



Protect America's Climbing



Economic Impact of Rock Climbing in Lander, Wyoming

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Executive Summary

Researchers at Eastern Kentucky University, with grant support from Access Fund and Central Wyoming Climbers' Alliance (WyoClimbers), conducted an economic impact of climbing in Lander, Wyoming. Lander is a popular climbing destination located in Fremont County, Wyoming. Results indicate:

1. Lander receives nearly 37,000 climbing-focused visits each year. Roughly 80% of these visits come from persons living outside of Fremont County, which functions as the study area for this study.
2. Climbers visiting Lander generate \$4.5 million in lodging, transportation, retail purchases, and food purchases each year in Fremont County. Climbers also spend an additional \$1.1 million in Wyoming but outside Fremont County while travelling to and from Lander.
3. Climbers visiting Lander/Fremont County spend an average of \$86 per trip, not including lodging. Most climbers utilize camping (nearly \$6 per trip) as their preferred form of lodging, while roughly 10% choose either hotels (\$108 per trip) or rental cabins (\$543 per trip) as their primary lodging during their visit.
4. Climber visitor expenditures support \$1.7 million in wages for local workers and the presence of 51 jobs in the study area.
5. Climbers are well-educated, with 46% having a four-year degree and 29% having a graduate degree.
6. Eighty percent of returning visitors indicated that their typical expenditures in Lander were lower due to the COVID-19 pandemic compared to previous years.

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Pics:

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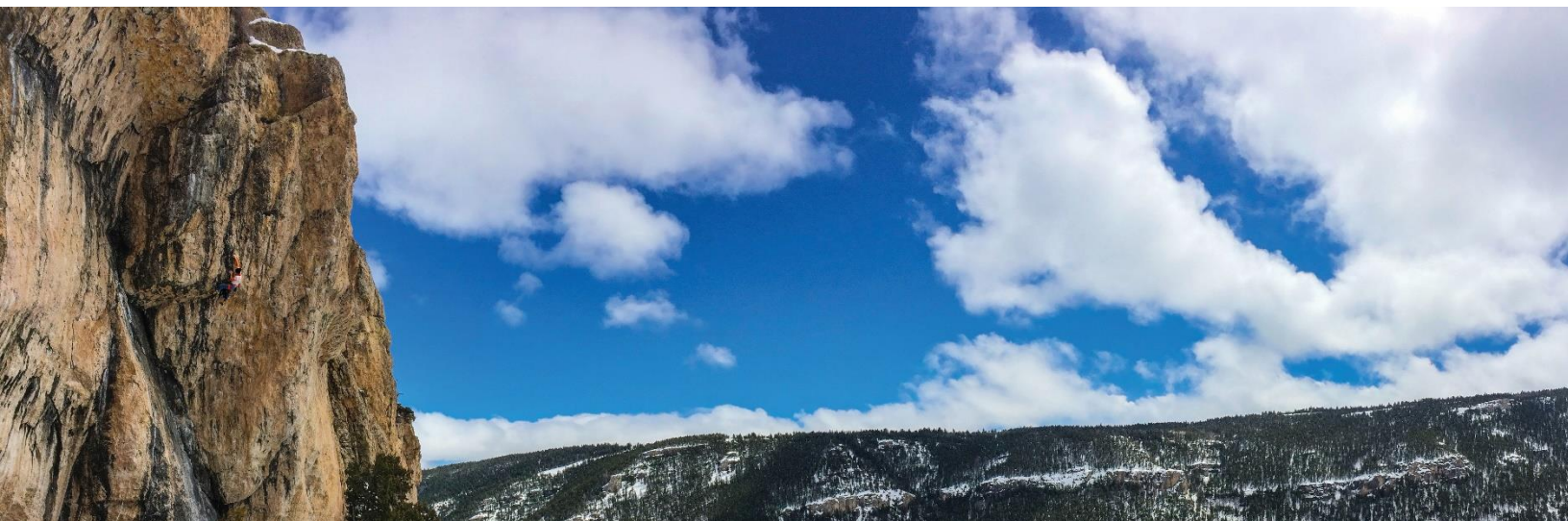
ToC: photo by Nate Liles

Page 10: climber TBA, photo by Nate Liles

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Study Summary

This study examines the economic impact of rock climbing in Central Wyoming's Lander climbing region. Utilizing an online survey and convenience sample of persons climbing in Lander as well as car count modeling for parking lots in the Lander region, the researchers estimate nearly 37,000 climbing-focused visits occur in Lander each year. Roughly 80% of these visits come from persons living outside of Fremont County, Wyoming, which serves as the study area for this study. These visits culminate in climbers spending \$4.5 million in lodging, transportation, retail purchases, and food purchases in Lander and Fremont County. Climbers visiting Lander/Fremont County spend an average of \$86 per trip before lodging. Most climbers utilize camping (nearly \$6 per trip) as their preferred form of lodging, while roughly 10% choose either hotels (\$108 per trip) or rental cabins (\$543 per trip) as their primary lodging during their visit. Climber visitor expenditures support \$1.7 in wages for local workers and the presence of 51 jobs in the study area.

Study Area

The study area for this study is Fremont County, Wyoming, which includes Lander and the climbing crags associated with this area. Study areas in economic impact studies include the activity being studied (in this case, climbing in Lander) as well as the likely areas where expenditures resulting from the activity being studied.

Literature Review

Wyoming, Fremont County, and Lander Economies

US Bureau of Labor Statistics data demonstrates how Wyoming's economy has adapted and transitioned to global economic changes over recent decades. Wyoming has, since 1986, been the leading US state for coal extraction, providing an estimated 40% of the nation's coal in 2019 (WMA, 2019). In 2018, the state produced 304 million tons of coal, most of which came from the Powder River Basin in northeast Wyoming. Today, mining and timber includes roughly 15,000 jobs (down by nearly half since 2012) (BLS, 2022). The actual employment number is very likely higher, however, deceiving as jobs related to coal (such as transportation) are reported in other sectors. Additionally, this sector grew roughly 5% during the latter days of the pandemic. In comparison, tourism plummeted during the early days of the COVID-19 pandemic (losing roughly 10,000 jobs almost overnight) but has since rebounded to 37,000 jobs (up 5,000 since 2012). Construction (representing roughly 23,000 jobs across the state in early 2022) has grown 11% over the last year as visitors turn into permanent residents and new homes and businesses are built in the state's economy. Manufacturing has remained steady throughout 2021 with 9,800 jobs, as has education and health services at 28,000 jobs.

After rebounding from the recent COVID-19 pandemic economic downturn, Wyoming's tourism industry has performed well. Wyoming's tourism industry attracted \$6.9 million overnight visitors in 2020, and their visits culminated in \$3.05 billion in the state that year (DRA 2020). These expenditures supported over 40,000 jobs existing in tourism and other sectors, meaning about 10% of jobs in the state are being created by tourism expenditures. The study authors also noted that Wyoming's tourism economy contracted less overall than the national tourism economy during the COVID-19 pandemic despite, again, a very rapid decline in the earliest days of the pandemic from which it has since fully recovered (and even grown) in size.

Study Area: Fremont County

As previously mentioned, the study area for this study is Fremont County, Wyoming, which includes Lander, the climbing area examined in this study. Fremont County is in Central Wyoming and is the fifth-most populous of Wyoming’s 23 counties. It includes the cities of Lander and Riverton. Fremont County includes the entire Riverton Micropolitan Statistical Area. As evidenced in Table One, Fremont includes over 39,000 residents and over 14,000 households. The median income is around \$54,000 per year with almost one in four residents holding a bachelor or higher degree and only 15% of residents experiencing poverty. In comparison, Lander, Fremont’s County seat, includes over 7,500 residents in an estimated 2,980 households. Overall, Lander has slightly higher educational attainment (39.2% versus Fremont County’s 24.8%) and median income (difference of roughly \$3,600).

Outdoor Recreation Economies

Climbing represents just one sliver of the growing outdoor recreation economy and tourism industry, but it has been especially visible in recent years. In addition to its first appearance in 2021, climbing has been recently represented by several mainstream movies (*Free Solo*, *Dawn Wall*, and *The Alpinist* to name a few) and made its way into the public consciousness. Likewise, climbing gyms (indoor climbing opportunities which often act as a gateway to outdoor climbing) have surged in popularity over the last decade (99boulders.com 2018). Likewise, organizations like Access Fund have created training programs for indoor climbers looking to add outdoor climbing to their activities, training these new outdoor visitors to minimize their impacts (Access Fund nd).

Wyoming has long been of interest to climbing enthusiasts and includes several popular destinations. These include Grand Teton National Park and Bridger-Teton National Forest (Northwestern Wyoming), Devil’s Tower National Monument (Northeastern Wyoming), Ten Sleep (Northcentral Wyoming), Vedauwoo (Southcentral Wyoming), and Lander (Central Wyoming). Lander has proven to be an attractive climbing destination, offering several cliffs scattered through the region in the Wind River Mountains. Mountainproject.com, a respected climbing mapping and route listing in the climbing community, notes that Lander’s climbing most often falls in two categories: *buttresses* (a rock feature protruding out from the crag, such as an attached pillar or chimney) as found in areas like Wild Iris and Fossil Hill, and *canyons* with climbing features such as Sinks Canyon and Wolf Point (Mountainproject.com nd).

Table One: Descriptive Statistics on Fremont County and Lander, Wyoming		
Variable	<i>Fremont County</i>	<i>Lander</i>
Population Estimate	39,336 (in 2021)	7,546 (in 2020)
Households, 2016-2020 mean	14,834	2,980
Percent with four-year degree or higher, 2016-2020 mean	24.8%	39.2%
Median household income, 2016-2020 mean	\$54,291	\$57,938
Poverty rate, 2020	15.0%	9.3%
Total Employment, 2020	9,889	*
Total Employer Establishments, 2020	1,243	*
Source: US Census QuickFacts *Data redacted by Census Bureau		

Economic Impact of Climbing

In recent years, researchers have completed several economic impact climbing studies in the US Mountain States/Interior West region. For example, a recent multi-activity study of outdoor recreation's economic impact in Utah's Manti-La Sal National Forest reported that climbing generated \$3.4 million in expenditures each year, supporting 49 jobs and \$1.5 million in wages (Maples, Gioglio, and Bradley 2021). Similar national forest studies in Colorado's Grand Mesa, Uncompahgre, and Gunnison National Forest and Montana's Custer Gallatin National Forest reiterated these findings. In Colorado, climbing-focused visits generated \$6.2 million each year while supporting the existence of an estimated 26 jobs (Maples and Bradley 2018a). In Montana, climbing visits generated \$2.6 million in expenditures. These expenditures also supported 22 jobs (Maples and Bradley 2018b).

Researchers have also examined the economic impact of climbing in rural areas with a history of extractive industries and transitional economies. A recent study in Eastern Kentucky's Red River Gorge (located in a region with a history of longstanding generational poverty) found climbers generated \$8.7 million annually, up from \$3.8 million roughly five years earlier (Maples and Bradley 2020; Maples et al. 2017). The study included counties involved in Eastern Kentucky's long famed coal heritage, largely in the washing and transportation end of the process, as the coal seams dwell slightly further east of the Red River Gorge. Similarly, a 2019, a study of West Virginia's New River Gorge focused directly on an area with an extensive coal mining history (Maples et al. 2019). There, researchers found climbers supported \$12.1 million in annual expenditures which translated into 168 jobs and \$6.3 million in wages each year. One overlapping theme with both locations was the declining size and scope of the coal industry amid global changes in coal use.

The culmination of a growing interest in tourism in Wyoming, the rapid growth of climbing, and the growing literature on climbing's economic impact presents an ideal opportunity to study the economic impact of climbing in Lander. Moreover, the ongoing COVID-19 pandemic gives another backdrop for completing this study as increasing numbers looked for outdoor recreation opportunities among limits on indoor activities. This study looks to establish several new facets of the Lander climbing community in exploring its demographics, its use patterns, its visitation patterns, and its visitors' mean economic expenditures.

Methodology

The data from this study are from an online survey of rock climbers visiting the Lander climbing region in 2020 or 2021. The survey collected a wide array of data points, including climber use patterns (climbing type, days per year spent climbing in Lander, approximate year started climbing), economic use patterns (year of last visit, length of last visit, lodging for last visit, group size for last visit, and specific expenditures across 13 categories), Leave No Trace behaviors (reported in a separate report), and common demographics (residence location, zip code, sex, education, personal annual income, race, and age). The questions on expenditures included thirteen specific items asking for the respondent's expenditures on lodging (hotel, cabin, and tenting), food purchases (fast food, dine-in food, grocery store purchases, and convenience store purchases), travel (gasoline, taxis) and retail/service purchases (general retail, outdoor recreation retail such as climbing gear, gear rentals, and climbing guide services).

The survey was distributed in 2021 using a convenience sample approach. The online survey link was released nationally using the Access Fund’s social media blasts and regionally through the Central Wyoming Climbers’ Alliance social media. A convenience sample is appropriate for this scenario, as the exact size of the climbing population visiting this region is, prior to this study, unknown. In all, 409 persons acknowledged the survey by clicking the provided link and giving consent to continue. Their responses are reported up until the moment they either completed the survey or discontinued the survey.

Additional steps are needed when preparing economic expenditure data for analysis and these steps are outlined in the Forest Service methodology (Rosenberger et al. 2017; White 2017) and utilized in recent climbing studies (Maples and Bradley 2021; Maples et. al. 2019). First, expenditures are separated into two categories: visitors to Fremont County (the study area for this project) and residents of Fremont County. Economic impact is represented by new expenditures created in a study area. As such, only visitor expenditures would be considered as economic impact. Residents are treated as redirected expenditures, where funds are moved from one area to another. This is not to belittle or reduce the importance of residents’ contributions to the economy, but rather to define expenditures as being new or already in the study area’s economy. As such, economic impact estimates in this report focus only on visitors, while resident expenditures are reported but not analyzed.

Next, visitor respondents are examined to ensure their expenditures are typical compared to other responses. The end goal of summarizing mean visitor expenditures is to establish what a typical visit to Lander to climb would look like. As such, methodology calls for excluding visitor respondents who report groups (larger than eight persons) and/or staying for abnormal lengths of time (here and in other recent studies, over 30 days). After adjusting respondent expenditures for group size (expenditure/group size), the researchers then summarized each category (e.g., gasoline, tenting, fast food purchases). In the case of lodging, only persons indicating they used that type of lodging (e.g., they stayed in a hotel) are included to give a clearer picture of typical expenditures. For all other variables, all cases are included as these are normal daily expenses.

After establishing the mean expenditures, the researchers then identified cases more than three standard deviations above the mean and removed those cases (Maples and Bradley 2021; Maples et al 2019;). This further reduces the chance of abnormally high expenditures overestimating the mean expenditures for, again, a typical visit. Note this keeps cases more than three deviations *below* the mean (e.g., \$0), as these are often cases where no expenditures are made. As a final check, any retail expenditures over \$500 are removed in adhering to USFS methodology reducing overestimations (White 2017). The researchers then establish a new set of mean expenditures for each category designed to provide a typical expenditure pattern for any climbing visitor to the Lander region. These expenditures are later modeled in IMPLAN, which is described further in the results.

Climber Visitation and Use Patterns

Demographics

Table Two summarizes core demographic variables of interest in the survey, including sex, age, education, and income. Note that all variables except age have been dichotomously coded, which means a score of 1 equals the presence of the trait being studied and a 0 equals the absence of this trait. As a result, the means in the table can be interpreted as percentages of cases with a score of 1. For example, 32% of respondents (mean of .32) indicated being female. The

average respondent age is 36; however, this figure is somewhat inflated as persons under 18 could not participate in the study. Further, Lander climbers are well-educated: 46% indicated having a bachelor’s degree, while another 29% indicated having advanced degrees such as PhDs, JDs, MDs, and numerous master’s degrees. Additionally, 13% of climbers in the study reported incomes of \$50k or greater, with just under one in four indicating six figure personal incomes.

Climbers on average hold over a decade of climbing experience with an average first year climbing being 2005. Additionally, 20% of respondents own their own business; of these individuals, 41% are businesses in the outdoor recreation sector. Further, another 30% of respondents work in a profession relating to outdoor recreation. This type of professionalization indicates that the group surveyed are not general hobbyists, but rather very dedicated to the climbing community. Overall, the findings of this table replicate the findings found in climbing studies summarized earlier in this table: most climbers are well-educated professionals in their 20s and 30s and often run their own business.

Respondent Climber Profile, Climbing Interest, and Economic Visitation Patterns

Table Three describes the profile of an average climber in the Lander region. The researchers asked respondents to indicate all kinds of climbing in which they engage at any location and respondents could check all that apply. Roughly 36% indicated engaging in sport climbing while 23% engaged in bouldering. The survey also asked respondents to talk about their early climbing experiences. On average, respondents began climbing in 2005, although this may be slightly impacted by excluding persons under age 18 from the study. In all, 41% indicated they first started climbing outdoors instead of indoors, noting a common trend of transitioning out of climbing gyms and into the outdoor crag. Respondents were also asked about their visitation frequency to Lander and to climbing gyms in any location. Climbers reported spending an average of 73 days yearly gym climbing and 28 days in Lander.

Table Two: Respondent Demographics*

<i>Variable</i>	<i>n</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>SD</i>
Respondent Sex (1=Female, 0=Male)	319	0	1	0.32	0.46
Respondent age	324	18	75	36.50	12.38
Has Bachelor’s College degree	331	0	1	0.46	0.49
Has Advanced degree	331	0	1	0.29	0.45
Personal income greater than \$50K	332	0	1	0.13	0.34
Personal income greater than \$99K	332	0	1	0.21	0.41
Owns own business	320	0	1	0.20	0.40
Business is in outdoor recreation	61	0	1	0.41	0.49
Works in profession related to outdoor recreation	314	0	1	0.30	0.45

*Although not reported in the table, the bulk of the sample indicated being white.

Table Three also begins establishing new knowledge about the economic impact expenditure patterns of climbers in Lander. First, 80% of respondents indicated they lived outside of Lander and Fremont County. Recall Fremont County forms our study area for this study, so persons living beyond that area would be defined as visitors to the area. Next, 72% noted having visited Lander at least once prior to their most recent visit. Group size was an average of 1.8 climbers (which is typical of other studies and climbing areas) and 98% reported staying overnight as part of their visit. Visits ranged from 1 to 40 days. Repeat visitors were also asked if the pandemic altered their typical expenditures compared to past visits. In all, 80% indicated their expenditures decreased due to pandemic closures and the like.

Visitation

Estimating visitation (or how many climbers visits a specific study area) is a central part of understanding how climbers generate economic impact in the study area. Prior to this study, no known estimates of the number of climbing visits to Lander/Fremont County existed. As such, part of this study included establishing this number. Unfortunately, funds were not available for an in-depth car counting study. As a viable alternative, the researchers collaborated with the WyoClimbers to determine parking capacities and percentages of parking spots used each day of the year to create a first estimate of climbing visitation to Lander.

This process began with a listing of all known parking areas frequented by climbers in Lander for climbing purposes. These lots are locations very near crags where all or nearly all parking would be climbing-related. These areas were organized into an Excel file. Next, the maximum parking capacity was established for each car by WyoClimbers based on their familiarity with each lot. The researchers then worked in tandem with WyoClimbers’ executive team to determine what capacity of the lot would be filled on a typical day throughout the

Table Three: Respondent Climbing Profile

<i>Variable</i>	<i>n</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>SD</i>
Trad climbing	411	0	1	0.16	0.37
Sport climbing	411	0	1	0.36	0.48
Bouldering	411	0	1	0.23	0.42
Ice climbing	411	0	1	0.05	0.22
Gym climbing	411	0	1	0.13	0.34
Mixed climbing	411	0	1	0.03	0.19
Top roping	411	0	1	0.11	0.31
Other type of climbing*	411	0	1	0.04	0.19
Respondent’s first year climbing	368	1958	2020	2005	12.25
Respondent first began climbing outdoors	371	0	1	0.41	0.49
Days per year climbing outdoors in Lander	375	0	365	28.12	46.95
Days spent climbing in a gym, any state	375	0	365	73.30	70.61
Respondent lives outside Fremont County	371	0	1	0.80	0.39
Has visited Lander before	225	0	1	0.72	0.45
Group size climbing	152	1	7	1.8	1.03
Stayed overnight	262	0	1	0.98	0.15
Length of stay	248	1	40	6.85	6.96
Decrease in spending due to COVID-19	137	0	1	0.80	0.39

climbing season. This included lot counts by WyoClimbers to establish reference points, as well as in-depth discussions and focus groups regarding climbing visitation patterns.

Table Four includes three estimates on visitation: total cars, total climbers, and total climbers visiting Lander who reside beyond the study area. An expanded version of this table is available in the study appendix. The researchers estimated over 20,000 cars are parked in climbing areas with climbing as their central purpose being there. When multiplied by the mean group size of 1.8 (which is a normal mean group size compared to past climbing studies), this equates to over 36,000 annual climber visits to the region. Note this allows for persons to visit more than once, as is normal for climbing areas, and is not an estimate of unique individual climbers. When excluding the estimated 20% who reported living inside of Fremont County, the researchers estimate this results in 29,556 visits each year from persons living outside of Fremont County. This is the visitation number used later in creating economic impact estimates.

Expenditures

Table Five summarizes visitor climber expenditures in this study. Note that lodging means (tents, cabins, and hotels) are only estimated for persons using that type of lodging, while all other measures include all cases. Note also all the means in this table have been cleaned (see methodology) to limit the risk of overestimation. Groceries (\$25), full-service restaurants (i.e., restaurants using wait staff, \$22), and gasoline (\$21) are the biggest typical vis expenditures. These findings fall in line with what has been seen in other climbing economic impact studies in comparable areas. In lodging, cabins are by far the biggest expenditure category at over \$543, however nearly all climbers reported using camping, which averaged at \$5.89 per trip. Additionally, both the hotel (\$108) and cabin (\$543) mean expenditures have low responses due to low rates of use, meaning these two means should be treated with caution. Note this area also has free dispersed camping in some areas, which means climbers may simply choose to camp for free. When added together, the expenditures in Table Five result in climbers annually spending \$4.5 million while climbing in Lander, Wyoming.



Table Four: Climbing Visitation Patterns to Lander, Wyoming

	<i>Total Cars</i>	<i>Total Climbers</i>	<i>Visiting Climbers</i>
January	688.16	1,238.69	990.950
February	559.36	1,006.85	805.478
March	717.6	1,291.68	1,033.34
April	833.52	1,500.34	1,200.268
May	880.91	1,585.64	1,268.510
June	1884.35	3,391.83	2,713.46
July	3849.2	6,928.56	5,542.84
August	3803.26	6,845.87	5,476.694
September	3024.3	5,443.74	4,354.99
October	2306.4	4,151.52	3,321.21
November	1343.2	2,417.76	1,934.20
December	634.8	1,142.64	914.11
TOTAL	20,525.06	36,945.11	29,556.09

Table Five: Visitor Climber Expenditures

<i>Variable</i>	<i>n</i>	<i>Mean</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>Amount Spent*</i>
Hotel Lodging	8	\$108.33	70.86	25	240	\$313,723.68
Cabin Lodging	13	\$543.3	524.65	28	1500	\$1,573,396.80
Tent Lodging	101	\$5.89	15.24	0	80	\$136,477.19
Limited-service Restaurants (fast-food)	236	\$1.88	5.08	0	25	\$55,565.28
Full-service Restaurants (Dine-in food)	238	\$22.41	36.48	0	175	\$662,349.96
Convenience Store Food	233	\$0.86	2.46	0	15	\$25,418.16
Groceries	238	\$25.20	48.66	0	250	\$744,811.20
Retail, General	239	\$6.15	20.94	0	180	\$181,769.40
Recreation Gear Purchases	238	\$7.89	19.11	0	100	\$233,196.84
Gasoline	235	\$21.64	29.56	0	120	\$639,591.84
Total	-	-	-	-	-	\$4,566,300.35

*Lodging expenditures utilized 98% of visits (28,964) as overnight visits with 80% assigned to tenting and 10% each assigned to cabin and lodging. All other categories utilized visitation estimate of 29,556

^ Per FS methodology, only ¼ of retail purchases are analyzed as goods can be used beyond the visit.

Research note: Categories not listed with expenditures ~=\$0 for a typical visit: guides, rental gear, taxis/transport

Economic Impact Analysis

Economic Impact Terminology

In the coming pages, the research team employs IMPLAN, a leading economic impact estimator, to create economic impact estimates for what visiting climbers contributed to the Lander region's economy during a typical year. IMPLAN (or Impacts for Planning) uses input-output modeling to establish economic impact by exploring what happens when climbers spend money in specific sectors (such as food, lodging, and retail). The analysis follows approaches used in prior peer-reviewed research and Forest Service studies.

Recall the researchers are conscious in ensuring the resulting economic impact results are conservative and valuable to the Lander community. Cases with disproportionately long stays or large group sizes (greater than eight) have been excluded and instances of unusually high expenditures have been listed as missing data. Retail purchases are also margined to give a more nuanced perspective on their impact. This prevents overestimating how much of these purchases remain inside the analysis. Additionally, as retail expenditures can be used outside the area where they are purchased, only 1/5 of the average retail and recreation retail expenditures are modeled in the economic impact estimates.

In the following paragraphs, the researchers use three terms to describe economic impact: *direct effect*, *indirect effect*, and *induced effect*. *Direct effect* is the economic result created when visitors present in the study area spend money during their visit. This direct effect can generate further change in the local economy via indirect and induced effects. *Indirect effect* is economic activity created when climbing visitation leads local businesses to purchase goods and services from other local industries to support their business operations. For example, indirect effect could include a local restaurant buying vegetables to create future meals for sale. Finally, *induced effect* is the estimated expenditures by local households and employees created by wages generated through climbing visitation. For example, a local restaurant employee may choose to spend his/her wages at another local business, creating additional rounds of local economic activity as the initial money spent multiplies throughout the study area.

These three terms can also be further divided by their employment impact in the region, value added to the local economy, and output. Labor income impact is measured by the estimated labor income (for employees and proprietors) created by the economic activity in the region. Labor income impact is a conservative estimate of economic impact and is the approach highlighted in this report. Value added indicates the true economic wealth added to the local economy after subtracting the cost of inputs needed to conduct everyday business. Value added includes expenditures in profit, employment compensation, and taxes. Finally, output is value added plus total revenues and sales from economic activity.

Economic Impact Summary

The researchers placed the total expenditures in Table Five into IMPLAN for economic impact analysis. For analysis, the researchers used the visitation estimate of 29,556 from Table Four. For lodging, visitation was adjusted to 98% of this number (28,964) based on the survey's findings that 98% of visitors stayed overnight (see Table Three). Then, 10% of these adjusted visits were applied to both hotel and cabin rentals while 80% was applied to tenting. As noted in Table Five, this results in \$4.5 million in annual total expenditures generated by visitors living outside the study area who come to Lander to climb.

Table Six details the economic impact of climbing visitation to Lander using Fremont County as the study area. Climbing's \$4.5 million in annual expenditures generated \$1.7 million in labor income (a conservative estimate of economic impact) and supported the presence of an estimated 51 jobs in the study area. Note these represent expenditures that are centrally dependent on climbing visitation to Lander.

Table Seven analyzes taxation generated by climbing visitors to Fremont County. The table details expenditures at three levels: county, state, and federal. Note that IMPLAN also reports sub-taxes, such as school district taxes, and these have been added into the county level column. In all, climbing expenditures contributed \$90,371 in county taxes, \$193,173 in state taxes, and \$426,572 in federal taxes. This equates to \$710,117 in taxes generated each year by climbing expenditures.

Table Eight details how climber visitor expenditures shape employment patterns in the region. As noted previously, climber expenditures support the presence of an estimated 51 jobs in Fremont County. These primarily fall across ten categories, wherein the greatest impact is in the other accommodation sector. This sector includes cabin rentals as well as campgrounds. The second greatest is in full-service restaurants, which include waitstaff and cooks. Hotels are third, while retail purchases at gas stations (snacks and gasoline) are fourth and fifth, respectively.

Impact of the 2021 International Climbers' Festival

In addition to conducting an economic impact of climbing in the Lander area for this study, the researchers also conducted a separate study of the International Climbing Festival located in Lander. This study found climbers spent an estimated \$149,307 while attending and participating in the festival, adding an additional \$45,000 in local wages to the region not reflected in Tables Six through Eight. This report (Rehm and Maples, 2021) is available upon request.



Table Six: Economic Impact Summary

<i>Impact</i>	<i>Jobs</i>	<i>Labor Income</i>	<i>Value Added</i>	<i>Output</i>
1 - Direct	41.24	\$1,405,074.14	\$2,054,895.22	\$3,168,124.94
2 - Indirect	4.72	\$176,353.28	\$299,506.00	\$678,343.86
3 - Induced	5.81	\$213,066.42	\$443,778.03	\$827,415.06
Totals	51.77	\$1,794,493.84	\$2,798,179.25	\$4,673,883.85

Table Seven: Tax Impacts of Climbing in Fremont County, WY

<i>Impact</i>	<i>County</i>	<i>State</i>	<i>Federal</i>	<i>Total</i>
1 - Direct	\$63,838.15	\$138,995.55	\$331,886.37	\$534,720.08
2 - Indirect	\$8,128.60	\$17,328.36	\$41,079.60	\$66,536.55
3 - Induced	\$18,405.21	\$36,849.53	\$53,606.43	\$108,861.17
Total	\$90,371.96	\$193,173.44	\$426,572.40	\$710,117.80

Table Eight: Job Sectors Impacted by Climbing Expenditures

<i>Employment Sector</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
508 - Other accommodations	19.86	0.00	0.00	19.86
509 - Full-service restaurants	11.87	0.08	0.35	12.29
507 - Hotels and motels, including casino hotels	3.61	0.00	0.00	3.61
406 - Retail - Food and beverage stores	3.33	0.01	0.16	3.51
408 - Retail - Gasoline stores	1.27	0.00	0.05	1.33
510 - Limited-service restaurants	0.73	0.03	0.35	1.12
410 - Retail - Sporting goods, hobby, musical instrument and book stores	0.43	0.02	0.08	0.52
411 - Retail - General merchandise stores	0.14	0.02	0.20	0.37
447 - Other real estate	0.00	0.74	0.19	0.93
511 - All other food and drinking places	0.00	0.73	0.18	0.91

Visitor Expenditures Beyond the Lander Region

Table Nine details visitor expenditures beyond the study area but still within Wyoming while travelling to and from Lander. These include common expenditures such as stopping at a gas station or restaurant in Wyoming while travelling to and from Lander to climb. Although not analyzed in the economic impact study (as they occur outside the study area), these expenditure patterns again represent expenditures created by climbers and are useful in reflecting on the importance of climbing in Wyoming's outdoor recreation economy.

The greatest expenditure outside of the study area but inside Wyoming is lodging, where climbers opting to stay overnight outside the study area spent \$86 on average for cabin rentals and \$18 on tenting fees. Gasoline (at \$8.68) also represented another important and common expenditure as climbers often drive to Lander either from out of state or after flying into the area at one of the regional or international airports in the state. In sum, these expenditures outside of the study area represent an additional \$1.1 million dollars brought to Wyoming's outdoor recreation economy.

Local Climbers' Expenditures in the Lander Region

Table Ten describes expenditures already present within the Lander economy, produced by climbers who live inside Fremont County. Recall that climbers living inside a study area would not be considered economic impact as their incomes and expenditures already exist in the study area regardless of being a climber. This, however, is not to dismiss their expenditures as climbers living in Lander contribute a great deal to the economy. Of the ten categories listed, averages in resident spending are highest towards mortgages on any property (\$13,786), business taxes (\$7,060), rent (\$5,900) and retail (\$2,503). Restaurants of any kind as well as local infrastructural services, such as phone or internet, also indicate large sums of spending by resident climbers. This equates to roughly \$36,000 per local climber per year.



Table Nine: Visitor Climber Expenditures Outside Study Area

<i>Variable</i>	<i>n</i>	<i>Mean</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>Amount Spent*</i>
Cabin Lodging	13	\$86.67	185.53	0	500	\$250,996.32
Tent Lodging	103	\$18.09	71.31	0	500	\$419,163.39
Limited-service Restaurants (fast-food)	235	\$.60	2.79	0	20	\$17,733.60
Full-service Restaurants Dine-in Food	238	\$2.70	10.28	0	60	\$79,801.20
Convenience Store Food	236	\$.56	2.22	0	15	\$16,551.36
Groceries	233	\$3.81	14.81	0	100	\$112,608.36
Gasoline	236	\$8.68	\$22.15	0	100	\$256,546.08
Total	-	-	-	-	-	\$1,153,400.31

*Lodging expenditures utilized 98% of visits (2) as overnight visits with 80% assigned to tenting and 10% each assigned to cabin and lodging. All other categories utilized visitation estimate of 29,556
 Categories not listed with expenditures ~=\$0 for a typical visit: hotel, retail, guides, retail, rental gear, taxis/transports

Table Ten: Local Climbers' Expenditures in Lander Region

<i>Variable</i>	<i>n</i>	<i>Mean</i>	<i>Min</i>	<i>Max</i>	<i>SD</i>
Restaurants of any kind	52	\$1,392.5	200	6000	1378.21
Retail stores	52	\$2,503.85	100	20000	3516.12
Local infrastructural services (phone, internet)	46	\$1,355.33	200	5000	1082.15
Local personal services	42	\$658.81	50	3000	740.99
Local memberships	32	\$563.28	60	1200	304.8
Donations to local organizations	33	\$980.3	40	10000	1922.69
Property taxes	33	\$1,818.18	100	5000	1248.36
Mortgages on any property	30	\$13,786.67	1300	36000	8186.27
Rents on any property	18	\$5,900	1100	11400	3225.45
Business taxes	5	\$7,060	300	25000	10245.39
Total	-	\$36,018.92	-	-	-

Limitations

All economic impact studies have instances where better data or more nuanced information could provide more detail in understanding how the activity being studied creates economic impact in the region. Additionally, there are questions not explored in economic impact studies worth noting for those unfamiliar with economic impact studies. The authors include the following limitations common to all economic impact studies.

1. Economic impact studies are snapshot estimates of a particular activity at a single moment in time. As such, the economic impact of any outdoor recreation activity will certainly vary from year to year based on weather, spending patterns, local business availability, and other variables. As such, the results in this study can be best understood as a scientific estimate of what expenditures would generally look like in a typical year barring major changes to the study area economy and its related activities.
2. Economic impact studies are limited in their ability to demonstrate directly observable activities in the study area. For example, if IMPLAN estimates expenditures create \$1,000 in induced expenditures, observing or pinpointing that sum in the economy is not possible. Rather, these models operate on predictions of what would happen given the data available.
3. Economic impact studies are not cost-benefit analyses. Cost-benefit studies relate how expenditures required to trigger a specific activity relate to specific quantitative benefits of the activity occurring. The authors of this study make no claims about the cost-benefit analysis of the activity studied.
4. This study does not attempt to account for changes created by the current Covid-19 global pandemic. Anecdotally, some outdoor areas have seen increased visitation due to pandemic conditions, so visitation estimates could be lower or higher. Additionally, some businesses open pre-pandemic may be now unavailable, limiting expenditures. Pandemic conditions may also limit one activity (such as hotel use) in favor of another (camping, for example). Although not addressed here, this would be an interesting point for future research.

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Appendix: Annual Visits to Lander Region by Monthly Car Count with Car, Climber, and Visiting Climber Totals, 2021

	<i>Sinks Canyon (92)</i>	<i>Fossil Hill (8)</i>	<i>Wild Iris main lot (32)</i>	<i>Wild Iris Aspenglade lot (25)</i>	<i>Wild Iris OK Corrall lot (40)</i>	<i>Wild Iris Quarry lot</i>	<i>North Country (18)</i>	<i>Little Po (15)</i>	<i>Remote pull off spaces (2)</i>	<i>Sinks Shady lot (20)</i>	<i>Rock Shop Boulder lot (10)</i>
January	688.16	0	0	0	0	0	0	0	0	0	0
February	559.36	0	0	0	0	0	0	0	0	0	0
March	717.6	0	0	0	0	0	0	0	0	0	0
April	833.52	0	0	0	0	0	0	0	0	0	0
May	387.32	48.48	89.92	70.25	112.4	29.8	53.64	44.7	16	22.4	6
June	138	128	323.2	252.5	404	94.5	153.9	122.25	16	130	122
July	142.6	156.8	822.4	642.5	1028	254	365.4	142.5	18	147	130
August	306.36	156	787.2	615	984	249	340.2	79.5	18	140	128
September	878.6	111.2	422.4	330	528	135	192.6	178.5	16	114	118
October	1591.6	64	112.32	87.75	140.4	39.1	70.38	152.85	16	0	32
November	1343.2	0	0	0	0	0	0	0	0	0	0
December	634.8	0	0	0	0	0	0	0	0	0	0
TOTAL	8221.12	664.48	2557.44	1998	3196.8	801.4	1176.12	720.3	100	553.4	536



Contact Information for Future Studies

EKU's Division of Regional Economic Assessment and Modeling (DREAM) offers highly valuable but affordably priced services in your region, including:

Economic impact studies

Feasibility studies

Visitor experience studies

Marketing studies

Needs assessments

Recreation studies

Tourism studies

Cost-benefit analyses

Place-attachment studies

Motivation studies

Please contact DREAM Director Dr. James Maples with questions and ideas at

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