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# Waterparks' Impact On Rural Communities In Eastern Kentucky

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# DEDICATION

This dissertation is dedicated to my Mother, Julia Sims, who has always been there for me throughout my walk of life. She has been there to push me and to provide me with the confidence in everything I do. When others have told me "no", "it's impossible", or "no use in trying", she has always been that voice of truth I could turn to when I had my doubts, knowing if she thought I could; then, I knew I could accomplish what I set out to do. Without her loving support and encouragement, I would never be where I am today. Thank you, Mom.

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ABSTRACT

As many rural communities are searching for ways to increase their local economy, several of these communities have begun to turn their attention to the tourism industry. By turning their attention to the tourism industry, they are searching for ways to increase tourism in hopes of bringing in additional revenue that is needed for revitalizing many of these communities. These rural communities are "focused on maximizing individual spending, and providing products and experiences as an incentive to tourists to stay longer and return on repeat visits" (Briedenhann & Wickens, 2004, p. 72). Also, waterparks, as well as amusement parks and theme parks, have become "motivators for tourism trips to many destination and core elements of the tourism product" (Raluca & Gina, 2008, p. 635).

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# INTRODUCTION

## Introduction

Many rural areas in Eastern Kentucky are struggling due to local economic downfalls; whether, due to the loss of local manufacturers and businesses, a decrease in production of natural resources, such as coal, or various environmental sanctions which have been levied upon natural resources over time. Many of the communities in this area of Kentucky are poverty stricken due to "decreasing coal consumption in the USA and the decline of coal production since the early 1980s" (Chon & Evans, 1989, p. 315). As other states within this region of the United States, such as parts of West Virginia and Tennessee, rural Eastern Kentucky is located in the foothills of the Appalachian Mountains. These rural areas are in dire need of increased revenue sources to revitalize the local communities. Private and public sector leaders are searching for means to increase economic development in hopes of bringing increased revenue and a better way of life for citizens in these rural communities. Communities in these rural areas are beginning to channel their efforts of economic recovery through various means, and one of those means is through the tourism industry.

Community leaders, both private and public, are beginning to view the tourism industry as a positive way to increase local economic income which would help in revitalizing these poverty-stricken communities. There are several different industries that make up the tourism industry. A community could choose one or more of these industries to help make a positive impact on the local economy and community. However, they need to focus on the industry or industries best suited for their community.

Examples include ecotourism, adventure tourism, wildlife tourism, and sports tourism. Recently, another area of the tourism industry has become a major focal point of private and public leaders. This area of the tourism industry is the leisure and entertainment industry. Within the leisure and entertainment industry, is the amusement park and attractions industry. The amusement park and attractions industry consists of amusement parks, theme parks, museums, zoos and aquariums, casinos and resorts, family entertainment centers, historical and cultural attractions, and waterparks (IAAPA, 2016).

Waterparks and aquatic facilities have recently become an industry of interest to the public and private sectors. Communities are adding waterparks in hopes of drawing additional tourists to their communities to increase profits for residents, government agencies, and local businesses. Also, public leaders are having waterparks and aquatic facilities built as means to provide entertainment and leisure options to residents. Waterparks "come in a multitude of shapes and sizes, from small aquatic centers that have a few waterpark features- such as a waterslide or leisure river- to city-owned facilities that rival some of today's major (water)parks, as well as indoor waterpark hotels/resorts" (World Waterpark Association, para. 1, 2016). Publicly funded waterparks and aquatic facilities are the fastest growing sectors in the waterpark industry and currently are being built to appeal to local citizens and tourists (Sangree, 2015).

Currently, there is limited amount of research that examines how waterparks affect local communities. Additional research needs to be conducted to examine what impact waterparks have on local economies and if it would be feasible for communities in rural Eastern Kentucky to build such a facility. Also, it is believed by those within the public and privet sectors that waterparks positively influence the economy by bringing in

additional revenue to the community. Local government officials may view a waterpark as successful from a different view, such as an increase of tourists to the area instead of the facility making only a profit. Some tourists may not have visited the community if it was not for visiting the waterpark.

**Statement of the Problem**

There is a limited amount of research that examines empirically how waterparks affect local communities. It is believed waterparks positively influence the economy by bringing in additional revenue and employment opportunities to the communities in which they exist. Additional research needs to be conducted to examine the impacts waterparks have on the overall local economy by examining the direct impact, indirect impact, and induced impact. These impacts should be further examined to determine if it would be feasible for communities in rural Eastern Kentucky to build such a facility. Local government officials may gauge a waterpark's success differently than others within the community by focusing on employment opportunities, increased tax revenues within the community, a safe recreational facility for families, and an increase of tourists to the area to name just a few examples of how the success of waterparks may be viewed.

**Purpose of the Study**

This research aims to examine the economic impact waterparks have on local and regional communities in Kentucky. Specifically, this study seeks to identify advantages and/or disadvantages associated with waterparks relating to tourism development and economic impact. This includes examining the collective impact waterparks have by examining the direct impact, indirect impact, and induced impact, and to see if the economic impact of a waterpark would influence or impact rural communities in Eastern

Kentucky that are struggling and searching for ways to increase economic development. Marouiller (1997) states "local policymakers realize the importance of this sector but have little or no experience" (p. 337). According to Milman (2010), "the theme park industry has generated a wide circle of social, economic, and political influences ranging from town planning, historic preservation, building architecture, shopping mall design, and landscaping" (p.234).

**Rationale for the Study**

Rural areas within Kentucky are looking for ways to increase their local economies. According to Sarnoff (2003), counties located in the Central Appalachian Region "have poverty rates three times those of other poor counties in the country" (p. 127) and continue "to have unemployment rates that are twice the national average" (p. 127). This is due to the region losing jobs and ultimately employment opportunities. These areas are highly dependent "on mining, forestry, agriculture, chemical industries, and heavy industry" (Appalachian Regional Commission, n.d., para. 2). However, over time, these opportunities have diminished due to various economic sanctions and businesses and corporations going out of business or relocating. This has left these areas searching for ways to increase revenue.

Tourism has quickly become an option for many community leaders, public and private. "Tourism as a major component of rural economic development strategies is on the rise because of an increase in tourism demand, changing rural economic patterns, perceptions of tourism as a clean industry, its apparent relative ease of creating jobs and local income, its relatively low capital requirements for business, and other community development benefits" (Marcouiller, 1997, p. 337). Community leaders realize tourism is

a way to increase the number of visitors to their communities which may not have come otherwise, and, in return, should have a positive influence on the local economy. Communities tend to support the development of tourism because it usually increases employment opportunities for locals, brings additional businesses to the area, and increases property values.

Recently, waterparks are being developed and built at an astonishing rate across the United States to boost local economies. Also, they are being developed by public and private investors. Typically, private investors make profits by charging higher priced admission tickets than public investors. Public waterparks usually charge less for admission than do private facilities; and, they are built both as a service and to attract tourists to the area.

Waterparks could have either a positive or a negative effect economically on local economies. Therefore, it is important to examine the impact waterparks have on the local economy. It is important for researchers to examine how these facilities impact the overall economy by analyzing the direct impact, indirect impact, and induced impact. As communities continue to invest in the waterpark industry, there is a dire need for continued research on waterparks and their effects on local communities.

**Research Objectives**

There are four primary objectives of this study:

1. Economic impacts waterparks have within the communities they exist in will be assessed.
2. Differences in economic impacts amongst waterparks will be identified.

3. The demographics of individuals visiting waterparks will be identified.
4. Barriers associated with waterparks will be described.

For this study, the researcher used an instrument to gather information related to economic impact and barriers. The instrument was a questionnaire divided into three main sections. The first section of the instrument was dedicated to economic impact. The second section focused on perceived barriers, and the third section was used to dedicated demographics. The researcher entered the results from the economic impact section into the IMPLAN Model Software, and the other two sections were entered into SPSS. Once results are entered, the software will be used to analyze the collected data.

**Research Questions**

The following questions are addressed during this study. Each question will be identified by the null hypotheses ($H_o$) and alternate hypothesis ($H_a$).

1. How do waterparks impact the economy?
   - $H_a$: Waterparks do have a positive effect on the economy.
   - $H_o$: Waterparks do not have a positive effect on the economy.
2. Is the economic impact on the community related to demographics?
   - $H_a$: Demographics do influence the overall economic impact waterparks have on the economy.
   - $H_o$: Demographics do not influence the overall economic impact waterparks have on the economy.
3. Is there an economic difference related to the sizes of the waterpark facility?
   - $H_a$: Larger waterpark facilities have a greater influence on the economy than smaller waterpark facilities.

$H_o$: Larger waterpark facilities do not have a greater influence on the economy than smaller waterpark facilities.

4. Are there any perceived barriers related to the waterpark industry?

$H_a$: There are differences in perceived barriers between waterparks.

$H_o$: There are no differences in perceived barriers between waterparks.

**Assumptions of the Study**

1. All participants will respond in good faith when answering questions on the survey.
2. The researcher assures anonymity to all participants of the study.

**Study Challenges**

1. Having waterparks in Kentucky to agree to participate in the study.
2. Collecting a minimum of 1,000 surveys for this study during the 2016 waterpark season.

There are challenges that are important to note for this study. One challenge is locating waterparks in Kentucky that match the definition of a waterpark for this study. An operational definition will minimize the amount of facilities to be utilized as research sites. Also, once these waterpark facilities are located, having them to agree to participate in the study will be challenging.

A second challenge is that some privately-owned and publicly-owned waterparks may choose to keep this information solely for their use 'in-house'. They may not want others to know the impact their waterpark has on the community for various reasons that cannot be explained. Another challenge would be the length of the study. The research will be conducted during the 2016 season as waterparks typically have short operating

seasons. Most waterparks only operate from May through September. This is a short window during which extensive data collection needs to occur.

**Significance of the Study**

This study is significant by contributing additional research and information on the waterpark industry. While other studies have previously been completed, the amount of scholarly research is limited. This study is important for several reasons. First, it provides vital information for communities where waterparks currently reside. For example, it will provide a better detailed visitor demographic which will include local and non-local residents. Also, it should be informative to communities considering building a waterpark or allowing a waterpark to be built within their community by providing data to community leaders regarding the waterpark industry in Kentucky. This research should provide information to local community leaders and residents regarding the importance of waterparks on the local economy. This is critically needed information for local community leaders, public and private, in rural areas searching for additional information regarding possible economic impacts waterparks may have on their communities while they are searching for alternative tourism options.

The study will provide a demographic profile of waterpark visitors. The participants' information will include demographics such as gender, education level, family income, and age. This information is useful for communities considering investing in a waterpark facility to appeal and attract tourists to the area. Also, this study will examine what barriers may be perceived regarding waterparks. These are examples of how this study will be significant to the waterpark industry as it continues to grow and develop.

**Definitions of Terms**

*Barriers*- anything that "intervenes between the preference for an activity and participation in it" (Crawford & Godbey, 1987, p. 120).

*Direct impacts*- "the first round effect of visitors' spending, that is, how much the restauranteurs, hoteliers, and others who received the initial dollars spend on goods and services with other industries in the local economy and pay employees, self-employed individuals and shareholders who live in the jurisdiction" (Crompton, 1999, p. 23).

*Economic impact analysis*- "traces the flows of spending associated with tourism activity in a region to identify changes in sales, tax revenues, income and jobs due to tourism activity" (Stynes, 1997, p. 5).

*Indirect impa*cts- "occur when the businesses receiving the initial spending turn around and purchase inputs, such as labor and materials, in the local economy" (Johnson & Moore, 1993, p. 280).

*Induced impacts*- "occur when households (labor) which have received the additional wages, turn around and purchase consumer goods in the local economy" (Johnson & Moore, 1993, p. 280).

*Publicly-owned*- a facility owned by a government entity such as could be a city, county, state, or federal entity.

*Privately-owned*- a facility owned and operated by an individual(s), organization, or corporation.

*Tourism*- the activity of visitor(s) within a location that is not considered his or her primary residence.

*Tourist*- an individual whose trip includes either an over-night stay or a same-day trip to a location other than their primary residence (UNWTO, 2014).

*Visitor*- an individual whose trip includes either an over-night stay or a same-day trip to a location other than their primary residence (UNWTO, 2014). Also, anyone "taking a trip to a main destination outside his/her usual environment, for less than a year, for any main purpose (business, leisure or other personal purpose) other than to be employed" (UNWTO, 2014, p. 13).

*Waterpark*- A waterpark is defined for this study as a facility with at least four or more attractions considered essential to a waterpark (IAAPA, 2015). The attractions considered essential are "toddlers'/children's play area, tube slide, lazy river, body flume, wave pool, tipping bucket play area, speed slide, family raft slide, mat racer slide, spray ground, still-water lagoon pool, action river, water coaster or a surfing simulator" (IAAPA, 2015, p. 8).

**Summary**

This study helps address the void caused by the limited amount of scholarly research available concerning the waterpark industry. Information was gathered through surveys from visitors at participating waterparks in Kentucky to obtain data that will be useful in determining the economic impact waterparks have within the community. This study examines visitor demographics as an effort to better identify those who will visit waterparks. In addition, this study examines possible barriers associated with waterparks. This will help the waterpark industry become more informed on what barriers may be preventing patrons from attending waterparks. Finally, the study focuses on the economic impact waterparks have on the economy by examining the direct impact, indirect impact, and induced impact in Kentucky.

# CHAPTER II

# LITERATURE REVIEW

## Review of Literature

While previous researchers have conducted various studies focusing on rural areas, tourism, and economic impact on tourism, there has been little academic research examining how waterparks affect economic development and impact rural communities. Waterparks could have a positive effect on the economic recovery and development in struggling rural communities in eastern Kentucky by increasing tourism. This review of literature contains background information on the Appalachian Region and rural Kentucky, the tourism industry, rural tourism, waterpark industry, economic impact studies, and barriers.

### Appalachia and Rural Kentucky

The Appalachian Region consists of 205,000 square miles ranging from the southern portion of New York to the northern tip of Mississippi. In all, the Region includes portions or all of 13 states, consists of a total of 420 counties, and has a population of over 25 million (Appalachian Regional Commission, n.d.). Also, 42% of the Appalachian Region is classified as rural area (Appalachian Regional Commission, n.d.). Until 2009, the Appalachian Region was divided into three sub regions: Northern Appalachia, Southern Appalachia, and Central Appalachia (Bagi, Reeder, & Calhoun, 2002). However, in 2009, the Appalachian Region was divided in to 5 subdivisions to help simplify data reporting (Appalachian Regional Commission, 2009). With those 5 subdivisions being the Northern, North Central, Central, South Central, and Southern Regions (Appalachian Regional Commission, 2009). The overview of literature

contained background information on the areas pertaining to the Appalachian Region and rural Kentucky, the tourism industry, rural tourism, waterpark industry, economic impact studies, and barriers (Figure 2-1).

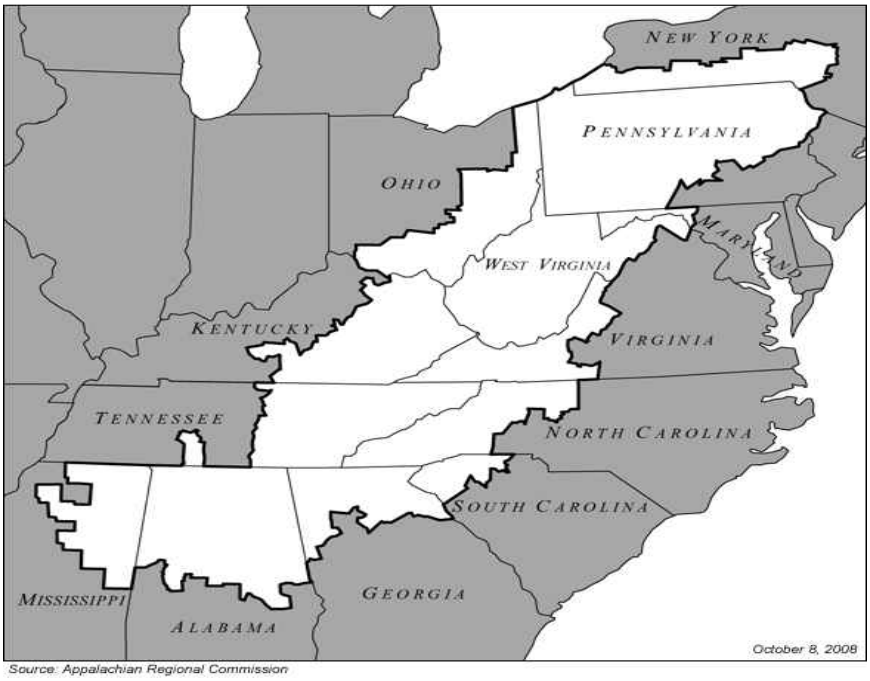


Figure 2-1: Appalachian Region

Source: Appalachian Regional Commission. (2008). The Appalachian Region. Retrieved Feb. 16. 2016, from Appalachian Regional Commission: http://www.arc.gov/appalachian_region/ MapofAppalachia.asp

According to the Mountain Association for Community Economic Development (2015), there are currently 54 counties located in Kentucky designated under the Appalachian Regional Commission. Out of the 54 counties in Kentucky, 38 are labeled as being distressed counties. For the Appalachian Regional Commission to designate an area as a distressed area, " the census tracts in at-risk and transitional counties must have a median family income no greater than 67 percent of the U.S. average and a poverty rate 150 percent of the U.S. average or greater" (Appalachian Regional Commission, n.d., para. 2). According to Sarnoff (2003), the "Northern and Southern Appalachia have

become considerably less poor over the past 40 years, while Central Appalachia has remained economically much as it was prior to the War on Poverty" (p. 127) (Figure 2-2).


Figure 2-2: The 54 Appalachian Counties in Kentucky

Source: Mountain Association for Community Economic Development. (2015). MACED Service Region Map. Retrieved Feb. 16, 2016, from MACED: http://www.maced.org/counties.htm

Overall, this area of the country is "characterized by high rates of poverty and unemployment, low per capita income, widespread school dropouts and low educational achievement, and significant physical isolation of its sparse population in the high rugged mountains" (Bagi et. al, 2002, p.31). To make things worse, "the region's traditional industries such as mining, manufacturing, textiles, and paper and wood products have faced intense global competition and are in decline" (Appalachian Regional Commission, 2011, para. 3). As these industries continue to leave the area, employment opportunities go along with them. This area has lost "more than 59,000 (15%) jobs in farming, forestry, and natural resources, and 473,000 (24.6%) manufacturing jobs" (Appalachian Regional Commission, 2011, para. 9). "This makes unemployment rates higher than the national average, per capita personal income only two-thirds of the national average, and more than one in four persons living in poverty" (Bagi et. al., 2003, p. 31).

This area of the United States receives a sizeable amount of state and federal funding due to the economic distress, poverty rates, and unemployment rates. Sarnoff (2003), states, "two major initiatives, Rural Action and the Appalachian Cooperative Exchange Network (ACEnet), offer a wide range of activities that support local home- and farm-based businesses" (p. 135). Another example is the RECLAIM Act, "which would release $1 billion ($200 million each year from 2017-2021) in available Abandoned Mine Lands funds for land remediation and reforestation of formerly mined lands" (Mountain Association for Community Economic Development, 2016, para. 2). This funding is to help stimulate economic growth and development in the Central Appalachia Area.

The government funding is helping to bring additional opportunities to this region which would not be considered otherwise. However, there are some regions where individuals have spawned and created successful businesses in these communities. "For instance, successful businesses have developed in Central Appalachia in recent years built on traditions that are gaining appeal outside of the area: growing specialty crops incompatible with agribusiness, medicinal herbs; creating and marketing packaged specialty foods and crafts; and developing recreational activities that appeal to nature lovers and sports enthusiasts (such as hiking, climbing, rowing, hunting, and fishing)" (Sarnoff, 2003, p. 135).

These various government programs have had positive effects on the Appalachian Region. They have helped provide better infrastructures, roadways, and increased awareness of the region that many had forgotten or never considered visiting. By opening this region to the "outside world," it has allowed individuals to see the majestic

beauties the Appalachian Region bestows upon the area from world class rapids at Russell Fork River's Breaks Gorge, Cumberland Falls State Park, or Mammoth Cave National Park. Many community leaders, public and private, believe "increased tourism will, in turn, increase the demand for hotels, restaurants, campgrounds, and craft shops" (Sarnoff, 2003, p.135). Therefore, it is imperative for these communities to not only attract visitors to the area, but also develop a plan to continue to have them make return visits.

The Appalachian Regional Commission (2011) notes "the Central Appalachian region, in particular, still battles economic distress, with concentrated areas of high poverty, unemployment, poor health, and severe educational disparities" (para. 3). Sarnoff (2003) adds, "this sense can only be overcome by changing the social landscape, enabling citizens to see 'their own kind' succeed without giving up their traditions and cultural connections" (p. 133). This area of the nation is customarily slow to adapt or change, but it is an area which is truly deep rooted in its past culture and history. As Sarnoff (2003) states, "Central Appalachia has, for the most part, not entered the mainstream of America, and is, instead, still very much the 'other' America" (p.136). However, it is slowly evolving as technology and development in the region changes over time. While rural areas are searching for ways to develop, tourism has played a vital part in other regions such as Kentucky Kingdom located in Louisville.

## Tourism Industry

The tourism industry economically is one of the fastest growing sectors in the world. The industry showed continued growth for the fifth consecutive year in 2014 (WTTC, n.d., para. 3). According to the UNTWO (n.d.), "the business volume of

tourism equals or even surpasses that of oil exports, food products or automobiles" (para. 2). Tourism is also "one of the major players in international commerce and represents, at the same time, one of the main income sources for many developing countries" (UNTWO, n.d., para. 2). Tourism is vital to so many countries across the world because it can impact communities and nations in many ways.

The tourism industry continued to see growth in many areas in 2014 which included economically and employment opportunities. For instance, the industry contributed a total of $7.6 trillion to the global economy, which accounted for 9.8% of the total economy's gross domestic products (GDP) (WTTC, 2015). Also, the industry accounted for 1 out 11 jobs across the world, for a total of 277 million jobs (WTTC, 2015). In 2014, it accounted for approximately 2.1 million new jobs directly and a total of about 6.1 million positions either directly, indirectly, or through induced activity (WTTC, 2015).

These impacts hold true in the United States as they did around the world in 2014. The tourism industry contributed a total of approximately $1,402.6 billion to the U.S. economy, and projections are these contributions will continue to rise in 2015 (WTTC, 2015). Total contribution to the job market in the United States for 2014 was over 13.6 million, which made up around 9.3% of the job market (WTTC, 2015). Industry leaders are projecting those numbers to increase for 2015 with the total economic contribution increasing about 3% and the total number of jobs relating to the industry increasing by approximately 1.7% (WTTC, 2015).

In Kentucky, tourism is as important to the overall economy as it is in other states, counties, and cites across America. The travel industry contributed about $13 billion to

the local economy in 2014, and direct expenditures totaled over $8.3 billion for the state (Tourism, Arts, & Heritage Cabinet, 2015). The travel industry provided individuals with 179,963 jobs and, of those, 125,938 were due to direct expenditures (Tourism, Arts, & Heritage Cabinet, 2015). Also, in 2014, the industry provided "$1.37 billion in tax revenues to government, $1.19 billion to the state and nearly $176.1 million locally. This is an increase from $1.31 billion in tax revenues in 2013" (Tourism, Arts, & Heritage Cabinet, 2015, para 1). Kentucky divides the state into nine regions, and each region showed gains in revenue in 2014. Table 2-1 shows the breakdown of direct expenditures for 2013 compared to 2014 in the different regions in Kentucky.

With these figures, one can see why so many community leaders, public and private, are trying to find ways to benefit their communities from the tourism industry in Kentucky. They see the potential for a growing economy, locally and regionally, plus opportunities for increased job growth for their local citizens. According to UNTWO Secretary-General Taleb Rifai, "this underlines the need to rightly place tourism as one of the key pillars of socio-economic development, being a leading contributor to economic growth, exports, and jobs" (UNWTO, 2013, para. 3). These contributors are key sectors in which rural areas are seeking to develop.

Table 2-1: Direct travel expenditures in Kentucky by region, 2013-2014 (adapted)

| Location | Direct Expenditures 2013 | Direct Expenditures 2014 | Change 2013-2014 |
|---|---|---|---|
| **Kentucky** | **$7,968,329,103** | **$8,317,528,155** | **4.4%** |
| Western Waterlands | $506,803,849 | $523,928,398 | 3.4% |
| Bluegrass, Blues & Barbecue | $317,568,953 | $331,367,324 | 4.3% |
| Caves, Lakes & Corvettes | $370, 292,046 | $395,099,286 | 6.7% |
| Bourbon, Horses & History | $2,434,193,628 | $2,556,025,612 | 5.0% |
| KY's Southern Shoreline | $189,318,691 | $193,867,294 | 2.4% |
| Northern Kentucky River | $1,700,399,638 | $1,782,114,545 | 4.8% |
| Bluegrass, Horses, Bourbon & Boone | $1,761,999,157 | $1,831,197,313 | 3.9 % |
| Kentucky Appalachians | $381,539,911 | $391,196,071 | 2.5% |
| Daniel Boone Country | $306,213,230 | $312,732,312 | 2.1% |

Source: Tourism, Arts & Heritage Cabinet. (2015). Economic Impact of Kentucky's Travel and Tourism Industry- 2013 and 2014. Retrieved from http://www.kentuckytourism.com/!userfiles/ Industry/Economic%20Impact%20of%20 Kentucky %20Travel% 20and%20Tourism%20Industry%202013-2014.pdf. Copyright (2015) Certec, Inc. (adapted)

## Rural Tourism

Rural areas with struggling economies are searching for different ways to increase revenue and economic development. Many Kentucky communities are struggling because of various economic downfalls that are not solely due to their own demise. Lane (1994) states "the powerful trends of industrialization and urbanization have steadily altered the economic and political positions of rural society" (p. 7). According to Briedenhann and Wickens (2004), "declining economic activity, restructuring of the agricultural sector, dwindling rural industrialization and out-migration of higher educated

youth has led to the adoption, in many western nations, of tourism as an alternative development strategy for the economic and social regeneration of rural areas" (p. 71). Tourism is one avenue leaders are turning to promote economic growth to revitalize these rural areas, of which some were once flourishing communities.

It is difficult to truly define rural tourism. Some have defined rural tourism as simply being tourism located in either rural areas or the countryside (Lane, 1994). Lane (1994, p. 9) listed seven factors resulting in the complexity of defining rural tourism that include:

1. Urban or resort-based tourism is not confined to urban areas, but spills out into rural areas.
2. Rural areas themselves are difficult to define, and the criteria used by different nations vary considerably.
3. Not all tourism which takes place in rural areas is strictly 'rural'- it can be 'urban' in form, and merely be located in a rural area. Many so-called holiday villages are of this type. In recent years, numerous large holiday complexes have been completed in the countryside. They may be 'theme parks', time shares, or leisure hotel developments.
4. Historically, tourism has been an urban concept; the great majority of tourists live in urban areas. Tourism can be an urbanizing influence on rural areas, encouraging cultural and economic change, and new construction.
5. Different forms of rural tourism have developed in different regions.
6. Rural areas themselves are in a complex process of change. The impacts of global markets, communications, and telecommunication have changed market conditions and orientations for traditional products.
7. Rural tourism is a complex multi-faceted activity: it is not just farm-based tourism. It includes farm-based holidays, but also comprises special-interest nature holidays and ecotourism, walking, climbing, tiding holidays, adventure, sports and health tourism, hunting and angling, educational travel, arts and heritage tourism, and, in some areas, ethnic tourism.

With so many variables to take into consideration, it is almost impossible to define rural tourism with a more complex definition than what was previously mentioned.

Rural communities continue turning to rural tourism because it has been "identified as a catalyst to stimulate economic growth, increase the viability of

underdeveloped regions, and improve the standard of living" (Briedenhann & Wickens, 2004, p. 71). It is easy to understand why community leaders, private and public, are eager to view tourism as a means of economic development. The benefits associated with rural tourism consist of increases in employment opportunities, income, and overall economic and population growth. "This kind of development has the potential to dramatically transform a stagnant rural community into a thriving community by attracting retirees, entrepreneurs, and young workers, diversifying the economy, and improving the quality of life with a broader array of goods and services" (Reeder & Brown, 2005, para. 2).

Rural communities should realize there could be some negative impacts associated with rural tourism. "Whilst governments are generally of the opinion that tourism development will generate new jobs, enhance community infrastructure and assist in revitalizing the flagging economies of rural areas, tourism as a development option has come under increasing censure due to the alleged paucity of revenues, the inequity of benefit distribution and the perceived social costs to resident communities" (Briedenhann & Wickens, 2004, p. 71). For instance, while there could be potential job growth in these rural areas, many of the employment opportunities are usually seasonal or part-time positions with low wages and little or no benefits. Also, it could increase the cost of living, increase crime rate, and cause problems with the community infrastructure, such as, overcrowded roads and streets (Reeder & Brown, 2005). However, the positive benefits of tourism out-number the negatives in many instances.

For communities to sustain a rural presence in the area, they must concentrate on maintaining their desired benefits while constantly assuring to minimize the harmful

impacts upon the region (Lane, 1994). Overall, communities are "focused on maximizing individual spending, and providing products and experiences as an incentive to tourists to stay longer and return on repeat visits" (Briedenhann & Wickens, 2004, p. 72). Communities must realize "important differences exist in how tourism is viewed among tourists, residents, and tourism-sensitive business owners" (Marcouiller, 1997, p. 342). "Tourists tend to choose destinations based on physical appearance, human sociocultural comfort, and affordability in the short term" (Marcouiller, 1997, p. 342). Businesses associated with tourism "tend to view development with an overriding interest in the resulting demand for the goods and services tourism creates" (Marcouiller, 1997, p. 342). Some "residents of destination areas experience a direct impact from tourist through crowding, localized price inflation, sociocultural cross-filtration, and economic opportunity" (Marcouiller, 1997, p. 342).

Community leaders must remember when "benefits and costs are assumed to be carefully evaluated, and when benefits exceed costs, the actor (citizens) will hold a positive attitude toward tourism. Then, if the reverse is true and costs exceed benefits, then a negative attitude towards tourism will be evident" (Wang & Pfister, 2008, p. 8). Community leaders must remember those who are opposed to tourism in the community are unlikely to participate and will only see the negative connotation towards the overall benefits; whereas, others will see positive benefits.

## Waterpark Industry

According to the World Waterpark Association (WWA), waterparks "come in a multitude of shapes and sizes, from small aquatic centers that have a few waterpark features- such as a waterslide or leisure river- to city-owned facilities that rival some of

today's major parks, as well as indoor waterpark hotel/resorts" (WWA, n.d., para.1). However, in a benchmark report conducted by the International Association of Amusement Parks and Attractions (IAAPA) (2015), they defined a waterpark as a facility with "at least four of the attractions considered essential to a waterpark" (p. 8). IAAPA (2015) considers the following as essential rides in which a waterpark must contain at least four for a facility to be consider a waterpark: "toddlers'/children's play area, tube slide, lazy river, body flume, wave pool, tipping bucket play area, speed slide, family raft slide, mat racer slide, spray ground, still-water lagoon pool, action river, water coaster or a surfing simulator" (p. 8). Whereas, Sangree (2015, para. 3) defines waterparks the following way:

An indoor waterpark resort is a lodging establishment containing an aquatic facility with a minimum of 10,000 square feet of indoor waterpark space inclusive of amenities such as slides, tubes, and a variety of indoor play features.
A resort with an outdoor waterpark is a lodging establishment with an outdoor aquatic facility with three or more waterpark elements requiring lifeguards such as slides, lazy river, or wave pools.
A standalone indoor waterpark is an aquatic facility that is not attached to lodging establishment with a minimum of 10,000 square feet of indoor waterpark space inclusive of amenities such as slides, tubes, and a variety of indoor water play features.
An outdoor waterpark is an outdoor aquatic facility with three or more water slides. It often includes other water elements requiring lifeguards such as lazy rivers, surf simulators, or wave pools. These parks will often offer additional splash features for younger children.

Without a set definition of a waterpark, it becomes difficult to examine the true impact waterparks have on local or regional economy. However, waterparks do have an impact on the economy from the standpoint of economic development, sustainability, employment opportunities, and an increase tax base for local and state governments.

The waterparks industry has proven to be a major contributor to the economy. In 2011, it was estimated the waterpark industry contributed $4.5 billion in direct economic

impact and $10.8 billion in total economic impact to the United States economy (Oxford Economics, 2013). The industry also provided employment for approximately 68,527 directly and 124,337 total jobs (Oxford Economics, 2013). Plus, it contributed an estimate of $1.1 billion in tax incentive federally, and $0.9 billion in local and state taxes (Oxford Economics, 2013). As more waterparks are continuously being developed across the nation, these totals will continue to increase over time.

The waterpark industry is growing at an astonishing pace as facilities are constantly being built. According to Sangre (2013), in 2013 there were a total of 837 waterparks located in the United States. The total number of waterparks had increased by 36 facilities to bring the total number to 873 in 2015 (Sangre, 2015). Municipal-owned waterparks appear to be the quickest growing sector in the industry. Municipal waterparks classified as either outdoor standalone or indoor standalone waterparks increased by 43 facilities between 2013-2015 (Sangre, 2015; Sangre, 2013). Like other theme parks, waterparks "are typically developed and operated by three types of investors:

1. the public sector (federal, state, or local governments) or quasi-autonomous non-governmental organizations;
2. the private sector: multinational organizations with interests in several sectors of the economy, major entertainment companies or individual entrepreneurs; and
3. nonprofit and voluntary organizations like national trust or religious organizations" (Milman, 2010, p. 233).

The private sector usually "is motivated by profit, diversification of the organization's product portfolio, achieving a rate of return on investment, and increasing the

corporation's market share" (Milman, 2010, p. 233). Also, privately-owned waterparks usually have a high-ticket price because they must cover their debt and maximize profits. Typically, larger privately-owned waterparks are located, or are, in an area that is known to be a tourist destination. Privately-owned waterparks usually appeal to individuals planning to stay all day or visit on multiple days while at a tourist destination.

Municipal waterparks are a fast-growing sector in the waterpark industry. Waterparks, as amusement parks, have become "motivators for tourism trips to many destination and core elements of the tourism product" (Raluca & Gina, 2008, p. 635). Municipal waterparks are perceived "as providers of leisure and recreation facilities for their local communities" (Milman, 2010, p. 233) while allowing a community to become a new haven for tourists. Municipalities, and other forms of government, are constructing and operating waterparks to "improve the image of the destination, increase tourism and hence economic benefits for the local community and provide education to the public" (Milman, 2010, p. 233). Waterparks gain support because they can "provide opportunities to gain political advantage, locally, nationally, and, in some cases, internationally" (Milman, 2010, p. 233).

While waterparks may have the positive effect on the development of tourism that government officials are so hoping for, there are possible downsides as well. For instance, local or state governments "may allocate large sums of public funds… hoping that it would result in economic development and environmental protection. However, intended outcomes may not always be materialized" (Milman, Okumus, & Duncan, 2010, p. 340). Some "waterpark developments have received a variety of economic incentives,

including tax abatements, room tax rebates for waterpark resorts, infrastructure funds, income tax rebates, and assistance in acquiring land" (Rice, 2013, para. 15).

In Kentucky, state law "allows eligible tourism attractions a rebate of state sales taxes, up to 25 percent of project capital costs over a decade. Projects must have a positive economic impact and attract at least 25 percent of visitors from out of the state. The rebate is based on sales tax generated by the attraction" (Shafer, 2015, para. 7). According to Rice (2013), "such deals also can be controversial, angering residents who think hiring teachers or firefighters is a better use of that money than helping private waterparks, even if the funds are only available for economic redevelopment" (para. 38). Milman et al. (2010) added waterparks may have an adverse effect by providing "potential negative economic, social-cultural, and ecological impacts" (p. 340) which "may include, but not limited to, high-entrance fees for residents, frictions between visitors and residents, pollution, habitat destruction, waste disposal problems, air and noise pollution, and rising levels of energy and water consumption" (Milman et al., 2010, p. 340).

It is important to remember that with "the growth of tourism in the past fifty years and the recognition of the economic benefits of tourism have led to the growth of purpose-built attractions" (Raluca & Gina, 2008, p. 636). Waterparks are being built to draw tourist to these areas; and, hopefully, they are having a positive effect upon the communities where they are located. It is imperative for government officials to know when electing to build waterparks within their communities there is a substantial amount of upkeep and continuous investments that must be made to maintain these types of facilities. Owners, private and public, must continue to build and add new attractions

every 2 to 4 years to keep the park relevant in an ever-changing industry and so it does not become stale. The more support a waterpark has from the local community and local officials the greater chance the facility will be successful in either adding a positive impact to the economy or helping to sustain the local economy. If we are to know the impact a waterpark has on a local economy, we must measure it. One way to measure the impact is to use the IMPLAN Model which is a variation of an in-put out-put model.

## IMPLAN Model

The tourism industry has positively impacted several destinations across the nation. English, Marcouiller, and Cordell (2000) state, "tourist seeking natural-based setting, tranquility, and adventure have affected rural economies by injecting new dollars into local businesses, supporting local tax bases, and creating increased demands for locally available land, labor, and capital" (p. 185). To calculate the impact of tourism on a destination, estimates are typically derived by reported trip expenditures (Johnson & Moore, 1993). From these expenditures, one can examine the direct, indirect, and induced impacts on the economy. The direct impact is "the first round effect of visitors' spending, that is, how much the restauranteurs, hoteliers, and others who received the initial dollars spend on goods and services with other industries in the local economy and pay employees, self-employed individuals and shareholder who live in the jurisdiction" (Crompton, 1999, p. 23). Indirect impacts are "the ripple effect of additional rounds of recirculating the initial visitors' dollars by local businesses and local government" (Crompton, 1999, p. 23). Lastly, the induced impact occurs by "further ripple effects generated by the direct and indirect effects, caused by employees of impacted businesses

spending some of their salaries and wages in other businesses in the city" (Crompton, 1999, p. 23).

These results, in return, show an estimate of how tourism is impacting the local community. However, when examining the direct, indirect, and induced impact tourism has on a destination, one must choose an economic impact model to analyze these impacts. There are several models to choose from which includes Reginal Economic Model, Inc. (REMI), Capacity Utilization Model (CUM), and the Impact Analysis for Planning (IMPLAN) model just to name a few. Each model is typically chosen by the researcher based on various needs such as program cost, type of data, special features, or an organization's request of a specific impact model to be used.

The IMPLAN model was "originally developed for the USDA Forest Service as a tool for analyzing economic impacts" (Johnson & Moore, 1993, p. 282). The IMPLAN model is considered a "cost-effective way to measure total tourism impacts on an area's economy" (Bonn & Harrington, 2008, p. 771). According to Bonn and Harrington (2008), "while it is considered solely as an output-input model" (p. 774), the IMPLAN model's "basic assumption is that the fundamental information in input-output analysis involves the flow or products from each industrial sector (producer) to each of the industrial sectors considered as consumers" (p. 774). The IMPLAN model has an added advantage "due to the system allowing users to adjust estimates of final demands based on primary data to more accurately estimate economic impacts" (Johnson & Moore, 1993, p. 282).

According to Bonn and Harrington (2008), the IMPLAN model has 5 key input-output assumptions:

1. "Constant returns to scale production function (that is, linear).
2. Homogenous sector output.
3. No input substitution.
4. No supply constraints.
5. Other IMPLAN considerations:
    a. Technology and trade relations are assumed.
    b. Need to account for price changes.
    c. Need to account for structural changes.
    d. Employment increase or decrease causes immediate in or out migration (that is, full employment)" (p. 775).

It is important to remember the IMPLAN model is used and accepted by many organizations when it comes to analyzing the economic impact tourism has on a local community (Bonn & Harrington, 2008).

Communities are contributing substantial amounts of money towards the tourism industry in hopes to develop or sustain their local economies. According to Frechtling and Horvath (1999), "informed private decision making and public policy require that executives, officials, employees, and their dependents understand the contribution that visitors make to the local economy, both through those businesses directly serving visitors and that supply these businesses" (p. 342). Overtime, locals can become dependent on the tourism industry due to the impact it has provided the local community; such as, additional jobs, additional income, and increased prices on local goods and services. Local governments need to examine and understand exactly how the tourism industry is impacting their community so they can make sound decisions as they relate to the community. Not only should the economic impact of waterparks be examined, but, barriers associated with waterparks should be examined.

## Barriers

Another aspect of the waterpark industry which should be examined is how barriers may affect an individual's opinion or perception of a waterpark. A barrier may

consist of anything that "intervenes between the preference for an activity and participation of it" (Crawford & Godbey, 1987, p. 120). Therefore, the waterpark industry needs to be able to identify and better understand what some individuals or groups may view as barriers to make the necessary changes for those barriers to be removed. A few examples of barriers include time constraints, price, effort, distance (to and from waterpark), financial resources, and equality (Marzo-Navarro & Pedraja-Iglesias, 2012; Allison & Hibbler, 2004).

Barriers can be classified in one of the following conceptual categories: intrapersonal barriers, interpersonal barriers, and structural barriers (Crawford & Godbey, 1987; Marzo-Navarro & Pedraja-Iglesias, 2012). "Intrapersonal barriers are psychological characteristics of an individual, including personality and interests, and attributes such as stress, religiosity, prior socialization into specific leisure activities, perceived self-skill and subjective evaluations of the appropriateness and availability of various leisure activities" (Marzo-Navarro & Pedraja-Iglesias, 2012, p. 318). However, intrapersonal barriers can change or be modified over time depending on the individual (Crawford & Godbey, 1987). "Interpersonal barriers are the result of interpersonal interaction or the relationship between individuals' characteristics" (Crawford & Godbey, 1987, p. 123). According to Crawford and Godbey (1987), interpersonal barriers are the result of interpersonal relationships which could include a spouse, family member, friend, or acquaintance. Structural barriers "represent constraints as they are commonly conceptualized, as intervening factors between leisure preference and participation" (Crawford & Godbey, 1987, p. 124). According to Marzo-Navarro and Pedraja-Iglesias (2012), structural barriers include "the family life cycle stage, financial resources, time,

and distance to the destination" (p. 318). Not only can barriers be categorized, but there are five factors that are associated with barriers.

According to Crawford and Godbey (1987), there are five factors that relate to why barriers may prevent individuals for participating. These five factors include:

1. Some barriers probably do intervene between leisure preference and participation.
2. Some intervening barriers may influence people to engage in leisure activities which they do not like.
3. Preferences and barriers may have been confounded in the measurement process.
4. Different types of barriers may have been confounded in the research conducted to date.
5. Individuals' leisure preferences may be significantly less stable over time than is commonly assumed (p.121).

Previous research has shown the more perceived barriers an individual has towards a place, location, event, or activity the less likely they are to participate (Reichert, Barros, Domingues, Hallal, 2007). According to Reichert et. al (2007), individuals were less likely to participate when they "report 6 or more barriers" (p. 517), and they were "113% higher than those who did not report any barriers" (p. 517).

Realizing what barriers are associated within the waterpark industry is very beneficial to the industry. As additional research and information is gathered regarding barriers, industry leaders will be better prepared and understand how to correct those issues, if possible. It is important to realize that not all barriers can be corrected, nor can all opinions be changed. However, it is the responsibility of the waterpark industry and its leaders to try to correct these issues or to help provide needed information to potential patrons.

**Summary**

After performing several article searches which included several different databases, Google Scholar, and various internet searches, there was a lack of scholarly

articles returned during those searches pertaining to either the waterpark industry, the economic impact waterparks have on the economy, or barriers associated with waterparks. The overall purpose of this study is to add to the current scholarly research pertaining to and regarding the waterpark industry. As waterparks are constantly being constructed and re-opened, the industry continues to grow and develop from year to year. Therefore, it is imperative for additional research to be gathered so others within the industry can continue to add to the current body of work.

While this study is focusing on waterparks in Kentucky, the information can also be utilized by others outside the state. This research will analyze the impact waterparks have on the economy in Kentucky. Also, it will focus on the demographics of those who choose to visit waterparks, and if there are any perceived barriers that may exist. The information from this study will be beneficial to those in either the public or private sectors. They will be able to make a sounder decision based upon the findings of this study. For instance, they will be able to better determine if the initial investment of a waterpark, either to construct or allow within the community, is feasible based on the impact waterparks have on the economy. The visitors' demographics will provide additional information to those communities looking to utilize and develop tourism to increase the local economy in the community. By examining barriers associated with waterparks, industry leaders will be able to address some of these possible issues. This study will allow communities to utilize visitor demographics to focus on developing a marketing plan for the region or area.

# CHAPTER III

# METHODOLOGY

The purpose of this study was to examine the economic impact waterparks have on local and regional communities in Kentucky. This was completed by analyzing the direct impact, indirect impact, and induced impact of waterparks in Kentucky. Additionally, it focuses on the demographics of individuals who choose to visit waterparks and barriers associated with waterparks.

## Research Questions

1. Do waterparks impact the economy?
   - $H_a$: Waterparks have a positive impact on the economy.
   - $H_o$: Waterparks do not have a positive impact on the economy.
2. Is the economic impact on the community related to demographics?
   - $H_a$: Demographics do influence the overall economic impact waterparks have on the economy.
   - $H_o$: Demographics do not influence the overall economic impact waterparks have on the economy.
3. Is there an economic difference related to the size of the waterpark?
   - $H_a$: Larger waterpark facilities have a greater influence on the economy than smaller waterpark facilities.
   - $H_o$: Larger waterpark facilities do not have a greater influence on the economy than smaller waterpark facilities.

4. Are there any perceived barriers related to the waterpark industry?

   $H_a$: There are no differences in perceived barriers between waterparks.

   $H_o$: There are differences in perceived barriers between waterparks.

**Population and Sampling**

The population for this study included local and non-local residents that were visiting a facility in Kentucky that agreed to participate in this study. Participants were randomly selected while visiting the waterpark. A visitor of a waterpark is considered any adult that uses the waterpark in any way including but not limited to: participating in activities in or out of the water, casually laying pool side, watching family members, or socializing with friends. For these facilities to be considered a waterpark for this study, they must contain at least four features considered to be essential to a waterpark which was defined in Chapter 1, under Definition of Terms. The final sample included five waterparks

**Data Collection and Instrumentation**

The researcher utilized on-site surveys to collect data needed for this study. By using surveys, the researcher could collect data critical to this study such as participants' demographics, the financial input-output of the participants of the study, and if there are any perceived barriers by with visitors at waterparks. The survey was be adapted from an Economic Impact Questionnaire previously used by Crompton (1999). Also, demographic information was collected to further examine any correlations between demographics and waterparks' economic impact.

Data were collected during the 2016 waterpark season. Typically, waterparks have a short operational season ranging from May to September. Surveys were

distributed by the researcher randomly to individuals visiting the various waterparks. The researcher collected the surveys upon completion by the participant. Surveys were administered throughout the season, and data entry and analysis took place once the season was over. Once surveys were gathered, all collected data was imported into the IMPLAN Input-Output Model software and SPSS software.

**Analysis**

A demographic profile of visitors and barriers was built using SPSS software. The computer program being used in this study regarding economic impact of waterparks is the IMPLAN Model Software. The IMPLAN Model is commonly used by educators and researchers within the tourism industry (Bonn & Harrington, 2008). Originally, the model was developed for the USDA Forest Service in 1993 to analyze the economic impact parks have on local communities (Johnson & Moore, 1993; Bonn & Harrington, 2008). "The model has been used by government agencies, including the Forest Service, Bureau of Land Management, and Army Corps of Engineers, to estimate the economic impact" (Johnson & Moore, 1993, p. 282). The IMPLAN Model is regularly used by professionals looking to examine the total effect an industry may have on the economy. The total economic impact includes direct impact, indirect impact, and induced impact on the economy.

The IMPLAN model is solely an input-output model. "IMPLAN assumes national average production coefficients and margins and uses a set of econometric equations to predict interregional trade flow" (Bonn & Harrington, 2008, p. 782). The software analyzes 509 economic industrial sectors at the national and county levels (Johnson & Moore, 1993; Bonn & Harrington, 2008). Also, the "IMPLAN Model allows internal

customization; that is, by developing multiplier tables, changing components of the systems such as production functions and altering trade flows, generating Type I, II, or any true social account matrix multiplier internalizing household, government and/or investment activities, and creating custom impact analysis by entering final demand changes" (Bonn & Harrington, 2008, p. 782).

**Challenges**

While the framework of this research study is complete, there were a few challenges that became apparent during this study. One example was selecting the waterparks that met the definition given in Chapter 1 to agree to participate in the study. Upon the waterpark agreeing to become a research site, each participating waterpark in the study was provided (at no cost) an economic impact study of the park and a summary of the statewide findings after the study. Also, the weather played an instrumental role in collecting data. The researcher planned accordingly based upon the current area's weather report; however, the weather did occasionally change throughout the visit. For example, during some visits, facilities would close or suspend operations momentarily due to inclement weather; also, weather or weather reports calling for higher percentages of storms would alter hours of operation and the overall daily attendance during some visits. Another challenge for this study was getting enough surveys collected during the 2016 waterpark season. The researcher visited each site at a minimum of three times during the 2016 season.

# CHAPTER IV

# RESULTS

## Data Collection

For this study, the researcher contacted or attempted to contact a total of nine waterpark facilities across Kentucky by phone, email, or both that met the definition of a waterpark given for this study in Chapter 1. Of the nine waterpark facilities originally contacted, four facilities did not return any emails or phone calls, which showed no interest in participation. However, five waterparks, SomerSplash Waterpark, Venture River Waterpark, Juniper Hill Aquatic Center, Paradise Cove Aquatic Park, and Tie Breaker Family Aquatic Center agreed to participate in the study. Each of these facilities contained at least four or more attractions considered essential to a waterpark, which meets the definition for this study given in Chapter 1.

The researcher collected data at each of the five waterpark facilities throughout the 2016 waterpark season. Table 4-1 details the number of visits to each research site and the total number of overall responses collect. The researcher collected on-site surveys at SomerSplash Waterpark 15 times for 39.3% of the total surveys collected. At Venture River Waterpark, the researcher collected on-site surveys five times, yielding 16.3% of the total surveys for this study. The researcher also collected on-site surveys at Juniper Hill Aquatic Center four times for 16.6% of the total surveys. The researcher visited Paradise Cove Aquatic Park five times to collect on-site surveys for a total of 16.1% of the surveys used. While visiting Tie Breaker Family Aquatic Center five times, the researcher collected a total of 11.7% of the total surveys for this study. In all, the

researcher collected on-site surveys at all five research sites a total of 34 times from Memorial Day to Labor Day.

Table 4-1: Date collection sites and number of responses

| Facility | Percent of Study Surveys | Number of Surveys | Number of Days Visited |
|---|---|---|---|
| SomerSplash Waterpark-Somerset, KY | 39.3 | 400 | 15 |
| Venture River Waterpark-Eddyville, KY | 16.3 | 166 | 5 |
| Juniper Hill Aquatic Center-Frankfort, KY | 16.6 | 169 | 4 |
| Paradise Cove Aquatic Park-Richmond, KY | 16.1 | 164 | 5 |
| Tie Breaker Family Aquatic Center-Hopkinsville, KY | 11.7 | 119 | 5 |
| Totals | 100 | 1,018 | 34 |

The researcher approached a total of 1,258 possible adult visitors (age 18 and older) for this study; of those, 1,018 agreed to complete the on-site survey for an overall survey response rate of 80%. The on-site completion rate varied from site to site for this study, with an 88% (N=400) response rate from SomerSplash Waterpark. Venture River Waterpark had an on-site completion rate of 72% (N=166). Juniper Hill Aquatic Center reaped a completion rate of 85% (N=169), while participants at Paradise Cove Aquatic Park completed a rate of 79% (N=164). Tie Breaker Aquatic Center had the lowest percentage with an on-site completion rate of 70% (N=119). Additional information on the response rate can be found in Table 4-2, which includes the number of potential participants, number of participant rejections, number of completed on-site surveys, and the on-site survey response rate at each research site and overall.

Table 4-2: Response ratios at various research sites

| Facility | Approached | Rejections | Completed Surveys | Survey Response Rate |
|---|---|---|---|---|
| SomerSplash Waterpark | 452 | 52 | 400 | .88 |
| Venture River Waterpark | 231 | 65 | 166 | .72 |
| Juniper Hill Aquatic Center | 199 | 30 | 169 | .85 |
| Paradise Cove Aquatic Park | 207 | 43 | 164 | .79 |
| Tie Breaker Family Aquatic Center | 169 | 50 | 119 | .70 |
| Total | 1,258 | 240 | 1018 | .80 |

**Descriptive Statistics**

Of the 1,018 surveys collected, 1,015 participants responded to the survey question regarding what form of admission was used to enter the park. Participants in the study used several different forms of admission for entrance. These forms of entrance included use of season passes, daily admission, or other forms of entry such as rain checks, free passes, and promotions. Of the three forms of admission to the park, an overabundant number of the study's participants entered by paying the parks' daily admission price at 72% (N=734). The use of a season pass or season passes at a usage rate of 22.6% (N=230) became the second most common form of entry. Lastly, only 5% (N=51) of the participants entered the park by using some other form of entry. These forms of admission are located in Table 4-3.

Table 4-3: Form of admission used to enter waterparks

| Type of admission | Percent | N |
|---|---|---|
| Season Pass | 22.7 | 230 |
| Daily Admission | 72.3 | 601 |
| Other | 5.0 | 51 |

A total of 1,017 responded to the question that best describe their annual household income. The results showed that 59.1% (N=601) of the participants had a total household income of $50,000 or more, while only 28.4% (N=289) had a combined household income of $49,999 or less. For unknown reasons to the researcher, 12.5% (N=127) of the respondents did not want to report their annual household income. Table 4-4 - Table 4-5 details how participants' total household incomes varied between pre-selected income categories.

Table 4-4: Household incomes greater and less than $50,000

| Household Income | Percent | N |
|---|---|---|
| $49,999 or less | 28.4 | 289 |
| $50,000 or more | 59.1 | 601 |
| Do not record | 12.5 | 127 |

Table 4-5: Household pre-selected income categories

| Household Income | Percent | N |
|---|---|---|
| $0.00-$19,999 | 4.9 | 50 |
| $20,000-$29,999 | 7.4 | 75 |
| $30,000-$39,999 | 7.1 | 72 |
| $40,000-$49,999 | 9.0 | 92 |
| $50,000-$74,999 | 20.2 | 205 |
| $75,000-$99,999 | 17.7 | 180 |
| Greater than $99,999 | 21.2 | 216 |
| Do not record | 12.5 | 127 |

Only 973 participants elected to respond to the question regarding the highest level of education in your household. The participants chose from five different categories which included less than high school degree or GED equivalent, completed high school or GED, no college, completed some college, completed bachelor's degree, or completed advance degree. Of the 973 respondents, 34.6% (N=337) completed some college, 28.6% (N=278) of the participants completed their bachelor's degree, while only 20.7% (N=201) completed an advanced degree. Surveys revealed 15.1% (N=147) had at least completed high school or GED but had no college education, and only 1% (N=10) had less than a high school degree or GED equivalent. Overall, 49.2% (N=479) of the participants had completed a degree in higher education ranging from a bachelors to an advanced degree. Result regarding the highest education level per household can be found in Table 4-6.

Table 4-6: Highest education level per household

| Level of education | Percent | N |
|---|---|---|
| Less than high school degree or GED equivalent | 1.0 | 10 |
| Completed high school or GED, no college | 15.1 | 147 |
| Completed some college | 34.6 | 337 |
| Completed bachelor's degree | 28.6 | 278 |
| Completed advance degree | 20.7 | 201 |
| Total | 100 | 973 |

A total of 1,016 participants responded to the question asking "what is your race". Respondents' response to race is located in Table 4-7. The researcher did attempt to ensure equal participation by all races for this study; however, a large majority of the

respondents were white in comparison to other races. For this study, the racial makeup of the participants resulted in 91% (N=925) white, 1.8% (N=18) black/African American, 1.7% (N=17) more than one race, .5% (N=5) Asian, and 1% (N=10) some other race. For reasons unknown to the researcher, 4% (N=41) elected to respond with "do not record." As previously mentioned, the researcher did attempt to take the needed measures to ensure proper participation by all possible adults, age 18 or older, in attendance at the various test facilities no matter their individual race or ethnicity.

Table 4-7: Respondents' race response ratio

| Race | Percent | N |
|---|---|---|
| Asian | 0.5 | 5 |
| Black/African American | 1.8 | 18 |
| White | 91.0 | 925 |
| More than one race | 1.7 | 17 |
| Some other race | 1.0 | 10 |
| Do not record | 4.0 | 41 |
| Total | 100 | 1,016 |

Of the 1,018 participants of the study, 1,016 responded to "what is your sex?" The participants selected from one of following four categories: female, male, other sex, or do not record. Of the 1,016 respondents, 86.6% were female (N=880), 10.5% were male (N=107), and 2.9% chose do not record (N=29). Also, the participants' ages ranged from 18-74. They averaged an age of 41.97, a mode of 38, and a median age of 39.99. The largest group fell between the ages of 35-44 years old at 42.4% (N=415), followed by those between the ages of 25-34 with 20.8% (N=203). The third most represented age group was those between the ages 45-54 at 19.6% (N=192). The age groups least represented in this study were those between the ages of 18-24 at 2.8% (N=27), and those

65 and older at 4.1% (N=40). Table 4-8 through 4-10 details the results regarding respondents' sex and age ratios.

Table 4-8: Respondents' sex response ratio

| Gender | Percent | N |
|---|---|---|
| Male | 10.5 | 107 |
| Female | 86.6 | 880 |
| Did not report | 2.9 | 29 |

Table 4-9: Total Respondents' age response ratio

| Age | Percent | N |
|---|---|---|
| 18-24 | 2.8 | 27 |
| 25-34 | 20.7 | 203 |
| 35-44 | 42.6 | 415 |
| 45-54 | 19.6 | 192 |
| 55-64 | 10.3 | 101 |
| 65+ | 4.1 | 40 |
| Total | 100 | 978 |

Table 4-10: Respondents' age response ratio per research site

| Facility | 18-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65+ | N |
|---|---|---|---|---|---|---|---|
| SomerSplash Waterpark | 2.3 | 20.0 | 44.8 | 21.0 | 9.4 | 2.6 | 391 |
| Venture River Waterpark | 4.5 | 17.4 | 42.6 | 20.0 | 8.4 | 7.1 | 155 |
| Juniper Hill Aquatic Center | 2.5 | 17.8 | 44.2 | 17.2 | 11.0 | 7.4 | 163 |
| Paradise Cove Aquatic Park | 3.1 | 18.9 | 40.3 | 20.8 | 12.6 | 4.4 | 159 |
| Tie Breaker Family Aquatic Center | 1.8 | 34.5 | 36.3 | 15.9 | 11.5 | 0 | 113 |
| Total | 2.8 | 20.7 | 42.6 | 19.6 | 10.3 | 4.1 | 981 |

**Barriers**

The researcher included various statements on the survey instruments pertaining to barriers to examine if any potential barriers existed pertaining to waterparks. The survey instrument contained 13 statements relating to various barriers that one may foresee when visiting or going to a waterpark. Therefore, the researcher used a 5-point Likert Scale for all 13 statements relating to barriers in which participants could score each question by using the following scale: 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, and 5= strongly agree. Table 4-11 details the results by showing the number of participants that answered the individual question, mean, standard deviation, and range. Appendix B details the response given by participants by detailing the number of participants' answering each barrier statement and the percentage based on the 5-point Likert Scale used for this study.

Table 4-11: Barrier statements results

| Barrier Statement | N | Mean | Std. Deviation | Range |
|---|---|---|---|---|
| Going to a waterpark is too physically demanding. | 1014 | 1.68 | .846 | 4 |
| I have no one to go with me to a waterpark. | 1014 | 1.58 | .823 | 4 |
| There is not a waterpark near me to go visit. | 1015 | 2.11 | 1.340 | 4 |
| Going to a waterpark involves too much risk. | 1015 | 1.53 | .723 | 4 |
| My family and friends are not interested in waterparks. | 1014 | 1.59 | .831 | 4 |
| Going to a waterpark is too costly. | 1011 | 2.41 | 1.191 | 4 |
| I do not like waterparks. | 1013 | 1.42 | .731 | 4 |
| I cannot participate in aquatic activities. | 1012 | 1.42 | .733 | 4 |
| Family commitments keep me from going to a waterpark. | 1015 | 1.72 | .906 | 4 |
| The expense of traveling and staying overnight is too great when visiting a waterpark. | 1013 | 2.01 | 1.133 | 4 |
| I do not know what to expect when visiting a waterpark. | 1014 | 1.57 | .793 | 4 |
| I have no time to go to a waterpark. | 1014 | 1.83 | .959 | 4 |
| I have no information about the waterpark and what they have to offer. | 1014 | 1.59 | .808 | 4 |

To further examine if barriers existed, the researcher ran an ANOVA and Tukey Post Hoc Test to determine significant difference between the five research facilities. Table 4-12 contains data relating to the ANOVA, and Tables 4-13 through 4-17 contain the data regarding the Tukey Post Hoc Tests. Based on the ANOVA and Tukey Post Hoc Tests, with a p-value less than 0.05, we reject the null hypotheses and conclude there is a significant deference between means of the participating waterparks. Juniper Hill Family Aquatic Center appears to be the outlier of the five parks that may result in additional research in comparison to the other four study sites.

Table 4-12: ANOVA comparing barriers of the 5 research sites

| Groups | Sum of Squares | df | Mean Square | F | P-Value |
|---|---|---|---|---|---|
| Between Groups | 4.922 | 4 | 1.231 | 3.767 | .005 |
| Within Groups | 324.709 | 994 | .327 | | |
| Total | 329.631 | 998 | | | |

Table 4-13: Tukey Post Hoc Tests for SomerSplash Waterpark

| SomerSplash Waterpark | Mean Difference | Std. Error | P-Value |
|---|---|---|---|
| Venture River Waterpark | -.08433 | .05303 | .504 |
| Juniper Hill Aquatic Center | .13161 | .05315 | .097 |
| Paradise Cove Aquatic Center | -.0682 | .05387 | .791 |
| Tie Breaker Family Aquatic Center | -.06089 | .06011 | .849 |

Table 4-14: Tukey Post Hoc Tests for Venture River Waterpark

| Venture River Waterpark | Mean Difference | Std. Error | P-Value |
|---|---|---|---|
| SomerSplash Waterpark | .08433 | .05303 | .504 |
| Juniper Hill Aquatic Center | .21594 | .06321 | .006 |
| Paradise Cove Aquatic Center | .02350 | .06382 | .996 |
| Tie Breaker Family Aquatic Center | .02344 | .06917 | .997 |

Table 4-15: Tukey Post Hoc Tests for Juniper Hill Aquatic Center

| Juniper Hill Aquatic Center | Mean Difference | Std. Error | P-Value |
|---|---|---|---|
| SomerSplash Waterpark | -.13161 | .05315 | .097 |
| Venture River Waterpark | -.21594 | .06321 | .006 |
| Paradise Cove Aquatic Center | -.19243 | .06391 | .022 |
| Tie Breaker Family Aquatic Center | -.19250 | .06925 | .044 |

Table 4-16: Tukey Post Hoc Tests for Paradise Cove Aquatic Park

| Paradise Cove Aquatic Center | Mean Difference | Std. Error | P-Value |
|---|---|---|---|
| SomerSplash Waterpark | .06082 | .05387 | .791 |
| Venture River Waterpark | -.02350 | .06382 | .996 |
| Juniper Hill Aquatic Center | .19243 | .06391 | .022 |
| Tie Breaker Family Aquatic Center | -.00006 | .066921 | 1.000 |

Table 4-17: Tukey Post Hoc Tests for Tie Breaker Family Aquatic Center

| Tie Breaker Family Aquatic Center | Mean Difference | Std. Error | P-Value |
|---|---|---|---|
| SomerSplash Waterpark | .06089 | .06011 | .849 |
| Venture River Waterpark | -.02344 | .06917 | .997 |
| Juniper Hill Aquatic Center | .19250 | .06925 | .044 |
| Paradise Cove Aquatic Center | .00006 | .06981 | 1.000 |

**Economic Impact**

For this study, the researcher used the IMPLAN Model to develop an economic study for each of the five participating waterparks to determine how those waterparks

impact the local communities in which they reside. Then, the overall averages of the five waterparks were used to determine the estimated economic impact waterparks may have on Kentucky's economy. To calculate the impact of waterparks, estimates are derived by participants reported trip expenditures in twelve different economic impact categories. The twelve categories used in this study included: lodging, concessions, restaurants, gas station, grocery, gas, entry, parking, park rental, retail, entertainment, and services. From these expenditures, the researcher provided an estimate of the direct, indirect, and induced impacts on the local and state economy.

The following information highlights the estimated economic impact each facility individually contributes to the region in which they reside, the largest employment sectors within the region, economic impact categories, average spent per participant, and the estimated tax impact on the region. However, it is important to remember that the information for this study is based on indicators from 2015 and are only estimates. At the time of this study, the IMPLAN software showed these as the most current indicators.

**Economic Impact Terminology**

There are three important terms associated with an economic impact study. Those terms include the following: direct effect, indirect effect, and induced effect. The direct effect is the initial phase or activity that affects the economy (from the time money changes hands from the consumer to the local business or establishment). Indirect effect is the second wave or round of spending (e.g. local businesses turn around and pay their employees or purchase other products or goods). The induced effect is the third wave of spending where local employees (labor) spend their wages locally. Therefore, impact creates an economic effect that trickles-down and impacts the local community or region.

**SomerSplash Waterpark's Economic Impact Study**

The economic indicators for this study region are in Table 4-18. SomerSplash Waterpark resides in Pulaski County, Kentucky, which consists of a land area of 662 square miles with a population of 63,782. Also, there are a total of 25,948 households. The average household income is $85,058. The region's Gross Regional Product (GRP) is over $2.09 billion dollars. The two largest contributors to the GRP in this region consists of approximately $1.2 billion in employee compensation and an approximately $105.3 million in property income. The remainder of GRP consists of over $580 million in other properties (such as rentals and various interests), along with over $176.4 million in taxes on production and imports. The total personal income for this region is $2.2 billion which is the total of wages across all sources within Pulaski County, Kentucky. The 205 industries across the region produce approximately 34,895 jobs. The region's Shannon-Weaver Diversity Index Score is 0.709.

Table 4-18: Economic indicator summary of Pulaski County, KY

| Indicator | Value |
|---|---|
| Gross Regional Product | $2,092,849,967 |
| Total Personal Income | $2,207,079,936 |
| Total Employment | 34,895 |
| Number of Industries | 205 |
| Land Area (Square Miles) | 662 |
| Population | 63,782 |
| Total Households | 25,948 |
| Average Household Income | $85,058 |
| Shannon-Weaver Diversity Index | 0.70944 |

The region's top employers are as follows: employment and payroll of local government (education), employment and payroll of state government (education), hospitals, limited-service restaurants (fast food restaurants), wholesale trade, full-service restaurants (dine-in restaurants), religious organizations, real estate, truck transportation, plus retail-general merchandise stores. Table 4-19 lists the top industries in the study region, as well as the number of jobs, job income, and the economic output associated with each industry.

Table 4-19: Descriptive statistics for largest employment sectors in Pulaski Co., KY

| Description | Jobs | Job Income | Economic Output |
|---|---|---|---|
| Employment and payroll of local government, education | 1,721 | $84,598,862 | $98,975,616 |
| Employment and payroll of state government, education | 1,163 | $52,088,879 | $60,848,412 |
| Hospitals | 1,152 | $71,094,284 | $152,277,740 |
| Limited-service restaurants | 1,147 | $18,642,275 | $79,025,124 |
| Wholesale trade | 1,088 | $52,855,076 | $227,629,105 |
| Full-service restaurants | 1,006 | $18,195,143 | $41,872,883 |
| Religious organizations | 976 | $53,827,557 | $170,893,295 |
| Real estate | 968 | $9,823,383 | $111,463,387 |
| Truck transportation | 874 | $45,508,297 | $139,316,589 |
| Retail- general merchandise stores | 863 | $23,394,096 | $58,131,870 |

The twelve economic impact sectors (and the categories) used in this study follows: lodging (499), concessions (503), restaurants (502), gas station (402), grocery (400), gas (402), entry (533), parking (512), park rental (533), retail (405), entertainment (496), and services (509). For SomerSplash, entry as well as park rental sectors were placed in the category 533: employment and payroll of local government (non-education)

since it is solely owned and operated by the city local government. Typically, for amusement parks and waterparks, the entry and park rental sectors would be placed in category 494: amusement parks and arcades; however, this was not an option within the IMPLAN model. Therefore, it is believed that the needed information for this region is nested within the category 533. The largest expenditure amongst participants at SomerSplash Waterpark came from entry with an estimated $9.67 spent per person. Restaurants brought in the second largest expenditure with an estimated $7.45 per person. Those were followed by concessions ($5.41), gas ($5.17), and grocery ($3.74). Overall, each participant spent an estimated total of $40.40 in Pulaski County, Kentucky because of SomerSplash Waterpark. Table 4-20 shows the impact sectors, categories, and the average estimated economic expenditures per participant.

Table 4-20: Economic activity per participant in Pulaski County, KY

| Sector | Category | Average Sales Per Participant (during visit) |
|---|---|---|
| Lodging | 499 | $2.30 |
| Concessions | 503 | $5.41 |
| Restaurant | 502 | $7.45 |
| Gas Station | 402 | $1.34 |
| Grocery | 400 | $3.74 |
| Gas | 402 | $5.17 |
| Entry | 533 | $9.67 |
| Parking | 512 | $0.12 |
| Park Rental | 533 | $0.42 |
| Retail | 405 | $2.92 |
| Entertainment | 496 | $1.63 |
| Services | 509 | $0.23 |

Based on the 2016 attendance of 73,490 visitors to SomerSplash Waterpark, it is estimated that SomerSplash Waterpark contributes approximately $2,752,715 to Pulaski County's economy because of being located within the region. SomerSplash Waterpark

generates an estimated direct economic effect of $1,811,580. Also, SomerSplash Waterpark contributes an estimated indirect economic effect of $224,916. Lastly, SomerSplash Waterpark contributes an estimated induced economic effect of $716,000 to the local region. SomerSplash Waterpark impacts the local job market directly by producing an estimated 33 jobs and another 8 jobs either indirectly or induced. Table 4-21 shows the details of the economic impact summary.

Table 4-21: Economic impact summary for Pulaski County, KY

| Total Impact | Employment | Labor Income | Value Added | Output |
|---|---|---|---|---|
| Direct Effect | 33.61 | $1,059,398 | $1,317,946 | $1,811,580 |
| Indirect Effect | 1.82 | $56,267 | $104,364 | $224,916 |
| Induced Effect | 6.35 | $216,371 | $378,603 | $716,220 |
| Total Effect | 41.78 | $1,332,035 | $1,800,914 | $2,752,715 |

SomerSplash Waterpark impacts local, state, and federal taxes. This is done by examining employee compensation, proprietor income, tax on production and imports, households, and corporations. It is estimated that it impacts the local and state economy by producing an estimated $110,044 in taxes. Also, at a federal level, it produces an estimated $282,186 in taxes. Table 4-22 shows the breakdown of the estimated taxation.

Table 4-22: Taxation for Pulaski County, KY

| Impact Type | Local & State Taxes | Federal Taxes |
|---|---|---|
| Employee Compensation | $2,887 | $160,986 |
| Property Income | $0.00 | $3,052 |
| Tax on Production & Imports | $102,609 | $16,224 |
| Households | $33,741 | $74,336 |
| Corporations | $4,548 | $27,588 |
| Total | $110,044 | $282,186 |

Once again, it is important to remember these figures are solely an estimate of the economic impact SomerSplash Waterpark has on the region of Pulaski County, Kentucky. The local municipality owns and operates SomerSplash completely which

may distort some of the findings. As previously stated, a waterpark would be coded in the category 494: amusement parks and arcades; however, this was not an option for this study using the IMPLAN model.

**Venture River Waterpark's Economic Impact Study**

The economic indicators for this study region are in Table 4-23. Venture River Waterpark resides in Lyon County, Kentucky, which consists of a land area of 216 square miles, a population of 8,306, and a total of 3,719 households averaging a household income of $65,804. The Gross Regional Product (GRP) exceeds $164.8 million dollars. The study region's GRP consists of approximately $94.6 million in employee compensation in addition to approximately $8.4 million in property income. The remainder of GRP consists of over $49.7 million in other properties (such as rentals and various interests), plus over $11.9 million in taxes on production and imports. The total of wages across all sources within Lyon County, Kentucky results in a total personal income for this region of $244.6 million. The 126 industries across the region produce approximately 3,354 jobs. The region's Shannon-Weaver Diversity Index Score is 0.616.

Table 4-23: Economic indicator summary of Lyon County, KY

| Indicator | Value |
|---|---|
| Gross Regional Product | $164,862,263 |
| Total Personal Income | $244,693,760 |
| Total Employment | 3,354 |
| Number of Industries | 126 |
| Land Area (Square Miles) | 216 |
| Population | 8,306 |
| Total Households | 3,719 |
| Average Household Income | $65,804 |
| Shannon-Weaver Diversity Index | 0.61677 |

The region's top employers are as follows: employment and payroll of state government (non-education), full-service restaurants (dine-in restaurants), other financial investment activities, nursing and community care facilities, employment and payroll of local government (education), real estate, employment of local government (non-education), limited-service restaurants (fast food restaurants), physicians' offices, and all other crop farming. Table 4-24 lists the top industries in the study region; as well as, the number of jobs, job income, and the economic output associated with each industry.

Table 4-24: Descriptive statistics for largest employment sectors in Lyon Co., KY

| Description | Jobs | Job Income | Economic Output |
|---|---|---|---|
| Employment and payroll of state government, non-education | 513 | $29,579,571 | $34,625,004 |
| Full-service restaurants | 181 | $3,056,359 | $7,318,619 |
| Other financial investment activates | 172 | $153,982 | $19,506,498 |
| Nursing and community care facilities | 159 | $4,619,745 | $9,402,202 |
| Employment and payroll of local government, education | 157 | $6,821,364 | $7,980,588 |
| Real estate | 134 | $341,117 | $9,241,412 |
| Employment and payroll of local government, non-education | 126 | $5,778,978 | $6,770,689 |
| Limited-service restaurants | 117 | $1,866,056 | $8,043,439 |
| Offices of physicians | 85 | $2,873,889 | $6,772,237 |
| All other crop farming | 67 | $176,330 | $1,339,766 |

The twelve economic impact sectors (and the categories) used in this study are as follows: lodging (499), concessions (503), restaurants (502), gas station (402), grocery (400), gas (402), entry (494), parking (512), park rental (494), retail (405), entertainment (496), and services (512). For Venture River, the services sector was placed in category 512: other personal services. Typically, the service sector would be placed in category 509: personal care services; however, this was not an option within the IMPLAN model. The largest expenditure amongst participants at Venture River Waterpark came from entry with an estimated $17.48 spent per person. Concession with an estimated $9.32 per person proved to be the second largest expenditure. Lodging ($7.98), restaurant ($7.93), and retail ($7.00) followed them. Overall, each participant spent an estimated total of $64.85 in Lyon County, Kentucky, because of Venture River Waterpark. Table 4-25

shows the impact sectors, categories, and the average estimated economic expenditures per participant.

Table 4-25: Economic activity per participant in Lyon County, KY

| Sector | Category | Average Sales Per Participant (during visit) |
|---|---|---|
| Lodging | 499 | $7.98 |
| Concessions | 503 | $9.32 |
| Restaurant | 502 | $7.93 |
| Gas Station | 402 | $1.70 |
| Grocery | 400 | $3.43 |
| Gas | 402 | $6.24 |
| Entry | 494 | $17.48 |
| Parking | 512 | $0.19 |
| Park Rental | 494 | $1.58 |
| Retail | 405 | $7.00 |
| Entertainment | 496 | $1.39 |
| Services | 512 | $0.61 |

Based on the estimated 2016 attendance of 95,500 visitors, Venture River Waterpark contributes approximately $3,472,160 to Lyon County's economy because of being located within the region. Venture River Waterpark generated an estimated direct economic effect of $2,872,447. Venture River Waterpark contributes an estimated indirect economic effect of $298,186. Lastly, Venture River Waterpark contributes an estimated induced economic effect of $301,527 to the local region. Venture River Waterpark impacts the local job market directly by producing an estimated 55 jobs and another 6 jobs either indirectly or induced. Table 4-26 shows the details of the economic impact summary.

Table 4-26: Economic impact summary for Lyon County, KY

| Total Impact | Employment | Labor Income | Value Added | Output |
|---|---|---|---|---|
| Direct Effect | 55.02 | $854,754 | $1,621,942 | $2,872,447 |
| Indirect Effect | 3.43 | $84,631 | $123,718 | $298,186 |
| Induced Effect | 2.81 | $63,924 | $150,353 | $301,527 |
| Total Effect | 61.27 | $1,003,309 | $1,896,014 | $3,472,160 |

Venture River Waterpark impacts local, state, and federal taxes. This is done by means of employee compensation, proprietor income, tax on production and imports, households, and corporations. It is estimated that it impacts the local and state economy by producing an estimated $516,506 in taxes. It produces an estimated $250,758 in taxes at the federal level. Table 4-27 shows the breakdown of the estimated taxation.

Table 4-27: Taxation for Lyon County, KY

| Impact Type | Local & State Taxes | Federal Taxes |
|---|---|---|
| Employee Compensation | $6,876 | $129,729 |
| Property Income | $0.00 | $2,288 |
| Tax on Production & Imports | $488,152 | $54,028 |
| Households | $17,660 | $41,966 |
| Corporations | $3,818 | $22,747 |
| Total | $516,506 | $250,758 |

Once again, it is important to remember these figures are solely an estimate of the economic impact Venture River Waterpark has on the region of Lyon County, Kentucky. As previously stated, services would be coded in the category 509: personal care services; however, this was not an option for this study using the IMPLAN model.

**Juniper Hill Aquatic Center's Economic Impact Study**

The economic indicators for this study region are in Table 4-28. Juniper Hill Aquatic Center resides in Franklin County, Kentucky, which consists of a land area of 211 square miles with a population of 50,375. Of the 21,568 households, household income averages $92,831. The region's Gross Regional Product (GRP) exceeds $3.02

billion dollars. The study region's largest contributor to the GRP consists of approximately $1.8 billion in employee compensation. The remainder of GRP consists of over $83.3 million in property income, $765.5 million in other properties (such as rentals and various interests), with over $352.5 million in taxes on production and imports. The total of all wages across all sources within Franklin County, Kentucky reflect a total personal income for this region of $2 billion. The 191 industries across the region produce approximately 38,353 jobs. The region's Shannon-Weaver Diversity Index Score is 0.626.

Table 4-28: Economic indicator summary of Franklin County, KY

| Indicator | Value |
|---|---|
| Gross Regional Product | $3,022,332,448 |
| Total Personal Income | $2,002,145,536 |
| Total Employment | 38,353 |
| Number of Industries | 191 |
| Land Area (Square Miles) | 211 |
| Population | 50,375 |
| Total Households | 21,568 |
| Average Household Income | $92,831 |
| Shannon-Weaver Diversity Index | 0.62662 |

Employment and payroll of state government (non-education), limited-service restaurants (fast food restaurants), employment and payroll of local government (education), employment services, full-service restaurants (dine-in restaurants), employment and payroll of local government (non-education), real estate, services to buildings, retail-general merchandise stores, and motor vehicle steering, suspension component (except spring), and brake systems manufacturing compile the region's top

employers . Table 4-29 list the top industries in the study region; as well as, the number of jobs, job income, and the economic output associated with each industry.

Table 4-29: Descriptive statistics for largest employment sectors in Franklin County, KY

| Description | Jobs | Job Income | Economic Output |
|---|---|---|---|
| Employment and payroll of state government, non-education | 9,460 | $688,260,620 | $805,658,325 |
| Limited-service restaurants | 1,277 | $20,750,337 | $88,130,035 |
| Employment and payroll of local government, education | 1,228 | $73,750,893 | $86,284,142 |
| Employment services | 1,217 | $36,461,849 | $68,983,147 |
| Full-service restaurants | 1,010 | $18,251,747 | $42,024,445 |
| Employment and payroll of local government, non-education | 856 | $49,626,072 | $58,142,239 |
| Real estate | 832 | $7,108,585 | $111,284,943 |
| Services to buildings | 747 | $11,648,082 | $23,943,031 |
| Retail-general merchandise | 684 | $16,593,921 | $43,636,654 |
| Motor vehicle steering, suspension component (except spring), and brake systems manufacturing | 678 | $39,883,511 | $322,708,923 |

Lodging (499), concessions (503), restaurants (502), gas station (402), grocery (400), gas (402), entry (533), parking (512), park rental (533), retail (405), entertainment (496), and services (509) make up the twelve economic impact sectors (and the categories) used in this study. For Juniper Hill Aquatic Center, entry and park rental sectors were placed in the category 533: employment and payroll of local government (non-education) since it is solely owned and operated by the city local government. Typically, for amusement parks and waterparks, the entry and park rental sectors would be placed in category 494: amusement parks and arcades; however, this was not an option

within the IMPLAN model. Therefore, it is believed that the needed information for this region is nested within the category 533. The largest expenditure amongst participants at Juniper Hill Aquatic Center was entry with an estimated $3.99 spent per person. Gas with an estimated $3.63 resulted in the second largest expenditure. Concessions ($3.58), restaurants ($3.51), and grocery ($3.03) followed in that order. Overall, each participant spent an estimated total of $21.11 in Franklin County, Kentucky, because of Juniper Hill Aquatic Center. Table 4-30 shows the impact sectors, categories, and the average estimated economic expenditures per participant.

Table 4-30: Economic activity per participant in Franklin County, KY

| Sector | Category | Average Sales Per Participant (during visit) |
|---|---|---|
| Lodging | 499 | $0.56 |
| Concessions | 503 | $3.85 |
| Restaurant | 502 | $3.51 |
| Gas Station | 402 | $0.80 |
| Grocery | 400 | $3.03 |
| Gas | 402 | $3.63 |
| Entry | 533 | $3.99 |
| Parking | 512 | $0.06 |
| Park Rental | 533 | $0.06 |
| Retail | 405 | $1.25 |
| Entertainment | 496 | $0.37 |
| Services | 509 | $0.27 |

Based on the 2016 attendance of 58,436 visitors to Juniper Hill Aquatic Center, the Aquatic Center contributes approximately $982,892 to Franklin County's economy because of being located within the region. Juniper Hill Aquatic Center generates an estimated direct economic effect of $717,806. Also, Juniper Hill Aquatic Center contributes an estimated indirect economic effect of $84,095. Lastly, Juniper Hill Aquatic Center contributes an estimated induced economic effect of $180,991 to the local

region. Juniper Hill Aquatic Center impacts the local job market directly by producing an estimated 12 jobs and another 2 jobs either indirectly or induced. Table 4-31 shows the details of the economic impact summary.

Table 4-31: Economic impact summary for Franklin County, KY

| Total Impact | Employment | Labor Income | Value Added | Output |
|---|---|---|---|---|
| Direct Effect | 12.48 | $447,377 | $506,730 | $717,806 |
| Indirect Effect | 0.67 | $24,892 | $45,446 | $84,095 |
| Induced Effect | 1.63 | $54,343 | $100,529 | $180,991 |
| Total Effect | 14.78 | $526,612 | $652,705 | $982,892 |

Juniper Hill Aquatic Center impacts local, state, and federal taxes. This is done by examining employee compensation, proprietor income, tax on production and imports, households, and corporations. The Aquatic Center produces an estimated $110,044 in taxes which impacts the local and state economy. It produces an estimated $282,186 in taxes at the federal level. Table 4-32 shows the breakdown of the estimated taxation.

Table 4-32: Taxation for Franklin County, KY

| Impact Type | Local & State Taxes | Federal Taxes |
|---|---|---|
| Employee Compensation | $3,728 | $52,088 |
| Property Income | $0.00 | $1,158 |
| Tax on Production & Imports | $31,615 | $10,993 |
| Households | $10,435 | $19,372 |
| Corporations | $1,264 | $6,580 |
| Total | $47,042 | $90,191 |

Once again, it is important to remember these figures are solely an estimate of the economic impact Juniper Hill Aquatic Center has on the region of Franklin County, Kentucky. Juniper Hill Aquatic Center is owned and operated completely by the local municipality which may distort some of the findings. As previously stated, a waterpark would be coded in the category 494: amusement parks and arcades; however, this was not an option for this study using the IMPLAN model.

**Paradise Cove Aquatic Center's Economic Impact Study**

The economic indicators for this study region are in Table 4-33. Paradise Cove Aquatic Center resides in Madison County, Kentucky, which consists of a land area of 441 square miles with a population of 87,824. Also, a total of 35,581 households average a household income of $81,836. The region's Gross Regional Product (GRP) amounts to over $2.9 billion dollars. The study region's largest contributors to the GRP consist of approximately $1.7 billion in employee compensation. The remainder of GRP consists of over $152 million in property income, $881.7 million in other properties (such as rentals and various interests), plus over $174.5 million in taxes on production and imports. The total personal income for this region is $2.9 billion which is the total of wages across all sources within Madison County, Kentucky. The 202 industries across the region produce approximately 45,911 jobs. The region's Shannon-Weaver Diversity Index Score is 0.684.

Table 4-33: Economic indicator summary of Madison County, KY

| Indicator | Value |
|---|---|
| Gross Regional Product | $2,946,536,402 |
| Total Personal Income | $2,911,807,488 |
| Total Employment | 45,911 |
| Number of Industries | 202 |
| Land Area (Square Miles) | 441 |
| Population | 87,824 |
| Total Households | 35,581 |
| Average Household Income | $81,836 |
| Shannon-Weaver Diversity Index | 0.68478 |

Employment and payroll of state government (education), employment services, employment and payroll of local government (education), limited-service restaurants (fast food restaurants), full-service restaurants (dine-in restaurants), retail-general merchandise stores, real estate, motor vehicle steering, suspension component, (except spring), and break systems manufacturing, junior colleges, colleges, university, and professional schools, and employment and payroll of federal government (non-military) are the region's top employers. Table 4-34 lists the top industries in the study region; as well as, the number of jobs, job income, and the economic output associated with each industry.

Table 4-34: Descriptive statistics for largest employment sectors in Madison Co., KY

| Description | Jobs | Job Income | Economic Output |
|---|---|---|---|
| Employment and payroll of state government, education | 4,218 | $213,518,265 | $249,424,591 |
| Employee services | 3,293 | $68,528,314 | $145,995,392 |
| Employment and payroll of local government, education | 1,771 | $100,143,410 | $117,161,804 |
| Limited-service restaurants | 1,701 | $26,570,812 | $114,949,326 |
| Full-service restaurants | 1,506 | $25,506,827 | $61,074,791 |
| Retail- general merchandise stores | 1,338 | $33,267,082 | $86,446,136 |
| Real estate | 1,283 | $9,529,801 | $158,427,917 |
| Motor vehicle steering, suspension component (except springs), and brake systems manufacturing | 1,122 | $84,837,316 | $560,447,815 |
| Junior colleges, colleges, universities, and professional schools | 937 | $46,199,906 | $94,055,252 |
| Employment and payroll of federal government, non-military | 924 | $85,506,592 | $117,462,906 |

Lodging (499), concessions (503), restaurants (502), gas station (402), grocery (400), gas (402), entry (494), parking (512), park rental (494), retail (405), entertainment (496), and services (509) are the twelve economic impact sectors (and the categories) used in this study. The largest expenditure amongst participants at Paradise Cove Aquatic Center was restaurants with an estimated $5.24 spent per person. The second largest expenditure was grocery with an estimated $4.79 per person. Those were followed by gas ($4.45), concession ($4.27), as well as, entry ($4.23). Overall, each participant spent an estimated total of $29.47 in Madison County, Kentucky, because of Paradise Cove Aquatic Center. Table 4-35 shows the impact sectors, categories, and the average estimated economic expenditures per participant.

Table 4-35: Economic activity per participant in Madison County, KY

| Sector | Category | Average Sales Per Participant (during visit) |
|---|---|---|
| Lodging | 499 | $0.55 |
| Concessions | 503 | $4.27 |
| Restaurant | 502 | $5.24 |
| Gas Station | 402 | $1.39 |
| Grocery | 400 | $4.79 |
| Gas | 402 | $4.45 |
| Entry | 494 | $4.23 |
| Parking | 512 | $0.11 |
| Park Rental | 494 | $0.00 |
| Retail | 405 | $2.04 |
| Entertainment | 496 | $1.49 |
| Services | 509 | $0.91 |

Based on the 2016 attendance of 56,699 visitors to Paradise Cove Aquatic Center, it is estimated that Paradise Cove Aquatic Center contributes approximately $1,070,505 to Madison County's economy because of being located within the region. Paradise Cove Aquatic Center has an estimated direct economic effect of $763,819. Paradise

Cove Aquatic Center contributes an estimated indirect economic effect of $127,726. Lastly, Paradise Cove Aquatic Center contributes an estimated induced economic effect of $178,959 to the local region. Paradise Cove Aquatic Center impacts the local job market directly by producing an estimated 16 jobs and another 2 jobs either indirectly or induced. Table 4-36 shows the details of the economic impact summary.

Table 4-36: Economic impact summary for Madison County, KY

| Total Impact | Employment | Labor Income | Value Added | Output |
|---|---|---|---|---|
| Direct Effect | 16.74 | $315,113 | $385,889 | $763,819 |
| Indirect Effect | 1.23 | $35,499 | $63,888 | $127,726 |
| Induced Effect | 1.71 | $51,679 | $97,118 | $178,959 |
| Total Effect | 19.68 | $402,290 | $546,895 | $1,070,505 |

Paradise Cove Aquatic Center impacts local, state, and federal taxes. This is done by examining employee compensation, proprietor income, tax on production and imports, households, along with corporations. It is estimated that it impacts the local and state economy by producing an estimated $110,044 in taxes. At a federal level, it produces an estimated $282,186 in taxes. Table 4-37 shows the breakdown of the estimated taxation. Once again, it is important to remember these figures are solely an estimate of the economic impact Paradise Cove Aquatic Center has on the region of Madison County, Kentucky.

Table 4-37: Taxation for Madison County, KY

| Impact Type | Local & State Taxes | Federal Taxes |
|---|---|---|
| Employee Compensation | $1,218 | $41,653 |
| Property Income | $0.00 | $2,129 |
| Tax on Production & Imports | $70,414 | $8,273 |
| Households | $10,608 | $20,943 |
| Corporations | $1,075 | $5,195 |
| Total | $83,315 | $78,193 |

**Tie Breaker Family Aquatic Center's Economic Impact Study**

The economic indicators for this study region are in Table 4-38. Tie Breaker Family Aquatic Center resides in Christian County, Kentucky, which consists of a land area of 721 square miles with a population of 73,309. A total of 27,433 households have an average household income of $99,814. The region's Gross Regional Product (GRP) is over $6.09 billion dollars. The study region's largest contributors to the GRP consist of approximately $4.6 billion in employee compensation. The remainder of GRP consists of over $148.8 million in proprietor income, $1.04 billion in other properties (such as rentals and various interests), plus over $228 million in taxes on production and imports. The total personal income for this region is $2.7 billion which is the total of wages across all sources within Christian County, Kentucky. The 217 industries across the region produce approximately 71,636 jobs. The region's Shannon-Weaver Diversity Index Score is 0.507.

Table 4-38: Economic indicator summary of Christian County, KY

| Indicator | Value |
|---|---|
| Gross Regional Product | $6,095,430,609 |
| Total Personal Income | $2,738,238,720 |
| Total Employment | 71,636 |
| Number of Industries | 217 |
| Land Area (Square Miles) | 721 |
| Population | 73,309 |
| Total Households | 27,433 |
| Average Household Income | $99,814 |
| Shannon-Weaver Diversity Index | 0.50742 |

The region's top employers are as follows: employment and payroll of federal government (military), employment and payroll of federal government (non-military), employment services, limited-service restaurants (fast food restaurants), employment and payroll of local government (education), scientific research and development services, wholesale trade, other federal government enterprises, hospitals, and warehousing and storage. Table 4-39 lists the top industries in the study region; as well as, the number of jobs, job income, and the economic output associated with each industry.

Table 4-39: Descriptive statistics for largest employment sectors in Christian Co., KY

| Description | Jobs | Job Income | Economic Output |
|---|---|---|---|
| Employment and payroll of federal government, military | 31,759 | $2,958,536,621 | $3,018,296,143 |
| Employment and payroll of federal government, non-military | 2,803 | $222,541,092 | $305,711,212 |
| Employment services | 2,103 | $51,528,933 | $103,674,995 |
| Limited-service restaurants | 1,439 | $21,161,997 | $94,534,782 |
| Employment and payroll of local government (education) | 1,263 | $68,975,639 | $80,697,380 |
| Scientific research and development services | 1,199 | $103,918,151 | $299,046,234 |
| Wholesale trade | 1,175 | $61,070,001 | $252,288,651 |
| Other federal government enterprises | 989 | $25,250,179 | $172,695,572 |
| Hospitals | 988 | $63,537,626 | $133,055,801 |
| Warehousing and storage | 965 | $57,683,348 | $109,791,130 |

The twelve economic impact sectors (and the categories) used in this study follow: lodging (499), concessions (503), restaurants (502), gas station (402), grocery (400), gas (402), entry (494), parking (512), park rental (494), retail (405), entertainment (496), and services (509). The largest expenditure amongst participants at Tie Breaker

Family Aquatic Center was concessions with an estimated $6.06 spent per person. The second largest expenditure was entry with an estimated $5.95 per person. Those were followed by gas ($4.32), restaurant ($2.92), and grocery ($1.66). Overall, each participant spent an estimated total of $24.42 in Christian County, Kentucky, because of Tie Breaker Family Aquatic Center. Table 4-40 shows the impact sectors, categories, plus the average estimated economic expenditures per participant.

Table 4-40: Economic activity per participant in Christian County, KY

| Sector | Category | Average Sales Per Participant (during visit) |
|---|---|---|
| Lodging | 499 | $0.59 |
| Concessions | 503 | $6.06 |
| Restaurant | 502 | $2.92 |
| Gas Station | 402 | $1.02 |
| Grocery | 400 | $1.66 |
| Gas | 402 | $4.32 |
| Entry | 494 | $5.95 |
| Parking | 512 | $0.00 |
| Park Rental | 494 | $0.43 |
| Retail | 405 | $0.11 |
| Entertainment | 496 | $1.34 |
| Services | 509 | $0.02 |

Based on the 2016 attendance of 46,843 visitors, Tie Breaker Family Aquatic Center contributed approximately $485,031 to Christian County's economy because of being located within the region. Tie Breaker Family Aquatic Center has an estimated direct economic effect of $383,582. Tie Breaker Family Aquatic Center contributes an estimated indirect economic effect of $62,256. Lastly, Tie Breaker Family Aquatic Center contributes an estimated induced economic effect of $39,193 to the local region. Tie Breaker Family Aquatic Center also impacts the local job market by producing an

estimated total of 8 jobs, of which 7 are due to a direct effect. Table 4-41shows details of the economic impact summary.

Table 4-41: Economic impact summary for Christian County, KY

| Total Impact | Employment | Labor Income | Value Added | Output |
|---|---|---|---|---|
| Direct Effect | 7.90 | $185,128 | $205,725 | $383,582 |
| Indirect Effect | 0.45 | $15,716 | $35,717 | $62,256 |
| Induced Effect | 0.32 | $11,614 | $21,212 | $39,193 |
| Total Effect | 8.67 | $212,458 | $262,655 | $485,031 |

Tie Breaker Family Aquatic Center impacts local, state, and federal taxes. This is shown by examining employee compensation, proprietor income, tax on production and imports, households, as well as, corporations. It is estimated that it impacts the local and state economy by producing an estimated $29,584 in taxes. At a federal level, it produces an estimated $33,025 in taxes. Table 4-42 shows the breakdown of the estimated taxation. Once again, it is important to remember these figures are solely an estimate of the economic impact Tie Breaker Family Aquatic Center has on the region of Christian County, Kentucky.

Table 4-42: Taxation for Christian County, KY

| Impact Type | Local & State Taxes | Federal Taxes |
|---|---|---|
| Employee Compensation | $107 | $19,442 |
| Property Income | $0.00 | $1,029 |
| Tax on Production & Imports | $26,743 | $5,714 |
| Households | $2,472 | $5,442 |
| Corporations | $262 | $1,398 |
| Total | $29,584 | $33,025 |

**Waterparks located in Kentucky and Attendance**

To estimate the economic impact waterparks have on Kentucky's economy, an internet search was performed to locate aquatic facilities that meet the definition of a waterpark as defined by this study. For this study, a waterpark is considered any facility

that has four or more attractions considered essential to a waterpark. Through the internet search, the researcher concluded a total of 13 waterparks across Kentucky met this definition. Of the 13 waterparks, five were original research sites used to find the estimated amount spent per person that visit waterparks. Each of the survey facilities provided the total attendance of their park for the 2016 season. To determine the attendance for the remaining eight waterparks that were identified from an internet search, the researcher attempted to contact each facility either by email, phone, or both. While some of the remaining eight facilities did provide the total attendance for the 2016 season, others would not for some unknown reason(s).

To estimate the attendance of the waterparks where the attendance is unknown, the average attendance to population for the five research facilities was calculated. Those five research facilities included Venture River Waterpark, SomerSplash Waterpark, Tie Breaker Family Aquatic Center, Juniper Hill Aquatic Center, and Paradise Cover Aquatic Center. The percentage of attendance to population for each park is in Table 4-43. After finding the ratio of attendance to population for the five research facilities, the researcher determined that Venture River Waterpark (1149.77%) was an outlier; therefore, it was omitted from the average ratio of attendance to population.

Table 4-43: Percentage of attendance to population from known waterparks in KY

| Waterpark | Park Attendance | County | County Population | Percent Attendance |
|---|---|---|---|---|
| Venture River Waterpark | 95,500 | Lyon | 8,306 | 1149.77% |
| SomerSplash Waterpark | 73,490 | Pulaski | 63,782 | 115.22% |
| Juniper Hill Aquatic Center | 58,436 | Franklin | 50,375 | 116.00% |
| Tie Breaker Family Aquatic Center | 46,843 | Christian | 73,309 | 63.90% |
| Paradise Cove Aquatic Center | 56,699 | Madison | 87,824 | 64.56% |

Since Venture River Waterpark is considered an outlier, the four remaining research facilities were divided into two categories: large waterparks and small waterparks. The research facilities that contain five or more attractions were placed in the large waterpark category, those being SomerSplash Waterpark and Juniper Hill Aquatic Center. Then, the waterparks consisting of four aquatic attractions were placed into the small waterpark category which included Tie Breaker Family Aquatic Center and Paradise Cove Aquatic Center. The average ratio of park attendance to population was then calculated for each group. For the large waterpark category, the average percentage of attendance to population was 115.6%, while the small waterparks average percentage of attendance to population was 63.3%. Tables 4-44 and 4-45 show the percentage of attendance to population for each category.

Table 4-44: Large waterpark category and average attendance to population

| Waterpark | Park Attendance | County Population (KY) | Percent Attendance |
|---|---|---|---|
| SomerSplash Waterpark | 73,490 | 63,782 | 115.22% |
| Juniper Hill Aquatic Center | 58,436 | 50,375 | 116.00% |
| Total | 131,926 | 114,157 | 115.6% |

Table 4-45: Small waterpark category and average attendance to population

| Waterpark | Park Attendance | County Population (KY) | Percent Attendance |
|---|---|---|---|
| Tie Breaker Family Aquatic Center | 46,843 | 73,309 | 63.90% |
| Paradise Cove Aquatic Center | 56,699 | 87,824 | 64.56% |
| Total | 103,542 | 161,133 | 64.3% |

To determine the liability of using the average percentage of attendance to population for unknown waterpark attendance, the percent error was calculated for each research facility in both categories. The formula used to determine the percent error is:

(Population x Percent Attendance) – Actual Attendance= Total Error

Total Error/Actual Attendance= Percent Error

The percent error for both SomerSplash Waterpark and Juniper Hill Aquatic Center was 0.3%. The percent error for Tie Breaker Family Aquatic Center was 0.4% and Paradise Cove Aquatic Center was 0.1%. Therefore, with the percent error being below the acceptable 5% for each waterpark with known attendance, the 115.6% was used for large waterparks, and 64.3% was used for small waterparks when determining the estimated attendance for facilities with an unknown attendance. Table 4-46 shows the actual percent error for each waterpark with known attendance.

Table 4-46: Percent error of attendance to population from known waterparks

| Waterpark | Park Attendance | County Population | Average Percent Attendance | Percent Error |
|---|---|---|---|---|
| SomerSplash Waterpark | 73,490 | 63,782 | 115.6% | 0.3% |
| Juniper Hill Aquatic Center | 58,436 | 50,375 | 115.6% | 0.3% |
| Tie Breaker Family Aquatic Center | 46,843 | 73,309 | 64.3% | 0.4% |
| Paradise Cove Aquatic Center | 56,699 | 87,824 | 64.3% | 0.1% |

When performing the internet search, the following waterparks located in Kentucky where determined to have four or more aquatic attractions and would be considered a waterpark by definition: Silverlake Waterpark (Kenton County), Leitchfield Aquatic Center (Grayson County), American Legion Waterpark (Hardin County), Fort Knox Waterpark (Hardin County), Nicholasville/Jessamine County Aquatic Park (Jessamine County), Russell Sims Aquatic Center (Warren County), Barbourville Waterpark (Knox County), and Kentucky Splash Waterpark (Whitley County). These eight waterparks along with the other five research facilities will be used to calculate the estimated economic impact waterparks have overall on Kentucky's economy. Table 4-47 shows the estimated attendance for waterparks where attendance is unknown. Table 4-48 shows the total attendance at waterparks where attendance is known.

Table 4-47: Estimated attendance for unknown waterpark attendance

| Waterpark | County (KY) | Population | Average Percent Attendance | Estimated Attendance |
|---|---|---|---|---|
| Nicholasville/Jessamine Co. Aquatic Park | Jessamine | 51,961 | .643 | 33,410 |
| Kentucky Splash Waterpark | Whitley | 36,129 | 1.156 | 41,765 |
| Barbourville Waterpark | Knox | 31,730 | 1.156 | 36,680 |
| Silverlake Waterpark | Kenton | 165,012 | 1.156 | 190,754 |
| Fort Knox Waterpark | Hardin | 106,429 | .643 | 68,434 |
| Leitchfield Aquatic Center | Grayson | 26,221 | 1.156 | 30,311 |

Table 4-48: Attendance at known waterparks

| Waterpark | County (KY) | Population | Attendance |
|---|---|---|---|
| Venture River Waterpark | Lyon | 8,306 | 95,500 |
| SomerSplash Waterpark | Pulaski | 63,782 | 73,490 |
| Tie Breaker Family Aquatic Center | Christian | 73,309 | 46,843 |
| Juniper Hill Aquatic Center | Franklin | 50,375 | 58,436 |
| Paradise Cove Aquatic Center | Madison | 87,824 | 56,699 |
| American Legion Waterpark | Hardin | 106,439 | 30,310 |
| Russell Sims Aquatic Center | Warren | 48,963 | 91,384 |

For estimated total attendance to waterparks in Kentucky, the total estimated attendance was added to the total known attendance for an estimated total attendance to waterparks located in Kentucky. Table 4-49 shows the estimated total attendance for waterparks located in Kentucky. This estimated total attendance will be used in developing the estimated economic impact waterparks have on Kentucky's economy.

Table 4-49: Total estimated attendance for waterparks in Kentucky

| | |
|---|---|
| Waterparks with unknown attendance (estimated) | 401,354 |
| Waterparks with known attendance | 452,662 |
| Total Attendance (estimated) | 854,016 |

**Economic Impact of Waterparks on Kentucky Study**

The economic indicators for this study include 12 regions that are located in Table 4-50. The waterparks within this study are in the following counties: Pulaski, Lyon, Franklin, Madison, Christian, Warren, Jessamine, Kenton, Knox, Grayson, Hardin, and Whitley. The study area consists of a land area of 5,091 square miles, a population of 823,939, with a total of 324,623 households having an average household income of $97,386. The region's Gross Regional Product (GRP) is over $37.1 billion dollars. The study region has two large contributors to the GRP, consisting of approximately $22.65 billion in employee compensation and an approximately $10.4 billion in other property type income (such as rentals and various interests). The remainder of GRP consists of over $2.22 billion in taxes on production and imports, as well as over $1.87 billion in proprietor income. The total personal income for this region is $31.6 billion which is the total of wages across all sources within these 12 counties located in Kentucky. The 369 industries across the 12 regions produce approximately 483,671 jobs. The region's Shannon-Weaver Diversity Index Score is 0.736.

Table 4-50: Economic indicator summary for Kentucky's waterparks

| Indicator | Value |
|---|---|
| Gross Regional Product | $37,193,802,956 |
| Total Personal Income | $31,613,702,976 |
| Total Employment | 483,671 |
| Number of Industries | 369 |
| Land Area (Square Miles) | 5,091 |
| Population | 823,939 |
| Total Households | 324,623 |
| Average Household Income | $97,386 |
| Shannon-Weaver Diversity Index | 0.73642 |

The regions' top employers are: employment and payroll of federal government (military), employment and payroll of local government (education), limited-service restaurants (fast food restaurants), full-service restaurants (dine-in restaurants), employment and payroll of federal government (non-military), employment and payroll of state government (education), employment and payroll of state government (non-education), employment services, hospitals, real estate. Table 4-51 lists the top industries in the study region, as well as the number of jobs, job income, and the economic output associated with each industry.

Table 4-51: Descriptive statistics for largest employment sectors in the 12 study areas

| Description | Jobs | Job Income | Economic Output |
|---|---|---|---|
| Employment and payroll of federal government (military) | 41,216 | $3,812,463,135 | $3,889,470,947 |
| Employment and payroll of local government (education) | 18,720 | $1,077,577,759 | $1,260,701,538 |
| Limited-service restaurants | 16,142 | $279,318,279 | $1,125,179,443 |
| Full-service restaurants | 13,252 | $266,209,480 | $577,904,480 |
| Employment and payroll of federal government (non-military) | 13,135 | $1,145,024,780 | $1,572,954,102 |
| Employment and payroll of state government (education) | 12,833 | $620,976,563 | $725,403,198 |
| Employment and payroll of state government (non-education) | 12,786 | $888,867,249 | $1,040,482,788 |
| Employment services | 12,695 | $326,430,332 | $647,540,771 |
| Hospitals | 12,609 | $807,413,927 | $1,696,714,600 |
| Real estate | 12,016 | $152,959,900 | $2,099,650,146 |

Lodging (499), concessions (503), restaurants (502), gas station (402), grocery (400), gas (402), entry (533, 494), parking (512), park rental (533, 533), retail (405), entertainment (496), and services (509, 512) make up the twelve economic impact sectors (and the categories) used in this study. For this model, the estimated amounts for each sector pertaining to entry, park rental, and services will be divided amongst the two categories with each of these sectors. For entry and park rental sectors, the estimated amount will be placed in category 533: employment and payroll of local government (non-education) and in category 494: amusement parks and arcades since some waterparks are solely owned and operated by the local city or government, whereas others are partially operated or owned by private investors. Therefore, it is believed that

some of the needed information for these sectors is nested within both categories 533 and 494. The estimated amount for the services category will be divided into categories 509 and 512. This is due to some areas not having the same types of services as other areas; therefore, the IMPLAN Model software is unable to calculate services in some areas.

The largest expenditure amongst participants was entry with an estimated $8.65 ($4.33 in sector 533 and 494) spent per person. The second largest expenditure was restaurants with an estimated $5.96 per person. Those were followed by concessions ($5.61), gas ($4.85), and grocery ($3.48). Overall, each participant spent an estimated total of $37.36 in these areas where waterparks are in Kentucky. Table 4-52 shows the impact sectors and categories, in addition to the average estimated economic expenditures per participant.

Based on the estimated 2016 attendance of 854,016 visitors to stand alone outdoor waterparks located in Kentucky, it is estimated that waterparks contribute approximately $23,269,297 to Kentucky's economy because of being located within the 12 study regions. Waterparks have an estimated direct economic effect of $16,003,749. Waterparks contribute an estimated indirect economic effect of $2,450,356. Lastly, waterparks contribute an estimated induced economic effect of $4,815,192 to Kentucky. Waterparks impact Kentucky's job market directly by producing an estimated 285 jobs and another 56 jobs either indirectly or induced. Table 4-53 shows the details of the economic impact summary.

Table 4-52: Economic activity per participant in 13 waterparks in KY

| Sector | Category | Average Sales Per Participant (during visit) |
|---|---|---|
| Lodging | 499 | $2.44 |
| Concessions | 503 | $5.61 |
| Restaurant | 502 | $5.96 |
| Gas Station | 402 | $1.27 |
| Grocery | 400 | $3.48 |
| Gas | 402 | $4.85 |
| Entry | | $8.66 |
| | 533 | $4.33 |
| | 494 | $4.33 |
| Parking | 512 | $0.10 |
| Park Rental | | $0.48 |
| | 533 | $0.24 |
| | 494 | $0.24 |
| Retail | 405 | $2.82 |
| Entertainment | 496 | $1.32 |
| Services | | $0.38 |
| | 509 | $.19 |
| | 512 | $0.19 |

Table 4-53: Economic impact summary of effects of waterparks on KY

| Total Impact | Employment | Labor Income | Value Added | Output |
|---|---|---|---|---|
| Direct Effect | 285.47 | $8,776,729 | $10,685,271 | $16,003,749 |
| Indirect Effect | 17.79 | $747,877 | $1,355,671 | $2,450,356 |
| Induced Effect | 40.74 | $1,502,480 | $2,706,908 | $4,815,192 |
| Total Effect | 344.00 | $11,027,086 | $14,747,850 | $23,269,297 |

Waterparks have an impact on local, state, as well as federal taxes. This is done by examining employee compensation, proprietor income, tax on production and imports, households, together with corporations. It is estimated that waterparks impact the local and state by producing an estimated $1,381,150 in taxes. At a federal level, it produces an estimated $2,072,643 in taxes. Table 4-54 shows the breakdown of the estimated taxation.

Table 4-54: Taxation for the state of KY

| Impact Type | Local & State Taxes | Federal Taxes |
|---|---|---|
| Employee Compensation | $21,708 | $1,090,348 |
| Property Income | $0.00 | $63,384 |
| Tax on Production & Imports | $1,048,960 | $156,999 |
| Households | $271,356 | $563,710 |
| Corporations | $39,126 | $198,202 |
| Total | $1,381,150 | $2,072,643 |

It is important to remember these figures are solely an estimate of the economic impact waterparks have on Kentucky's economy. The overall total attendance used for this study is based on an estimated attendance at six waterparks, while seven waterparks gave the actual attendance for their parks. Therefore, some of the figures may be higher or lower than the totals shown. However, this economic impact study gives an estimated impact that waterparks potentially have on Kentucky's economy.

**Summary**

In this chapter, the researcher presented the finding for stand-alone waterparks located across Kentucky. By gathering surveys at five stand-alone waterparks, the researcher presented a statistical analysis regarding the demographics of those that visit waterparks located in Kentucky, and if there were any barriers that may exist regarding their attendance. To further examine the economic impact that the waterpark industry has on local regions and Kentucky overall, the researcher utilized the IMPLAN Model software. By using the IMPLAN Model, the researcher developed an economic impact study for each of the five research facilities relating to the region in which they reside. Also, the researcher developed an economic impact study to estimate the total impact the waterpark industry has on Kentucky's economy.

# CHAPTER V

# FINDINGS, IMPLICATIONS, & CONCLUSIONS

## Introduction

This chapter provides a summary of the study, findings from the data collected, implications, and future studies. The summary provides an overview of the entire study. The researcher will explain, as well as, discuss the findings from the data collected. Lastly, the researcher will discuss the implications of the study and provide ideas for future studies based on the results and findings of this study.

## Summary of the Study

As rural communities are searching for ways to increase their local economy, several have begun to turn their attention to the tourism industry. As the tourism industry continues to grow, "the recognition of the economic benefits of tourism has led to the growth of purpose-built attractions" (Raluca & Gina, 2008, p. 636). Communities are turning to waterparks to attract tourists to these areas. This research study was designed to add to the limited amount of scholarly research that examines how waterparks affect local communities as communities continue to build these facilities in hopes of increasing the local economy.

Therefore, the researcher developed this research study to examine the economic impacts waterparks have on local and regional communities in Kentucky plus the overall economic impact on Kentucky's economy. The researcher examined the differences between the economic impacts amongst the waterparks in this study. The researcher also examined demographics of those visiting waterparks and how they may affect the economy. Lastly, the researcher wanted to identify if any barriers were associated with

waterparks by those that utilize the facilities, and, if so, what those barriers are. The researcher developed several research questions pertaining to this study which will be addressed based on the findings of the study.

**Demographic Summary**

To provide a better idea of the characteristics of the typical waterpark attendee, the researcher composed an overview of the survey responses provided by the respondents. Based on 1,018 surveys collected, most of respondents purchased a daily admission ticket at 72.3% compared to those using a season pass at 22.7%. In this study, the respondents predominantly consisted of white females between the ages of 35-44 with 49.3% of the respondents having completed either a bachelor's or advanced degree. In addition, 59.1% of respondents indicated a household income of $50,000 or more.

**Interpretation of Findings**

The first research question focused on the economic impact waterparks have on the economy. The researcher wanted to see how waterparks impacted the economy and the local job market. The researcher utilized the IMPLAN Model software to estimate the effects waterparks have on the local economy overall. In doing so, the IMPLAN Model showed that waterparks do have a positive effect on the overall economy regionally and state-wide. According to the results of this study, waterparks can have an astounding impact, not only on the economy, but also on the local job market by providing full-time employment opportunities.

According to the IMPLAN Model, SomerSplash Waterpark had an overall economic impact to the region by providing an estimated output of over $2.75 million along with an estimated 41 jobs in the region. Venture River had an economic impact of

an estimated output of over $3.47 million with an estimated 61 full-time jobs. Juniper Hill Aquatic Center impacted their local region by providing an estimated output of $982,892 and provided an estimated 14 full-time jobs. Paradise Cove Aquatic Center provided an estimated output of $1.07 million in additional to over 19 full-time jobs to the community. Lastly, Tie Breaker Family Aquatic Center had an estimated economic impact of $485,031 plus provided over 8 full-time jobs to the region. Not only do waterparks have a positive impact on local and regional economies, but they also have an astonishing impact on the state of Kentucky. By estimating the attendance from the 13 waterparks mentioned in chapter 4 from across the state, it is projected that waterparks impact Kentucky's economy by providing an overall estimated output of $23.26 million and approximately 344 full-time jobs. Therefore, the researcher concludes that waterparks do have a positive effect on the economy.

The second research question revolves around the demographics of those that attend waterparks. Do demographics play a role in the impact waterparks have on the community? The researcher concludes that the characteristics of those that visit waterparks do, in fact, impact the local economy. This is based on 59.1% of the respondents having a household income of $50,000 or more. Because of their high-income bracket, respondents would be able to spend additional money within the community at places such as restaurants, gas stations, and department stores compared to what they would spend if most respondents lived in poverty.

The third research question examines if the size of a waterpark has an impact on the local economy. According to the findings, the researcher concluded the size of a waterpark does play a vital role in the impact it provides on the local community. It

appears that larger waterparks, containing five or more attractions, do indeed have a greater impact on the local economy. Waterparks with five or more attractions usually have an average attendance to population percentage of 115.6%; whereas, small waterparks containing only four attractions typically have an average attendance to population percentage of 63.3%. In Chapter 4, Venture River Waterpark was considered an outlier due to the attendance to population being 1,149.77%. Venture River Waterpark had an attendance of 95,500 for the 2016 season; however, the local population of the Lyon County, Kentucky was only 8,306. Therefore, Venture River Waterpark has an enormous impact on the local economy and is a vital part of the region.

For the final research question, the researcher asked if there were any perceived barriers related to the waterpark industry. To determine if there were any barriers, the researcher provided a 5-point Likert Scale containing thirteen statements on the survey instrument. Respondents could answer one of the following for each statement: 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, and 5= strongly disagree. Based on the ANOVA and Tukey Post Hoc Tests, with a p-value less than 0.05, the null hypothesis was rejected and concluded there were a significant deference between means at one of the five participating waterparks. Therefore, with the exception of one park, the researcher concluded there were no perceived differences in barriers between those attending different waterparks.

**Overview of Study Questions**

Based on the findings of this research study, the researcher concludes the null hypotheses is rejected for three of the four research questions listed below:

1. How do waterparks impact the economy?

   $H_a$: Waterparks do have a positive effect on the economy.

   $H_o$: Waterparks do not have a positive effect on the economy.

2. Is the economic impact on the community related to demographics?

   $H_a$: Demographics do influence the overall economic impact waterparks have on the economy.

   $H_o$: Demographics do not influence the overall economic impact waterparks have on the economy.

3. Is there an economic difference related to the sizes of the waterpark facility?

   $H_a$: Larger waterpark facilities have a greater influence on the economy than smaller waterpark facilities.

   $H_o$: Larger waterpark facilities do not have a greater influence on the economy than smaller waterpark facilities.

4. Are there any perceived barriers related to the waterpark industry?

   $H_a$: There are differences in perceived barriers between waterparks.

   $H_o$: There are no differences in perceived barriers between waterparks.

**Implications and Future Research**

This study addresses four major questions, the first being the role waterparks play on the economy from a regional and state perspective. Also, it examined the role demographics of those attending waterparks have on the economy. This study helped to clarify whether the size of a waterpark plays a role in influencing the local economy. Finally, the study helps to identify possible barriers that may be associated with

waterparks. The researcher concluded findings regarding these issues because of this study.

The results show that waterparks can have a major role by providing an increase in revenue to a region. An excellent example of this is the estimated impact of the five waterparks in this study. The estimated effects on a region ranged from $485,000 to over $3 million, while the estimated impact on Kentucky's economy was over $23.2 million. This type of impact on an economy could be crucial to rural areas that are turning to "tourism as an alternative development strategy for economic and social regeneration" (Briedenhamn and Wickens, 2004, p. 71). This study reveals positive economic outcomes; however that is not always the case. Sometimes, waterparks close for reasons such as low attendance, not being maintained properly, or becoming a burden on the community due to the cost of maintaining the facilities. Future research should examine if the cost to maintain a waterpark is worth the economic impact it provides to the community.

The study provided valuable insight on the demographics of those attending waterparks and form of admission used to enter the park. This study showed that 72.3% of those that entered the waterpark were daily visitors, whereas 22.7% were season pass holders. Typically, locals will purchase season passes because of the ease and convenience of being able to go multiple times. With a season pass, it is usually cheaper if you attend after a certain number of visits compared to paying on each visit. Those entering a waterpark by purchasing a daily admission ticket are more likely to be visiting from outside of the local region, such as tourists, which adds additional revenue to the local economy.

The study shows most respondents in this survey were white females between the ages of 35-44. This may be misleading as to the sex of those attending waterparks due to the researcher's discovery that males would frequently ask or have the female to fill out the survey instead of them. Therefore, this could skew or influence the outcome of the actual number of males visiting waterparks. This could be examined further in future studies. The data shows that waterparks need to market to those of various races. Specifically, the data show that whites make up 91% of attendees to waterparks across Kentucky. From a marketing standpoint, this is critical because waterparks are losing additional revenue by only appealing to whites.

The data revealed that attendees are highly educated with 49.3% responding that they have completed either a bachelor's or an advanced degree. With 49.3% of the respondents having a bachelor's degree or higher, it should not be a surprise that 59.1% of respondents have a household income of $50,000 or more. This is expected as those having a higher education obtain higher waged positions than those that do not have a higher education.

This study helps to clarify if the number of attractions in a waterpark influences the attendance and the local economy. This study shows that larger waterparks, those containing at least five or more attractions, provide an attendance to population of 115.6% while smaller waterparks, or those containing at least four attractions, have an attendance to population of 64.3%. The researcher can conclude that those waterparks containing at least 5 or more attractions do appear to have a larger impact on the local community. However, communities must decide if they are going to focus on building a facility that is geared more for locals by building smaller waterparks/pools or if they are

hoping to utilize the facility to attract primarily tourists from outside their local communities by building larger waterparks with five or more attractions. If a community is building a waterpark, it is very important that they realize the costs that are associated when building, the additional cost of maintaining, and the upkeep associated with these facilities.

Lastly, the researcher hoped to identify possible barriers associated with waterparks. However, the researcher concluded that there were very limited barriers associated with those that attend waterparks based on the data from this study. Future studies should examine if there may be barriers that keep individuals from attending waterparks instead of those that already attends waterparks as this study did.

There were three implications the research noted regarding this study. First, communities can use this study when deciding what size of a waterpark they want to build. Secondly, community leaders can better decide what size of waterpark to build based on who their target market is (locals or tourist). Lastly, this study provides private business leaders who are searching for results based on research to present to local community leaders regarding the benefits waterparks could have on their communities. These were just a few implications resulting from this study.

This study could provide important information pertaining to the questions the researcher utilized. The researcher could make an educated decision based on data obtained from the surveys. It provided information pertaining to the various impacts waterparks have on local communities, demographics of those attending waterparks in Kentucky, and if there are any barriers associated with waterparks. Based on the data, the

researcher provided future thoughts for additional research studies that could be beneficial to the waterpark industry.

**Summary**

The purpose of this study was to examine the impact waterparks have on the economy of various regions in Kentucky and the state of Kentucky. Five waterparks were chosen as research sites across Kentucky with a minimum of four attractions within the facility. Those research sites included SomerSplash Waterpark, Venture River Waterpark, Juniper Hill Aquatic Center, Paradise Cove Aquatic Park, and Tie Breaker Family Aquatic Center. The researcher attempted to contact additional waterparks for the study but was unable to get replies from those additional waterparks for unknown reasons. However, the researcher obtained 1,018 surveys from participants in attendance at the participating waterparks.

The study provided the researcher with a clear picture of those attending waterparks. The study showed most people attending a waterpark are educated white females between the ages of 35-44. Also, 59.1% of the respondents had a household income of $50,000 or more. Of the 59.1%, 49.3% had a bachelor's degree or higher.

The study revealed waterparks can have a positive influence on a region and the state of Kentucky's economy. According to the economic impact studies obtained by using the IMPLAN Model software, each of the five research facilities in this study showed they have a positive impact on the communities in which they reside. Venture River Waterpark had an attendance to population percentage of 1,149.77%. Venture River had the largest impact on its community by providing an estimated impact of over

$3 million. The other four research facilities' impact on the economy ranged from $485,000 to $2.7 million.

According to this study, the overall impact on the economy may be dependent on the size of the waterpark. Waterparks that contain five or more attractions had the largest attendance to population percentages in comparison to waterparks containing at least four attractions. Often, communities should consider the cost associated with building these facilities and whether they want the waterpark to be a local or regional draw in hopes to attract tourists to the area. However, rural areas must realize positive outcomes are not always the case. Sometimes, waterparks close for reasons such as low attendance, not being maintained properly, or becoming a burden on the community due to the cost of maintaining the facilities.

The researcher concludes from the data that waterparks could help rural areas increase their local economy. This type of boost to the economy should help in revitalizing these areas that have watched their communities diminish over time by job loss, decreased employment opportunities, and even a decrease in population. However, it is important for these rural areas to build a waterpark that fits both their budget and future plans. Also, if communities continue to build waterparks, eventually, they may become over populated across the state and the economic impact communities are seeing currently may begin to decline. This possible decline could become a drain economically to the community by trying to sustain a large facility.

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# APPENDICES

# Appendix A: Research Instrument

Appendix A: Research Instrument

## Economic Impact of Waterparks on Local Communities

**First, we would like to know about you and your time spent at the waterpark during this visit.**

1. Is this waterpark your main reason for visiting this community today? O No O Yes

2. Which form of admission was used to enter the waterpark during your visit today?

O Season Pass O Daily Admission O Other (Please Specify) _____

3. Are you staying overnight on this visit? O No O Yes: How many nights? _____

4. On your current visit, how many days will you spend at this waterpark? _____ *days this visit*

5. In a typical year, how many days do you spend visiting this waterpark? _____ *days per year*

6. What is your home zip code? (If you are not a US resident, please list your home country) _____

**Next, we would like to know more about your expenditures while on your visit today at the waterpark.**

7. Please tell us how much you will spend on the following categories on this trip inside and outside waterpark. Please be as precise as possible.

| | **Amount spent *at or inside* the waterpark** | **Amount spent *outside* the waterpark but in the city limits** |
|---|---|---|
| Lodging | | |
| Food and drinks at concession stands in park | | |
| Food and drinks at restaurants | | |
| Food and drinks purchased at gas stations | | |
| Food and drinks purchased at grocery stores | | |
| Vehicle costs (such as gasoline and oil) | | |
| Entry Fees to the waterpark | | |
| Parking Fees | | |
| Fees on rentals or upgrades | | |
| Retail purchases other than food | | |
| Entertainment | | |
| Personal services (such as showers and laundry) | | |

8. *Counting yourself*, how many persons will you be paying for on this trip? _____ adults _____ children

9. Please tell us your enthusiasm for the possibility of the following future developments in the waterpark.

| | **No Interest** | **Weak Interest** | **Neutral Interest** | **Somewhat Interest** | **Strong Interest** |
|---|---|---|---|---|---|
| Family Rides | | | | | |
| Thrill Rides | | | | | |
| Tube Rides | | | | | |
| Body Slides | | | | | |
| Additional Shade Structures | | | | | |
| Additional Cabanas | | | | | |
| Additional Concession Areas | | | | | |
| Spray Pads | | | | | |
| Kiddie Play Areas | | | | | |
| Additional Seating | | | | | |

10. Below are several statements regarding your barriers to visiting waterparks. For each statement, please select the most appropriate answer.

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|---|---|---|---|---|---|
| Going to a waterpark is too physically demanding. | 1 | 2 | 3 | 4 | 5 |
| I have no one to go with me to a waterpark. | 1 | 2 | 3 | 4 | 5 |
| There is not a waterpark near me to go visit. | 1 | 2 | 3 | 4 | 5 |
| Going to a waterpark involves too much risk. | 1 | 2 | 3 | 4 | 5 |
| My family and friends are not interested in waterparks. | 1 | 2 | 3 | 4 | 5 |
| Going to a waterpark is too costly. | 1 | 2 | 3 | 4 | 5 |
| I do not like waterparks. | 1 | 2 | 3 | 4 | 5 |
| I cannot participate in aquatic activities. | 1 | 2 | 3 | 4 | 5 |
| Family commitments keep me from going to a waterpark. | 1 | 2 | 3 | 4 | 5 |
| The expense of traveling and staying overnight is too great when visiting a waterpark. | 1 | 2 | 3 | 4 | 5 |
| I do not know what to expect when visiting a waterpark. | 1 | 2 | 3 | 4 | 5 |
| I have no time to go to a waterpark. | 1 | 2 | 3 | 4 | 5 |
| I have no information about the waterpark and what they have to offer. | 1 | 2 | 3 | 4 | 5 |

**Finally, we'd like to know more about you.**

11. What is your sex? O Female O Male O Other Sex O Do not record

12. What is your age? _____

13. What is your race? O Asian O Black/African American O White
O More than one race O Some other race O Do not record

14. Which category best describes the highest educational level in your household?
O Less than high school degree or GED equivalent O Completed high school or GED, no college
O Completed some college O Completed Bachelor's degree
O Completed advanced degree (such as PhD)

15. Which category best describes your current annual household income before taxes?
O $0-$19,999 O $20,000-$29,999 O $30,000-$39,999 O $40,000-$49,999
O $50,000-$74,999 O $75,000-$99,999 O Greater than $99,999 O Do not record

**Thank you for participating in this survey. Please return your completed survey to the data collection agent and have a great time on your visit.**

2

# Economic Impact of Waterparks on Local Communities

**Consent to participate in a research study**

You are being invited to take part in a research study entitled "Waterparks' Impact on Rural Communities in Eastern Kentucky." The person in charge of this study is Stephen Sims, a PhD Candidate at Eastern Kentucky University. His email is stephen_sims3@mymail.eku.edu. Dr. Michael Bradley (dissertation chair) and Dr. James Maples (committee member) will also be working on this study. Their emails are Michael_bradley@eku.edu and James.maples@eku.edu. Results from this study will be used to help us better understand how waterparks shape economic impact in in local communities.

As a participant in this study, you will be completing a brief and anonymous survey. To the best of our knowledge, the things you will be doing have no more risk of harm than you would experience in everyday life. If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any benefits or rights you would normally have if you choose not to volunteer. You can stop at any time during the study and still keep the benefits and rights you had before volunteering. We are happy to answer any questions you may have before, during, or after the survey.

**Survey Consent:**

- o I am eighteen years old, have thoroughly read this statement, understand its contents, have been given an opportunity to have my questions answered, and agree to participate in this research project.
- o I do not wish to participate in this research project.

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**For office use:**

Date Collected: _____ Time: _____ Agent Initials: _____
Water Park Location: _____
Time: _____

Additional Notes:

3

Appendix B: Barrier statements and response ratios

Appendix B: Barrier statements and response ratios

| Going to a waterpark is too physically demanding. | Percent | N |
|---|---|---|
| Strongly Disagree | 52.3 | 530 |
| Disagree | 31.4 | 318 |
| Neutral | 13.0 | 132 |
| Agree | 2.8 | 28 |
| Strongly Agree | 0.6 | 6 |
| Total | 100.0 | 1014 |

| I have no one to go with me to a waterpark. | Percent | N |
|---|---|---|
| Strongly Disagree | 59.0 | 598 |
| Disagree | 27.2 | 276 |
| Neutral | 11.0 | 112 |
| Agree | 2.0 | 20 |
| Strongly Agree | 0.8 | 8 |
| Total | 100.0 | 1014 |

| There is not a waterpark near me to go visit. | Percent | N |
|---|---|---|
| Strongly Disagree | 47.9 | 486 |
| Disagree | 21.0 | 213 |
| Neutral | 12.5 | 127 |
| Agree | 9.5 | 96 |
| Strongly Agree | 9.2 | 93 |
| Total | 100 | 1015 |

| Going to a waterpark involves too much risk. | Percent | N |
|---|---|---|
| Strongly Disagree | 59.5 | 604 |
| Disagree | 28.4 | 288 |
| Neutral | 11.6 | 118 |
| Agree | 0.3 | 3 |
| Strongly Agree | 0.2 | 2 |
| Total | 100.0 | 1015 |

| My family and friends are not interested in waterparks. | Percent | N |
|---|---|---|
| Strongly Disagree | 58.0 | 588 |
| Disagree | 28.9 | 293 |
| Neutral | 10.3 | 104 |
| Agree | 1.7 | 17 |
| Strongly Agree | 1.2 | 12 |
| Total | 100.0 | 1014 |

| Going to a waterpark is too costly. | Percent | N |
|---|---|---|
| Strongly Disagree | 29.9 | 302 |
| Disagree | 23.6 | 239 |
| Neutral | 26.1 | 264 |
| Agree | 16.1 | 163 |
| Strongly Agree | 4.3 | 43 |
| Total | 100.0 | 1011 |

| I do not like waterparks. | Percent | N |
|---|---|---|
| Strongly Disagree | 69.4 | 703 |
| Disagree | 21.2 | 215 |
| Neutral | 8.0 | 81 |
| Agree | 0.6 | 6 |
| Strongly Agree | 0.8 | 8 |
| Total | 100.0 | 1013 |

| I cannot participate in aquatic activities. | Percent | N |
|---|---|---|
| Strongly Disagree | 70.0 | 708 |
| Disagree | 19.8 | 200 |
| Neutral | 8.7 | 88 |
| Agree | 1.2 | 12 |
| Strongly Agree | 0.4 | 4 |
| Total | 100.0 | 1012 |

| Family commitments keep me from going to a waterpark. | Percent | N |
|---|---|---|
| Strongly Disagree | 53.1 | 539 |
| Disagree | 27.2 | 276 |
| Neutral | 14.7 | 149 |
| Agree | 4.6 | 47 |
| Strongly Agree | 0.4 | 4 |
| Total | 100.0 | 1015 |

| The expense of traveling and staying overnight is too great when visiting a waterpark. | Percent | N |
|---|---|---|
| Strongly Disagree | 45.9 | 465 |
| Disagree | 21.3 | 216 |
| Neutral | 21.0 | 213 |
| Agree | 8.9 | 90 |
| Strongly Agree | 2.9 | 29 |
| Total | 100.0 | 1013 |

| I do not know what to expect when visiting a waterpark. | Percent | N |
|---|---|---|
| Strongly Disagree | 58.7 | 595 |
| Disagree | 29.2 | 296 |
| Neutral | 10.0 | 101 |
| Agree | 1.3 | 13 |
| Strongly Agree | 0.9 | 9 |
| Total | 100.0 | 1014 |

| I have no time to go to a waterpark. | Percent | N |
|---|---|---|
| Strongly Disagree | 47.8 | 485 |
| Disagree | 28.3 | 287 |
| Neutral | 17.7 | 179 |
| Agree | 5.3 | 54 |
| Strongly Agree | 0.9 | 9 |
| Total | 100.0 | 1014 |

| I have no information about the waterpark and what they have to offer. | Percent | N |
|---|---|---|
| Strongly Disagree | 58.6 | 594 |
| Disagree | 27.1 | 275 |
| Neutral | 11.9 | 121 |
| Agree | 1.9 | 19 |
| Strongly Agree | 0.5 | 5 |
| Total | 100.0 | 1014 |

# Appendix C: IRB Approval

# Appendix C: IRB Approval

EASTERN KENTUCKY UNIVERSITY
*Serving Kentuckians Since 1906*

Graduate Education and Research
Division of Sponsored Programs
Institutional Review Board

Jones 414, Coates CPO 20
521 Lancaster Avenue
Richmond, Kentucky 40475-3102
(859) 622-3636; Fax (859) 622-6610
*http://www.sponsoredprograms.eku.edu*

**NOTICE OF IRB EXEMPTION STATUS**
**Protocol Number: 16-221**
Institutional Review Board IRB00002836, DHHS FWA00003332

Principal Investigator: **Stephen Sims** Faculty Advisor: **Dr. Michael Bradley**

Project Title: **Waterparks' Impact on Rural Communities in Eastern Kentucky**

Exemption Date: **05/13/2016**

Approved by: **Dr. Jim Gleason, IRB Member**

This document confirms that the Institutional Review Board (IRB) has granted exempt status for the above referenced research project as outlined in the application submitted for IRB review with an immediate effective date. Exempt status means that your research is exempt from further review for a period of three years from the original notification date if no changes are made to the original protocol. If you plan to continue the project beyond three years, you are required to reapply for exemption.

**Principal Investigator Responsibilities**: It is the responsibility of the principal investigator to ensure that all investigators and staff associated with this study meet the training requirements for conducting research involving human subjects and follow the approved protocol.

**Adverse Events**: Any adverse or unexpected events that occur in conjunction with this study must be reported to the IRB within ten calendar days of the occurrence.

**Changes to Approved Research Protocol**: If changes to the approved research protocol become necessary, a description of those changes must be submitted for IRB review and approval prior to implementation. If the changes result in a change in your project's exempt status, you will be required to submit an application for expedited or full IRB review. Changes include, but are not limited to, those involving study personnel, subjects, and procedures.

**Other Provisions of Approval, if applicable**: None

Please contact Sponsored Programs at 859-622-3636 or send email to tiffany.hamblin@eku.edu or lisa.royalty@eku.edu with questions.

Kentucky UNBRIDLED SPIRIT

VITA

**Stephen M. Sims**

**Candidate for the Degree of Doctor of Education**

**Dissertation:** WATERPARKS' IMPACT ON RURAL COMMUNITIES IN EASTERN KENTUCKY

## EDUCATION:

| | |
|---|---|
| 5/2017 | Eastern Kentucky University<br>Doctorate of Education: Educational/Organizational Leadership & Policy Studies |
| 5/2014 | Eastern Kentucky University<br>Master of Science: Recreation & Park Administration |
| 8/2002 | Eastern Kentucky University<br>Master of Science: Physical Education: Sports Administration |
| 5/2001 | Eastern Kentucky University<br>Bachelor of Science: Physical Education: Athletic Training |
| 5/1998 | Somerset Community College |

## EXPERIENCE

8/2016-Present Eastern Kentucky University Richmond, KY
**Part-Time Faculty**

Part-time instructor for the Recreation & Parks Administration Department teaching in the undergraduate curricula. Taught both online and classroom settings. Courses include: REC 101 & REC 590

8/2016-Present Somerset Independent School System Somerset, KY
**Certified Athletic Trainer**

Works with players, game and practice coverage, paperwork, taping, treatments, order supplies, stocked training rooms, interacted with: athletic director, superintendent, principals, coaches, team doctors, and parents, a lot of teamwork, experience working with all types of people.

5/2007-Present SomerSplash Waterpark Somerset, KY
**General Manager** City of Somerset

General Manager of ~$11 million waterpark. Performs all daily business procedures and operations. In charge of controlling marketing, sales, promotions, cold calling, concessions, admissions, aquatics, and maintenance. Managing ~120-150 employees during seasonal operation and oversee a budget of ~$1.3 million. Performs paper work, handles customer

complaints and public affairs, orders supplies, and hires all seasonal staff. Certifies and re-certifies aquatic staff. Oversees that all departments are operating correctly during operation. 2010, began hosting and coordinating the City of Somerset's Annual Fourth of July Celebration and operating/overseeing the City's public pool facility. 2012-2015 coordinated and operated Cal Ripken League's concession area. Also, in 2012 hosted and coordinated the City's First Skatepark Palooza. In 2013, hosted and helped coordinate the City of Somerset's first HalloweenBlast. For this event, we hosted a trunk-or-treat at SomerSplash Waterpark. Coordinated DJ, music, and ~$15,000 firework show for the event. SomerSplash was awarded the World Waterpark Association's Executive Board Award of The Longest Day of Play Event in 2015.

9/2009-2012 (Part Time) Total Rehab Center Somerset, KY
6/2004-5/2007 (Full Time)
**Certified Athletic Trainer**

Development of a Sports Rehabilitation and Sports Performance/Conditioning Programs. Worked with local athletes, high schools, and physically active adults dealing with injury evaluations, injury care and prevention, provided practice and game coverage for local high schools, developed rehabilitation programs for non and post-surgical injuries, explained therapy to patients, used medication to aid patient rehabilitation, communicated with physicians discussing patients' medical needs, analyzed and recorded progress, assisted in ordering supplies, administration work, organization, and paperwork.

8/2003-5/2004 Dr. Lissette Baechtold Richmond, KY
**Personal Assistant**

Administrative work, ran errands, checked mail, provided childcare, and prepared personal bills, also gained great time management skills.

8/2002-9/2003 Commonwealth Sports & Industrial Rehab Richmond, KY
**Physical Therapy Tech**

Assisted with rehabilitation programs, explained therapy to patients, explained and used medication to aid patients in rehabilitation, executed ultrasounds, analyzed and recorded progress, organizational skills, paperwork, answered telephone, faxed work, interacted with patients, audited files, and assisted in ordering supplies.

Summer 2001 & 2002 NFL's Buffalo Bills Orchard Park, NY
**Athletic Training Intern**

NFL Athletic Training Intern, worked with players on a daily basis, paperwork, taping, treatments, stocked training room, interacted with management and team doctors, a lot of teamwork.

8/2001-5/2002 Eastern Kentucky University Richmond, KY
**Graduate Assistant Instructor/Aquatics**

Instructor (Physical Education Classes)/Head Lifeguard: made lesson plans, organized class work, handled vast amount of paperwork, exercised problem solving and strong leadership.

7/1995-1/2001 Palisades Restaurant Bronston, KY
**Waiter/Host/Cook** At Woodson Bend Resort
Waiter, host, cook, interacted with guests, as well as gained enormous sales and customer service skills that will carry to any job. Assisted with Promotion and Sales aspect of events. Helped plan, schedule, and implement events from beginning to end. Cold calling to local business, helped set up and clean up. Menu coordination, decorations, music, and seating arrangements for events. Handled all aspects to assure total party satisfaction.

## ATHLETIC TRAINING PROFESSIONAL EXPERENCE:

### NFL Internship & Games Worked

**Regular Season Games:**

| | |
|---|---|
| 11/20/16 | Cincinnati Bengals vs. Buffalo Bills |
| 10/11/15 | Tennessee Titans vs. Buffalo Bills |
| 11/25/12 | Indianapolis Colts vs. Buffalo Bills |
| 10/02/11 | Cincinnati Bengals vs. Buffalo Bills |
| 11/21/10 | Cincinnati Bengals vs. Buffalo Bills |
| 11/15/09 | Tennessee Titans vs. Buffalo Bills |

**Preseason Game:**

| | |
|---|---|
| 8/13/05 | Indianapolis Colts vs. Buffalo Bills |

**7/02-8/02 Buffalo Bills Summer Training Camp Athletic Training Intern**

- **Preseason Games:**

| | |
|---|---|
| 8/9/02 | Buffalo Bills vs. Cincinnati Bengals |
| 8/16/02 | Buffalo Bills vs. Minnesota Vikings |

**7/01-8/01 Buffalo Bills Summer Training Camp Athletic Training Intern**

- **Preseason Games:**

| | |
|---|---|
| 8/12/01 | Buffalo Bills vs. St. Louis Rams |
| 8/18/01 | Buffalo Bills vs. Philadelphia Eagles |
| 8/25/01 | Cincinnati Bengals vs. Buffalo Bills |

- **Regular Season Games:**

| | |
|---|---|
| 9/23/01 | Indianapolis Colts vs. Buffalo Bills |
| 12/23/01 | Atlanta Falcons vs. Buffalo Bills |

**Volunteer Experiences:**

| | | |
|---|---|---|
| Summer 2009-present | American Red Cross Learn To Swim Program | Somerset, KY |
| Summer 2006 | 4-H Camp: Adult Leaders | Dawson Springs, KY |
| Summer 2004 | Kentucky Bluegrass State Games | Lexington, KY |
| Summer 2000 | Kentucky Bluegrass State Games | Lexington, KY |
| 6/12-15/00 | Kentucky Youth Soccer Olympic Development Camp | Richmond, KY |

## AFFILIATIONS:

| | | |
|---|---|---|
| 12/2013- present | Honorable Order of Kentucky Colonels | Member |
| 11/2012- present | International Association of Amusement Parks & Attractions Member | Member |

| | | |
|---|---|---|
| 7/2009-11/2013 | American Red Cross<br>Lake Cumberland Area Chapter, KY | Board of Directors/<br>Member |
| 7/2008-present | World Waterpark Association | Member |
| 6/2000- present | National Athletic Trainers' Association | Member |
| 6/2000- present | Kentucky Athletic Trainers' Society | Member |
| 8/1999-5/2001 | EKU's Student Athletic Trainers' Club | Vice President/Member |

## ADDITIONAL INFORMATION:

**Courses Taught:**

- Rec 590: Special Topics: Wildlife Tourism & Research 2016: Winter
- Rec 101: Recreation and Tourism Careers: Fall 2016

**Certifications:**

- Board of Certification Certified Athletic Trainer (NATA)
- Kentucky Medical Board Certified Athletic Trainer
- American Red Cross Lifeguard Instructor Trainer
- American Red Cross Water Safety Instructor
- American Red Cross Lifeguard, CPR, & AED Certified
- Aquatic Facility Operator (National Recreation & Park Association)

**Publications:**

Sims, S. & Bradley, M. J. (2014, September). A Call for More Research: Effects of Regional Theme Parks on Local Communities. *The Young Professional-Congress Edition,* 2(2), 22-24.

Sharp, R. L., Bradley, M. J., Kurtz, J., Lakes, R., Richardson, J., & Sims, S. (2014, Summer). Making a Case for Conference Attendance in Times of Economic Uncertainty. *KRPS Quarterly*, 8.

Sims, S. (2009, March). Just the Facts. *Aquatic International*. 48-50.

Sims, S. (2008, June). Rescue Me. *Aquatic International*. 58.

Sims, S. (2008, May). A Summer with a Splash. *World Waterpark Magazine*. 46-48.

Sims, S. (2008, March). Short Staffed. *Aquatic International*. 74.

**Professional Oral Presentations:**

Sims, S. (2016). Smaller Park Meeting. Presented at the 2016 World Waterpark Association Symposium & Trade Show. New Orleans, LA.

Bergman, T., Devine-Knight, S., & Sims, S. (2015). INSTAFACESNAPWIT- How to Overcome Social Media Challenges When Starting Out. Presented at the 2015 World Waterpark Association Symposium & Trade Show. Palm Springs, CA.

Bradley, M.J., Sims, S., & Liu, H. (2014). Public space social equity in Appalachian Kentucky.

Presented at the 2014 Association for Humanist Sociology Midwest Regional Conference. Indianapolis, IN.

**Professional Poster Presentations:**

Bradley, M. J., Sims, S., Liu, H. (2014) *Social Equity and Public Space Access in Appalachian Kentucky.* Presented at the 36th Annual Southeastern Recreation Research Conference. Asheville, NC

Sims, S. (2013) *Recent Trends Within the Tourism Industry.* Presented at the 2013 KY Recreation & Park Society Conference. Hebron, KY.

**Honors:**

- Member of the Honorable Order of Kentucky Colonels
- Selected to be on the 2010 American Red Cross Lifeguarding Sounding Board & Workgroup Member: Instructor Training, Implementation, Marketing & Sales