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## Weighing the Impacts of Airbnb in Iceland: Multivariate Perspectives

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WEIGHING THE IMPACTS OF AIRBNB IN ICELAND:

MULTIVARIATE PERSPECTIVES

being

A Thesis Presented to the Graduate Faculty

of the Fort Hays State University

in Partial Fulfillment of the Requirements for

the Degree of Master of Science

by

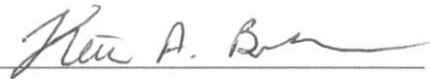
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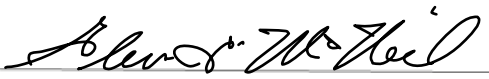
6/4/20

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the Master of Science Degree

By

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## ABSTRACT

This research sought to evaluate if the sharing economy leader, Airbnb, creates impacts that residents of Iceland feel they experience. The study also aimed to discover if rural and urban inhabitants have similar perspectives on Airbnb impacts. Airbnb's entrepreneurial encroachment into the accommodation sector has caused a multitude of localities to manage an assortment of complex affairs. These matters are difficult to solve due to their changing, contradictory, and incomplete premise. The purpose of this research is to determine if Airbnb activity is prominent in Iceland and therefore causing the country to experience similar issues that officials are struggling to solve in many major cities worldwide. This was established by running descriptive statistics on data obtained through a voluntary survey. This research can aid in creating international legislative platforms to maximize the benefits and minimize the risks related to Airbnb, as matters in Iceland can show similarity to other global cities. Locally, the results discovered in Iceland will be valuable to the Icelandic Tourist Board's ongoing research on tourism trends within the island. Tourism was pushed as a tool in Iceland after the 2008 financial crisis in response to the country's failing fishing and aluminum industries. Tourism now accounts for upwards of 10 percent of Iceland's Gross Domestic Product (GDP). There is a concern for the economic endeavor's ability to diminish Iceland's culture and nature, which are what draws tourists initially, making tourism a multiplex theme in Iceland. This research will contribute to the emerging scholarly work on tourism, Airbnb, and their impacts on sensitive polar regions that dictate the rest of the world's climate such as Iceland.

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## INTRODUCTION

Tourism is a shared human endeavor that has been evolving since the start of the twentieth century and is rapidly expanding worldwide. Theories speculate that a wide variety of circumstances can be held responsible for this increase (Schubert, Brida, and Risso 2011). Those becoming more aware of destinations from advertisements, the convenience of online booking, and more affordable travel options may be attributed to the expansion of tourism. The short-term rental giant Airbnb plays a considerable role in recent tourism trends (Ioannides, Röslmaier, and Van Der Zee 2018). Lawler (2012) describes how Airbnb supports growing tourism by providing accommodation where hotels fail to meet demand and by allowing travelers to visit destinations they could otherwise not afford. In addition to this, Paulauskaite et al. (2017) explain that Airbnb offers travelers a unique experience. The impacts caused by Airbnb encompass a new facet of tourism research that has been the focal point of much recent work. The cold-water island of Iceland is not immune to the trend of growing tourism. Tourist arrivals have more than doubled in recent years in Iceland and it is one of the fastest-growing sectors in the economy (Jóhannesson, Huijbens, and Sharpley 2010). This presents both opportunities and challenges for Iceland (Jóhannesson, Huijbens, and Sharpley 2010). For example, Iceland has the opportunity to benefit monetarily from this influx of tourism but challenges will also arise through the need to control this influx. Most of the research analyzing the impacts of Airbnb focuses on major cities such as San Francisco or Barcelona. More research is needed to determine if small cities and towns are also experiencing similar impacts. This is important to comprehend in order to fully understand the consequences of Airbnb and devise successful mitigation approaches.

Iceland's sparse population is mostly made up of rural towns and villages that receive high numbers of tourists like the country's urban areas. This combined with the fact that Iceland's annual number of foreign tourists is continuously increasing, creates a prime location to examine Airbnb impacts on a smaller scale. Do Icelandic residents living in rural areas perceive the impacts of Airbnb similarly to those living in larger municipalities? This topic serves importance due to the notable amount of positive and negative impacts Airbnb imposes. Identifying these impacts can assure benefits caused by Airbnb will be maximized and risks minimized. It is vital for areas that are experiencing an Airbnb presence to discover and thoroughly understand the effects caused by Airbnb vacation rentals. Comparing residents' perceived notions of the effects of Airbnb can determine what type of locations are experiencing more dramatic changes within the country. Airbnb's presence pressures countless officials to develop solutions to the many complications caused by short-term rentals. If one location successfully develops strategies for managing Airbnb's manifold impacts, then these plans can be transformed into universal legislation that other regions can utilize. Not only will ascertaining information on perceived impacts of Airbnb in various localities aid in regulating Airbnb but it will also act as a catalyst for future research regarding Airbnb impacts. This research will analyze local opinions in attempts to understand Airbnb impacts on districts with small populations compared to those with larger populations.

### Overnight Stays by Region

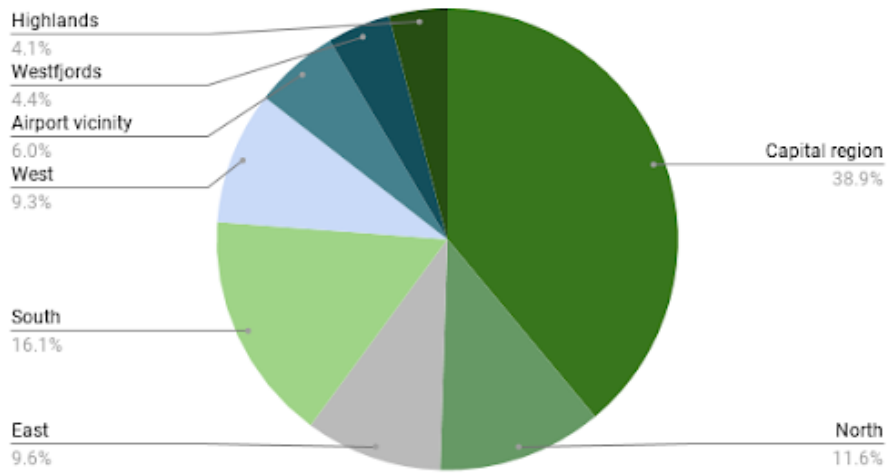


Figure 1. This Figure Represents Which Regions Most Visitors Stay In. (Icelandic Tourist Board 2016)

## STUDY AREA AND BACKGROUND INFORMATION

Iceland is an island nation located on the Mid-Atlantic Ridge near the Arctic Circle and consists of a subarctic climate within a tundra biome (Palmason and Saemundsson 1974). The country experiences mild temperatures compared to other regions at the same latitude caused by the Gulf Stream and the Irminger Current (Steinecke 1999). Iceland is believed to be first settled by Viking explorers as early as the 8th century. The land existed under Norwegian and then Danish rule before claiming independence in 1944 (Ásgeirsson 1994). The Nordic country was once, one of the poorest nations in Europe, but now has a competitive global economy, a high quality of life, and exemplary human rights conditions (OECD 2018). Iceland has a population of approximately 300,000 inhabitants with well over half of the population residing in the capital city of Reykjavík (Statistics Iceland 2012). Many people living in peripheral regions of the country earn their income by traditional means such as fishing, farming, or tending sheep, but in the city, there are more modern career options that attract young people (Seyfrit, Bjarnason, and Olafsson 2010). According to an OECD (Organization for Economic Co-operation and Development) survey, Icelanders have a deep sense of community and consider egalitarianism to be a highly valued component of their constitution (OECD 2018).



Figure 2. Iceland's Location on a Map. (Google Maps 2020)

Iceland was chosen as a case study site to contribute to the current discourse of the country's economic dependence on tourism. Iceland jeopardizes its environment and culture for the sake of maintaining an internationally competitive economy (Magnason 2012). Icelanders possess a heightened sense of national pride, and a large portion of this can be attested to the unique environment and natural landscapes of the island (Magnason 2012). Volcanoes, geysers, hot springs, glaciers, unique flora and fauna, coastal cliffs, and the aurora borealis are all features that can be witnessed on the 40,000 square mile island and a leading factor that attracts tourists. Besides Iceland's nature, the countries' culture, heritage, and language also contribute to the immense sense of national pride in the country (Hálfðanarson 2005). A survey administered by the European Commission found that 85 percent of Icelanders believe independence to be "very important" in their country. This is a stark difference compared to the 47 percent of Norwegians and 49 percent of Danes who felt the same about their own countries (International Business

Publications 2016). Icelandic citizens' close connection with their country's land and heritage furthers uncertainties regarding potential threats increasing tourism can cause on the nation.

Airbnb aids in accommodating the worldwide increase in tourism (Ioannides 2018). The Arctic regions, including Iceland are not immune to this trend. Since the close of the Second World War, a significant number of international tourists began to visit Iceland each year (Jóhannesson, Huijbens, and Sharpley 2010). This number steadily increased until recent years when tourism numbers began to show explosive growth. Iceland now hosts more tourists than their own population annually (Sæþórsdóttir 2010). Many communities in or near the Arctic region are using tourism as a tool to combat other declining sectors of their economy. Iceland is a suitable representation of this phenomenon. Iceland once depended on the fishing and aluminum industry as their top contributors to their GDP (Baum 1999). Tourism has become the leading industry of Iceland's economy in recent years (Statistics Iceland 2016). Traditional hotels do not have the means to accommodate the unexpectedly large number of tourists, as tourism continues to annually increase in Iceland (Sutherland and Stacey 2017). Airbnb allows the number of foreign tourists to continue to rise, by providing accommodation to the surplus of visitors. Iceland's newly developed dependence on tourism can cause a multitude of impacts. This research was required to determine if Airbnb activity in Iceland is impacting Iceland and its residents.



## LITERATURE REVIEW

### I. What Is Airbnb and Why People Choose It

Airbnb is an online marketplace that allows any property owner to rent out space to other online users. The online platform is designed in a simple manner that permits most individuals with internet access to navigate through the site and book accommodation. Hosts are free to offer space to potential guests that range from a single bedroom in their apartment to an entire home. Guests can use search criteria such as various locations, dates, and amenities to discover and book their desired accommodation. Hosts offer an abundance of photos to accurately depict the physical features and atmosphere of their listing. Booking can be done in one of two different manners. Hosts have the option of allowing guests to ‘instant book’ by viewing a calendar and choosing from available dates, thereby confirming their trip. Hosts can also have guests request what days they wish to stay on their trip and then hosts either approve or deny these dates for a trip to be officially booked (Airbnb 2019). After the booking is confirmed lines of communication are expanded between the guest and host by allowing the two parties to openly message each other on the Airbnb website. The host provides their phone number to the guest and the guest then receives the address of their accommodation rental. Initial steps are taken before the booking process to ensure safety to both the Airbnb host and the guest. Airbnb established and utilizes a risk scoring algorithm that uses “predictive analytics and machine learning” that works to identify suspicious activity. Hosts’ and guests’ names are run through regulatory, terrorist, and sanctions watchlists, while those in the United States must additionally pass a background check (Airbnb 2019). Safety workshops are offered to Airbnb hosts, where

local experts and authorities offer advice ranging from fire safety to accident prevention. Resources such as carbon monoxide and smoke detectors are often given to hosts free of charge at these events. Additionally, Airbnb claims that users are protected by a multi-layer defense strategy by utilizing secure payment methods, login authentication, and account alerts (Airbnb 2019).

Airbnb was previously catered to target a market that consisted of millennial age, atypical travelers with limited disposable incomes (Guttentag 2013). Airbnb now attracts countless types of people traveling for an array of distinct purposes. An incentive motive for staying at an Airbnb exists as cost benefits (Guttentag 2013). Various options such as renting a room in major metropolitan areas like Los Angeles or New York City for as little as twenty dollars a night, highlight the many affordable options offered through Airbnb. Regardless of offering cheaper rates compared to that of traditional hotels, Airbnb markets itself as having qualities to offer guests that traditional hotels cannot. Guttentag et al. (2018) surveyed over eight hundred Airbnb guests over a one-year period beginning in 2014. Guttentag et al. (2018) found that choosing Airbnb was based on five differing rationals; interaction, home benefits, novelty, sharing economy ethos, and local authenticity. Research such as Mody, Suess, and Lehto (2017) and Paulauskaite et al. (2017) claim that Airbnb provides guests with an authentic experience and this engagement is one of the leading reasons individuals choose to stay with Airbnb. Mody, Suess, and Lehto (2017) expanded upon Pine and Gilmore's (1998) original Conceptualization Model (Pine and Gilmore 1998) by adding additional classifications. The authors selected eight dimensions; entertainment, education, escapism, esthetics, serendipity, localness, "communitas" and personalization. These dimensions were

evaluated by surveying both Airbnb and traditional hotel guests. The study found that Airbnb scored significantly higher in all eight dimensions, meaning Airbnb was more successful at offering these elements. Tussyadiah and Pesonen (2016) determined that travelers' desires to share authentic experiences can alter their behavioral patterns that affect tourist destinations. It was found that due to Airbnb, guests travel more frequently, visit alternative locations, increase their trip lengths, and engage in additional activities while on their trip. These behavior patterns are attributed to "travelers' desires for more meaningful social interactions with locals and unique experiences in authentic settings" and the cost reduction Airbnb provides (Tussyadiah and Pesonen 2016). Mody, Suess, and Lehto (2017) created three themes in their study to categorize key factors of perceived authentic experiences. Interior and atmosphere, interaction with hosts, and interaction in local culture were chosen. Interior and atmosphere described features that guests consider more home-like and would not be found at a traditional hotel. Interaction with hosts was created as a category because the authors found interviewees to mention this multiple times as something that enhanced the authenticity of their stay. Hosts can pass on information and give details of the Airbnb unit's surrounding location that guests would have otherwise not been aware existed. The last theme, interaction with local culture, was designated as a category because many interviewees felt that due to their stay at an Airbnb, they had the opportunity to experience the culture of an area that other tourists were not able to be immersed in. Another notable method developed to determine factors that characterize authentic experience is Kim, Ritchie, and Tung's (2010) Memorable Tourism Experience Scale (MTES). There are seven domains within the MTES model: hedonism, novelty, local culture, refreshment, meaningfulness,

involvement, and knowledge. There are twenty-four options for subjects to choose from that fall into the seven corresponding categories. The authors argue that these are significant components of the tourism experience that affect a person's memory.

Not only does Airbnb appeal to those with financial restrictions but high-end travelers looking for luxury style accommodation can also find an extensive range of options through Airbnb. Entire homes can be rented, providing renters to temporarily reside in neighborhoods that would otherwise be unattainable by guests who choose traditional accommodation options. Instead of being restricted to a small area with a heavy concentration of hotels and guest homes, renting a whole house allows guests to experience aspects of a given area only locals typically access. Authentic experiences can also be acquired by renting a room or space in a host's home (Mody, Suess, and Lehto 2017). Choosing a housing option as such creates a more personal experience between the Airbnb host and guest. This option has the potential to share cultures, create bonds, and procure exclusive travel information only a local can provide. Travelers' initial purpose for choosing peer-to-peer accommodations stems from the longing to experience a more meaningful stay (Tussyadiah and Pesonen 2016).

Despite numerous research efforts to create models that gauge authentic experiences, the term is purely subjective and there is a disagreement over clearly defining the meaning of authentic experiences. This discourse provides the opportunity for an abundance of tourism research to attempt to create methods that define this terminology with more clarity.

## II. The Start of Airbnb

Airbnb's humble beginnings were contingent on three financially forlorn college students in 2007. When an impending design conference was soon to transpire in San Francisco, the city's hotels became inundated. The college students decided to rent out their extra bedroom, in hopes a profit could be earned off desperate conference attendees with little alternative options. After successfully hosting guests during the conference, the concept of private individuals renting out their homes through an online medium was developed into a startup in 2008. The new business was coined as Airbnb: air for air mattress to represent the meager amenities the students were able to provide to their first guests and "bnb" for bed and breakfast as a reminder that the foundations of their startup, although having a modern entrepreneurial twist, do in fact have roots in a well-established market foothold (Guttentag 2013).

Airbnb experienced only marginal success during the first three years after establishment. From 2008 to 2011, the company reached its first one million room nights sold globally. Explosive growth was then experienced in 2012 when ten million room nights were sold within the following year alone. Airbnb's net worth is currently estimated at over thirty-five billion dollars and has rentals in almost every country (Forbes 2018). Their success is comparable to that of most major mid-range hotel chains (Guttentag 2013).

Airbnb Room Nights Sold Globally Since 2008

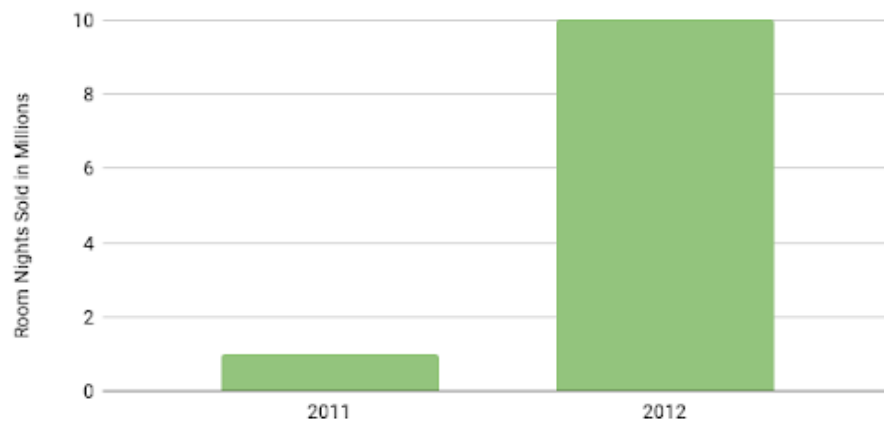


Figure 3. This Figure Shows the Explosive Growth Airbnb Experienced in 2012.

Accommodation Type by Foreign Visitors

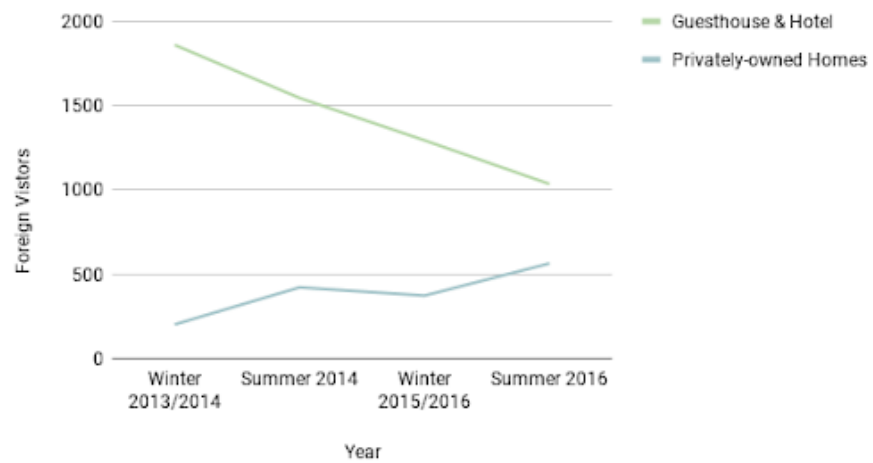


Figure 4. This Figure Shows Accommodation Type Trajectory Change in Iceland. (Iceland Tourist Board 2016)

### III. Airbnb as a Sharing Economy and Disruptive Innovation

In providing accommodation between private individuals, Airbnb falls into the recently developed category of sharing economies, collaborative consumption, and peer economies. These terms encompass the same meaning: a host of transactions that allows assets and services to be allocated between private individuals (Guttentag 2013). The term ‘sharing economy’ was previously used to a limited extent by scholars to describe the phenomena of individuals freely sharing information with others in collaborative online endeavors such as the website *Wikipedia*. Presently, the term sharing economy is commonly used in scholarly research, with heavy reference beginning in 2011-2012 (Martin 2016). The sharing economy encompasses a new business model that differs from comparative norms. Sharing strangers' personal property such as homes, cars, or tools was once thought to be an obscure concept without many people partaking in the notion. Co-owning properties in the form of a timeshare have been a widely accepted arrangement for decades but renting out homes or a room to strangers is a new concept that is gaining popularity (Cohen and Kietzmann 2014). Major sharing economy businesses such as Airbnb and Uber were once deemed to serve only a specific group of people. Those who were not considered target markets for these businesses in the past now depend on dimensions of the sharing economy. Examples included families, business travelers, and those looking for luxury stays are contingent on using Airbnb to find accommodation (Guttentag 2013).

Schor (2016) agrees that novelty is the main push factor as to why individuals choose sharing economies like Airbnb, but that economic, environmental, and social factors can also play a role. Schor establishes four broad categories that sharing

economies can fall into: recirculation of goods, increased utilization of durable assets, exchange of services, and sharing of productive assets. Using these definitions, eBay and Craigslist would belong in the first category of recirculation of goods. Zervas, Proserpio, and Byers (2017) argue that sharing economies have been warranted by both technological innovations and supply-side flexibility. Innovations in technology have allowed suppliers to easily distribute their products or services, consumers to locate these products or services, and keep overhead prices low. Supply-side flexibility refers to the ease and time it takes for someone to become an Uber driver or to list their home as an accommodation option. Martin (2016) describes the sharing economy as an economic opportunity, a more sustainable form of consumption, a pathway to a decentralized, equitable, and sustainable economy, creating unregulated marketplaces, reinforcing the neoliberal paradigm, and an incoherent field of innovation.

Many emerging sharing economy companies including Airbnb are susceptible to being deemed as a 'disruptive innovation'. Disruptive innovation is a new business or product that holds one or more qualities that differ from their traditional business counterparts (Guttentag 2013). To be classified as such, there are certain criteria that must be followed. Disruptive innovations must create new markets in their relative realm by offering alternative methods to that of sustaining businesses, as well as attract a subset of people traditional businesses fail to target (Bower and Christensen 1995). Typically, these innovations initially experience marginal growth, followed by rapid success. It is not until disruptive innovations' unique characteristics begin to influence their comparative market, that sustaining businesses view these surfacing companies as potential threats to the market (Guttentag 2013).



Christensen et al. (2015) label sustaining businesses as ‘incumbent’ companies who focus on improving by better serving their highest-paying customers. By dedicating much of their attention to their most profitable customers a large consumer base is overlooked. This allows an entrant business to target the overlooked population. Despite lacking in resources, the entrant business can provide similar services or products with additional qualities that make their company more appealing compared to the incumbent business. Sustaining businesses do not initially acknowledge the decline in lower-end consumers because they are preoccupied with pursuing more profitable markets. While the entrant business slowly becomes more successful, they can begin to cater to high-end markets while preserving the qualities that initially attracted the less profitable consumers. It is not until this stage that incumbent businesses are jeopardized, and disruption occurs.

Christensen et al. (2015) also state that the term “Disruptive innovation” is many times used out of context in attempts to be an all-encompassing term for successful endeavors. Christensen’s et al. (2015) findings align with Bower and Christensen’s 2015 research by going on to say that there are two important requirements that must be met to earn the title of disruptive innovation. First entrant businesses must target low-end footholds and second, they must create new-market footholds. Aldi’s grocery store chains provide an appropriate example of disruptive innovation because they are geared towards a low-end market by providing affordable groceries and they created a new market where name brand products are not an indication of quality.

Identifying a disruptive innovation is more complicated than recognizing a sharing economy. For example, according to Christensen et al. (2015) Uber can be

described as part of the sharing economy but is not a disruptive innovation. This is because Uber's target market was the same as traditional taxi cabs. Uber did not create a new market because again their company was geared to those already using taxi cabs. In the case of Airbnb, the company is part of the sharing economy and can be classified as a disruptive innovation. Airbnb followed the two requirements of being considered a disruptive innovation. First, the company initially targeted low-end footholds by providing affordable accommodation. Second, Airbnb created an entirely new market by making it common practice for private individuals to rent out their homes to strangers. Airbnb's popularity grew as did its reputation and resources. They began to attract high-end market consumers by offering high-end accommodation and amenities hotels do not. As previously stated, Airbnb's initial slow growth and then explosive success follows the typical pattern of disruptive innovations.

#### IV. Legality

Airbnb's success is threatened by the legal issues the company faces. Airbnb makes up a part of the informal economy, which refers to businesses that are not monitored by authorities (Williams and Horodnic 2017). Unbeknown to many Airbnb guests and hosts, much of Airbnb activity is actually illegal (Guttentag 2013). This is because most cities have regulations established that prohibit short-term rentals. Also, Airbnb does not require its guests to pay any form of accommodation tax, therefore evading tax obligations other hotel chains are forced to pay (Guttentag 2013). Taxing Airbnb units is challenging, considering the only requirement hosts must follow is creating a profile on Airbnb's website to advertise their rental property. In this way, Airbnb rentals remain 'under the radar' to city governments and a tax profit cannot be

acquired (Guttentag 2013). Safety regulations are another pressing legal issue threatening Airbnb, such as adhering to proper fire code (Kennedy et al. 2018). Various impacts Airbnb has on many cities is another reason why Airbnb is being analyzed from a legal standpoint. Due to the confusion revolving around taxing Airbnb, managing safety issues, and minimizing the impacts of Airbnb, the company has been the center of controversy in major cities worldwide (Guttentag 2013). Cities are reacting in different ways, from requiring hosts to register with their city, capping the number of rental nights a host can utilize, and zoning areas that allow only certain neighborhoods to be part of Airbnb (Nieuwland and Melik 2018). The above-mentioned examples can be put into one of four categories: quantitative restrictions, qualitative restrictions, locational restrictions, and density restrictions (Nieuwland and Melik 2018). Officials in Washington D.C have implemented a law allowing hosts to rent out their space for a maximum of ninety nights out of the year (The Washington Post 2019). This would be an example of a quantitative restriction measure. Nieuwland and Melik (2018) explain that every city possesses differing circumstances, so one regulation created in a specific city may not apply to another. Decisions made in one area can influence other cities and guide them on methods of regulating Airbnb, despite cities requiring the creation of legislation that is tailored to their unique conditions.

## V. Airbnb Impacts

Airbnb's ingress into the accommodation sector supports a profusion of diverging impacts on global cities like New York City, Los Angeles, and Amsterdam. Airbnb causes both positive and negative influences over respective destinations. It is difficult to properly manage these influences without consequently eliminating positive

impacts or proliferating negative impacts. Positive aspects of Airbnb can include 1) the creation of jobs for locals, 2) benefits to small businesses, 3) extra income for hosts, 4) the creation of deeper cultural roots, 5) attracting conscientious tourists, and 6) development of peripheral regions (Dieter, Lundmark, and Lemelin 2013; Jordan and Moore 2017). First, an increase in tourism can provide job opportunities in order to sustain businesses that cater to tourism. Positions can be filled within the food and beverage industry, transportation services, and tour operations (Aynalem, Birhanu, and Tesefay 2016). Second, tourism causes an influx of individuals in a particular area. Inflation in a given population allows for local businesses to serve a wider customer base, thus increasing profit. A third positive benefit is an extra income earned by Airbnb hosts. Those who decide to become an Airbnb host can earn a substantial additional income. Many times, hosts depend on this income to maintain their mortgage or other bills (Guttentag 2013). Fourth, Airbnb also contributes to the creation of deeper cultural roots, because many times local culture is a leading aspect of tourist attraction to a particular area. This causes locals to preserve culture, often leading to community pride and cultural exchange (Das and Chatterjee 2015). Additionally, Airbnb attracts conscientious travelers (Jordan and Moore 2017). Those who choose Airbnb accommodations tend to classify themselves as ‘non-tourists’. These travelers make environmentally beneficial decisions and prefer to spend their money locally rather than at popular tourist sites (Guttentag 2013). Lastly, developing tourism in peripheral regions can act as a vital tool for regional development, stimulation of the economy, and prevention of emigration (Dieter, Lundmark, and Lemelin 2013).

Airbnb's sizable amount of positive impacts are joined with negative impacts as well. Some of these include 1) disruption of communities, 2) housing availability and housing quality shortage, 3) traffic and overcrowding, and 4) negative economic consequences. First, disruption of community is a common negative complaint revolving around areas experiencing an increase in tourism activity. This is especially prevalent in small neighborhoods that Airbnb transforms into an area with high tourism (Jordan and Moore 2017). Second, housing availability can become scarce when Airbnb successfully infiltrates a locality. Property owners earn a higher profit providing short-term rentals over renting out their properties in a traditional long-term manner. Increasing short-term rentals causes housing availability to diminish and buying prices to rise (Lúðvík and Ragnarsson 2018). Also, traffic and overcrowding are likely to occur in cities with high densities of Airbnb presence because there is an increase of people and vehicles in a given area. This is an inevitable attribute that accompanies increasing tourists in a specific location (Nieuwland and Melik 2018). Additionally, negative economic impacts can occur through the increase of Airbnb activity. This is because Airbnb competes with the hotel industry yet is typically not able to be taxed by the public sector. In order to determine what regulations will benefit specific areas, close monitoring of Airbnb impacts is required. Lastly, Airbnb's presence can create a nuisance for locals when guests fail to respect the area with antics such as noise disturbances and littering (Gurran and Phibbs 2017).

## METHODS

Data collection on the survey results were completed by distributing a voluntary survey online using Qualtrics survey software. Qualtrics survey software allows for surveys to be distributed and data to be collected and organized virtually. Surveys were sent through e-mail using a snowball sampling method to collect the data. The only requirement to take the survey was being a resident of Iceland. Email addresses were located by searching for various businesses, schools, museums, and restaurants. Surveys were then sent to available email addresses found through establishment websites. Two research assistants conducted on-the-ground research by distributing the surveys in Iceland to citizens and college students within a localized area. Recipients of the survey included students, business owners, hotel owners, and citizens of Iceland. Surveys were distributed beginning in September 2019 until January 2020.

Surveys asked an array of questions ranging from basic demographic information to opinions regarding tourism and Airbnb in Iceland. The survey instrument based questions off of The Icelandic Tourist Board's research and off of controversial topics on Airbnb presented in the media. The demographic information asked in the survey included age and gender. This was asked to determine if any discrepancies in opinions exist between different genders and ages. The original survey included questions regarding individuals' highest education attainment, career, and income. These questions were included to identify discrepancies that existed between these categories and Airbnb opinions. These questions were eventually removed from the survey because very little responses were being left on these questions.

Data was analyzed by running basic descriptive statistics on the data, running a comparison of proportions test, and responses were then compared from a rural versus

urban perspective. Rural and urban were defined by considering any locality rural if it had under 3,000 residents and urban if there were 3,000 or more residents. The United Nations itself recognizes the difficulty of defining urban areas globally, stating that, “because of national differences in the characteristics that distinguish urban from rural areas, the distinction between urban and rural population is not amenable to a single definition that would be applicable to all countries” (United Nations 2020). Iceland does not have any official threshold for what defines an area as being urban. The threshold used in this study was designed based off Iceland’s population distribution. Descriptive statistics were applied to the data to accurately understand and classify the survey responses. A comparison of proportions test was chosen in order to see the difference in rural and urban responses. Foody (2004) brings attention to this statistical testing method as a useful tool in evaluating differences in thematic map classification accuracy. Online resource MedCalc was used to complete the comparison of proportions test more efficiently. This website requires a proportion percent and sample size to be manually inputted in order to perform the analysis. MedCalc was chosen to be used to reduce human error (MedCalc 2020). The full survey can be viewed in Appendix A. of this survey.

## RESULTS

One hundred and sixty individuals participated in the survey. One hundred fifty-four of those individuals gave their consent to continue their participation in the survey. Out of these participants, only eighty-four survey takers' responses were deemed viable for use. Participants were from a total of twenty-four different cities and towns. Fourteen of those towns were labeled as rural and ten were considered urban. Fifty-one percent of respondents were from a rural area and 49 percent were from an urban area.

Sixty-nine of the eighty-four respondents reported on their gender. Thirty-nine percent were female, fifty-seven percent were male, and three percent identified as others. Seventy-eight people reported on their age. Forty-one percent were in their 20s, twenty-one percent were in their 30s, seventeen percent were in their 40s, seven percent in their 50s, ten percent in their 60s, and four percent were either eighteen or nineteen years old. In response to the survey question "Are you a host for Airbnb?", seventeen percent of those from rural areas responded "yes" and eighty-one percent of those from rural areas responded "no". Ten percent responded "yes" from urban areas and ninety percent responded "no" from urban areas. In total there were eighty-three operative responses to this question.

For the survey question "Have you ever stayed in Airbnb as a guest?", forty percent of those residing in a rural area responded "no" and sixty percent responded "yes". Thirty-eight percent of those residing in urban areas responded "no" and sixty-two percent responded "yes". In total there were eighty-three responses to this question.

For the survey question "Do you think Airbnb brings more customers to local businesses?", seventeen percent of those living in a rural area responded "no" and eighty-



three percent responded “yes”. Fourteen percent of those living in an urban area responded “no” and eighty-six percent responded “yes”. In total there were eighty-four responses to this question.

For the survey question “Do you think Airbnb rentals create significant competition for hotel/guest homes where you reside?”, twenty-nine percent of those residing in rural areas responded “no” and seventy-one percent responded “yes”. Twelve percent of those residing in urban areas responded “no” and eighty-eight percent responded “yes”. In total there were eighty-three responses to this question.

For the survey question “Do you think tourism in general causes the area in which you live to experience cultural/social changes?”, ten percent of respondents from rural areas responded “no” and ninety percent responded “yes”. Fourteen percent of those from urban areas responded “no” and eighty-six percent of responding “yes”. In total there were eighty-four responses to this question.

The survey question “Do you think Airbnb specifically causes the area in which you live to experience cultural/social changes?”, thirty-eight percent of those living in a rural area responded “no” and sixty-two percent responded “yes”. Fifty-nine percent of those living in an urban area responded “no” and forty-one percent responded “yes”. In total there were seventy-six responses to this question.

For the survey question “Do you think Airbnb affects housing availability or prices in your area?”, twenty-nine percent of those living in a rural area responded “no” and seventy-one percent responded “yes”. Eleven percent of those living in an urban area responded “no” and eighty-nine percent responded “yes”. In total there were seventy-six responses to this question. Table 1 shows the percent difference of those who responded

either “no” or “yes” to each survey question. A checkmark was given to each statistically significant value.

Table 1. Comparison of Proportions Test Results.

Survey Question	Rural Difference	Urban Difference	Rural P-Value	Urban P-Value
Are you a host for Airbnb?	64%	80%	√/0.0009	√/0.0001
Have you ever stayed in Airbnb?	20%	24%	0.2084	0.1349
Do you think Airbnb brings more customers to local businesses?	66%	72%	√/0.0005	√/0.0002
Do you think Airbnb rentals create significant competition for hotel/guest homes where you reside?	42%	76%	√/0.0141	√/0.0001
Do you think tourism in general causes the area in which you live to experience cultural/social changes?	80%	72%	√/0.0001	√/0.0002
Do you think Airbnb specifically causes the area in which you live to experience cultural/social changes?	24%	18%	0.1494	0.2886
Do you think Airbnb affects housing availability or prices in your area?	42%	78%	√/0.0256	√/0.0002

## DISCUSSION AND CONCLUSIONS

The goal of this study was to determine if residence in rural areas of Iceland feel they experience Airbnb impacts differently than Icelandic residence living in urban areas. The study also aimed to discover specifically what impacts were being experienced by Icelandic residence. The results of this study showed that many respondents do feel that Airbnb causes significant impacts. For example, Figure 5 shows that both rural and urban respondents answered mostly “yes” to the survey question "Do You Think Airbnb Brings More Customers to Local Businesses?"

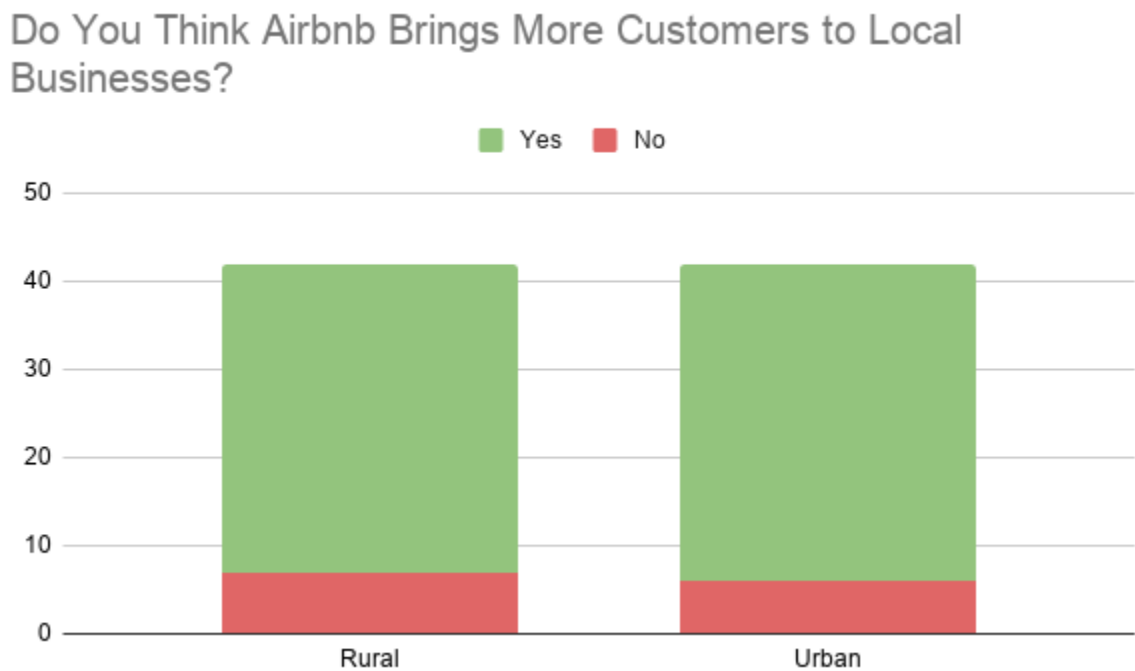


Figure 5. This Figure Shows the Responses to the Survey Question "Do You Think Airbnb Brings More Costumers to Local Businesses?"

The survey offered the option to leave additional comments were survey takers had the opportunity to further express their points of view. Some additional comments

included “I have a guesthouse, pay all the taxes and permissions. We have too much Airbnb here and they are a very big concurrence for us. They do not have to live off their business, but I have (to).”, “There are mixed emotions regarding Airbnb, they bring guests to Iceland (who travel) around Iceland. There need to be more strict laws around Airbnb because there are too many benefiting from renting their houses/flats to guests. That increases rental prices and house prices, locals are having a problem getting houses/flats because people get more money from Airbnb because there is not strict enough law around Airbnb. I would like to ban Airbnb.”, and “Airbnb is contributing to collapsing the housing market.”. Some individuals feel strongly that Airbnb creates unjust competition for local hotels and that Airbnb’s presence is disrupting the housing market. Despite these opinions, some of the survey results show that others felt Airbnb is not to blame but more likely tourism in general. Figure 6 shows that more respondents chose that they felt tourism in general had greater impacts on the cultural and social aspects of their community than Airbnb specifically. The impact “Disruption of Community” was the only choice that respondents felt Airbnb caused more than tourism. This could be because residence living in a small rural area might notice the intrusion of guests easier than those residing a large urban area. The specific cultural and social impacts described in the survey can be seen in Appendix A.

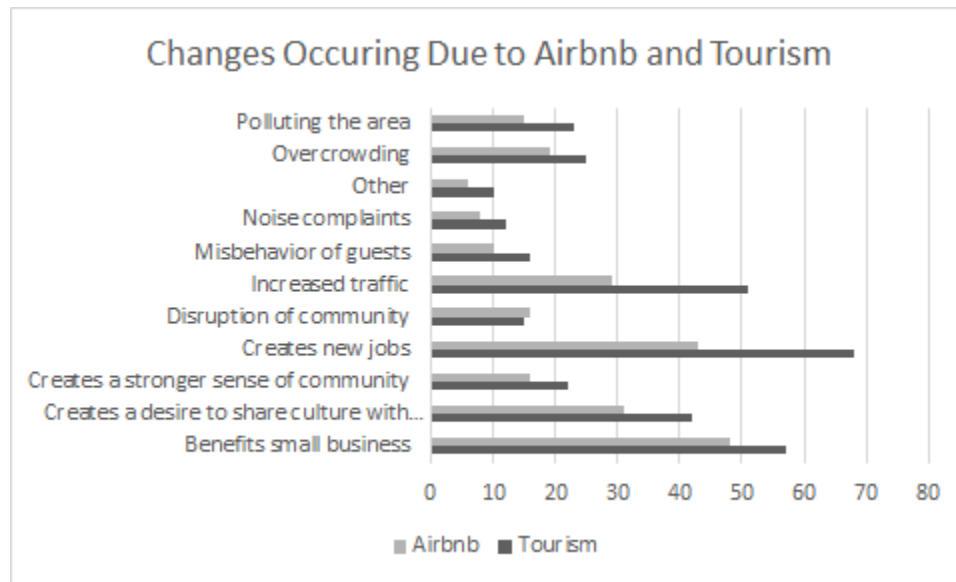


Figure 6. This Figure Shows Which Impacts Respondents Felt were Occurring Due to Airbnb and Tourism

There were discrepancies in three survey question results, meaning that rural and urban residents answered differently. The survey question “Do you think Airbnb rentals create significant competition for hotel/guest homes where you reside?” (Figure 7), significantly more of those from urban areas responded “yes”. This can be explained due to the high rates of competition and demand of accommodation in urban areas. Also, more urban residents responded “yes” to the survey question “Do you think Airbnb affects housing availability or prices in your area?” (Figure 8). A likely explanation as to why more urban residents answered “yes” to this question could be again due to higher rates of demand. Urban areas consist of young people who are starting their careers in urban areas and looking for an apartment to rent. These people may have trouble finding an affordable option in the city and can blame Airbnb. More rural respondents responded “yes” to the survey question “Do you think Airbnb specifically causes the area in which you live to experience cultural/social changes?”. This question’s results are

understandable because a rural area that is scarcely populated will be able to notice new people visiting or living amongst them, whereas in an urban area that already is more of a ‘melting pot’ this disturbance would be near impossible to detect.

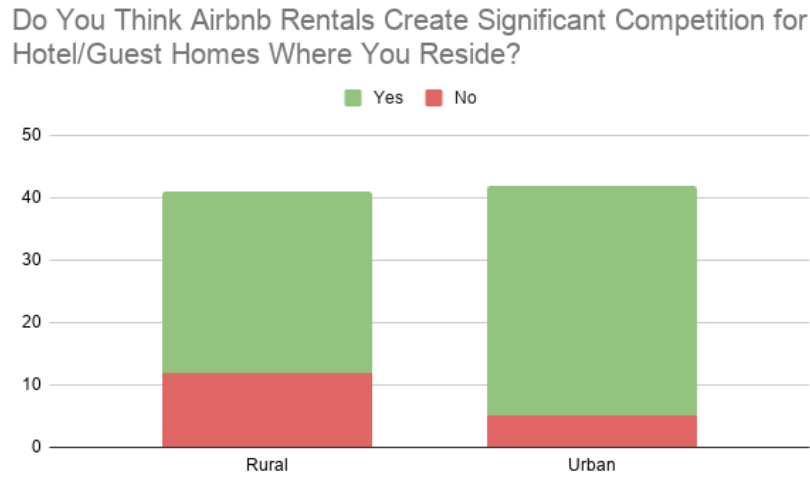


Figure 8. This Figure Shows Responses to the Survey Question "Do You Think Rentals Create Significant Competition for Hotel/Guest Homes Where You Reside?"

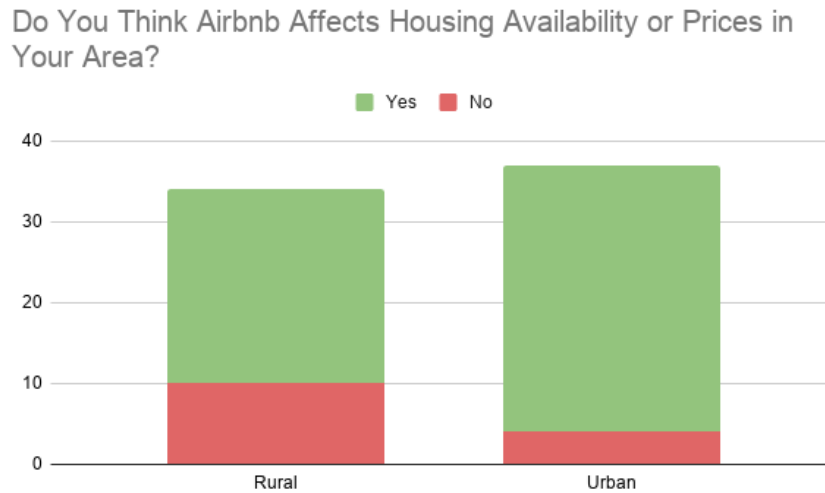


Figure 7. This Figure Shows Responses to the Survey Question "Do You Think Airbnb Affects Housing Availability or Prices in Your Area?"

Based on residents' opinions, Iceland is experiencing the impacts of Airbnb that other major cities are experiencing worldwide and there is a difference on how rural versus urban residents of Iceland perceive Airbnb impacts. Considering that tourism is such a major contributor to Iceland's GDP, it is unlikely that full bans will be put on Airbnb. Strategic measurements would have to carefully be put in place in order to control the negative impacts of Airbnb while allowing those positive impacts to remain in existence.

This study confirms that Airbnb usage is increasing in Iceland. Other results of this study validate that traditional guest house usage is decreasing, while visitor rates continue to rise. Airbnb supports this trend of increasing tourism by providing an alternative accommodation option to tourists while catering to a surplus of visitors, hotels and traditional guest homes do not have the means to provide for. Future research can ascertain if traditional guest homes and hotels are undergoing financial loss triggered by the decline of their usage and increase in Airbnb operations. It can be inferred that numerous Airbnb impacts mentioned in this study are being experienced, such as new jobs are being created for locals, small businesses are benefiting, and hosts are earning extra income. It is also conceivable that a disruption of communities, housing availability and quality shortage, and traffic and overcrowding impacts are being felt as well. Issues Airbnb is possibly imposing would add to the already existing discourse in Icelandic Tourism. Limitations of this study include a small sample size that reflects the difficulty in soliciting the study, sampling restraints due to the difficulty in reaching rural Iceland, and using a snowball sampling method. Future research is required to discover precisely what impacts Airbnb are causing in Iceland as well as mitigation methods. Differentiating

between what impacts are caused by Airbnb versus tourism in general will ensure Airbnb does not receive repercussions for issues the company is not causing. This research supports the regulation of Airbnb in order to maintain the positive impacts Airbnb creates while controlling the negative impacts. Regulation methods that have proved successful in other cities worldwide include capping the number of nights an Airbnb host can rent, restricting the number of Airbnb properties a host can have, and hosts must be present in the rental. Regulations will eliminate issues that can arise through Airbnb such as limited housing, overcrowding, and unjust competition for hotels while allowing positive impacts to thrive.



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## APPENDICES

### Appendix A. Survey Administered to Participants

# Airbnb Survey

---

#### Start of Block: Default Question Block

Q25 Welcome to the research study! We are interested in understanding the impacts that Airbnb has on communities in Iceland. You will be presented with a survey relevant to Airbnb and Iceland and asked to answer some questions about it. Please be assured that your responses will be kept completely confidential. The study should take you around five minutes to complete. Your participation in this research is voluntary. You have the right to withdraw at any point during the study, for any reason, and without any prejudice. If you would like to contact the Principal Investigator in the study to discuss this research, please e-mail Alexa Gorlick at [agorlick@mail.fhsu.edu](mailto:agorlick@mail.fhsu.edu). By clicking the button below, you acknowledge that your participation in the study is voluntary, you are 18 years of age, and that you are aware that you may choose to terminate your participation in the study at any time and for any reason. Please note that this survey will be best displayed on a laptop or desktop computer. Some features may be less compatible for use on a mobile device.

- I consent, Begin the Study (1)
- I do not consent, I do not wish to participate (2)

*Skip To: End of Survey If Welcome to the research study! We are interested in understanding the impacts that Airbnb has... = I do not consent, I do not wish to participate*

---

Q13 Are you a host for Airbnb?

- Yes (1)
- No (2)

---

Q23 What village/town/city do you reside in?

---

---

Q12 Have you ever stayed in Airbnb as a guest?

Yes (1)

No (2)

---

Q1 Do you think Airbnb rentals create significant competition for hotel/guest homes where you reside?

Yes (1)

No (2)

---

Q10 Do you think Airbnb brings more customers to local businesses?

Yes (4)

No (5)

---

Q4 Do you think tourism in general causes the area in which you live to experience cultural/social changes?

Yes (1)

No (2)

*Skip To: Q26 If Do you think tourism in general causes the area in which you live to experience cultural/social c... = Yes*

---

Q26 Please select any of the following changes that you think are occurring in your area because of tourism.

- Creates a desire to share culture with travelers (1)
  - Creates new jobs (2)
  - Benefits small business (3)
  - Creates a stronger sense of community (5)
  - Overcrowding (6)
  - Disruption of community (7)
  - Increased traffic (8)
  - Polluting the area (9)
  - Misbehavior of guests (10)
  - Noise complaints (11)
  - Other (12) \_\_\_\_\_
-



Q3 Do you think Airbnb specifically causes the area in which you live to experience cultural/social changes?

Yes (1)

No (2)

*Skip To: Q11 If Do you think Airbnb attracts more travelers to Seydisfjordur resulting in cultural/social changes in = Yes*

---

Q11 Please select any of the following changes that you think are occurring in your area because of Airbnb.

- Creates a desire to share culture with travelers (1)
  - Creates new jobs (2)
  - Benefits small business (3)
  - Creates a stronger sense of community (4)
  - Overcrowding (5)
  - Disruption of community (6)
  - Increased traffic (7)
  - Polluting the area (8)
  - Misbehavior of guests (9)
  - Noise complaints (10)
  - Other (11) \_\_\_\_\_
- 

Q5 Do you think Airbnb affects housing availability or prices in your area?

- Airbnb effects housing availability (1)
- Airbnb effects housing prices (2)
- Airbnb effects both housing availability and housing prices (3)
- No, Airbnb effects neither housing availability housing prices (4)

---

Q15 What is your Age?

---

---

Q18 What is your gender?

Male (1)

Female (2)

Other (3)

---

Q27 Please feel free to leave any additional comments or thoughts about Airbnb in Iceland.

---

End of Block: Default Question Block

---

Appendix B. IRB Letter of Exemption



**FORT HAYS STATE  
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*Forward thinking. World ready.*

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**OFFICE OF SCHOLARSHIP AND SPONSORED PROJECTS**

DATE: April 23, 2019

TO: alexa gorlick

FROM: Fort Hays State University IRB

STUDY TITLE: [1419711-1] Sharing Economy Leader: Airbnb's development in Seyðisfjörður, Iceland

IRB REFERENCE #: 19-0118

SUBMISSION TYPE: New Project

ACTION: DETERMINATION OF EXEMPT STATUS

DECISION DATE: April 23, 2019

REVIEW CATEGORY: Exemption category # 2

Thank you for your submission of New Project materials for this research study. The departmental human subjects research committee and/or the Fort Hays State University IRB/IRB Administrator has determined that this project is EXEMPT FROM IRB REVIEW according to federal regulations.

Please note that any changes to this study may result in a change in exempt status. Any changes must be submitted to the IRB for review prior to implementation. In the event of a change, please follow the Instructions for Revisions at <http://www.fhsu.edu/academic/gradschl/irb/>.

The IRB administrator should be notified of adverse events or circumstances that meet the definition of unanticipated problems involving risks to subjects. See <http://www.hhs.gov/ohrp/policy/AdvEvtGuid.htm>.

We will put a copy of this correspondence on file in our office. Exempt studies are not subject to continuing review.

If you have any questions, please contact Leslie Paige at [lp Paige@fhsu.edu](mailto:lp Paige@fhsu.edu) or 785-628-4349. Please include your study title and reference number in all correspondence with this office.

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