**Project Title:** Tourism Resilience and Community Sustainability: Adaptation and Recovery of Rural Businesses and Destinations

**Requested Project Duration:** October 1, 2021 through September 30, 2026

**Statement of Issues and Justification**

External forces such as globalization and technological change have led to a decline in traditional agricultural, forestry, and mining jobs in rural America. As a result, many small towns and communities in rural areas are looking to effective means such as recreation and tourism for economic diversification and growth. The rural authenticity, unique culture and heritage, distinctive and “alive” assets of traditional music, art and craft, local food and drink, and outdoor beauty and recreation have been increasingly identified as important assets that can help to improve local economies. It is argued that asset-based economic development is more sustainable as opposed to the traditional coal mining industry and the newly emerged Marcellus Shale gas industry in the Appalachia and Northeastern region. One of the six goals identified in the Appalachian Regional Commission (ARC) 2016-2020 Strategic Plan focuses on “strengthening Appalachia’s community and economic development potential by leveraging the Region’s natural and cultural heritage assets.” To achieve this goal, ARC has provided funding for hundreds of projects in a wide range of program areas, including “asset-based development”, “entrepreneurship and business development”, and “tourism development.” The increasing importance of the recreation economy has also been recognized by the USDA as an emerging or priority area of national need and an effective means for rural development. A recent study (OIA, 2016) reveals that outdoor recreation economy generates $887 billion in spending, supports 7.6 million direct American jobs and generates $125 billion in federal, state, and local tax revenue.

Previous studies have found that nonmetro counties with high recreation development have a population gain because rural amenities and recreation opportunities attracted people for permanent residence (Beale & Johnson, 1998; Headwaters Economics, 2019; Johnson & Beale, 2002; McGranahan, 1999). In West Virginia, a study on visitors’ economic impact by Dean Runyan Associates (2018) indicates that the size of the travel industry in relation to the total economy of a locale is more significant in some smaller communities and rural areas than urban areas in the state. For some rural counties like Greenbrier, Tucker, and Pocahontas with unique scenic and outdoor recreational opportunities, the travel industry is a vital component of the total local economy in terms of travel-generated employment and earnings.

While recognizing the role that recreation/tourism plays in rural areas, tourism itself is very susceptible/vulnerable to external factors (Williams & Balaz, 2014) such as natural disasters, economic crises, disease outbreaks, climate change, terrorism, and uncertainties in safety and security, among others. For example, between 2000 and 2015, international tourism has suffered from major disruptive events such as the September 11 terrorist attacks in 2001, the severe acute respiratory syndrome (SARS) outbreak in 2003, the global economic crisis in 2008/2009, and the 2015 Middle East Respiratory Syndrome (MERS) outbreak. However, the negative impacts caused by these events on tourism were short lived and “none of one of them [have] led to a longer-term decline in the global development of tourism, … with only SARS (-0.4%) and the global economic crisis (-4.0%) leading to declines in international arrivals (Gossling et al., 2021, p. 3). Thus, tourism as a system seemed to be resilient as it will eventually recover from external shocks. That said, the impact from the COVID-19 pandemic is unprecedented “with no foreseeable conclusion” (Litvin et al., 2021, p.1), causing unemployment rates in the USA to the level not seen since the great recession in 1930’s (USDA Economic Research Service, 2021b). As a result, its impact on certain sectors of the tourism system may be permanent and may not be able to go back to the level they were prior to the pandemic.

The county-level impact of COVID-19 pandemic on rural America in terms of local unemployment and employment rates were analyzed by USDA Economic Research Service (2021) which classifies all U.S. counties into six economic dependence types: farming, mining, manufacturing, Federal/State government, recreation, and nonspecialized. It is found that COVID-19 case rates are lowest in nonmetro recreation counties while highest in nonmetro manufacturing-dependent counties. However, the Northeast region, especially in Appalachia, is among the highest unemployment rates in March 2021. Therefore, given the importance of outdoor recreation/rural tourism in local economy and its vulnerability to external shocks, particularly the unprecedented COVID-19 pandemic, a multistate long-term project that assesses and monitors the recovery of the tourism sector in rural areas deems necessary.

The economic distress facing rural America has been exacerbated by the COVID-19 pandemic which has profoundly affected people’s lives. While tourism has been regarded as an effective means for rural economic development and diversification, it has been hit hardest by the pandemic (Ugur & Akbıyık, 2020). For example, international arrivals plunged by 74% in 2020 with an estimated loss of 1.3 trillion in international visitors’ spending in the same year (UNWTO, 2021). In the U.S., travel spending in 2020 declined by 42% from 2019 (US Travel Association, 2021). Specifically, in terms of the hospitality sector of the tourism system, the expected room revenue loss for US hotels is nearly $83.7 billion in 2020 (vs. $51.2 billion for 2021) (American Hotel and Lodging Association, 2021). The American Hotel & Lodging Association conducted a survey of over 1200 members in November 2020 about the hotel’s financial outlook and staffing levels, finding that 71% of hotels cannot survive for another 6 months without further federal assistance and 77% will have to lay off more employees given the current and predicted travel demand. Moreover, over one thirds of hotels will face bankruptcy or be forced to sell by the end of 2020.

While the impact of COVID-19 pandemic on the tourism industry is widespread, the depth and breadth of the impacts vary among businesses and destinations. Small businesses that account for the largest chunk of the tourism sector in rural areas have suffered the most. For example, the Northeast region, especially in Appalachia, had the highest unemployment rates (USDA Economic Research Service, 2021a). While the COVID-19 crisis has drawn increasing attention from researchers, research on rural people as a whole (Mueller et al., 2021) and rural tourism in particular is largely limited even though rural areas accounted for the highest percent of COVID-19 cases and deaths (USDA Economic Research, 2021b). Although small and medium-sized businesses are more vulnerable to crisis impacts compared to large hotels, airlines, and tour companies, tourism crisis management tends to focus on the latter with small businesses being largely ignored (Cioccio & Michael, 2007; Cushnahan, 2004). There is a lack of understanding as to how businesses and destinations have responded to the crisis at the meso level (regional, state) (Neise et al., 2021). Watson and Deller (2021) argue that “the resiliency of these tourism- and hospitality-dependent regions to recover from such shocks is less well understood” (p.1). Furthermore, Yang’s et al. (2021) study on community resilience measurement indicates that tourism sectors are important in measuring community resilience. Thus, there is a need to examine the impact of crises and disasters such as COVID-19 on the tourism sector in rural areas systematically and longitudinally to fully understand the resilience, adaptability, and recoverability of rural tourism across states during and following the pandemic. The COVID-19 pandemic may offer an opportunity for tourism sectors in rural areas to restructure in a more sustainable way in the long term. It is hoped that rural tourism will come back better and more resilient following the COVID-19 pandemic.

**Related, Current and Previous Work**

Although tourism and recreation are conceptually different, the two terms are interchangeably used as they overlap in many ways and it is hard to separate them practically. Rural tourism research in the 1960s and 1970s was focused on farm tourism with the economic impacts of tourism on farmers as the main theme, although to some degree social and psychological impacts and problems were also examined (Oppermann, 1996). Farm tourism continued to be the study focus in the 1980s and early 1990s; however, other forms of rural tourism such as bed and breakfast (B&B) and rural tourism impacts on local communities were also examined during this time period (Oppermann, 1996). Much of the rural tourism research before the 1990s was conducted in Europe (Oppermann, 1996). Since 2000, rural tourism research has extended to other countries/regions beyond Europe and has broadened to a variety of tourism themes. Lane and Kastenholz (2015), after an examination of 1,848 articles published after 2000, identified 16 themes ranging from tourism management and development to economics, environment/ecology, rural/regional development, ecotourism, cultural tourism, and protected areas.

While rural tourism has been widely examined in the literature as a means for rural development, a search of the National Information Management and Support System (NIMSS) database reveals that few projects address issues and challenges facing rural America with a focus on outdoor recreation/rural tourism as a whole and community resilience in particular. For example, two projects were found to be related to outdoor recreation with at least one objective on resilience. They are: NE1962: Outdoor Recreation, Parks and Other Green Environments: Understanding Human and Community Benefits and Mechanisms (2017-2022), objective 3, Demonstrate and expand the evidence for the role of park and outdoor recreation services in promoting community vibrancy and resilience; and NECC1011: Balancing Natural Resource Recreation Management, Human Well-Being, and Community Resilience, Objective 3, Understand the role and the dynamics of outdoor recreation for resilient and vibrant communities. There may be other projects that do not focus on outdoor recreation/rural tourism but have considered outdoor recreation in a broad context. For instance, NE1029: Rural Change: Markets, Governance and Quality of Life, objective 3, Develop a better understanding of the role of amenities in rural development and the impact of economic and social changes on the quality of life in rural communities. While the first two projects have community resilience as a research objective, both focused on the connections between outdoor recreation, physical activity, human health and well-being, particularly among youth (for the first project).

A search of NIMSS database also found several other projects on community resilience, though not related to recreation/tourism. For example, 1. NE1749: Enhancing Rural Economic Opportunities, Community Resilience, and Entrepreneurship, objective 2, Evaluating Factors and Policies Affecting the Resiliency of Rural Communities; 2. NC1030: Sustainable and Resilient Systems: Transformative Response to Disruptions by Families, Businesses, and Communities, objective 2, Identify and measure the sources of major change and disruption and the structural barriers that impact the family/household, the business or the community, and objective 3, Identify and measure transformative responses to the positive and negative impacts of change and disruption on the family/household, the business, or the community; 3. NC1171: Individual, family, and community factors associated with resilience in diverse, rural, low-income families, objective 1, Community Capacity: To assess community capacity to support resilience in diverse rural low-income families, and objective 2, Individual and family resilience processes: To examine individual and family resilience processes from the perspective of rural, low-income mothers; and 4. NC1100: A Systems Perspective to Community Resilience: Rural healthcare at the intersection of households and businesses (2021-2016). These projects examined community resilience as it relates to economic and policy changes and/or natural and human-made disasters, none of them have focused on the COVID-19 pandemic or any other similar disease outbreaks as they affect individuals, businesses, and communities.

A search of USDA NIFA’s Current Research Information System (CRIS) also shows that none of the projects that involve rural tourism, agritourism, and other forms of tourism such as nature-based tourism or ecotourism funded by Hatch Program, McIntire-Stennis Program, or AFRI Competitive Grants in the past decade has focused on tourism resiliency and crises. This clearly indicates that there is research gap in the field of tourism resiliency as it relates to external shocks.

*Tourism resilience, adaptability, and recoverability*

As aforementioned, tourism industry is vulnerable to risks and crises, which has emerged as a popular research theme in the past decade or so. However, there is “theoretical fragmentation of the understanding of risk and uncertainty, resembling a patchwork of disconnected ideas across scales and disciplines” (Williams & Balaz, 2015, p. 282). Recently, Ritchie and Jiang (2019) further identified three research gaps related to tourism risks: lack of conceptual and theoretical foundations; lack of empirical testing of models/theory; and unbalanced research theme coverage, which, according to Arbulu et al. (2021), “refers to the lack of research on the factors affecting vulnerability and resilience in tourism” (p. 2).

Resilience can be analyzed at three different levels: (1) the micro level (i.e., the resilience of individual organizations), (2) the meso level (i.e., the resilience of an industry, a market or a group of companies), and (3) the macro level (i.e., the totality of individual organizations and market (Rose, 2006; cited in Neise et al., 2021). An examination of the organizational resilience serves as the basis for understanding resilience at the meso level. Thus, most resilience studies were conducted either at the micro level or at the meso level or at both levels.

Resilience can be understood as a simple recovery to the original level. It is also understood as a development process which consists of four factors--risk or vulnerability, resistance, reorientation or reorganization, and recoverability (Martin, 2018). Organizational resilience is conceptualized in recent research as the ability to withstand disruptions and transform against challenges (Barasa et al., 2018). Neise et al. (2021) further argue that organizational resilience involves three aspects: absorption, coping, and adaptation. Absorption refers to a firm/organization’s ability to withstand disruptions and remain functional (Berkes, 2007). Pre-shock performance can be used as a key indicator to measure absorption (Neise et al., 2021). Coping reflects the ability of a firm/organization to respond quickly to shocks and resulting restrictions while adaptation relates to an enterprise’s ability to develop and implement strategies to respond to crises in the long run (Berman et al., 2012).

Ritchie and Jiang (2019) reviewed 142 papers published from 1960 to 2018 on tourism risk, crisis and disaster management and identified three major stages studied: preparedness and planning (e.g., proactive crisis management/response, crisis management plan and strategies, risk management mechanism, etc.), response and recovery (e.g., tourism response and recovery strategies, government policy response actions, post-crisis/disaster marketing strategies and campaign, recovery strategy measurement, etc.), and resolution and reflection (e.g., crisis/disaster learning, organizational learning, knowledge management, and destination/enterprise resilience). While over 50% of the 142 papers focused on response and recovery, most studies in this category are case specific “with limited contribution to theory development” (p. 7). The review revealed that three key strategies for effective tourism recovery (crisis communication, recovery marketing, and stakeholder collaboration) have been discussed in previous studies.

Previous studies have examined the impact of such pandemics as SARS, Asian Flu, and HIN1 on tourism (Chen, 2011, Chien & Law, 2005; Kuo et al., 2008; Lee & Chen, 2011; Mao et al., 2010; Pine & McKercher 2004; Tew et al., 2008; Tse et al., 2006; Wen et al., 2005; Wu et al., 2010). These studies have examined different aspects of the tourism industry, including hotels, cruises, travel flows, travel intentions, perceived risks, consumer behavior, and crisis management and recovery, among others. There are also studies that specifically investigate the hospitality’s responses to crises prior to the COVID-19 outbreak. Examples include Dahles and Susilowati (2015) (the 1997-1998 Asian financial crisis in Indonesia), Israeli and Reichel (2003) (terror activities from 2000 to 2002 in Israel), Gehrels and Blanar (2013) (2008 economic crisis in Czech Republic). For the purpose of this project, the following review is mainly focused on studies related to the COVID-19 pandemic.

While studies on the COVID-19 crisis as it relates to recreation/tourism have expanded recently, most of them are conceptual or descriptive with a focus on visitors’ behavior changes, number monitoring, and spatial use of nature/urban green areas and associated health benefits while empirical studies on tourism resilience and recovery are limited (Varzaru et al., 2021). Prayag et al. (2020) argue that “existing resilience studies on tourism organizations do not provide empirical evidence of the relationships between different types of resilience” (p.1219). Assaf et al. (2021) identified consumer behavior, demand and performance modeling, forecasting, destination and facility management, information technology, and quality of life as six key pillars that require more attention for future research, based on a survey of industry and academic experts’ opinions. Studies of the pandemic on tourism can be broadly classified into two types: supply on the destination side (i.e., hospitality, travel agents, destination attractions) and demand on the market side (i.e., tourists’ perception and behavior change, tourist arrivals). Below is a brief review of findings on these two types with a focus on perception of risk, impact on hospitality (which usually accounts for the large chunk of tourism spending in a destination) and tourist arrivals.

*Perception and Behavior*

Although different countries/states have adopted different policies/regulations on travel restrictions, the “cocooning” theory (Popcorn, 1981) that refers to people’s stay at home to avoid uncertainty outside may apply for some people during the global pandemic. Previous studies found that the same risk may be perceived differently by different people. There are many factors that may contribute to risk perception, including socio-demographics, personal characteristics (e.g., Allocentric vs. Psychocentric described in Plog, 1974), and past travel experience. For example, allocentric Americans were more likely to travel for vacations and family/friend visits during the pandemic than their psychocentric counterparts (Litvin et al., 2021). tourists from the US, Hong Kong, and Australia tended to take travel risk more seriously than their counterparts from Greece, Canada, and the UK (Richter, 2003; Weber & Hsee, 1998; cited in Bratic et al., 2021). Several studies found that perceived risk of the COVID-19 negatively affected Chinse people’s decision to travel to major cities (Nazneen et al.) or even rural areas (Hong et al., 2020; Zhu et al., 2020). Neuburger and Egger’s (2021) study in the DACH region (Germany, Austria, Switzerland), based on two rounds of surveys (two weeks before and immediately after COVID-19 was declared a pandemic, p. 1011), reported that people were more likely to change or cancel their travel plans over the two-week period with increasing perceptions of travelling risk. Bratic et al. (2021), in examining increased travel anxiety due to perceived risk of COVID-19 in Serbia, found that COVID-19 perception led to travel anxiety which led to change and cancellation of travel plans.

There are studies that used big data to analyze customers’ perceptions of the COVID-19 as it affects tourism. For example, Hu et al. (2021) examined travelers' online evaluations of China’s hotel services based on 98,163 hotel reviews from Ctrip.com. Customers’ perceptions were comparatively analyzed between “within COVID-19 pandemic” (January 21, 2020, to April 13, 2020) and “recovering from COVID-19 pandemic” (April 14, 2020, to June 2, 2020) with reference to the corresponding period in the year 2019. They found that the pandemic has altered people’s expectations of hotel attributes and services. Other examples of the use of big data to examine the pandemic-related perceptions/behaviors include Kwok et al. (2021) (assessment of public’s attention to COVID-19 messages posted on Facebook and Twitter by hospitality companies; Kim et al. (2021) (consumers’ choice and decision making in the hotel and restaurant domains as affected by the pandemic based on Google Trends Data and other information sources); and Piccinelli et al. (2021) (assessment of air travelers’ concerns over the pandemic from online comments), among others.

*Hospitality*

The journal Tourism Recreation Research just issued a call for a special issue on “Hospitality Innovation and Resilience during Uncertainty” reflects the importance of research on the resilience in the hospitality sector as it is affected by the COVID-19. Duro et al. (2021) argue that the hospitality sector in the tourism industry has been hit hardest by the COVID-19 pandemic. Klein and Smith (2021) analyzed COVID-19 impacts on core industries in six large cities (Seattle, WA; Reno, NV; San Francisco, CA; Las Vegas, NV; Orlando, FL, and Washington, DC.), finding that leisure and hospitality industry was most vulnerable while information technology and government were most resilient. presentation to owners/manager Hospitality businesses tend to adopt coping strategies such as layoffs or furloughs to navigate through the hard times. However, this workforce reduction strategy may adversely affect the mental wellbeing of those workers who were laid off or furloughed because of the pandemic (Chen & Chen, 2021).

Wilkesmann and Wilkesmann’s (2020) study on top gastronomy in Germany shows that 50% restaurants could survive for a maximum of 6 weeks if the COVID-19 shutdown is maintained and many restaurants cannot survive in the long term. Another study (Neise et al., 2021) on restaurants and bars) in the same country reports that 45% of owners considered their businesses as resilient. Most owners received reliefs from the government and only a few offered a delivery and takeaway service during the lockdown. Businesses already struggling with high costs or with loans and debts prior to the pandemic cannot withstand the lockdown impact and are less resilient. In other words, restaurants and bars with better financial and economic performance before the COVID-19 crisis are more resilient.

*Tourist arrivals*

Varzaru et al. (2021) examined the COVID-19 impacts on the tourism industry for 24 European countries based on data from March 2020 and January 2021, finding that total cases of COVID and total deaths of COVID significantly influenced the average percentage of changes in tourism measured as nights spent (by all customers, by residents, and by non-residents) at tourist accommodation establishments during the 11 months of pandemic. They further classified these countries into two clusters using the nights spent by the three groups with cluster 1 including countries that have successfully coped with the COVID-19 pandemic and cluster 2 being counties that have been affected the most, suggesting travel restrictions have reduced people’s inclination to travel, which, in turn, led to reduced number of nights spent.

Arbulu et al. (2021) used Monte Carlo simulations to estimate the tourism recovery (in terms of arrivals, cruise ship passengers, Gross Value Added, GVA, and employment) in Balearic Islands based on four scenarios that reflect the different levels of supply shock (travel restrictions and lockdown) and demand shock (a fear of travelling, falling income, low season). They found that in the best-case scenario, it would take over two years for the Island’s tourism to reach the arrival levels of 2019. A backtesting analysis was also conducted to compare predications GVA reduction for each scenario with the historical data, showing a mean deviation of -2.09%, ranging from -5.79% to 1.79%. Balearic Islands, along with other destinations in Spain, was also examined by Duro et al. (2021) who identified tourism dependency, market structure, the supply of rural accommodation, and health incidence of the pandemic as the primary factors to measure the vulnerability of tourism to COVID-19 and developed a COVID-19 vulnerability index using Spain and its 50 provinces as case. Balearic Islands was found to be among the most vulnerable destinations in Spain.

In summary, crisis studies on tourism prior to the COVID-19 pandemic can serve as a reference for studies under the current circumstances with the COVID-19 pandemic. However, not all prior crises are global in nature and as such their impacts are limited in terms of magnitude and scale. It is worth noting that current COVID-19 related tourism studies are fragmented, local, and cross-sectional. Ritchie & Jiang (2019) stress that “at the local level the impacts of a crisis (e.g. unserviceable infrastructure in a period of time) is localized and may have little effect nationally” (p. 6), and “researchers should consider using multiple case studies to improve generalizability” (p.6). In other words, a systematic, synergic, and longitudinal study is needed to better understand the dynamics of the impacts so that future crisis management can incorporate lessons learned from the past crises and the current pandemic to reduce vulnerability and enhance resilience ahead of crisis and disasters (Litvin et al., 2021; Ritchie & Jiang, 2019).

**Objectives**

1. Assess, inventory, and classify the impact of current and potential external shocks on rural tourism at the multi-state level.
2. Investigate the resilience, adaptability, and recoverability of different components of the rural tourism system (i.e., suppliers, buyers, and destinations).
3. Identify, implement, and evaluate strategies for tourism businesses and destinations to cope with external shocks.

**Methods**

The research methods and approaches that are being proposed will be developed and applied to all participating states. Although all states face similar COVID-19 issues, the impacts and associated coping strategies may differ from county to county and from region to region (region here refers to tourism region defined by each state), which allows for comparative analysis of the relationships between dependent and independent variables. Thus, interstate collaboration provides the opportunity not only for longitudinal analysis within a single state, but also for cross-section analysis across states, research that has never been done before.

A national team composed of researchers and extension specialists from participating states with varying levels of COVID-19 impacts and different destination characteristics will be built through the National Extension Tourism Network and other outlets such as personal contacts, email list servs and academic/professional conferences.

This project will follow the definition of the Office of Management and Budget to define rural counties/areas. Following the USDA Economic Research Service, rural areas are defined in this project as nonmetropolitan (nonmetro) counties. Tourism as a system should be investigated from the systematic approach that “makes it possible to analyze, describe and synthesize different viewpoints from an overall perspective” (Kaspar, 1989, p. 443). Tourism as a system consists of multiple subsectors that are interconnected. The UNWTO defines the tourism industry as composed of 12 categories. However, given the rural nature of this multi-state project, it would be unfeasible to investigate all the 12 sectors of the tourism system. Instead, the team will focus on consumers (the market side) and tourism businesses and destinations (the supply side). The analysis will be done at the county level (rural counties) and/or tourism region level (each state has defined tourism regions. For example, there are nine tourism regions in West Virginia).

Research activities will involve monitoring and assessing the pandemic impacts at different time periods (pre, during, and after) from the perspectives of supply and demand (cf. Assaf et al., 2021). Specifically, on the market side, research topics would include visitors’ perceived risk of travel, their shifting preferences of destination choices/lodging types, their changes of motivations, travel patterns and destination images. Research on the supply side may involve 1) testing the regional inequity of rural areas in terms of their resilience to COVID-19; 2) assessing the spatial effects of COVID-19 at different geographic scales, including county, tourism region, and state; 3) examining attitudes of rural residents towards tourism that may take place in remote areas; 4) examining new forms of tourism and amenity migration as related to new forms of workspaces (e.g., digital nomads); and 5) coping strategies developed by tourism businesses (hotels/motels, B & B, vacation rentals, cabinets, restaurants, bars and other dinning places).

Primary data and secondary data will be used. Possible secondary data sources include, but not limited to:

* Current Population Surveys, CPS
* the Integrated Public Use Microdata Series, IPUMS
* American Community Surveys, ACS
* US Bureau of Census
* North American Industry Classification System (e.g., code 71 refers to attractions such as Arts, Entertainment, and Recreation and code 72 refers to hospitality component such as Accommodation and Food Services)
* Baseline Resilience Indicators for Communities <https://artsandsciences.sc.edu/geog/hvri/bric>
* COVID 19 Tourism Index by Temple University <https://experience.arcgis.com/experience/6e1ccb1ee1bb4469871898646aa62f54>
* John Hopkins Coronavirus Resource Center

<https://coronavirus.jhu.edu/map.html>

* USDA Economic Research Service, the COVID-19 pandemic and rural America.

<https://www.ers.usda.gov/covid-19/rural-america/>

* USDA Rural Development COVID-19 Response

<https://www.rd.usda.gov/coronavirus>

* US Travel Association

<https://www.ustravel.org/>

* American Hotel and Lodging Association, AHLA

<https://www.ahla.com/>

A mixed methods approach that involves both qualitative and quantitative data collection and analysis will be adopted in this study to achieve the three research objectives. Qualitative methods may include focus groups and in-depth interviews. Study participants (community leaders/officials, destination managers, enterprise owners or managers/staff, local business development agencies and associations, CVB, chamber of commerce, and local residents) will be identified and selected based on research objectives and needs. There are three types of focus groups: face to face (in-person), phone, and online, each with advantages and disadvantages. Face to face focus group, depending on the pandemic situation of a given study area, is preferred for this study given the scope (local area where people are easily to be brought together) and the nature (deep understandings of the ups and downs of local tourism development) of this study. However, for a focus group that involves participants from multiple counties or states, an online focus group would be the right choice. Data will be transcribed with the use of some software like Dragon and analyzed using Nvivo 12.

Quantitatively, online survey and big data from social media or other platforms will be used. Qualtrics, a popular online survey platform, will be used to collect data from visitors identified from Qualtrics data panel which is formed from multiple sources, including “website intercept recruitment, member referrals, targeted email lists, gaming sites, customer loyalty web portals, permission-based networks, and social media, etc.” (Qualtrics. 2021). Alternatively, potential visitor participants can also be recruited from Amazon’s Mechanical Turk (MTurk), which “has been determined to be a reliable platform for conducting social science research and has gained significant acceptance by tourism researchers” (Litvin et al., 2021, p. 2). For residents, potential participants can be recruited through the purchase of email addresses from GeoSelector-DirectMail.com. Finally, for tourism businesses, potential participants can be identified via self-created mailing list (Wilkesmann & Wilkesmann, 2020) using the snowball approach and/or local CVB network. Data analysis of quantitative data may include, but not limited to, GIS spatial regression, least-squares regression, ANOVA, t-tests, factor analysis, cluster analysis, time series analysis, and structural equation modeling.

In terms of travel patterns, there are different ways to examining people’s spatial/temporary movements in a destination, including the traditional way of using pencil-paper questionnaires or travel diaries and more advanced approaches of data collection based on GPS devices, online social media, mobile social media, mobile phone call detail record (CDR) data or UberMedia, and other big data platforms (e.g., Google, Baidu) (Xu, Xu, Wang, Yue, Deng, & Mao, 2019). Compared with the traditional approach of data collection using questionnaires, field observations, or interviews, geotagged big data provide geographical and contextual information about people’s spatial movement and thus are more useful and effective to understand the spatial movements/behaviors of individuals as well as their comments, perceptions, and momentary experience associated with a destination during different stages of the COVID-19 pandemic . Information obtained from big data or social media on where people visit, why they visit, how long they stay, what they experience, and how satisfied they are with a destination visited is tremendously useful for better planning and management of a destination.

In terms of visit volume estimation, there is a trend among researchers to use geotagged photos uploaded to Flickr or other social media to approximate visitation rates in a park or a tourism destination. For example, Wood et al. (2013), in examining the visitation rates at 836 recreational sites around the world, found that “crowd-sourced information from Flickr photographs corresponds well with empirical information about where people go” (p. 2) and “there is a reliable statistical relationship between the number of people counted and the Flickr-generated estimate of user-days” (p. 2). In their studies, photo-user-days (PUD) are defined “as the total number of days, across all users, that each person took at least one photograph within each site” (p.6). Sessions et al. (2016) studied the relationship between the number of Flickr-generated photos measured as monthly PUD and publicly available visitor statistics in 38 national parks in the western United States. They found that the monthly PUD significantly predicts national park visitation, leading them to conclude “researchers can use Flickr photographs to infer the number of visitors to a park” (p. 706). Similar finding was reported by Kim et al. (2019) who examined the applicability of Flickr in 15 ASEAN heritage parks, with PUD being significantly related to the field observation data such as visitation revenue (r = 0.90). Flickr photos have also been used to identify the origins of visitors in Wood et al. (2013) and Sessions et al. (2016). The information on visitors’ origins is essential as it allows for the differentiation of local visitors (residents) from outside visitors.

While recognizing the power of using Flickr to predict visitor use patterns and numbers, the use of a single source of social media may increase the bias of results. Researchers have suggested using multi-source big data to increase accuracy (Wood et al., 2013; Sessions et al., 2016).

There are two basic approaches to evaluating the effectiveness of these activities: those that readily lend themselves to numerical representation (quantitative), and those that tend to be less easily summarized in numerical form (qualitative).  Some argue for qualitative approaches to the collection of evidence of effectiveness and equity, while others argue that the approaches should utilize only data collected using quantitative methods.  Still others argue for method triangulation which included the collection and integration of both qualitative and quantitative data.  Both groups agree that comparative and experimental research is needed to improve the quality of the data collected, and to minimize and better understand and measurement error (Rossi and Freeman, 1993). To compound this problem, the complexity of many current resource management programs/policies often means that the public and specific stakeholder groups do not have adequate knowledge to develop well-formed opinions about a specific program or policy.  This lack of knowledge often transcends into a lack of support for a given policy or program. To make matters worse, if the public or stakeholder groups possess erroneous information about policy or program, it can have a detrimental effect on decision making associated with the policy or program (i.e., funding, level, and direction of public or stakeholder support).  Consequently, program and project managers have begun to recognize the value of developing communication strategies that are effective in providing information on their specific program or project to the public and specific stakeholder groups (Bright, et al., 1997, Robertson and Carlsen, 2003; Robertson, et.al., 2002).  Policy and decision makers want to make the best possible decisions based on evidence gathered from the public and stakeholders with the appropriate rigor and related to a particular purpose or standard for decision making at a reasonable cost.

Examples of the use of triangulations

1. Visitors’ perceptions of destination attributes and services

Understanding visitors’ perceptions of destination attributes and services is crucial for Destination Management Organizations (DMO) to manage and market destinations. Visitors’ perceptions are typically examined based on data collected from surveys, which are largely limited in sample size because of budget and personnel constraints, resulting in sampling errors and biases. In contrast, big data are available (though not always at no cost) for customer-generated media/online reviews and can be applied to a large geographical area, even at the regional /national level. Thus, visitors’ evaluations and reviews about their own experiences with a destination from popular online review platforms such as TripAdvisor, Expedia, and Yelp can provide rich information on their perceptions of the destinations visited through content analysis, text mining, machine learning, etc. In so doing, findings from traditional surveys can be cross validated with findings from big data analysis, with the latter being complementary to the former (Antonio et al., 2020).

Although the applications of mixed methods that involve traditional surveys and big data analysis are limited in the field of tourism studies, there are exceptions. For example, Kim and Lehto (2013) analyzed survey results along with textual data form tourism websites to examine the convergence or divergence of destination personalities. This use of combining survey responses with textual data is considered by Truong et al. (2020) as one of five advantages of mixed methods—triangulation (other four are: complementarity, development, initiation, and expansion).

Given the nature of this multi-state project being longitudinal, survey results at time point A can be compared with survey results at time point B, so are results from big data analysis. Thus, results from both sources can be cross validated longitudinally and cross sectionally.

2. visit volume, visitor spending, and big data

Visit volume and spending at the county level can also be estimated based on survey data (Deng et al., 2017). Results from the survey data can be related to room head counts and sales. For example, there are 12 sectors classified as visitor-related by the Florida Department of Revenue (Hotels and Motels, Bars and Restaurants, Liquor Stores, Photo and Art Stores, Gift Shops, Admissions, Sporting Goods, Rentals, and Jewelry Stores) (Stienmetz and Fesenmaier, 2019). Thus, visitor-related sales at the county level can be calculated by adding up taxable sales for each of these 12 sectors. A relationship between estimates based on survey and the actual sales can be established at time point A as well as at time point B and time point C. If such relationship can be tested as reliable across states longitudinally, then the visit volume and spending can be estimated in the future simply based on actual sales of visitor-related sectors which are easily available at the county level for most states.

There are states that hire marketing firms like Longwoods International or Dean Runyan Associates to provide longitudinal data on visitor profiles including spending. Thus, a relationship can be established between the three sources of data: primary data obtained from surveys, secondary data from firms, and secondary data from actual sales.

As indicated in the proposal, there is a trend among researchers to use geotagged photos uploaded to Flickr or other social media to approximate visitation rates in a park or a tourism destination. For example, Wood et al. (2013) found that “there is a reliable statistical relationship between the number of people counted and the Flickr-generated estimate of user-days” (p. 2). This relationship can also be examined and tested in this proposed project at the county level across participating states at different time points (pre, during, and post-pandemic), thus adding another source of triangulation.

**Measurement of Progress and Results**

Outputs

Publications in scientific articles/reports

Webinars/workshops

Crisis recovery frameworks and theory development

Inventory of tourism assets in rural areas under examination

Assessment of tourism performance pre, during, and after crisis

Creation of a rural tourism resilience index dashboard

Graduate students engaged in multi-state projects

Extension programs engaged

New Extension programs developed

**Outcomes or Projected Impacts**:

* A better understanding of the role of the tourism industry in local and regional economy and how dependency on tourism sectors influences local/regional economic resiliency.
* Development of future funding proposals that promote collaborative research and extension activities on tourism resiliency and community sustainability in the U.S.
* Development of best practice toolkit for rural tourism responses to external shocks.
* Development of strategies to recover from externa shocks.

Milestones

(2022)

* Apply for competitive funding to support objectives
* Fine-tune the project objectives and methods with input from Extension specialists
* Identify and recruit participating states and investigators
* Recruit research participants
* Identify agency/community partners

(2023-2024)

* Implement research activities for each objective
* Disseminate practical findings through Extension research partners

(2025-2026)

* Continue with years 2023-2024 research activities
* Continue extension and project results transfer
* Disseminate outcomes through academic and practical outlets
* Plan for next phases

**Projected Participation**:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Station** | **Objective** | **Research** | **Extension** |
| Dr. Douglas Arbogast | West Virginia University Cooperative Extension | 1,2,3 | x | x |
| Dr. Jinyang Deng | West Virginia University | 1,2,3 | x |  |
| Daniel Eades | West Virginia University Cooperative Extension | 1,2,3 | x | x |
| Dr. Charlie French | University of New Hampshire Cooperative Extension | 1,2,3 | x | x |
| Dr. Robert Robertson | University of New Hampshire | 1,2,3 | x |  |
| Penelope Whitman | University of New Hampshire Cooperative Extension | 1,3 |  | x |
| Dr. Stephan Goetz | Pennsylvania State University | 1,2,3 | x |  |
| Dr. Jason Scott Entsminger | Pennsylvania State University | 1,2,3 | x | x |
| Dr. Xinyi Qian | University of Minnesota Cooperative Extension | 1,2,3 | x | x |
| Dr. Matt Ulmer | University of Alabama Cooperative Extension | 1,3 |  | x |
| Miles Phillips | Oregon State University Cooperative Extension | 1,3 |  | x |

**Outreach Plan**

The National Extension Tourism Design Team (NETDT) was established to provide leadership to National Extension Tourism (NET) work collectively across the U.S., the design team is a loosely structured group geographically aligned with the four Regional Rural Development Centers with Design Team members from each region. NET members provide research-based education and engagement and outreach support among participating land-grant and sea grant institutions. NET provides strategies to collaborate and share including a bi-annual conference, website, webinars, and joint programming around topics such as agritourism, community or rural tourism development, and coastal tourism. NET members also collaborate on research and scholarship as evidenced by the recently published online volume of case studies entitled *Innovative and Promising Practices in Sustainable Tourism: Case Studies.*

Extension tourism specialists from the NET Design Team will be involved in all phases of the Hatch project helping to align research with local stakeholder needs and ensure that research findings are disseminated to community stakeholders through the various outlets described above that are designed to foster academic, Extension, and community partnerships and collaboration. National Extension Tourism involvement will ensure that local community needs are identified and fully integrated into the research design and planning process. The integration of community stakeholders in the research design and implementation process will ensure that once the research is conducted that the findings can be disseminated through academic and practical outlets with the results being developed into practical tools that communities can utilize to improve their resiliency and manage their destinations in a sustainable manner. The research developed and implemented as a result of this Hatch proposal will directly support the development and evaluation of applied programming (i.e. curriculum, assessment tools, training, etc.) to assist and advance Extension and Outreach efforts in meeting the needs of rural tourism stakeholders as they adapt and build resiliency.

Critically, through connections fostered within NET, our proposed Multi-State project will have access to broader networks of researchers and Extension professionals working on other topics in the fields of tourism, recreation, and hospitality. This includes a strong presence within NET of leading experts in agritourism, a field with an increasingly dense network of researchers. These researchers can be engaged in this project through their emerging work on resiliency of agritourism enterprises (for examples see Curtis and Slocum (2021)  and Chin and Musa (2021) ). Because of their work at the level of the firm, they are well-poised to contribute to this project’s goals on business resiliency, and this project offers the first real opportunity for them to do so in a tourism-specific context.

Internationally-focused projects and colleagues abroad will also be incorporated into this project’s activities where appropriate and allowable under funding guidelines. Those participating in this proposal’s development have key connections to a global body of researchers and outreach educators through engaged activities, such as the International Workshop on Agritourism . A number of principles to this proposal and/or leaders within NET also currently engage in their own projects abroad, bringing a global perspective to the research and education that will result from the creation of this Multi-State collaborative effort.

Participating researchers from different disciplines will be identified based on their publications and academic acquaintances. These researchers can be from those affiliated with an Ag Experiment Station or anyone with relevant research expertise and experience is welcome to join. Once such a team is formed, then it comes time for brainstorming to define topics for interdisciplinary examination, determine methods to be used, and set up goals to be achieved. it is important to build good working relationships among participants during the implementation of this project to ensure researchers with different expertise from different disciplines understand one another and contribute collaboratively to the same goal.

**Organization and Governance:**

Two committees, a Technical Committee and an Executive Committee, will be created to guide and coordinate research activities following the recommended standard governance for multistate research activities. The Technical Committee will be made up of an official representative from each participating state appointed by the Experiment Station Director, a representative from USDA, and an administrative advisor designated by the Experiment Station Directors. The Executive Committee will consist of a Chair, Secretary, and administrative advisor.

The Technical Committee will meet once a year, usually in the fall to coincide with the National Extension Tourism Conference. The committee will evaluate research progresses and activities to ensure adherence to the project objectives and accomplishment of projected outputs/outcomes. The Chair and Secretary will be elected at the annual Technical Committee meeting for two-year terms. The Chair will be responsible for the preparation of the annual report. The Secretary will take on the responsibility of organizing the annual meeting, recording and distributing meeting minutes, and performing other duties assigned by the Technical Committee.

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