subject of these videos.

Travel Marquette has also educated hotel management on ways to best serve bicycling visitors. During cycling events, one local hotel allows bicycles to in the building and provides a bike wash station for cyclists. Visitors to the trails system are known to be provided some of the best rooms with views of Lake Superior. Finally, Travel Marquette has prints and distributes maps of the trails. Travel Marquette has become the venue to provide information about the Marquette area trails to people outside of the community.



Picture 4: Hampton Inn Bike Wash Station

DEPARTMENT OF NATURAL RESOURCES (DNR)

The DNR has also become involved with the Marquette area mountain bike trails. North of Marquette is property that is managed by the DNR known as the Harlow Lake property. Harlow Lake is an extension of land managed from Van Riper State Park. Its proximity to Marquette yet distance from Van Riper State Park, made it difficult to manage. There was little oversight over trails development and trail signs were often lost due to vandalism. Harlow Lake also had several illegally developed mountain biking trails. A lack of management over this area resulted in criminal activity and frequent lost hikers. The DNR has recently approached the NTN to develop the mountain biking trails on the North side of Hwy M550. Through this, an organization known as the Friends of Harlow Lake has begun volunteering to work on the trails, map the trails and to place signage in the area. The Harlow Lake trails are quickly becoming some of the most popular trails in the area.

LOCAL RETAILERS

Many of the local retailers are represented on table 3 providing funding for the Marquette area trails through the NTN. Many retailers also support the trails by sponsoring weekly rides, annual events, and by hosting bicycle demo days and clinics. Marquette is a town of approximately 30,000 people, yet it is able to support four for profit bicycle shops. These shops report to cooperate well with each other to create a cycling culture in the community. Local shops also report increasing sales in the past three years, particularly in the winter. One bicycle retailer that sells other types of outdoor recreation equipment reported that bikes are now their top seller and they are making room for more bicycles in their store.

There are several non-bicycle shop retailers that are stakeholders in the Marquette area trails system. Border Grill is a restaurant located along the Iron Ore Heritage trail which accesses the Marquette South Trails. Border Grill has provided food for NTN events and has sponsored youth cycling development organizations. One retailer that truly stands out as a supporter of the trails is Black Rocks Brewery.

Black Rocks is a small brewery that is listed as a title sponsor of the NTN. They invest a great deal in cycling and assist in marketing the trails. Black Rocks has a distinct presence at all mountain biking events and its facilities are often used to host receptions associated with them. Outside of the pub are bike racks filled with state of the art mountain bikes as well as a bike repair stand with tools and an air pump.



Picture 5: Bike Maintenance Stand at Black Rocks Brewery

When discussing the social capital associated with the Marquette area mountain biking trials evidence leads us to believe that the NTN is central to their existence. However it is important to include all other sources of social capital involved in the system. Each source adds to what has become a notable ecotourism economy in Marquette.

CONCLUSION

The purpose of this co-learning plan was to identify the relationships that have added to the development of the sport of mountain biking as an ecotourism economy in the Marquette area. The product of the relationships, examination of organizations investment, and gains is social capital. Social capital is the component of the ecotourism model that represents the investment and gains. In the case of the Marquette area mountain biking trails system, several local organizations have worked together to develop an ecotourism model that has added to the quality of the economy and the culture of the area. This co-learning plan can be used as a model in other communities of Michigan to develop ecotourism economies.

Gary Fisher spoke in Marquette in June 2015. Gary Fisher is often known as the originator of the sport of mountain biking. When asked what was the greatest development of technology in mountain biking over the past years? He replied “it’s the trails” (IMBA, 2015). In order to develop a successful mountain biking ecotourism economy, a community must develop and maintain quality trails that provide riding opportunities for riders of all skill levels. The focus of the Marquette area trails system had been able to accomplish trials have been recognized on an international level. This has been successful due to the development of strong social capital.

The results of this co-learning plan indicate that in order to have success of maintaining a successful ecotourism economy in Michigan specific factors must be in place. A community must have a natural resource that will attract tourists. Along with that there must be an interest in sustaining the natural environment from both the community and the visitors. Social capital must be developed among several aspects of the local community in order to support and sustain the ecotourism entity. Mountain biking in the Marquette area has been a successful ecotourism economy because they have established relationships between organizations and retailers, which support the sport, develop the natural resources in a sustainable manner, and are effectively bringing tourists to the community.

A key component to the development of social capital regarding mountain biking in the Marquette area has been the NTN. Having an organization that has the sole mission of trails development and maintenance that the local community is willing to invest in provides centralization to social capital. Involvement of the City of Marquette through Travel Marquette and the development of a Recreation Specialist provides the community the ability to directly attract visitors who are interested in mountain biking to gain knowledge about the area. An association with IMBA has provided guidelines and standards which when met had scaled the trails system development to international recognition. Finally, developing positive relationships with the organizations that own and manage the lands used is very important to the sustainability of an ecotourism economy. These components can be used to replicate the establishment of other ecotourism economies in Michigan.

RECOMMENDATIONS FOR FURTHER RESEARCH

The process of completing this co-learning plan has developed interest and expressed needs for further research. Individuals and organizations approached during interviews indicated their support for further research on the topic of a vision of mountain biking as an ecotourism industry. Research in this area would support and validate their efforts and interest in growth.

The first recommended study is to test the social capital model for the development of ecotourism industries on other venues in Michigan. Michigan is rich in natural resources and has an interest in developing its tourism economy. The Pure Michigan campaign supports this effort as well. Applying the

Marquette findings to another area in the state or to another mode of ecotourism such as sea kayaking would support the outcomes of this study.

The second recommended study is to define the impacts of the development of a mountain bike trails system. Impacts of a trails system have not been thoroughly researched. Quantitative findings are difficult to find on this topic. Impacts include economic improvements such as, developing an industry in an area that adds to its financial base. Another impact that is assumed but has not been quantified is the effect that a mountain biking trails system has on the quality of life with in a community. For example, the city of Duluth is investing large amounts of money to develop mountain biking trails in its community not only to develop the economy but also to attract and retain quality young professionals.

CLOSING REMARKS

In closing, it is important to note that the Marquette area is rich in natural resources with a history of an economy that has benefited from them. Mining and forestry, though lucrative, are not sustainable industries, as they have decreased production, the economy in the Marquette area has been affected. The ecotourism economy of mountain biking is sustainable. The effects that it has on the area are yet to be measured but indications are that it has a positive economic and cultural impact. The model used to develop the local trails system in the Marquette area can be replicated if each of the key variables are in place.

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