

Economic Impact of Rock Climbing in Newton County, Arkansas

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Abstract

The researchers conducted an economic impact study of nonlocal climbers visiting Newton County, Arkansas and their expenditures using an online survey (n=380). Researchers estimate 39,610 nonlocal climbers visit Newton County per year, spending on average \$84.02 per person per trip. Based on the results of the study, the researchers estimate visitors spent \$6.3 million in the study area as a result of climbing. This estimate comes from \$3,037,910 in lodging (hotels and camping) and \$3,327,837 in food/gas/retail expenditures. The researchers analyzed the economic impacts of the annual climbing festival, 24 Hours of Horseshoe Hell, which supports an additional \$371,577 in Newton County each year. Demographics from the study indicate climbers visiting Newton County are well-educated, with roughly three in four respondents holding at least a bachelor's degree and another 27.3% holding advanced degrees.

Keywords

Climbing, rock climbing, economic impact, rural development, rural economies

INTRODUCTION

Outdoor recreation continues to represent a vibrant segment of the United States economy. Recently, the Bureau of Economic Analysis (BEA) estimated outdoor recreation added \$1.2 trillion in economic output as a result of visitors connecting with nature and the outdoors (BEA, 2024; BEA, 2023). Following the 2020 pandemic, the US population actively sought outdoor experiences, with an estimated 55% of Americans engaging in outdoor recreation in 2022, up 2.3% from 2021 (OIA, 2023). Outdoor recreation is also more inclusive than it has been in the past as inclusivity-focused outdoor recreation groups have appeared across the nation (AAC, 2019). This has especially been the case with rock climbing, which has been highly visible following its premiere in the Tokyo Olympic Games, its presence in a series of mainstream cinema, and the assertion climbing supports well-being (Bond, 2024a; Maples, 2021).

Rock climbing reflects the greater national trend toward outdoor recreation growth in recent years. Outdoor Industry Association estimated climbing users increased from 2.1 million to 2.3 million between 2017-2021 (OIA 2023). Recent studies on rock climbing have created new knowledge on the economic contributions of visiting climbers, noting climbers annually spend millions in crags across the nation (Bradley &

Maples, 2024; Maples & Bradley, 2021; Maples, Bradley, Boujaoude, Rehm, & Golden, 2021; Maples, Bradley, Giles, Leebrick, & Clark, 2019). Collectively, these studies have also established a demographic for climbing visitors: persons who typically possess college degrees (often advanced degrees) and have desirable incomes which support their activities while visiting and contradicting longstanding. These findings have disrupted past unsubstantiated myths depicting rock climbers as financially-broke dirtbags who spend little while climbing (Chrobak, 2017; Taylor, 2010; Roper, 1998).

In this study, the researchers examine the annual economic impacts of climbing in Newton County, Arkansas while establishing their use patterns and demographics. Based on an online survey (n=380) and visitation estimates of 39,610 nonlocal climber visits, the researchers estimate visiting climbers annually spend \$6.3 million in Newton County which supports \$1.3 million in local wages. Additionally, the researchers analyzed the economic impacts of the annual climbing festival, 24 Hours of Horseshoe Hell separately, which supported \$371,577 in expenditures Newton County each year for the event alone. Please note, the economic impact of the festival was included in the annual economic impact results. Throughout, climber demographics indicate they are well educated, with the majority at least holding a bachelor's degree. Roughly one in five own their own business (often in recreation) while others are professionals in healthcare, science, engineering, and marketing.

LITERATURE REVIEW

Outdoor recreation represents an important and growing sector of the US economy. The Bureau of Economic Analysis (BEA) indicated outdoor recreation contributed \$1.2 trillion in economic output in 2023, up from \$1.1 trillion the prior year (BEA, 2024; BEA, 2023). In that analysis, BEA focuses on three areas in their outdoor recreation estimates which help illustrate the breadth of outdoor recreation's involvement in the economy: conventional outdoor recreation, other outdoor recreation, and supporting activities. *Conventional recreation* covers activities most immediately associated with recreation such as boating, fishing, climbing, cycling, and so forth. *Other recreation* widens this analysis to include activities like going to outdoor concerts, while *supporting activities* adds expenditures created by travel costs as well as expenditures like construction which make recreation possible. In the 2024 estimates, 31.4% of value added came from conventional recreation, while 20.1% is from other outdoor recreation, and the remaining 48.5% from supporting activities. Similar national studies, such as the Outdoor Industry Association's (OIA) economic impact study of outdoor recreation in 2017, have echoed the BEA's findings. For example, OIA (2017) noted outdoor recreation use supported \$887 billion in annual expenditures and 7.6 million jobs across the nation. Moreover, this supported \$65 billion in federal tax revenue and \$59 billion in state and local revenue.

Concomitantly, outdoor recreation is also growing in its participation rates. OIA (2023) noted that in 2022 55% of the US population (aged 6 and older) engaged in outdoor recreation. This participation base grew 2.3 from the prior year, with inflation likely supporting a decrease in the number of outings but an increase in more persons seeking outdoor recreation experiences (OIA, 2022). Moreover, reductions in barriers to

use and changing perceptions on inclusivity have supported greater diversity in outdoor recreation use. For example, the American Alpine Club's (AAC) inaugural State of Climbing report found an increased presence of women who climb amid inclusivity programs such as Flash Foxy and Brown Girls Climb while programs like Brothers Who Climb, Natives Outdoors, and Sending in Color supported greater racial and ethnicity diversity in climbing (AAC, 2019). More locally, recent research in Arkansas supported inclusivity by identifying income inequality and physical impairment as two major barriers to be addressed in state outdoor recreation efforts going forward (Arkansas Department of Parks and Tourism, 2023).

Rock climbing in general has experienced growth in recent years in use patterns and its economic impacts. Climbing has been increasingly visible (and arguably, consumable) by the US and even global population. Examples include a glut of recent mainstream climbing documentaries (such as *Free Solo*, *Meru*, and *Valley Uprising*), the inclusion of climbing in the Tokyo Olympic games, and the frequent discussion of climbing as a form of well-being (Bond, 2024a). Climbing has also demonstrated growth since the 2020 pandemic. For example, OIA indicated sport/boulder climbing steadily grew from 2.1 million users to 2.3 million users, 2017-2021 (OIA, 2023). This also holds true abroad; outdoor rock climbing in England indicated a 9% increase between 2019 and 2023 despite having higher entry costs compared to other outdoor recreation activities (Bond, 2024b). The US climbing gym industry similarly reported ongoing growth (albeit slightly slowed in recent years) in new gyms opening and new users engaging gym facilities (Climbing Business Journal, 2024).

Recent climbing studies of rural climbing crags have provided a more localized understanding of the economic impacts of climbing in rural settings. Two studies in Central Appalachia are especially relevant here in its relative similarities to Arkansas' Ozarks. A study in Eastern Kentucky's Red River Gorge estimated rock climbers spent \$8.7 million annually in some of the nation's poorer counties (Maples & Bradley, 2021). This study notably included analyzing an annual climbing festival (Rocktoberfest) which is a mainstay among the Red's climbing community. Second, a prior study in West Virginia's New River Gorge estimated rock climbers spent \$12.1 million annually in an area steeped in coal history and economic decline (Maples et al., 2019). This area would, in subsequent years, be identified as a national park. Both studies had similar demographic findings: climbers are well-educated persons and concomitantly, often professionals with desirable incomes. These findings also largely dismiss the longstanding myth depicting climbers as *dirtbags*, a historical artifact and term of endearment often utilized in Yosemite's climbing community to describe climbers who eschewed careers and personal comforts to instead centrally focus on climbing (Taylor 2010; Roper 1998). In Kentucky's Red River Gorge, this label had a longstanding pronounced chilling effect on how local tourism organizations viewed climbers as clientele (Chrobak, 2017). However, the proliferation of demographic data on climbers has since relegated the dirtbag mythos back to the chronicles of history in many climbing destinations, turning climbers into prospective clientele rather than a community concern (Maples, 2021).

Two additional rural rock climbing studies provide additional insight on rural economies. A pandemic study of rock climbing in Bishop, California noted climbers spent \$15.6 million annually, although this number was reduced by pandemic closures (Maples et al., 2021). Likewise, a recent study in Lander, Wyoming estimated climbers spent \$4.5 million annually (Bradley & Maples, 2024). Lander, much like Newton County (the area examined in the present study) has a longstanding history of ore mining (Leroy, 2024). Again, both studies replicated demographic findings from the earlier studies in Kentucky and West Virginia.

Arkansas has a vibrant outdoor recreation economy. In 2023, outdoor recreation supported \$4.5 billion in expenditures in Arkansas, which supported over 40,000 jobs (roughly 3% of employees in the state) (ORR, 2024). Recent BEA estimates indicate outdoor recreation employment grew by 1.9% in Arkansas (BEA, 2024). Although on the lower end compared to other states (such as Alaska at 7.5% or Nevada at 5.8%), this nonetheless represents a valuable increase in jobs post-pandemic. The most popular outdoor recreation activities in the state included boating/fishing, hunting/shooting/trapping, RV use, motorcycle/ATV use, and equestrian use (ORR, 2024).

Today, Arkansas is an increasingly popular climbing destination with room for further route development (Henkel, 2016). Arkansas' geological features support extensive climbing opportunities across the state, attracting climbers from across the nation. Arguably the most well-known climbing area in the state is Horseshoe Canyon Ranch in Newton County, which includes over two miles of cliff band and countless route and boulder opportunities. Development began there in the late 1990s with rapid development starting around 2002 (Fennel, 2009). In 2006, Arkansas's climbing community first experienced 24 Hours of Horseshoe Hell. In this extremely popular annual climbing festival, climbers push themselves to climb for 24 hours straight with finishers being expected to complete a route at least once per hour while earning points which determine the winners (Tower, 2016).

METHODS

Study Area

This study focuses on economic expenditures, use patterns, and demographics of climbers in Newton County, Arkansas. Newton County is in Northwestern Arkansas, about an hour south of the southern Missouri border and roughly two hours east from Bentonville, Arkansas. Newton County has an estimated population of 7,071 as of 2023, down from a recent high of 8,608 residents in the 2000 Census. Newton County is included in the Harrison, Arkansas micropolitan area. While not technically a rural area by Office of Management and Budget definitions (due to its inclusion in a micropolitan area), Newton County has the visual characteristics and natural features reminiscent of other rural climbing destinations across the nation. Newton is nestled in the Boston Mountain Range of the Ozarks. The Buffalo National River (notably the first national river designation in the United States in 1972) traverses Newton County and provides extensive recreation opportunities. The southern end of the county also overlaps with

the Ozark-St. Francis National Forest. For the purposes of the present study, Newton County encapsulates the areas where the activity being studied (rock climbing) occurs as well as the areas where visitors are likely to spend money as a result of their trip (including towns like Jasper, Ponca, and Parthenon).

Data Collection and Cleaning

The researchers used an online survey to collect data for this study. The survey consisted of questions about climbing expenditures, use patterns, and demographics used by previous studies on the economic impact of climbing (see Bradley and Maples, 2024 as the most recent example). Data were collected from September 15, 2022 to May 15, 2023 via social media and email lists of local and national climbing organizations. In all, 380 persons initiated the survey and 215 fully completed the survey. As the exact population size of Newton County's climbing community is unknown and has never been examined prior, this is best treated as a convenience sample. In the event a respondent stopped the survey before completing it, their responses were included up to the moment they discontinued the survey. Post-collection, data were downloaded and cleaned in Stata for analysis.

Additional data cleaning is required specifically for the economic impact variables to ensure conservative, reliable estimates (Flyr& Koontz, 2023; Thomas, Cornachione, Koontz, & Keys 2019; White, 2017). These include the following common methodological steps of excluding persons who did not participate in the activity, persons with abnormal stays (operationalized here as three standard deviations from the mean), and groups with eight or more persons. Additional steps to reduce overestimation include recoding retail purchases over \$500 and non-response to variables as \$0.00 (Maples et al., 2019). Due to lower response rates and most visitors choosing to stay overnight, the researchers did not attempt to do visitor segmentation as outlined in Thomas and associates (2019), opting instead to have a single spending pattern for the average visitor. While useful where applied, this approach is better suited for areas with much larger visitation rates, such as national parks, as it requires a large sample size (at least 500 responses per visitor segment), not feasible in most studies of this size. As is common to economic impact studies of this kind, persons who reported living inside Newton County were excluded from spending patterns as their expenditures would be more accurately treated as redirected expenditures rather than new impacts (Clouse, 2019).

It is important to acknowledge that the use of an online convenience survey may introduce sampling bias. Without a known total population size for Newton County climbers and relying on voluntary participation through social media and climbing organizations, the respondent pool may not fully represent the broader climber population. Similar challenges regarding sample representativeness are common in outdoor recreation research (Flyr & Koontz, 2023; Thomas et al., 2019), and while efforts were made to broadly distribute the survey, this limitation should be considered when interpreting the results.

Visitation Estimates

Visitation is an important component of examining economic impact and understanding visitors' use patterns in outdoor recreation studies. Prior to this study, no known public studies estimating the visitation patterns of rock climbers had been conducted in Arkansas, including Newton County. As such, it was necessary for the researchers to create a visitation estimate as part of this study. The researchers partnered with the Arkansas Climbers Coalition (ACC) to conduct a parking lot estimate of visitation. Selected members of the ACC and local climbing community were provided with a data form in which they could provide, upon visiting any of the eight major parking areas used almost exclusively by climbers, enter the date and time of their visit along with a head count of how many cars were in the parking lot across the climbing season. The researchers then translated this data into an Excel form which tracked parking estimates across the entire calendar year and estimated what percentage of the lot would be filled across a typical day (including rare cases of more than 100% due to parking lot turnover throughout the day during busier dates in season).

While subjective elements are inherent to this method, using a combination of direct parking counts and local climber focus group validation follows approaches commonly utilized in rural outdoor recreation economic impact studies (e.g., Maples et al., 2019; Flyr & Koontz, 2023). This approach, while not eliminating subjectivity, provides a practical and reasonable estimate where formal visitor counts do not exist. The researchers worked with the ACC to address gaps, which largely consisted of adding zero cars for out of season dates. This resulted in an estimate of over 14,000 vehicles being parked in these lots in a typical year. Nonetheless, researchers recognize that these visitation estimates carry a degree of uncertainty, and any economic calculations based on these figures should be interpreted with appropriate caution. This yearlong pattern was then analyzed by focus groups of local climbers familiar with the area to ensure there were no instances of overestimation. Using results on group size from the survey (which averaged 1.9 persons per trip) and attributing 2% of visits to persons living inside the study area (roughly 1,000 visits), the researchers estimated 39,610 visits occurred each year from persons living outside of Newton County. Note that these are not indicative of 39,610 persons, but rather total visits as it is common for climbers to visit a climbing location more than once per year.

IMPLAN Methodology

The researchers utilized IMPLAN (IMpacts for PLANning), a leading economic impact package, to analyze visitor climber expenditure patterns across five common categories (subcategories in parentheses): *lodging* (hotel/motel, camping), *food purchases* (fast food restaurants, full-service restaurants, grocery stores, bars/breweries/pubs, gas station convenience food purchases), *transportation* (gasoline purchases, taxi or similar transportation), *retail non-food purchases* (gear purchases, all other general retail non-food purchases) and *services* (gear rentals, guide services). These categories and subcategories were selected based on the common categories found in other tourism economic impact studies previously cited in

this study and guided by conversations with local Newton County residents on the kinds of services available in the area.

The methodological approach employed in this study aligns with practices commonly found in similar outdoor recreation economic impact analyses. Studies conducted in the Red River Gorge, New River Gorge, Bishop, and Lander climbing areas (e.g., Maples & Bradley, 2021; Maples et al., 2019; Bradley & Maples, 2024) have similarly relied on survey data, parking estimates, and focus group validations to estimate visitor numbers and spending patterns. This provides precedent and validation for the mixed-methods approach used in the present study.

Analysis

Table 1 describes the use patterns of the sample. The survey asked climbers about the kinds of climbing in which they engaged while in Newton County. The most common response was sport climbing (36%) followed by trad climbing (19%) and bouldering (17%). For non-climbers, sport climbing involves the use of permanent anchors as a safety feature, while traditional (trad) climbing involves the use of removable anchors as a safety feature. In comparison, bouldering involves no ropes or anchors, opting for shorter routes and the use of crash pads on the ground for safety. Eight percent noted they climb in gyms. When asked in what context they first began climbing, the majority of the sample (44%) indicated they began climbing in a gym while 31% began climbing outside. The remainder of the sample began both around the same time.

Table 1: Use Patterns		
Question/category	n	%
Which of the following best describe(s) your main climbing interests when visiting Newton County? Please check all that apply.		
Trad climbing	162	19.17%
Sport climbing	305	36.09%
Bouldering	150	17.75%
Ice climbing	10	1.18%
Mixed climbing	25	2.96%
Top-roping	118	13.96%
Gym climbing	70	8.28%
Another kind of climbing	5	0.59%
Which of the following statements best describes your experiences as a climber?		
I would say I first started climbing indoors.	146	44.92%
I would say I first started climbing outdoors.	101	31.08%
I would say I first started both about the same time.	78	24.00%
Which of the following responses best matches where you live the majority of the year?		
My primary residence is in Newton County, AR.	8	2.45%
My primary residence is outside of Newton County, AR.	318	97.55%

Would you say that climbing was your main purpose for visiting Newton County?		
Yes, climbing was my main purpose for visiting.	288	96.00%
No, climbing was not my main purpose for visiting.	12	4.00%
Did you stay at least one overnight stay while visiting?		
Yes, I stayed overnight.	254	86.98%
No, I did not stay overnight.	38	13.01%
Which of the following best describes your lodging options for your most recent visit?		
I camped in a tent, van, camper, or similar option.	160	64.00%
I stayed in a hotel or motel.	4	1.60%
I stayed in a rental house, rental cabin, or similar option.	68	27.20%
I stayed in some other kind of lodging.	18	7.20%
While climbing in Newton County, in what other outdoor recreation activities do you often engage? Please check all that apply.		
Mountain biking	40	9.32%
Gravel riding	18	4.20%
Road cycling	8	1.86%
Canoeing	50	11.66%
Kayaking	57	13.29%
Backpacking	44	10.26%
Day hiking	157	36.60%
Road, trail, or cross country running	28	6.53%
Another activity not listed	27	6.29%

Only 2% of the sample noted living in Newton County, indicating climbing visits to Newton County will be originating from beyond the county lines. Respondents represented climbers from 48 U.S. states. Additionally, nearly all respondents (96%) indicated their most recent visit to Newton County was centered around climbing. Although not reported in the table, it is also interesting to note 14% of respondents indicated their recent visit to Newton County was also their first visit to Newton County. The majority of respondents indicated staying overnight as a result of their visit (86%), with the majority opting to camp in some form (64%) and staying, on average, three nights. When asked what other forms of outdoor recreation they engage in while visiting to climb, respondents most often indicated day hiking (36%) as a secondary activity on their climbing trips followed distantly by kayaking (13%) and canoeing (11%). Overall, climbers engaged in a wide variety of activities linked back to existing trail systems, whether they be paths, paved, or water.

Table 2 examines the demographics of respondents in the study. In all, 30% of the sample indicated being female. As with prior climbing studies (see Maples and Bradley RRG CITE), the sample in this survey was highly educated, with 29% having advanced degrees and 76% holding a bachelor's degree. Personal annual incomes

were most concentrated in the \$50K to \$74K range followed by the \$100K and up category. Most of the respondents indicated being in their 30s with the average age being around 35, although this number is somewhat skewed by the requirement that persons under 18 could not participate in the study. Approximately 90% of the respondents identified as white.

Table 2: Demographics		
Question/category	n	%
What would you say is your sex?		
Female	67	30.73%
Male	151	69.26%
Which category best represents your highest educational attainment level?		
Less than bachelor college degree	52	23.63%
Bachelor degree	103	46.81%
More than a bachelor degree	65	29.54%
Which category best represents your personal annual income before taxes?		
\$0-\$19,999	22	10.23%
\$20,000-\$29,999	6	2.79%
\$30,000-\$49,999	26	12.09%
\$50,000-\$74,999	62	28.84%
\$75,000-\$99,999	41	19.07%
Greater than \$99,999	58	26.98%
What is your age?		
18-29	63	29.03%
30-39	93	42.86%
40-49	38	17.51%
50-59	18	8.29%
60 and up	5	2.30%
Do you own your own business?		
Yes, I do.	45	20.93%
No, I do not.	170	79.07%
Is your job directly related to outdoor recreation?		
Yes, it is.	50	24.39%
No, it is not.	155	75.61%
Would you say your business is directly related to outdoor recreation? (Business owners only)		
Yes, it is.	16	39.02%
No, it is not.	25	60.98%

Table 2 also includes measures examining respondent's employment. Nearly one in four respondents indicated their job is related to outdoor recreation. In all, one in five respondents indicated they owned their own business, with 39% of those businesses being related to outdoor recreation. The survey also included a question asking about the respondent's current profession. Although not summarized in the table, common respondent professions included healthcare, teaching, science, engineering, and marketing.

Table 3 describes the mean expenditure patterns of rock climbing visitors to Newton County. Note this table does not include persons living in Newton County. The table summarizes expenditures across five broad categories: Lodging, food purchases, transportation, retail (non-food) purchases, and services. The figures have been cleaned to as outlined in the methodology section to reduce risk of overestimation and include cases where respondents indicated no expenditures. In the lodging sector, respondents spent, on average, \$62.59 when using hotels and motels and \$14.11 per visit while camping. Recall 86% of respondents indicated they stayed overnight as a result of their visit, and the great majority (64%) chose to camp. The greatest food purchase expenditures were \$15.50 at full-service restaurants (which include wait staff in a dine-in setting) and \$15.32 at grocery stores. Respondents also spend \$11 on fast food restaurants and \$10 on snacks and convenience foods at gas stations. In travel costs, respondents indicated spending around \$17 to fuel their vehicles but did not report using taxis or similar transports. Turning to retail, respondents indicated spending around \$5 per visit at general retail stores such as Dollar General and climbing gear purchases. Finally, while guides and rental gear options do exist in the study area, they are rarely used by visitors in this scenario. As a result, no summary statistics are reported for these categories.

Table 3: Economic Expenditure Patterns Inside Study Area for Climbing Visitors to Newton County					
	n	Min	Max	Mean	SD
Lodging					
Hotels and motels	307	\$0	\$1,200	\$62.59	225.35
Camping/RV use	307	\$0	\$258	\$14.11	45.93
Food purchases					
Fast food restaurant	307	\$0	\$300	\$11.83	41.42
Full-service restaurant	307	\$0	\$400	\$15.50	48.15
Grocery stores	307	\$0	\$300	\$15.32	55.25
Gas station food	307	\$0	\$350	\$10.59	39.7
Bars/Breweries	307	\$0	\$50	\$0.49	6.22
Transportation					
Gas station fuel purchases	307	\$0	\$250	\$17.21	42.63
Taxi/Uber	307	\$0	\$0	\$0.00	0
Retail purchases					
Climbing gear purchases*	307	\$0	\$350	\$5.81	35.82

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General retail*	307	\$0	\$120	\$5.61	22.05
Services					
Gear rental	307	\$0	\$30	\$0.16	2.66
Guide services	307	\$0	\$100	\$1.48	15.07
* Only 20% of this measure is modeled in IMPLAN					

Table 4 lists the estimated annual economic impacts of visiting rock climbers in Newton County. Note the results in this table are based on the mean expenditures from Table 3 and the visitation estimates of 39,610 visits and \$6.36 million in expenditures. Results indicated climbers supported \$1.38 million in local wages annually. Additionally, Table 4 summarizes the results of a separate study conducted on 24 Hours of Horseshoe Hell, a nationally famous climbing festival held in the study area each year. These results were created using the same methodology as the present study using a sample of 74 climbers participating in this event, which had 1,750 attendees in 2023. There, the researchers estimated climbers spent \$371,577 as a result of the festival, supporting \$100,923 in wages in the study area.

Table 4: Economic Impacts of Rock Climbing in Newton County, AR			
Table	Labor Income	Value Added	Output
Annual Visiting Climber Impacts			
Direct	\$1,207,459	\$2,201,779	\$4,160,740
Indirect	\$114,688	\$191,321	\$799,023
Induced	\$62,477	\$171,212	\$364,669
Total Effect	\$1,384,624	\$2,564,312	\$5,324,432
24 HHH Impacts			
Direct	\$88,296	\$159,876	\$290,824
Indirect	\$8,067	\$13,387	\$50,978
Induced	\$4,560	\$12,497	\$26,549
Total Effect	\$100,923	\$185,760	\$368,352

DISCUSSION AND CONCLUSION

The results of this study create new knowledge supporting the outdoor recreation economy found in Arkansas while also supporting future studies exploring future aspects of this economy. Specifically, future research could investigate the unmet needs of visiting climbers, such as lodging preferences, dining options, or other services that could enhance their stays. Surveys of local business owners could also explore opportunities to better align goods and services with climbers' spending patterns. Moreover, qualitative interviews could help understand potential barriers to creating new recreation-focused businesses in Newton County and rural Arkansas more broadly. First, the results of this study reiterate what has been found in other climbing studies of this type: climbing can be a useful and legitimate form of economic impact in rural, transitional economies (Bradley & Maples, 2024). While planning for future manufacturing takes place in the county industrial park, rock climbing visitors can

generate new, steady spending in the economy. Rock climbing is also a low investment form of economic activity. It does not require large scale investments or changes to the area such as building pump tracks for mountain biking or extensive trail networks for hiking. Rock climbing simply requires access to climbing areas (crag) and climbers generally do the rest with their own resources, such as establishing trail networks, climbing routes, and guides (Maples, 2021). Such access efforts can also be done in tandem with local climbing organizations to maximize the return on this effort while also marketing to this community as a customer demographic.

This study creates new knowledge on the demographics of climbers in Arkansas which can be targeted in tourism and marketing efforts going forward. The mean expenditure patterns already note climbers are largely finding the basic services desired in the region. For example, if the lodging expenditures or grocery expenditures had been especially low or non-existent, this gives evidence visitors are going elsewhere for these services. This is not at all the case in this study. Moreover, previous studies have indicated outdoor recreation users as a whole are locavores interested in intensely local experiences and cuisine (Curtis, Bradshaw, & Slocum, 2020; Tidball, Tidball, & Curtis, 2013). This necessitates a predilection for locally-owned businesses when visiting areas to recreate. Spending at locally-owned businesses can be valuable as these dollars often remain in the local economy more readily than spending at chain businesses. Since the demographics of this community are now clear (and replicated based on past studies), marketing efforts to more deeply understand their needs and wants can easily begin. This includes also identifying how their spending patterns can best support local business development.

Climbers may also have a potential role to play as new business developers in Arkansas. This topic is somewhat dated and arguably under-researched today, but past studies have argued outdoor recreation users have at least some correlation with being business owners (Sheffield, 1988; Syme, Uysal, & McLellan, 1988). The premise holds there are similarities in how users approach risk in outdoor recreation settings and in owning a business. The findings of the present study do provide some support for this argument, as about one in five respondents self-described as being business owners. A second trend, that of remote work, is also playing into this relationship. Recent work argues outdoor recreation users took advantage of the pandemic's normalization of remote work and took this opportunity to move to be closer to the areas in which they like to recreate (Seaman, Hartman, Martin, & Coppens, 2024; Maples 2021). It follows that this demographic would also be bringing their businesses with them and/or establishing new local businesses supporting jobs and wages among Arkansas residents. As such, pairing outdoor recreation marketing alongside local business development options and services may be attractive to climbers and local government. Moreover, Arkansas as a state is invested in outdoor recreation economic development and possesses extensive outdoor recreation opportunities as well as the amenities and experiences outdoor recreation users often desire.

As with all research, this study raises questions which should be considered in future studies. The first is the need to conduct similar research state-wide across all

forms of outdoor recreation with a detailed focus on important hotspots of outdoor recreation tourism. State level statistics are already available, but these estimates lose much of their granularity in focusing on too-wide a study area. Local studies (such as the present study) provide details which can be used by ground-level local organizations and government while also establishing the demographics and behaviors of users. More work is needed here in support of the state's dedication to outdoor recreation activities.

Additionally, researchers should hone on the specific wants and needs of outdoor recreation users in Arkansas as a whole and, where possible, conduct focused case studies on its most important outdoor recreation areas. This study presents economic impact questions in a way which simply asks how much was spent, but this misses the nuances and depth of learning what the potential for spending might have been given the presence of the right businesses, goods, and services. Knowing more about this demographic will better support local business decision-making and could even provide statewide guidance which could be used to support economic development.

Turning again to the idea of business development, it would be valuable to conduct qualitative research on the barriers to creating new small businesses in Arkansas and considering what resources could be provided to promote new business development and growth. This is two-pronged; persons already living in Arkansas could create businesses which in part support tourism/outdoor recreation growth while outdoor recreation users drawn to Arkansas could choose to relocate here and start businesses in a friendly, supportive, and financially viable environment. Such small businesses support local jobs and often keep their expenditures within the state, preventing leakages found with chain businesses.

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