A Choice Experiment of Wyoming Residents' Preferences Toward Water Resilience Improvement Programs

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Introduction

Increasing temperatures have a direct impact on water availability and the natural and economic activities that rely on that availability. In many semiarid rural places, water is integral to primary economic activities including agriculture, energy, and tourism. Thus, the livelihoods, security, and health and well-being of these rural communities are intrinsically tied to the future of climate change and associated risks to water resources. While the implications of changing climate and water resources run deep through many communities and economies, they also flow to neighboring states with regional and national implications.

The mounting pressures of impending climate change on rural places is particularly germane to Wyoming where the state's unique geographic setting includes the snow-dominated mountainous headwaters for three major North American river basins - the Green/Colorado, Snake/Columbia, and the Platte/Missouri-Mississippi rivers. Recent climate change in Wyoming (Shuman, 2012) includes impacts on water resources that range from drought (e.g. Xiao et al., 2018; Udall and Overpeck, 2017), which also plays a role in increased forest fires (Carter et al., 2017 and 2018); to changes in precipitation and snowpack (Nicholson et al., 2018, Pederson et al., 2013); to earlier-than average spring snowmelt and runoff (Shinker et al., 2010, Stewart, 2009, Stewart et al., 2005). Such changes in mountainous precipitation and increasing drought conditions means that many watersheds are experiencing diminished flows in rivers, especially late in the summer growing season (Shinker et al., 2010) and contribute to increases in wildfire activity (Calder et al, 2019). Such environmental changes are projected to continue (Udall and Overpeck, 2017) and will increasingly put Wyoming's communities, and potentially downstream

neighbors, at risk. Thus, it is paramount that institutions understand rural perceptions of climate change, their preferences for intervention, and how community attributes may drive these preferences.

This article explores Wyoming residents' preferences and willingness to pay for community programs that would ameliorate damages from water-related natural hazards. Specifically, we analyze a choice experiment of Wyoming residents using latent class analysis to predict different class segments' willingness to pay for community program attributes. The attributes include varying levels of total damages, water hazard type, whether the program would be reactive (i.e., repair) or proactive (i.e., avoidance), and the likelihood of program effectiveness. In addition to estimating preferences across community segments, we include measures of political, social, and cultural capitals as class membership variables to observe the influence of identity and the strength of a community's institutions on determining climate preparedness preferences. The discussion around these estimates may assist policy makers and practitioners in developing more effective and politically feasible climate preparedness programs, along with the narratives surrounding them, within rural communities across the U.S.

The article proceeds by first reviewing the relevant literature in section two before detailing the data and methods used in the analysis in section three. Section four presents our findings and discusses implications for policy makers. Section five summarizes the core findings, notes model limitations, and outlines areas for future research.

Literature Review

Choice experiments on climate preparedness programs

Influence of political, social, and cultural capitals on program preferences

Emery and Flora, 2006 – Genesis of community capitals

Himes-Cornell et al., 2018 – Communities with strong political, social, and financial capitals tend to fair better after a disaster

Flora and Thiboumery, 2005 – Importance of community capitals, particularly social capital, on the sustainable development of arid communities.

Faulkner, Brown, and Quinn, 2018 – Importance of community capitals in developing resilient communities.

Berkes and Ross, 2013 – Importance of leadership, social connections, people-place relationships, and collaborations in building community resilience.

Data/Methods

This study uses primary data gathered through online surveys of 731 Wyoming residents administered in April 2022. The survey was comprised of four sections: perceptions of natural hazards, community capitals, discrete choice experiment, and beliefs and trust information. The discrete choice experiment portion of the survey included five choice occasions, each with five attributes and varying levels from two to four. The SAS Optex procedure was used to obtain the optimal experimental design and ensure efficient model results. The latent class logit model was estimated using the econometric software NLOGIT in order to accommodate a nonresponse option.

The five attributes of the choice experiment included damage type, chance of occurrence, damage level, program strategy, and price. The levels of these variables are presented in table

one. The three damage types considered resemble three of the most common water related natural hazards experienced across Wyoming. A fourth level, Storms, was considered but rejected due to the large degree of variability in storm type (e.g., blizzard, thunderstorm, hail, tornado, etc.). All three damage types have led to millions of dollars in damages to Wyoming communities within the past five years.

Given the uncertainty around future water-related natural hazard events in a particular locale, we include Chance of Occurrence to capture the imperfect nature of the programs and the likelihood that some respondents are sensitive to different levels of uncertainty. Similarly, the level of damage may vary depending on the type, severity, and scale of the natural hazard event. Finally, we differentiate between proactive and reactive program strategies to estimate participants' preferences for programs that take place preemptively or after the hazard event occurs. Price varies across four levels which were stated to be added onto the participant's monthly water bill. In 2018, the statewide average monthly water bill was $40 (WY Water Development Commission, 2018).

Table 1. Choice Experiment Attributes and Levels

Attribute	Number of Levels	Level values
Damage Type	3	Drought, Wildfire, Flood*
Chance of Occurrence	3	25%, 50%, 75%
Damage Level	3	$50M, $100M, $150M
Program Strategy	2	Proactive, Reactive
Price (added to monthly water bill)	4	$5, $10, $15, $20

*Flood served as the baseline damage type

In order to avoid nonresponse bias, a nonparticipation option was available as a third option for each choice set. Within the Latent Class Analysis, we describe nonparticipation responses with additional covariates, including the respondent's age, how long they have lived in

the state, and which region of the state they live in. These variables are described with the class membership variables in table 2.

To frame the results, it is worth noting the general characteristics of each region. The SE region (reference group) of the state is characterized by the location of the only university in the state, the state capital, and relatively diverse field crops. The NE region is characterized by mining and agricultural industries and outdoor recreation. The NW region has the most wealth in the state and is home to the most income inequal county in the US (Teton County). In addition to being relatively more mountainous and wetter, the NW region also hosts two national parks, the headwaters of the Snake River, and the agriculturally productive Big Horn Basin. The SW region of the state is mostly high desert with notable mining activity and reservoirs that feed the Colorado River. Cattle are the most valuable agricultural commodity in Wyoming and are usually run on large ranches in every region of the state.

The class membership variables selected describe significant differences in the respondents' political, social, and cultural capitals. Each community capital is presented as an index created using principal components analysis and based on respondents' answers to a subset of survey questions. All community capital questions are available in the appendix but we quickly describe their nature here. The political capital section can be summarized as a set of political gridlock questions (varying by level of government) and a set of questions capturing respondents' perceptions of their local government's basic political and administrative skills. The social capital section included questions on the quality of social network, they types of social bonds, and the perceptions of or interactions with neighbors.

Cultural capital is more difficult to measure because in addition to quality there can be many types of cultural capital. We define cultural capital in Wyoming as a mix of industry or

lifestyle identity, and the types and number of events in the community every year. Specifically, we asked participants to rate how closely their community's identity is tied to agriculture, tourism, or mining, the three largest industries by value in Wyoming. Similarly, we asked respondents how often they had festivals, fairs, livestock shows, rodeos, and farmers markets each year in their communities. After conducting a principal components analysis on these eight cultural variables, two components had eigen values above one, and the first component seemed to strongly capture a classic example of Wyoming tourism. That is, Tourism Identity was the only positive identity factor loading, and all event factor loadings were positive and significantly higher than those in any other component. Component two captured a more traditional Wyoming economy with lower factor loadings for the event variables but stronger correlation with agricultural and mining identities. While we may test component two in future analyses, we only concentrate on the "tourism" component here. Principal components with an eigenvalue of at least one for all three community capital indices are available in the appendix.

Table 2. Nonparticipation and Class Membership Summary Statistics

Variable		Observations	Mean	Std. Dev.
Nonparticipation	Age	506	52.74	16.9379
	Yrs. in Community	505	25.69	17.057
	Southeast	568	0.41	0.4916
	Northeast	568	0.17	0.3720
	Northwest	568	0.25	0.4334
	Southwest	568	0.18	0.3812
Class Membership	Social Capital Index	567	0.00	1.9504
	Political Capital Index	567	0.00	1.9424
	Tourism (Cultural Capital Index)	567	0.00	1.6317

Southeast counties: Albany, Converse, Goshen, Laramie, Natrona, Niobrara, Platte
Northeast counties: Campbell, Crook, Johnson, Sheridan, Weston
Northwest counties: Big Horn, Fremont, Hot Springs, Park, Teton, Washakie
Southwest counties: Carbon, Lincoln, Sublette, Sweetwater, Uinta

Theory and Empirical Model

A random utility framework was employed to model how residents' community capital stocks influenced their preferences for water-related natural hazard program attributes and participation. Under the assumption that consumers are utility maximizing, an individual n will select program alternative i over j alternatives only if alternative i offers them the most utility relative to alternatives. Given any choice situation, the researcher only observes information on the alternatives' attributes z_{nj} and some information about the individual themselves r_n, resulting in an observed portion of the individual's utility function $V_{ni}(z_{ni}, r_n)$, and an unobserved portion ε_{ni}. The probability an individual chooses alternative i over j alternatives, denoted P_{ni}, then becomes:

$$\begin{aligned} P_{ni} &= Prob(U_{ni} > U_{nj}) \\ P_{ni} &= Prob(V_{ni} + \varepsilon_{ni} > V_{nj} + \varepsilon_{nj}) \\ P_{ni} &= Prob(V_{ni} - V_{nj} > \varepsilon_{nj} - \varepsilon_{ni}) \end{aligned} \tag{1}$$

Where the probability that an individual chooses i is the probability that the difference between the observed portions of utility is greater than the difference between the unobserved components. If we assume the errors are independent and that the unobserved component of the respondent's utility function is Gumbel distributed then Train (2008) shows that a logit choice probability can be obtained from this cumulative distribution:

$$P_{ni} = \frac{\exp\,(\beta' z_{ni})}{\sum_j \exp\,(\beta' z_{nj})} \tag{2}$$

where the probability of individual n choosing alternative i is a function of z independent variables observed by the researcher with preference parameters β to be estimated.

While limited dependent empirical models such as the multinomial logit are popular due to their closed form and ease of interpretation, the strong assumption of the individuals' errors being independent has led to some researchers choosing more flexible forms such as the mixed-logit that allows the researcher to model correlations among alternatives in the error component of the model (Train, 2008). As another option, the latent class logit model assumes that consumers can be classified into a discrete number of market segments, or classes ($s = 1, \dots, S$) based on their preference similarities and differences, allowing the model to endogenously determine consumer heterogeneity rather than it being assumed to follow some distribution specified by the researcher. Since there is no prior expectation to believe that all residents behave similarly across Wyoming, we adopt the latent class logit model to avoid biased estimates that may arise from the assumption of homogeneity across consumers. One last reason to choose the latent class logit over model alternatives is the greater flexibility it offers given the main effects design of the choice experiment.

Given some number of classes S set by the researcher, the probability that individual n is observed in class s is:

$$\gamma_{ns}(\varphi_s) = \frac{\exp(\varphi_s x_n)}{1 + \sum_{s=1}^{S-1} \exp(\varphi_s x_n)} \tag{3}$$

where φ are coefficients of individuals' perceptions of community capitals, x_n, that determine class membership, and class S is dropped for identification (Pacifico & Yoo, 2013). The probability of individual n choosing alternative i over alternative j with T choice occasions, is the sum of each class membership probability multiplied by the conditional probabilities of individual n choosing alternative i conditional on being in class s across all alternatives and choice occasions:

$$P_n(J = i|z_n) = \sum_{s=1}^{S} \gamma_{ns}(\varphi_s) \prod_{t=1}^{T} \prod_{i=1}^{J} \left(\frac{\exp(\beta_s' z_{ni})}{\sum_j \exp(\beta_s' z_{nj})} \right)^{C_{nit}} \quad (4)$$

where C is an indicator function that takes on a value of one if individual n selects alternative i on occasion t and zero if otherwise (Pacifico & Yoo, 2013). Note, the conditional probability that individual n chooses alternative i given they are in class s, the right-hand term in parentheses, is simply the multinomial logit specification for a respondent in class s (Shen, 2009). To summarize, the objective is to estimate coefficients β and φ given each alternative program's attributes, z, and individuals' perceptions of community capitals, x. This information will allow the model to control for individual heterogeneity while determining the influence community capital stocks have on individuals' choice behavior and WTP for each program attribute across classes.

Several previous studies perform various tests to determine the number of latent classes that capture the bulk of consumer heterogeneity without overfitting the model. While studies such as Nylund, Asparouhov, & Muthen (2007) find bootstrapping methods to be superior in determining the number of classes, the Akaike Information Criterion (AIC) seems to be more commonly used (or at least traditionally used) due to its comparable results and relative simplicity. Consequently, we selected the model with the smallest AIC.

Preliminary Results

Preliminary results of the latent class logit model with nonparticipation and class membership covariates are presented in table 3. Given our specification detailed in the prior section, the first goal is to optimize the number of latent classes predicted by the model by choosing the specification with the lowest AIC. Estimating the model with two classes resulted

in an AIC of 5,59.3, three classes resulted in an AIC of 4,990.8, and the four class model did not converge. Thus, we determine that the three-class specification captures the majority of consumer heterogeneity. This model converged with a normal exit after 160 iterations. According to the model Chi Squared statistic, with 2,514 useable observations and 44 parameters the model specification is significant at the one percent level. At first glance, all price parameter estimates are highly significant and negative, reflecting the law of demand.

Table 3. Latent Class Logit with Non-Participation and Class Membership

Class shares	Class 1 22.0%		Class 2 18.7%		Class 3 15.7%	
Variables	Solo Preppers		Concerned Communities		Careful Institutionalists	
	$\hat{\beta}$	$\widehat{WTP}$	$\hat{\beta}$	$\widehat{WTP}$	$\hat{\beta}$	$\widehat{WTP}$
Drought	0.7211**	$9.46	1.5571***	$16.51	0.7216***	$10.11
Wildfire	0.8122***	$10.66	1.1164***	$11.83	0.4419***	$6.19
Chance	0.0088	$0.12	-0.0096	$ -0.10	0.0076***	$0.11
Damage	0.0060**	$0.08	0.0047	$0.05	-0.0008	$ -0.01
Proactive	0.5791**	$7.60	-0.5063	$ -5.37	0.3479***	$4.88
Pay	-0.0762***	--	-0.0943***	--	-0.0714***	--
Non-participation						
Constant	-3.0660***		3.6989***		-3.8392	
Age	0.1151***		-0.0909***		-0.0626**	
Yrs. in Comm.	0.0737***		0.0744***		-0.0072	
Southwest	0.2845		-0.3696		-3.959	
Northeast	-1.3954**		-3.0653***		5.4424*	
Northwest	-1.2918***		1.3862**		-0.6852	
Class Membership						
Constant	-0.2891***		-22.5319**		--	
Political Cap.	-0.0707**		-3.9797**		--	
Social Cap.	-0.2120***		9.6946**		--	
Tourism	-0.2167***		0.91		--	
*** P-value<1%			Observations: 2,514			
** P-value<5%			Chi^2 (44): 620.98***			
* P-value<10%			AIC: 4,990.8			

The class shares displayed below each class in table 3 indicate the share of respondents who were assigned to each latent class based on some similarity of preferences. These shares total to 56.4%, suggesting that 43.6% of respondents indicated nonparticipation across the

classes. Accordingly, the attribute preferences expressed in the classes represent parameter estimates of the respondents who indicated some willingness to participate in the programs.

Based on the statistically significant attribute, nonparticipation, and class membership parameters at the 10% level, we label the three classes as Solo Preppers (22%), Concerned Communities (18.7%), and Careful Institutionalists (15.7%). Solo Preppers are defined by their moderate WTP to mitigate damages from droughts ($9.46**) and wildfires ($10.66***) relative to floods, their willingness to pay more to mitigate larger damages ($0.08**), and their desire to avoid damages through a proactive strategy ($7.60**) compared to a reactive repair-based strategy. Older participants and those who have lived in the state longer were less likely to participate in this class indicating the attribute preferences were held by relatively younger participants. The "Solo" aspect of this group arose from the class membership parameter estimates which indicate that Solo Preppers have less political capital compared to the base class (class 3), the least social capital, and the least tourism cultural capital.

Concerned Communities are defined by their high WTP to mitigate damages from droughts ($16.51***) and wildfires ($11.83***) compared to the other two classes, and their indifference toward the other program attributes. That is, their primary concern are the natural hazard events themselves rather than the likelihood of occurrence, level of damages, or the type of strategy taken. Participation in this class increased with age, decreased with the number of years living in the state, and was relatively lower in the NW region. While this class had the least political capital, they had the most social capital. Comparing Concerned Communities' class membership traits to their program attribute preferences indicates they may prefer working in their social networks rather than relying on a publicly operated program.

Careful Institutionalists are less concerned about wildfires ($6.19***) and moderately concerned about droughts ($10.11***) compared to the other classes. What differentiates them are their preferences for proactive programs ($4.88***) that are more likely to have an effect ($0.11***) and their relatively high degree of political capital compared to the other classes. Nonparticipants in this class were younger and more likely to be from the NE region.

Discussion and Implications

The first policy relevant takeaway from this exercise is the finding that only 56.4% of participants responded affirmatively to participating in any hazard mitigation program. While this is still a majority, the thin margin implies that some communities may reject policies that do not reflect their preferences. Furthermore, regional nonparticipation covariates indicate mixed results and only allude to the NE having relatively more Concerned Communities class participation and less Careful Institutionalist class participation. That is, programs in the NE region of Wyoming may have better success playing into Concerned Communities' program preferences compared to other class traits.

Less social capital appears to be loosely correlated with higher preferences for proactive water hazard mitigation strategies. Solo Preppers have the least social capital and the highest preference for a proactive program strategy while Concerned Communities have the highest social capital and a nearly significant preference for a reactive program strategy (*P-value* = 0.1159). However, social capital also appears to be correlated with higher concern for droughts and wildfires, even if these participants appear to be less enthusiastic about other program attributes. Thus, higher degrees of social capital in communities may imply greater concern for

shared values but a preference for solving issues through social networks rather than public programs that may be seen as political.

The two classes with the most political capital favored proactive program strategies. The relatively higher scores of political capital may be real (i.e., greater skills and efficiencies in local authorities) or simply just perceived (i.e., greater belief and trust in local authorities). Regardless, this implies room for community development or Cooperative Extension Service programs that invest in local leadership trainings (e.g., board governance, grant writing, public finance, etc.) or public trust building programs (e.g., public image campaigns, public communication, civic engagement, etc.). More effective and trusted local authorities may sway residents into supporting more proactive strategies for water-related natural hazard mitigation programs.

Classes with higher cultural capital were more concerned about drought which most heavily impacts the agricultural industry – the third largest and the oldest industry in Wyoming. As indicated by the cultural capital factor loadings in table A.3, agriculturally based events such as rodeos, livestock shows, and farmers markets are important cultural contributors even for communities who more closely identify with the tourism industry. Furthermore, it appears that older participants were more likely to participate in the classes with higher cultural capital, suggesting leveraging the importance of Wyoming's traditional agriculturally rooted tourism culture in generating support for water-related natural hazard program attributes.

Conclusion

This article explores how social, political, and cultural community capitals influence Wyoming residents' preferences for water-related natural hazard mitigation programs. We first use 2021 survey data from a representative sample of Wyoming residents in a principal components analysis to build indices for each of the three community capitals. We then use these

indices as class membership variables in a latent class analysis using choice experiment data from the same 2021 survey. We find three classes most efficiently capture the bulk of respondent heterogeneity and imply that 56.4% of respondents preferred some program compared to nonparticipation.

Preliminary results suggest that a proactive program strategy may be possible with investments in community leadership skills and public trust. Similarly, investing in social and cultural capitals may be an effective conduit to increasing support for drought mitigation programs. Without investments in these community capitals, Wyoming residents are more likely to express lower WTP for drought and wildfire mitigation strategies or lower WTP for program attributes that involve trusting the efficacy of local authorities to successfully run the natural hazard mitigation programs.

Limitations of this research include the narrow geographic scope of respondents, the ambiguity of indices, and the single specification of a water hazard mitigation program. First, while we believe our sample to be representative of Wyoming residents, the external validity of these results likely only extends to states in the Rocky Mountain West. However, this region is expected to experience some of the most severe water scarcity issues in the coming decades. Second, principal components analysis are useful to measure more abstract concepts like community capitals, but they do not provide clear policy paths due to their abstract and ordinal nature. Finally, there are likely other program attributes which we did not consider that may be important factors in determining resident participation, and we only consider one specification of the program we designed. Future studies should consider other program attributes, measures of community capitals, and sampling populations from other states in the Rocky Mountain West.

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Appendix

Table A.1 Political Capital Principal Components and Loadings

Variable	Comp1	Comp2
Eigenvalue	3.78353	2.13373
Gridlock Local	-0.3272	0.4178
Gridlock County	-0.3175	0.4513
Gridlock State	-0.2345	0.4933
Gridlock Federal	-0.1439	0.3235
Skills Public Communication	0.3834	0.2409
Skills Collecting and Analyzing Information	0.4017	0.236
Skills Building Collaborations with Community	0.3981	0.2289
Skills Public Finance	0.3766	0.2436
Skills Grant Writing	0.3283	0.22

Table A.2 Social Capital Principal Components and Loadings

Variable	Comp1	Comp2	Comp3
Eigenvalue	3.8026	1.5439	1.17064
Quality of Social Networks	0.3497	-0.073	0.148
Social Bonds 1	0.3339	-0.047	0.3279
Social Bonds 2	-0.2397	0.4137	-0.1715
Social Bonds 3	-0.1645	0.4134	0.3111
Social Bonds 4	-0.2792	0.3892	0.235
Social Bonds 5	0.0459	0.1527	0.7401
Neighbors 1	0.3375	0.1457	-0.0102
Neighbors 2	0.4165	0.1515	-0.0483
Neighbors 3	0.2883	0.179	-0.172
Neighbors 4	0.3588	0.2667	-0.1571
Neighbors 5	0.3057	0.3131	-0.0555
Neighbors 6	-0.0943	0.4798	-0.2856

Table A.3 Cultural Capital Principal Components and Loadings

Variable	Comp1	Comp2
Eigenvalue	2.67779	1.24403
Identity Agriculture	-0.0078	0.5609
Identity Tourism	0.3225	-0.2353
Identity Mining	-0.0324	0.6833
Events Festival	0.4349	-0.1856
Events Fair	0.4342	0.1185
Events Livestock Show	0.4169	0.3208

Events Rodeo	0.4151	0.0736
Events Farmers Market	0.4137	-0.079

Table A.4 Community Capital Questions	
Political Capital	
How often do you feel that political gridlock at the following levels prevents your community from making timely decisions?	Never to Always, 5 levels
How would you rate your community's decision makers' skill levels in public communication?	Very low to Very high, 5 levels
How would you rate your community's decision makers' skill levels in collecting and analyzing information?	Very low to Very high, 5 levels
How would you rate your community's decision makers' skill levels in building collaborations with community?	Very low to Very high, 5 levels
How would you rate your community's decision makers' skill levels in public finance and investments?	Very low to Very high, 5 levels
How would you rate your community's decision makers' skill levels in grant writing?	Very low to Very high, 5 levels
Social Capital	
How would you rate the general quality and strength of your community's local networks and social relationships?	Very low to Very high, 5 levels
How would you rate the following statements regarding the quality of bonds and relationships between social groups (religious, political, recreation, occupation/industry, etc.) in your community?	
"We work together to develop solutions, even when we do not agree."	False to true, 4 levels
"One group, sometimes not in our community, usually makes most of the decisions."	False to true, 4 levels
"They solve their problems, and we solve ours."	False to true, 4 levels
"We do not have strong groups, so we all look after ourselves."	False to true, 4 levels
"We do not have clear groups, so we make the decisions together as one group."	False to true, 4 levels
How strongly do you agree with the following statements regarding relationships between members of your community?	
"I feel I can rely on my neighbors in times of trouble or need."	Not at all to Strongly, 5 levels
"I feel a strong sense of community when I walk around town."	Not at all to Strongly, 5 levels
"I plan to remain a resident of this town for many years to come."	Not at all to Strongly, 5 levels
"I frequently find myself chatting with community members on the street."	Not at all to Strongly, 5 levels

"Residents are opinionated and have active roles in making the community function."	Not at all to Strongly, 5 levels
"When things are done in the community, it I often the same few people doing all the work."	Not at all to Strongly, 5 levels
Cultural Capital	
How strong is your community's identity tied to the following industries? (e.g., "We have a strong history of ranching," "Coal runs in our blood," etc.)	
Agriculture	Not at all to Extremely, 5 levels
Mining	Not at all to Extremely, 5 levels
Tourism, art, recreation, and accommodation	Not at all to Extremely, 5 levels
Manufacturing	Not at all to Extremely, 5 levels
Retail Trade	Not at all to Extremely, 5 levels
Transportation and warehousing	Not at all to Extremely, 5 levels
Professional, scientific, and technical services	Not at all to Extremely, 5 levels
Education	Not at all to Extremely, 5 levels
Government (local, state, federal)	Not at all to Extremely, 5 levels
Healthcare	Not at all to Extremely, 5 levels
How often does your community host the following types of cultural events?	
Festivals (e.g., historical, music, art, food/beverage, nature, holiday, etc.)	Never, rarely, once every couple of years, annually, more than annually

Fair/carnival	Never, rarely, once every couple of years, annually, more than annually
Livestock show	Never, rarely, once every couple of years, annually, more than annually
Rodeo	Never, rarely, once every couple of years, annually, more than annually
Farmers' market	Never, rarely, once every couple of years, annually, more than annually