



Willingness-to-Pay Study 2014 Report

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THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
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COSI 2 Visitor Satisfaction Survey 55

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COSI Willingness-to-Pay Study

Introduction

COSI, Columbus, Ohio's dynamic Center of Science and Industry, inspires the scientists, dreamers, and innovators of tomorrow. Opened in 1964 at Memorial Hall in downtown Columbus, COSI moved in 1999 to a new 320,000-square-foot home designed by internationally-renowned architect Arata Isozaki, creating one of the largest modern-built science centers in the United States. COSI continues to represent a significant investment in the economic development and community revitalization of downtown Columbus.

As a "center of science," rather than a standalone science center, COSI has established embedded partnerships that enrich our guests' experiences, including WOSU@COSI, the only working television station in a science center; the Ohio State University (OSU) Labs in Life, working research laboratories created through a partnership with The Ohio State University and staffed by OSU researchers; Battelle's STEM Innovation Network, in partnership with one of the world's leading research institutions; the Columbus Historical Society; and the STEM-based Metro High School, among others. In 2008, COSI was named America's #1 science center for families by Parent Magazine. Since 1964, COSI has engaged with over 30 million people from all 50 states and around the world, both on-site and through its award-winning outreach programs.

In the fall of 2013, COSI entered into a partnership with Ohio State University Extension, Community Development (OSU-CD) to conduct a Willingness-to-Pay (WTP) Study. The study examines and compares the existing fee structure, customer views, and visitor demographics to determine the potential for increased fees and packaging of the museum products and services. COSI desired to survey individuals that had limited interaction (known as COSI Database) with the facility and individuals (known as the Qualtrics Panel) that were randomly selected using a survey panel filtered for age (over 18), non-members and having no interest in ever visiting COSI. Throughout the fall, COSI and Ohio State University Extension created a single survey that was used by both survey groups. The COSI database includes 263 responses and the Qualtrics survey includes 3,106 responses.

With assistance from the Department of Statistics (STATS) and the Center for Urban Regional Analysis (CURA) at Ohio State University, Community Economic Field Specialists from Ohio State University Extension organized, displayed and interpreted data results to create the enclosed technical report.

Recommendations include adjusting the pricing structure and give consideration to "one stop shopping" for visitors.

Project Objectives

The aim of the study is to maximize the future sustainability of COSI. In particular, there are three objectives for the OSUE-CD study:

- 1) Assessment of existing fee structure in comparison with other similar organizations taking into account location, visitor profile and museum services;
- 2) Analysis of potential fee structure changes or additions based on a survey and statistical analysis of non-member visitor data to measure willingness to pay (this analysis will identify where opportunities exist for increase in fees and for packaging products); and
- 3) Recommendations for fee increases and restructuring, including specific amounts.

Methodology

Process

OSUE-CD researchers and COSI staff held a planning session in February 2014 to develop the parameters of a willingness-to-pay study. The study entailed defining the sample group, creating and disseminating a survey instrument, analyzing data results and developing recommendations for potential pricing changes.

In March and April, a survey instrument was created and tested using Qualtrics. The survey was then sent to a defined panel of 800 recipients. 600 (75%) respondents were located in Ohio with the remaining 200 located throughout the United States. Specifically, 67 respondents were from Michigan; 36 were from Indiana, and finally 26 were from Kentucky. Therefore, over 91% of all respondents were located either in Ohio or the surrounding states of Ohio. The panel survey was conducted during April and results were received the first part of May 2014.

A link to the same survey instrument was then sent in mid-May with an e-mail letter of invitation to COSI's non-member "COSI" database. Of the 263 Respondents, 153 completed the survey. Recipients were given two weeks to complete the survey with results ready by the end of the first week in June. OSUE researchers downloaded data results for both surveys and began analyzing the results, developing a report and creating recommendations.

Design

Researchers worked with COSI staff to develop the survey instrument using closed-ended questions designed to capture price points at which respondents would be willing to pay for specific services. The first survey was conducted by Qualtrics, while the second survey was distributed by COSI. Data from both surveys were placed into Excel databases and analyzed using SAS version 9.3. The data contain several demographic variables, including:

- Age;
- Family size (divided into various age groups);
- Location of home (state, zip code)
- Family income; and
- Other science museums and centers they have attended.

The database also contains several variables related to the price the respondent would be willing to pay for various combinations of admissions, including:

- General admission only;
- General admission and special exhibit;
- General admission and Giant Screen movie;
- General admission and planetarium;
- General admission and Adventure;
- General admission and motion simulator;
- General admission and ALL other activities; and
- Annual family membership.

For each question regarding the admission prices, the respondent was asked to provide the price that was so expensive that the respondent would not purchase it. After initial examination of the data, a few records had unusually high values changed. These included one instance where the respondent noted there were 9 family members between the ages of 0 and 2 (correct to zero assuming a typographical error), and several instances of prices where a decimal point appeared to have been misplaced.

Sample

The panel database (non-members) includes 3,106 responses obtained through the Qualtrics survey. The COSI database (non-member visitors) includes 263 responses. Not all responses are complete. The two databases representing these groups were combined after adding a variable that indicated the survey group (see Maps #1-5 in Appendix for respondent distribution by U.S., region and state, in addition to distribution by 3-digit zip codes).

Analysis

OSUE-CD researchers hired campus Statistical Consulting Service (SCS) to assist in performing data analysis on the price data, specifically in developing several of the tables in this report. Maps were also developed in collaboration with the Center for Urban and Regional Analysis (CURA) to indicate location and distribution of pricing by respondents. These two on-campus entities have been of great assistance to the team in completing this important work for COSI.

This report summarizes the results of the surveys generated from both the Qualtrics panel and the COSI database. Prior to analysis, all responses for prices that were equal to zero were replaced with missing values (next highest). The statistical analyses to be included in this report are summary tables of counts of respondents in the various demographic categories, summary statistics for the various price variables, and comparison of the prices between several groups of respondents. In particular, the comparisons will be between:

- The two survey populations (panel and COSI);
- Family sizes;
- Home states (Ohio, neighboring, other); and
- Location within Ohio (Franklin County and other).

The statistical analyses to compare the groups will consist of t-tests (if two groups are being compared) and one-factor analysis of variance (ANOVA) with Tukey multiple comparisons (if several groups are being compared). Two-factor ANOVA will also be used to determine if there are differences in responses for the combination of survey groups and each other demographic factors of interest.

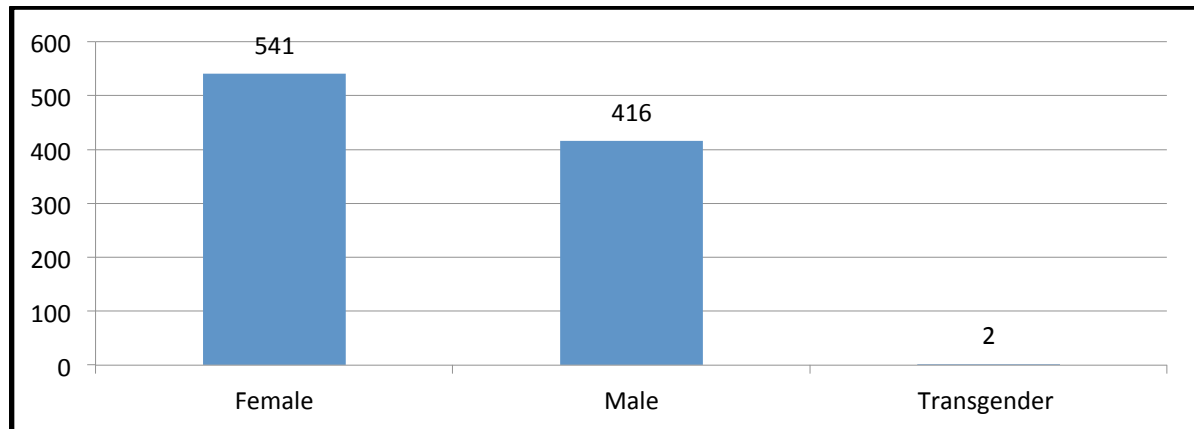
Demographic Results

The table and graphics below describe the characteristics of the survey respondents for both the panel and COSI database populations. From the COSI database, 52% respondents were located in Franklin County and 43% of the Qualtrics Panel were located in Franklin County.

COSI Database County Location	Actual Number	Qualtrics Panel County Location	Actual Number
Franklin	129 (52%)	Franklin	389 (43%)
Delaware	15 (6%)	Cuyahoga	80 (9%)
Fairfield	13 (6%)	Hamilton	41 (5%)

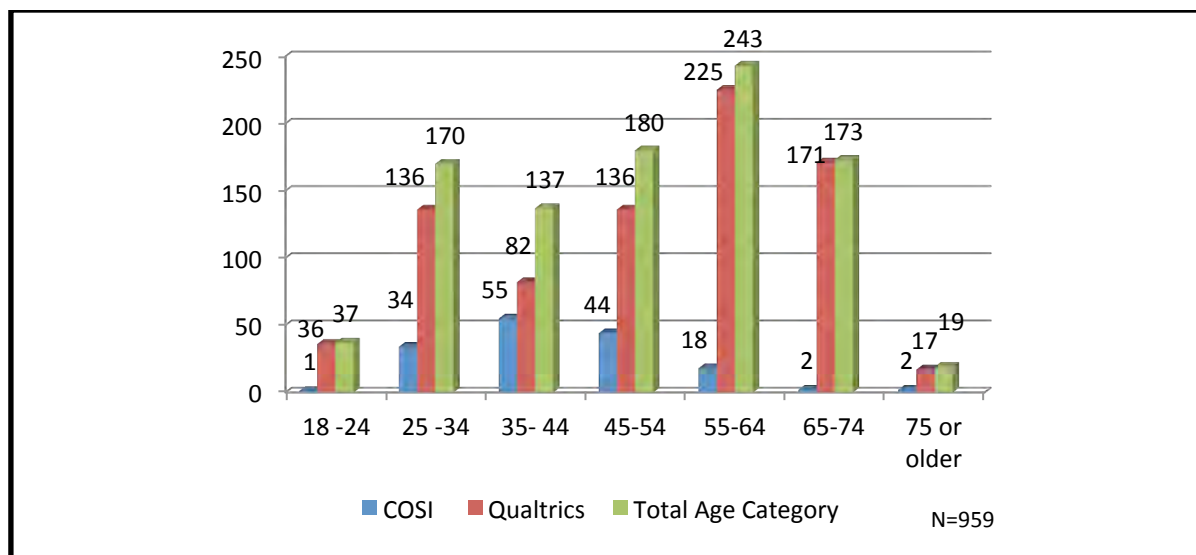
From data obtained, 56% survey respondents were female and 43% male (542 female vs. 416 male). There were also two respondents that identified themselves as transgender.

Figure 1. Are you: Female, Male or Transgender?



Regarding the age of the respondents, Figure 2 shows that over 25% respondents were between the ages of 55-64 while just 4% were between the ages of 18-24 and only 2% identified themselves at older than 75. From the COSI database, the largest response was in the 35-44 age category at 35% followed by the 45-54 category at 28%. Regarding the Qualtrics respondents, the largest response was in the 55-64 age category at 28%.

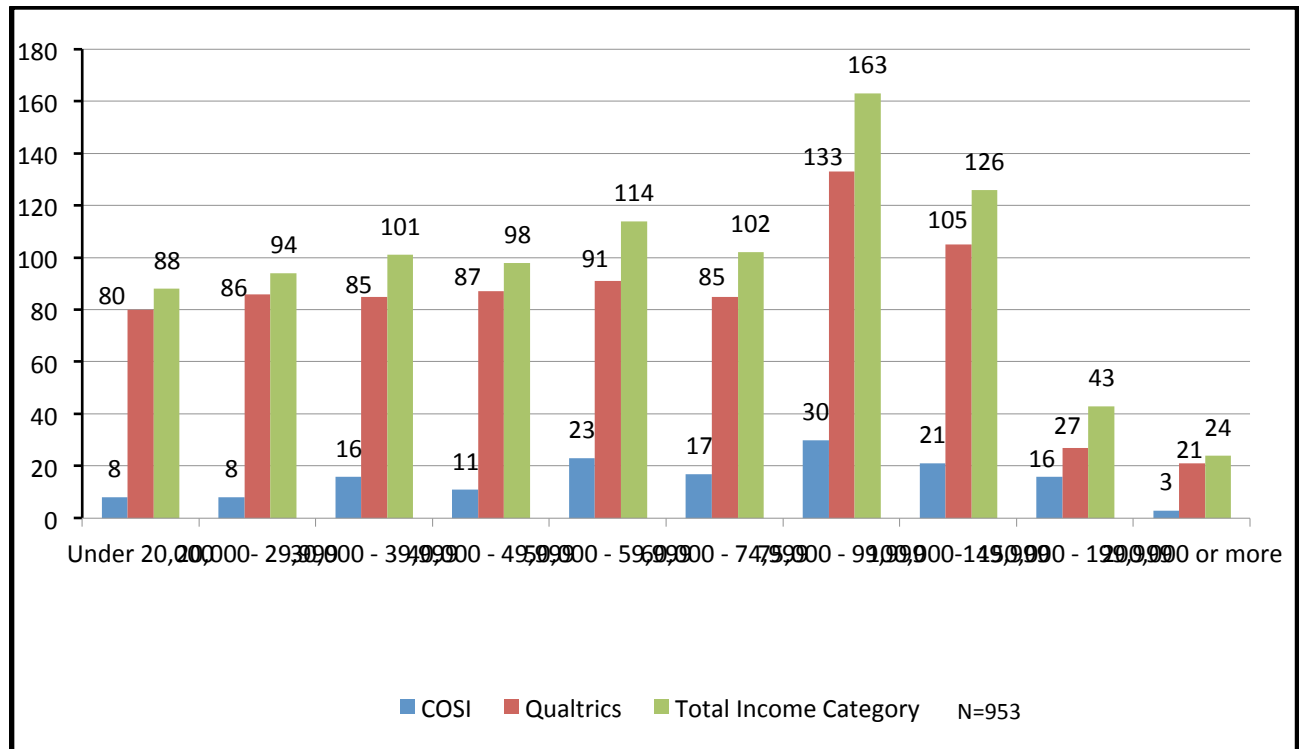
Figure 2. What is your age?



As Figure 3 demonstrates, survey respondents that indicated a total family household income between \$75,000 and \$99,999 had the greatest amount of responses (17%), followed closely by total household incomes of \$100,000 and \$149,999 at 13%. Finally the income of \$200,000 or more had the least respondents at 3%.

Regarding the COSI respondents, the highest respondent category was identified in the \$75,000 – \$99,999 (30) category followed by the \$50,000 – \$59,999 (23) category. In the Qualtrics response, the \$75,000- \$99,999 was the highest followed by the \$100,000- 149,999 category

Figure 3. What is your income?



When respondents were asked about their interest in visiting COSI, over 66% indicated that they were moderately to extremely interested in visiting COSI. This is a clear indication that respondents want to visit the facility and learn more about program offerings. Finally it should be noted that only 14% are not at all interested in visiting COSI. See Figure 4 below.

Figure 4. How interested are you in visiting COSI?

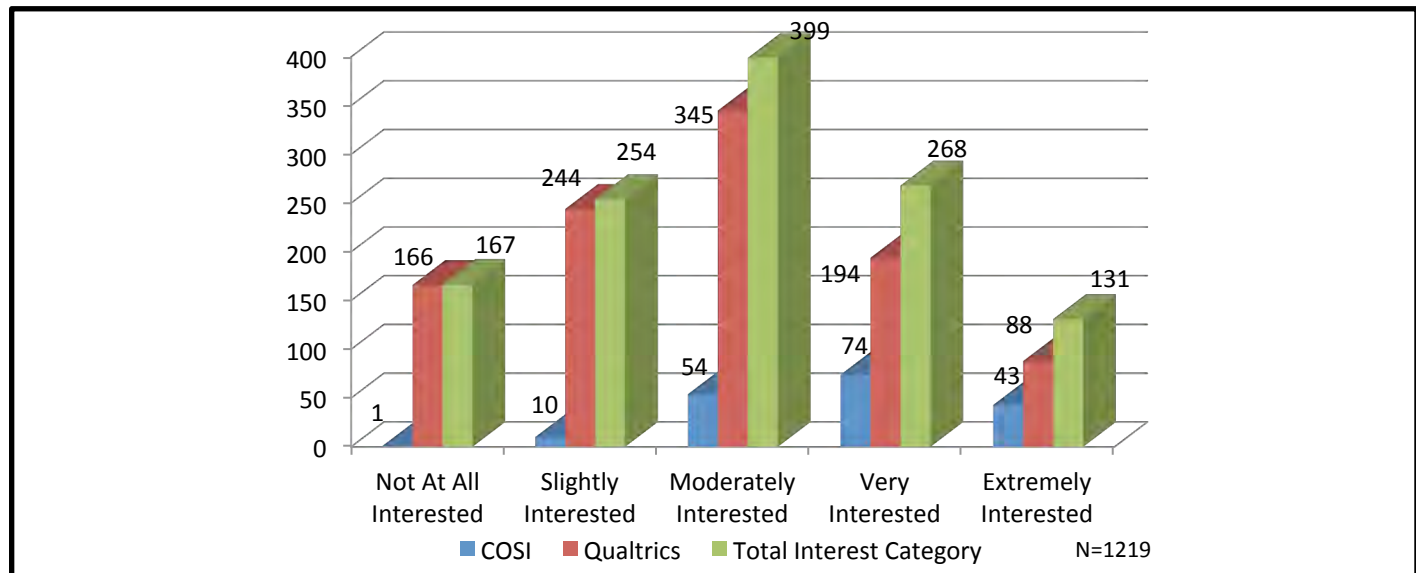
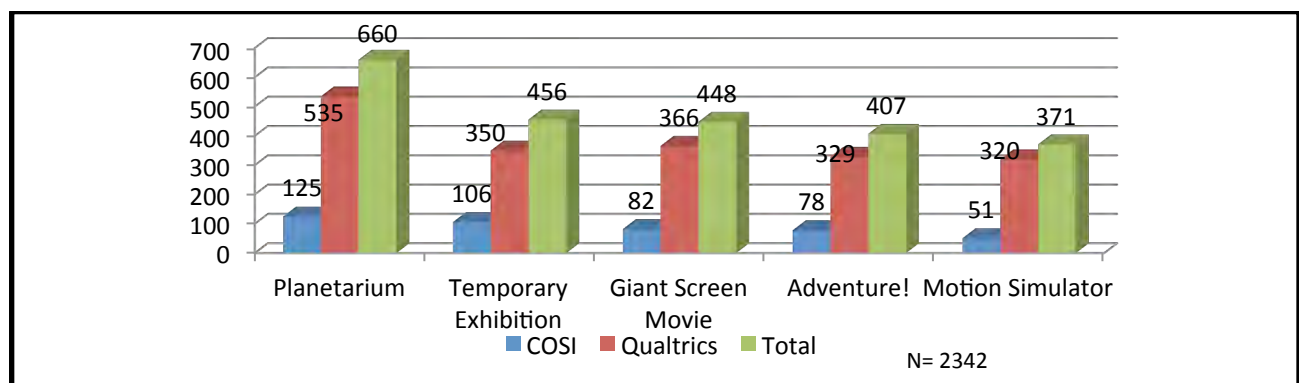


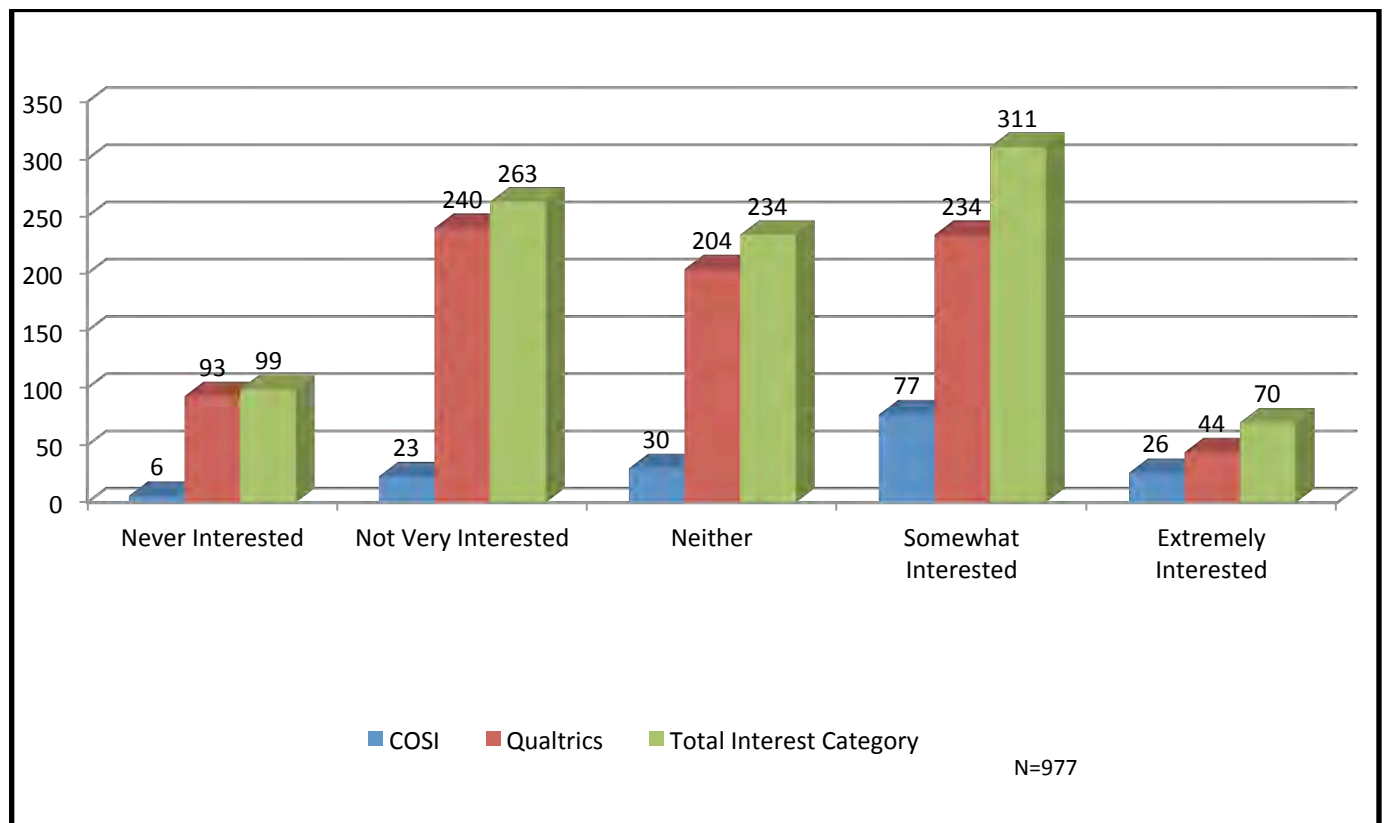
Figure 5 provides respondent preferences for different experiences that they could add to their General Admission ticket, 28% (660 responses) wanted to add Planerarium to their General Admission Ticket followed very closely by Temporary Exhibitions, Giant Screen Movies, and Adventure!. The Motion simulator at 16% was the least desirable to add to the General Admission Ticket.

Figure 5. Which of the COSI Experiences would you be interested in adding to a General Admission Ticket?



Survey Respondents were also asked about their interest in purchasing a membership to COSI. Of the 977 responses, 32% (311 responses) were somewhat interested and 7% (70 responses) described themselves as extremely interested in purchasing a membership. Figure 6 also indicates that 263 respondents, or 27, would not be very interested in purchasing a membership. COSI leadership wanted to delve into this question a little deeper to find out if other demographic variables play a role in respondents' interest in purchasing a membership.

Figure 6. How interested are you in purchasing a Membership to COSI?



To find out whether age was a determining factor in level of interest, Table 1 was created from the primary database combining the COSI and panel survey results. The far right column in Table 1 shows the percentage of respondents in that age range who are either somewhat or extremely interested in a COSI membership. Results indicate that age seems to be a factor and that the youngest range, 18-24, at 42.7%, is most interested, followed by the next youngest range, 25-34, at 46.3%. The 34-44 age group came in third at 40.2%, indicating that either the younger or family-aged adults are most interested in a membership. Interest drops off after age 45 to about 30%, but picks up again for the 75 and older age group to 35%.

Table 1: Relationship Between Age Range and Membership Interest

Age Range	Never	Not very	Neither	Somewhat	Extremely	Total (somewhat + extremely)	Total # Respondents	% Interest
18-24	3	4	12	13	4	17	36	47.2%
25-34	11	34	28	48	15	63	136	46.3%
35-44	13	18	18	25	8	33	82	40.2%
45-54	15	41	42	31	7	38	136	27.9%
55-64	26	75	52	65	7	72	225	32.0%
65-74	19	58	48	44	2	46	171	26.9%
75+	4	5	2	5	1	6	17	35.3%
Grand Total	93	240	204	234	44	815	275	

Table 2 shows the relationship between income and membership interest. Here, income levels also play a role in the respondents' level of interest. The lowest percentage interest in a COSI membership was also the lowest income group, under \$20,000 at 23%. Conversely, 52% of the highest income group, \$200,000 and above, were either somewhat or extremely interested in a membership. Other ranges revealed no significant findings, although the \$40-\$49,999 range was also low at 24%, likely due to couples or families with children who have competing expenses or interests. In general, interest in membership is greater as income levels increase. Income range distribution by 3-digit zip code are also depicted in Maps 15-23 in the Appendix.

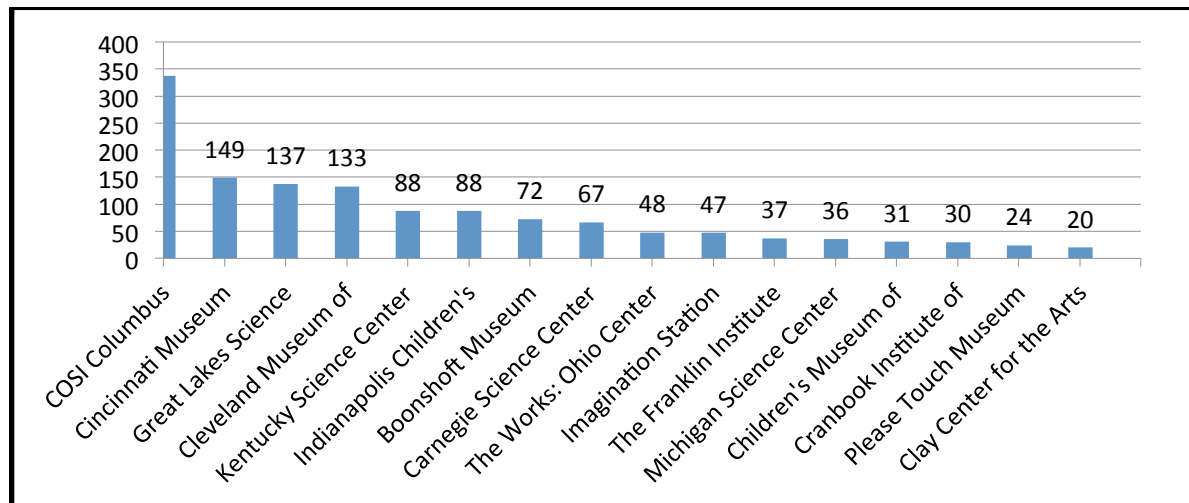
Table 2. Relationship between Income and Membership Interest

Income Levels	Never	Not Very	Neither	Somewhat	Extremely	Total (Somewhat + Extremely)	Total Respondents	% Interest
under \$20,000	12	25	25	13	5	18	80	23%
\$20-\$29,999	11	29	17	27	2	29	86	34%
\$30-\$39,999	10	16	24	29	6	35	85	41%
\$40-\$49,999	10	26	30	17	4	21	87	24%
\$50-\$59,999	12	29	17	27	6	33	91	36%
\$60-\$74,999	11	21	28	19	6	25	85	29%
\$75-\$99,999	13	41	29	45	5	50	133	38%
\$100-\$149,999	8	31	24	33	9	42	105	40%
\$150-\$199,999	1	10	5	10	1	11	27	41%
\$200,000+	2	5	3	11	0	11	21	52%
Grand Total	93	240	204	234	44	275	816	

Map #14 on page 41 also depicts levels of interest in membership by 3-digit zip code areas. In this example, there is a noticeable relationship between location in central Ohio and level of interest. Respondents located closest to COSI in zip code areas 430, 431 and 432 appear to be either "somewhat" or "extremely" interested in membership more frequently than in other zip code areas.

Finally, respondents were asked about visiting other science education institutions in the Ohio region. Of the 667 responses, over 50% have indicated that they visited COSI over the last 5 years. After COSI, about 22% of the respondents also visited the Cincinnati Museum Center, the Great Lakes Science Center and the Cleveland Museum of Natural History. See Figure 7 below.

Figure 7. Which of the following places have you visited in the last five years?



Price Data Results

Table 3 provides summary statistics for the various admission prices for all respondents. The summary statistics include the number of respondents (N), the minimum and maximum values among all respondents, the mean, median and mode of the responses, and the standard deviation. Figures 8-15 plot the distributions of the various price points.

Table 3. Summary Statistics for Various Admission Prices Across All Respondent

Admission Type	N	Min	Max	Med	Mode	Mean	Std Dev
General Admission Only	996	1.00	125.00	20.00	20.00	21.71	7.01
General Admission + Special Exhibit	435	2.00	100.00	27.95	30.00	28.03	8.19
General Admission + Giant Screen movie	430	1.00	100.00	25.00	25.00	26.78	7.87
General Admission + Planetarium	637	1.00	100.00	25.00	25.00	25.15	6.91
General Admission + Adventure	389	1.00	150.00	25.00	25.00	26.04	11.01
General Admission + Motion Simulator	356	1.00	100.00	25.00	25.00	25.83	7.36
General Admission + All Inclusive	987	1.00	208.00	33.00	35.00	32.97	10.96
Annual Family Membership	930	1.00	500.00	120.00	150.00	116.34	38.51

Table 4 provides a breakdown of the summary statistics into the two response groups. Standard deviations clearly demonstrate price ranges within reasonable limits for all admission types except for the annual family membership. Even after removing '0' outliers, the SD remained high in this category, particularly for the panel respondent group at 40.05.

Table 5 presents the results of the two-sample t-tests were used to determine whether there were statistically significant differences in the mean responses between the two groups for each of the admission types. For each of the one-time admission types, the mean price provided by the "panel" respondents was statistically significantly higher than the mean of the "COSI" respondents. There was no statistical difference between the means for the annual family membership.

Table 4. Comparison of Statistics for Admission Prices between Two Respondent Groups

Group	Admission Type	N	Min	Max	Med	Mode	Mean	SD
Panel	General Admission Only	838	1.00	125.00	20.00	25.00	22.20	7.36
	General Admission + Special Exhibit	337	2.00	100.00	29.95	30.00	28.96	8.77
	General Admission + Giant Screen movie	354	1.00	100.00	25.00	25.00	27.48	8.27
	General Admission + Planetarium	523	1.00	100.00	25.0	25.00	25.85	7.15
	General Admission + Adventure	317	1.00	150.00	25.00	25.00	26.93	11.84
	General Admission + Motion Simulator	309	1.00	100.00	25.00	25.00	26.49	7.44
	General Admission + All Inclusive	825	1.00	208.00	35.00	35.00	33.66	11.48
	Annual Family Membership	782	1.00	500.00	120.00	150.00	116.86	40.05
COSI	General Admission Only	158	10.00	30.00	18.98	25.00	19.10	3.81
	General Admission + Special Exhibit	98	10.00	35.00	26.00	26.00	24.85	4.58
	General Admission + Giant Screen movie	76	10.00	30.00	25.00	25.00	23.54	4.37
	General Admission + Planetarium	114	3.00	30.00	23.00	25.00	21.92	4.46
	General Admission + Adventure	72	10.00	30.00	23.00	25.00	22.13	4.43
	General Admission + Motion Simulator	47	10.00	35.00	23.00	25.00	21.51	4.97
	General Admission + All Inclusive	162	10.00	45.00	25.00	25.00	29.43	6.83
	Annual Family Membership	148	22.00	250.00	115.00	115.00	113.59	28.97

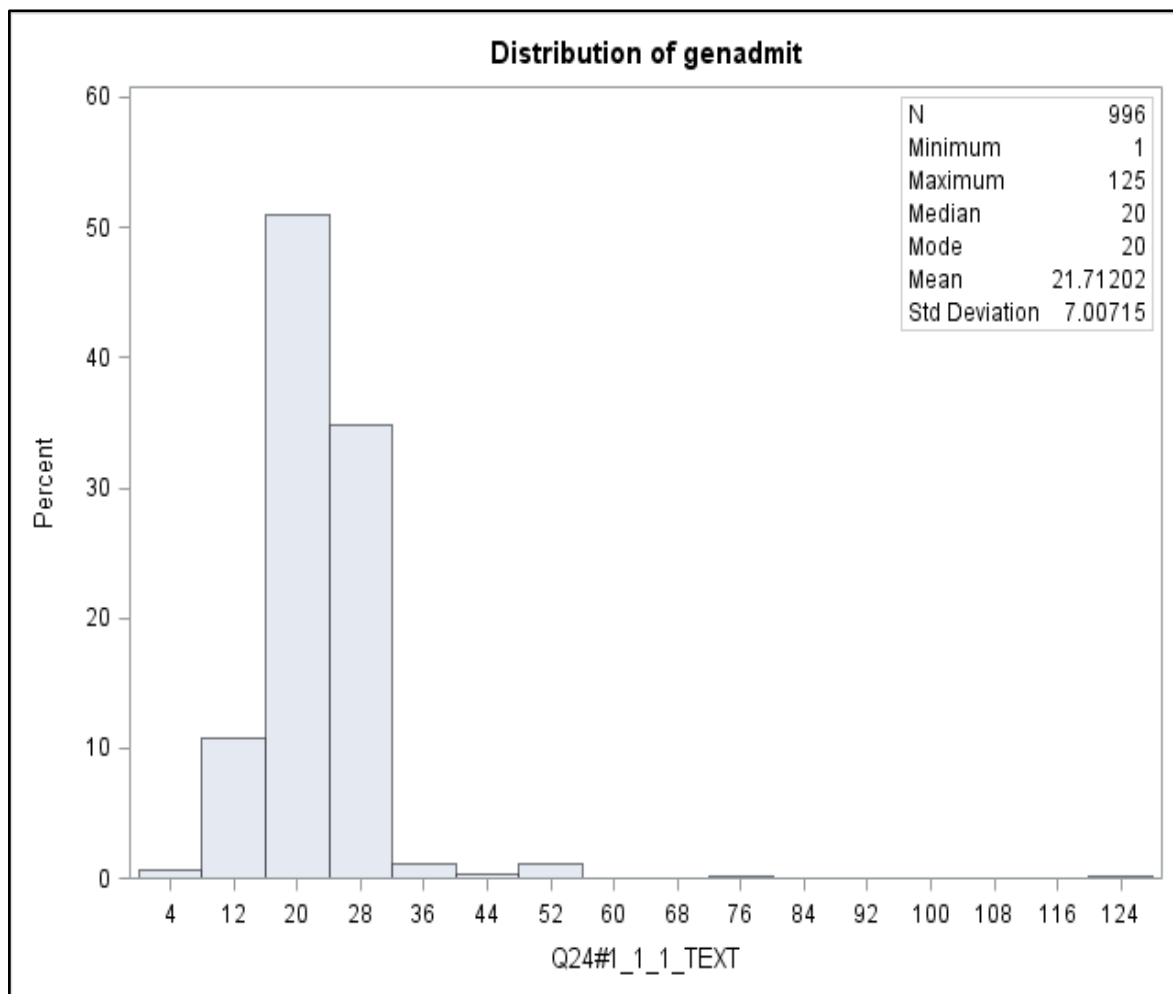
Table 5. Results of the t-tests Comparing Admission Prices between Panel and COSI Groups

Admission Type	Panel		COSI		t	p
	N	Mean	N	Mean		
General Admission Only	838	22.20	158	19.10	7.84	<0.0001
General Admission + Special Exhibit	337	28.96	98	24.85	6.18	<0.0001
General Admission + Giant Screen movie	354	27.48	76	23.54	5.91	<0.0001
General Admission + Planetarium	523	25.85	114	21.92	7.54	<0.0001
General Admission + Adventure	317	26.93	72	22.13	5.67	<0.0001
General Admission + Motion Simulator	309	26.49	47	21.51	5.93	<0.0001
General Admission + All Inclusive	825	33.66	162	29.43	6.33	<0.0001
Annual Family Membership	782	116.86	148	113.59	1.18	0.2398

The histograms in figures 10-13 demonstrate similar price expectations by respondents for admission combinations other than general admission only, general plus all inclusive and family membership for the combined surveys. Over 50% of the respondents chose \$25 as the price they would prefer for the general plus Giant Screen movie, planetarium, adventure and simulator combinations. Based on median and mode results, with median prices being within \$2 of each other, respondents view these four admission combinations as being equal in value. The standard deviation from the mean ranged from about 7 to 11, indicating a consistent price spread.

Figure 8 indicates a strong preference for general admission ticket priced at \$20. This is based on 996 respondents with the greatest frequency of responses agreeing with this price. The median was slightly higher at just over \$21.70.

Figure 8. Distribution of Prices for General Admission Only



Although the general plus special exhibit price distribution in Figure 9 was somewhat higher, the difference was not significant enough to support an appreciably higher price.

Figure 9. Distribution of Prices for General Admission Plus Special Exhibit

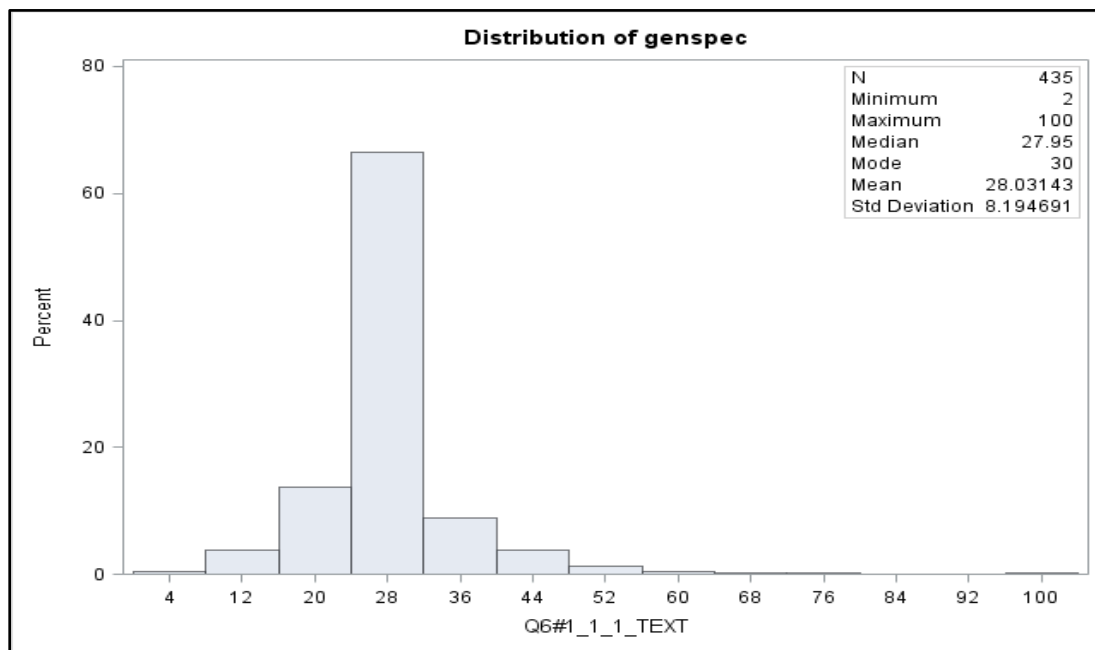


Figure 10. Distribution of Prices for General Admission Plus Giant Screen Movie

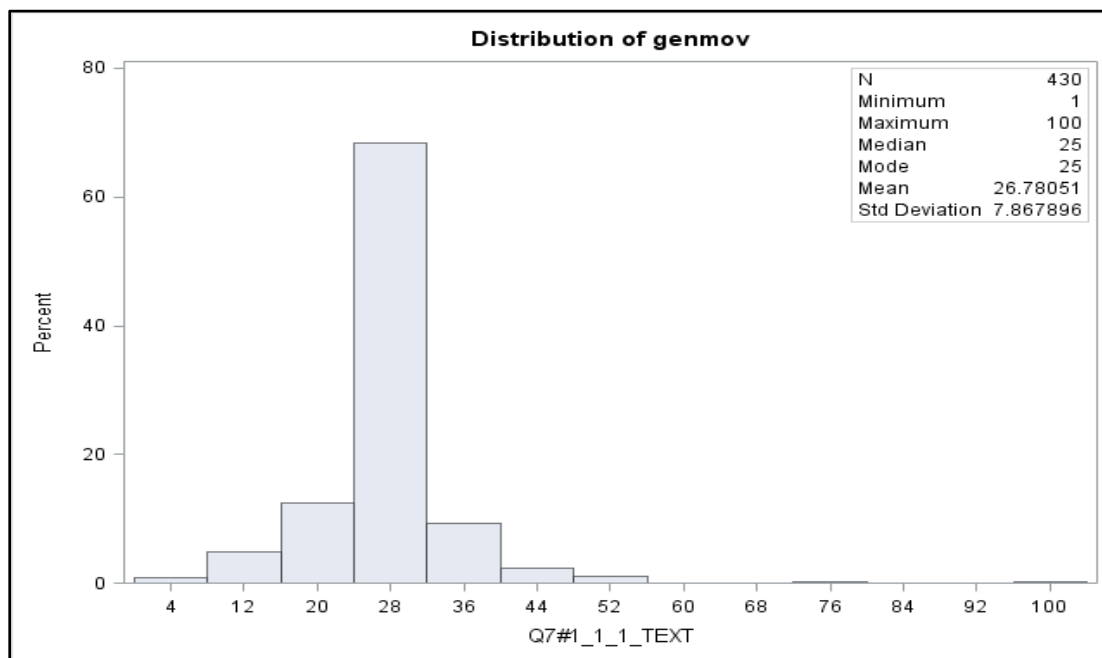


Figure 11. Distribution of Prices for General Admission Plus Planetarium

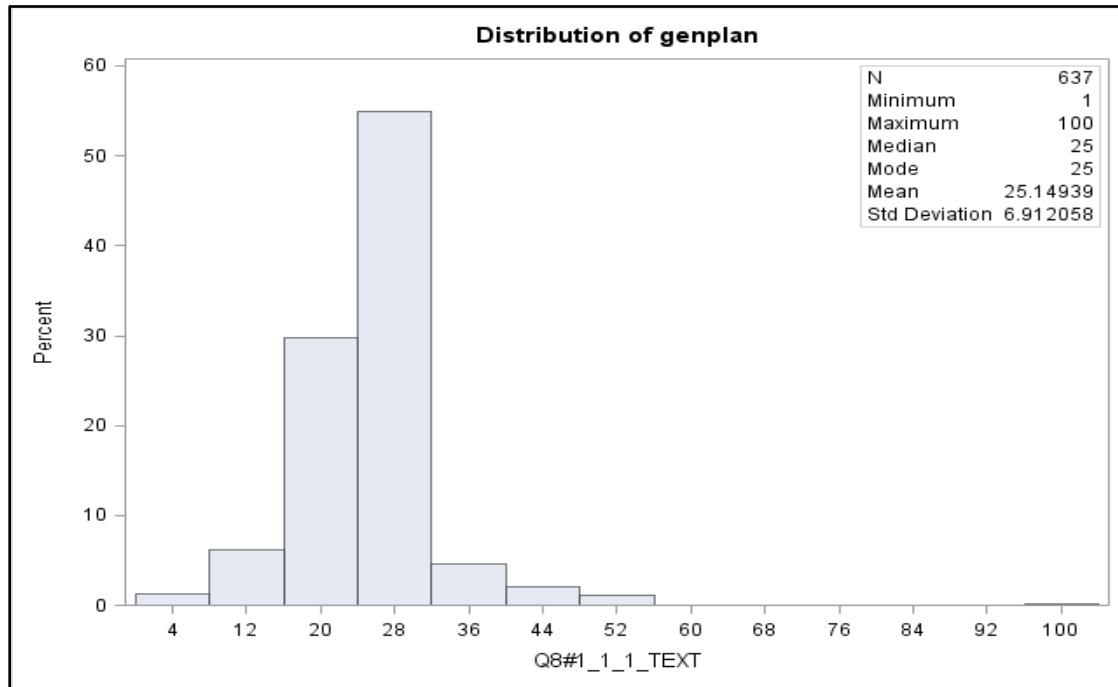


Figure 12. Distribution of Prices for General Admission Plus Adventure

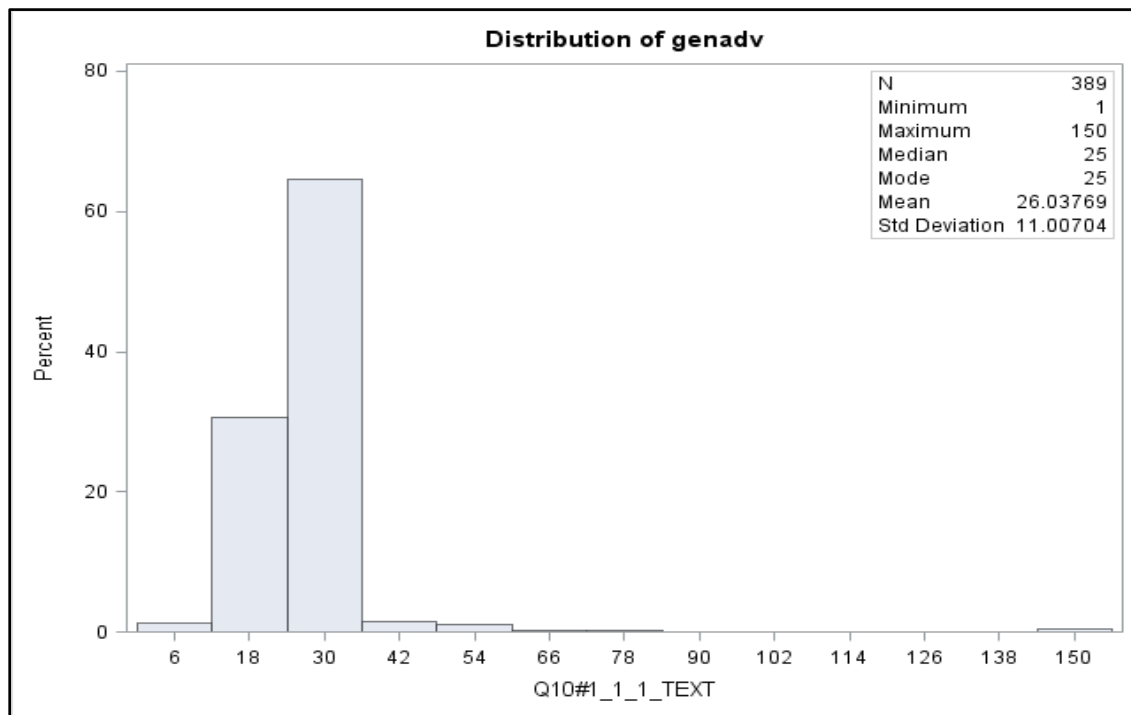
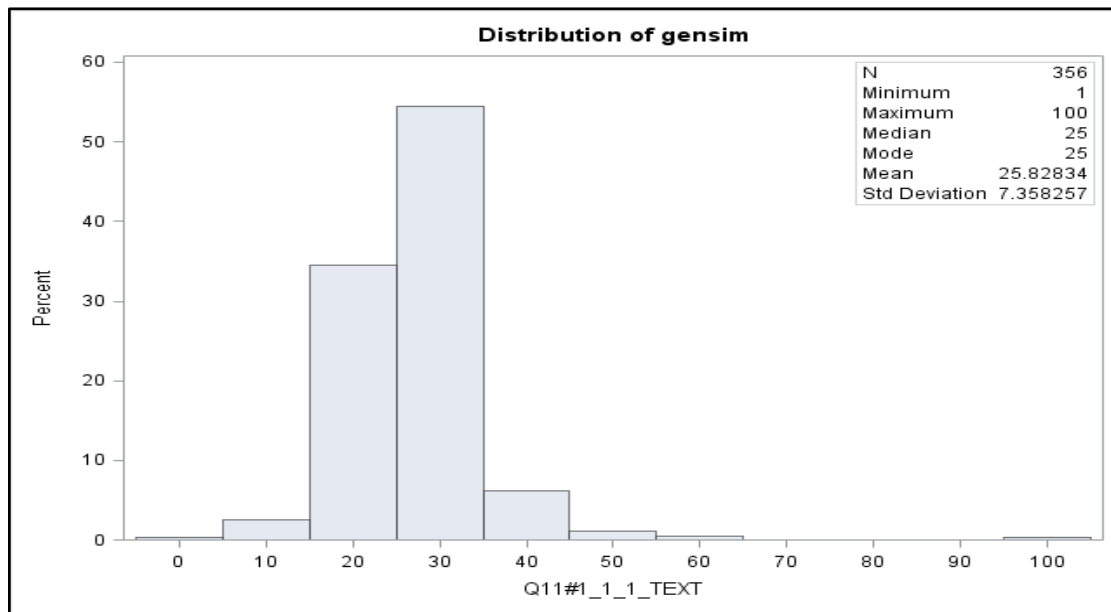
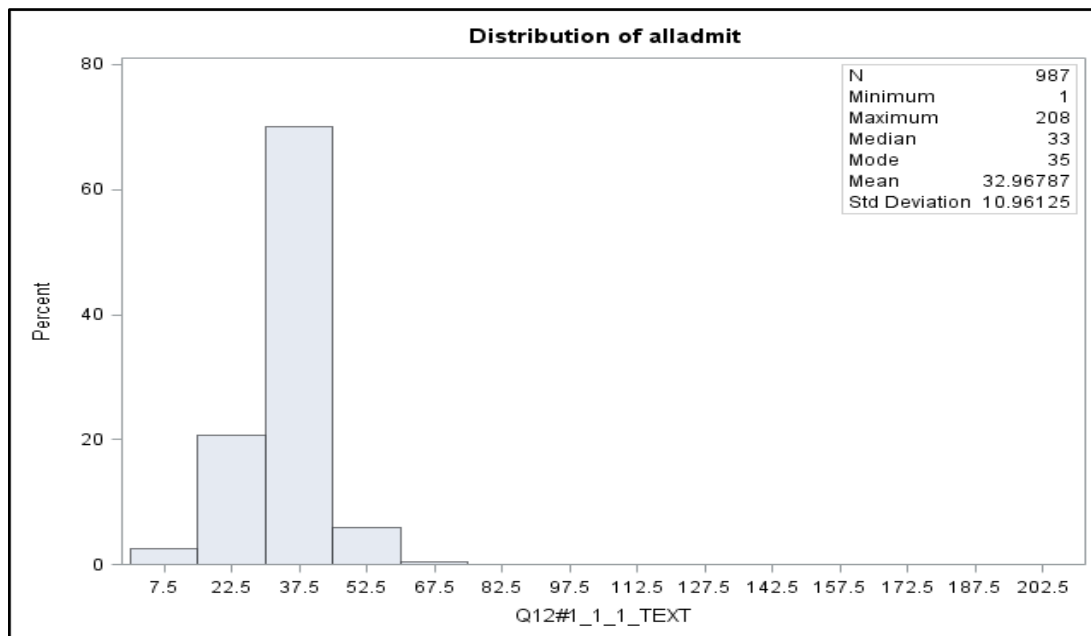


Figure 13. Distribution of Prices for General Admission Plus Simulation



The distribution of responses for general admission plus all exhibits in Figure 14 shows a mode frequency of responses that supports a price of \$35, while the median is \$33 and the mean also almost \$33. Since this admission combination allows for all exhibits and complete flexibility for the customer, the higher price point, \$35, could be seen as reasonable.

Figure 14. Distribution of Prices for General Admission Plus All Exhibits



A much higher standard deviation at over 38.5 is demonstrated in Figure 15 below for the annual family membership. This indicates a significant spread of price choices by respondents, ranging from a minimum of \$1 to a maximum of \$500. The most frequent choice was the family membership price of \$150. The median and mean values support a lower price of between \$115 to \$120. With a higher standard deviation, the analysis relies more on qualitative than quantitative results, taking into account the existing price and other market factors. Our opinion is that the market can support a price above the existing price of \$115 but not a price as high as \$150.

Figure 15. Distribution of Prices for Annual Family Membership

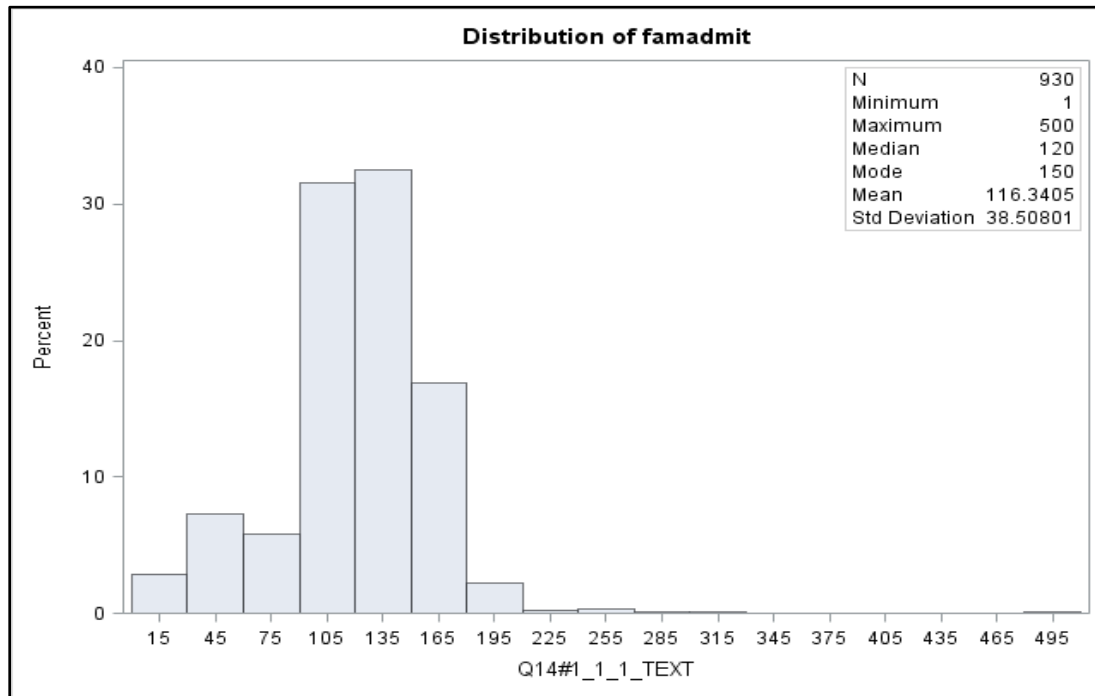


Table 6 compares existing prices with the mean price provided by respondents for each admission category. Results indicate respondents would pay significantly more for all categories except general admission plus all inclusive. For this scenario, the mean price is \$33.58 or \$7.37 less than the current fee for this service. On average, panel respondents would be willing to pay \$3.38 more for service categories (assuming a general admission plus planetarium price of \$22.95) not including the general admission plus all category. The mean price for an annual family membership was statistically the same as what is already being charged by COSI for a basic family membership. COSI non-member database respondents are less willing to pay more for most services, although it should be noted that the difference between what the COSI database respondents are willing to pay and the actual price of the service is, in most cases, negligible. Based on the mean, COSI survey respondents are willing to pay \$.70 less for individual exhibit combinations other than all inclusive. Both the panel and COSI database respondents indicate they would pay significantly less for the general admission plus all inclusive, \$7.37 less for the panel and \$11.70 less for the COSI database.

When combining results for both the panel and COSI database, the survey supports a net average increase of \$2.68 for the membership only membership combinations other than “all included”. A more detailed analysis of this breakdown is provided in Table 6 below.

Table 6. Mean Price Differential for Admission Combinations between Two Respondent Groups

* Assumption

Group	Admission Type	Mean Price	Existing Price	Price Difference
Panel	General Admission Only	22.13	17.95	4.18
	General Admission + Special Exhibit	28.87	25.95	2.92
	General Admission + Giant Screen movie	27.32	24.50	2.82
	General Admission + Planetarium	25.80	22.95*	2.85
	General Admission + Adventure	26.93	22.95	3.98
	General Admission + Motion Simulator	26.49	22.95	3.54
	General Admission + All Inclusive	33.58	32.50	1.08
	Annual Family Membership	114.95	115	(.05)
COSI	General Admission Only	19.10	17.95	1.15
	General Admission + Special Exhibit	24.85	25.95	(1.1)
	General Admission + Giant Screen movie	23.54	24.50	(.96)
	General Admission + Planetarium	21.92	22.95*	(1.03)
	General Admission + Adventure	22.13	22.95	(.82)
	General Admission + Motion Simulator	21.51	22.95	(1.44)
	General Admission + All Inclusive	29.25	32.50	3.25
	Annual Family Membership	112.83	115	(2.17)

Table 7 summarizes the responses by state of residence, which was divided into three groups that consisted of Ohio residents, residents of states bordering Ohio (IN, MI, KY, PA, WV), and residents of other states. One-way ANOVA with Tukey multiple comparisons were performed using a significance value of 0.05. Table 8 contains a summary of the results of the Tukey multiple comparisons. The results of this analysis indicate that:

- Ohio residents had a lower mean price for general admission only than the other two state groups;
- Ohio residents had a lower mean price for (1) general admission with special exhibit, (2) general admission and Giant Screen movie, (3) general admission and Adventure, and (4) general admission and motion simulator than neighboring state residents, but the mean price for other states was not statistically distinguishable from either Ohio or neighboring-state residents; and
- Residents of neighboring states had a higher mean price for (1) general admission plus all Inclusive and (2) annual family Membership than Ohio residents or other state residents, but the mean prices for the latter two groups were not statistically distinguishable.

Table 7. Comparison of Summary Statistics for Admission Prices between Three State-Residence Groups

State	Admission Type	N	Min	Max	Med	Mode	Mean	SD
Ohio	General Admission Only	767	1.00	50.00	20.00	20.00	21.00	5.40
	General Admission + Special Exhibit	352	2.00	75.00	26.95	30.00	26.98	6.75
	General Admission + Giant Screen movie	328	1.00	75.00	25.00	25.00	25.77	7.10
	General Admission + Planetarium	497	1.00	50.00	25.00	25.00	24.32	5.89
	General Admission + Adventure	286	1.00	75.00	25.00	25.00	24.77	6.53
	General Admission + Motion Simulator	251	1.00	55.00	25.00	25.00	24.81	6.03
	General Admission + All Inclusive	769	1.00	115.00	33.00	35.00	31.73	8.84
	Annual Family Membership	721	1.00	250.00	116.00	115.00	112.08	37.71
Adjacent States	General Admission Only	170	5.00	50.00	25.00	25.00	24.25	7.42
	General Admission + Special Exhibit	61	21.95	100.00	30.00	30.00	33.57	11.33
	General Admission + Giant Screen movie	79	17.95	100.00	30.00	30.00	30.33	10.03
	General Admission + Planetarium	107	5.00	100.00	26.00	25.00	28.65	9.83
	General Admission + Adventure	82	19.95	150.00	25.00	25.00	30.73	19.88
	General Admission + Motion Simulator	81	5.00	100.00	25.00	25.00	28.31	10.28
	General Admission + All Inclusive	167	5.00	208.00	35.00	35.00	38.11	17.65
	Annual Family Membership	164	5.00	500.00	125.00	150.00	127.52	48.64
Other States	General Admission Only	59	2.00	125.00	20.00	20.00	23.65	16.34
	General Admission + Special Exhibit	22	15.00	66.00	26.50	30.00	29.49	12.28
	General Admission + Giant Screen movie	23	19.00	44.00	29.95	30.00	29.06	5.94
	General Admission + Planetarium	33	12.00	40.00	25.00	30.00	26.27	6.26
	General Admission + Adventure	21	12.00	32.00	25.00	25.00	24.95	5.27
	General Admission + Motion Simulator	24	18.95	45.00	28.00	28.00	28.08	5.90
	General Admission + All Inclusive	51	17.00	50.00	35.00	35.00	33.52	7.95
	Annual Family Membership	45	15.00	200.00	120.00	150.00	111.53	45.41

Table 8. Results of Tukey Multiple Comparisons Comparing Admission Prices between States of Residence

Admission Type	Means			p-values for comparisons		
	OH	Adj	Other	OH / Adj	OH / Other	Adj / Other
General Admission Only	21.00	24.25	23.65	<0.0001	0.0279	0.8890
General Admission + Special Exhibit	26.98	33.57	29.49	<0.0001	0.4365	0.1374
General Admission + Giant Screen movie	25.77	30.33	29.06	0.0001	0.1293	0.8973
General Admission + Planetarium	24.32	28.65	26.27	<0.0001	0.4060	0.2522
General Admission + Adventure	24.77	30.73	24.95	0.0004	0.9998	0.1172
General Admission + Motion Simulator	24.81	28.31	28.08	0.0039	0.1017	0.9953
General Admission + All Inclusive	31.73	38.11	33.52	<0.0001	0.6725	0.0257
Annual Family Membership	112.08	127.52	111.53	0.0003	0.8928	0.0360

Support for higher pricing for exhibits is also illustrated in Maps #6-13 (pages 33-40) in the Appendix which use five pricing categories (chosen by the software used by CURA) to color code the location of respondents and price choices by 3-digit zip code. In general, the price points increase with distance from central Ohio. Respondents traveling from locations such as

Indianapolis, Chicago, Pittsburgh or Detroit may be committed to overnight trip and be more willing to pay more since cost may not be as much of a factor.

Table 9 compares the mean prices for the various admission types between Franklin county residents and residents of other Ohio counties. Franklin county residents were identified as all respondents who lived in a zip code that is present in Franklin County. Because zip codes do not follow county lines, it is possible that there are a few respondents from outside Franklin county that are included in the Franklin County residents; however, these respondents live near enough to Franklin County to behave like residents.

Table 9. Comparison of Summary Statistics for Admission Prices between Franklin County Residents and Other Ohio Residents

Group	Admission Type	N	Min	Max	Med	Mode	Mean	SD
Franklin	General Admission Only	294	6.00	35.00	20.00	20.00	20.14	4.62
	General Admission + Special Exhibit	158	10.00	49.99	26.00	30.00	26.47	5.69
	General Admission + Giant Screen movie	120	10.00	35.00	25.00	25.00	24.32	5.65
	General Admission + Planetarium	195	3.00	50.00	23.95	25.00	23.38	5.46
	General Admission + Adventure	102	10.00	40.00	23.95	25.00	23.40	4.98
	General Admission + Motion Simulator	89	10.00	40.00	23.95	25.00	23.53	5.46
	General Admission + All Inclusive	302	1.00	115.00	32.50	35.00	30.91	9.04
	Annual Family Membership	294	6.50	250.00	116.00	115.00	112.44	31.83
Other Ohio Counties	General Admission Only	473	1.00	50.00	20.00	20.00	21.54	5.78
	General Admission + Special Exhibit	194	2.00	75.00	27.00	30.00	27.39	7.49
	General Admission + Giant Screen movie	208	1.00	75.00	25.01	25.00	26.60	7.70
	General Admission + Planetarium	302	1.00	50.00	25.00	25.00	24.93	6.08
	General Admission + Adventure	184	1.00	75.00	25.00	25.00	25.53	7.14
	General Admission + Motion Simulator	162	1.00	55.00	25.00	25.00	25.51	6.22
	General Admission + All Inclusive	467	1.00	75.00	33.00	35.00	32.40	8.43
	Annual Family Membership	427	1.00	250.00	120.00	115.00	115.24	36.83

Table 10 illustrates two-sample t-tests were performed to compare the two groups. Statistically significant differences were found between the two groups for (1) general admission only, (2) general admission and Giant Screen movie, (3) general admission and planetarium, (4) general admission and Adventure, (5) general admission and motion simulator, and (6) general admission and All Inclusive. In all six cases, Franklin County residents had lower mean prices than respondents from other Ohio counties.

Table 10. Results of the t-tests Comparing Admission Prices between Franklin and Other Ohio Counties

Admission Type	Franklin		Other		t	p
	N	Mean	N	Mean		
General Admission Only	294	20.14	473	21.54	3.70	0.0005
General Admission + Special Exhibit	158	26.47	194	27.39	1.31	0.1910
General Admission + Giant Screen movie	120	24.32	208	26.60	3.07	0.0023
General Admission + Planetarium	195	23.38	302	24.93	2.95	0.0034
General Admission + Adventure	102	23.40	184	25.53	2.96	0.0034
General Admission + Motion Simulator	89	23.53	162	25.51	2.62	0.0095
General Admission + All Inclusive	302	30.91	467	32.40	2.28	0.0228
Annual Family Membership	294	112.44	427	115.24	1.09	0.2764

Table 11 compares summary statistics for the prices associated with the various admission types between respondents with families of different sizes. Family size is broken into six groups: 1-, 2-, 3-, and 4-person families, families with 5 or 6 people, and families with 7 or more people. One-way ANOVA with Tukey multiple comparisons was performed to determine if there were any differences in the mean prices between families of different size. In general, there were no statistically significant differences between the prices across family size, although there were two exceptions. For general admission with Adventure, families with 5 or 6 members had higher prices than families with 2 or 4 members, and for general admission with all inclusive, families with 5 or 6 members had higher prices than families with 2 or 4 members.

Table 11. Comparison of Summary Statistics for Admission Prices bet. Different Family Sizes

Family Size	Admission Type	N	Min	Max	Med	Mode	Mean	SD
1	General Admission Only	173	1.00	50.00	20.00	25.00	21.76	7.55
	General Admission + Special Exhibit	74	2.00	59.95	28.98	30.00	28.01	9.24
	General Admission + Giant Screen movie ¹	77	1.00	54.00	26.00	25.00	26.31	9.01
	General Admission + Planetarium	115	1.00	50.00	25.00	25.00	25.22	7.74
	General Admission + Adventure ²	69	1.00	75.00	25.00	25.00	26.24	10.14
	General Admission + Motion Simulator	68	1.00	59.95	25.00	25.00	25.78	7.69
	General Admission + All Inclusive ²	174	1.00	115.00	34.25	35.00	32.99	11.89
	Annual Family Membership	169	1.00	289.00	116.00	115.00	113.50	41.24
2	General Admission Only	369	5.00	50.00	20.00	25.00	21.74	5.33
	General Admission + Special Exhibit	164	5.00	50.00	30.00	30.00	27.71	5.96
	General Admission + Giant Screen movie ¹	160	5.00	45.00	25.00	25.00	26.05	5.29
	General Admission + Planetarium	228	3.00	50.00	25.00	25.00	25.18	6.18
	General Admission + Adventure ²	121	15.00	55.00	25.00	25.00	25.69	5.01
	General Admission + Motion Simulator	129	15.00	55.00	25.00	25.00	26.00	5.21
	General Admission + All Inclusive ²	370	5.00	55.00	33.00	35.00	32.45	7.59
	Annual Family Membership	361	1.00	250.00	120.00	115.00	113.04	34.02
3	General Admission Only	144	10.00	125.00	20.00	25.00	22.70	10.46
	General Admission + Special Exhibit	61	15.00	75.00	28.00	30.00	28.42	8.39
	General Admission + Giant Screen movie	65	10.00	50.00	26.00	30.00	26.72	6.85
	General Admission + Planetarium	90	15.00	50.00	25.00	25.00	26.08	6.60
	General Admission + Adventure	61	15.00	50.00	25.00	25.00	26.34	5.95
	General Admission + Motion Simulator	53	15.00	50.00	25.00	25.00	26.65	6.37
	General Admission + All Inclusive	146	10.00	60.00	34.48	35.00	33.56	8.20
	Annual Family Membership	143	15.00	300.00	120.00	150.00	121.30	37.10
4	General Admission Only	159	10.00	78.00	20.00	20.00	21.71	6.98
	General Admission + Special Exhibit	76	10.00	66.00	27.00	30.00	28.74	8.19
	General Admission + Giant Screen movie	72	10.00	75.00	26.00	25.00	27.81	8.22
	General Admission + Planetarium	112	10.00	40.00	25.00	25.00	24.49	4.75
	General Admission + Adventure ²	79	10.00	36.56	25.00	25.00	24.05	5.26
	General Admission + Motion Simulator	63	10.00	50.00	25.00	25.00	24.79	6.14
	General Admission + All Inclusive ²	163	10.00	75.00	33.00	35.00	32.34	7.89
	Annual Family Membership	161	15.01	250.00	120.00	150.00	120.07	34.10
5 – 6	General Admission Only	67	5.00	50.00	20.00	20.00	20.92	6.94
	General Admission + Special Exhibit	30	10.00	100.00	26.00	26.00	28.04	14.87
	General Admission + Giant Screen movie ¹	27	15.00	100.00	25.00	25.00	30.14	15.86
	General Admission + Planetarium	50	5.00	100.00	24.98	25.00	25.55	12.22
	General Admission + Adventure ²	33	15.00	150.00	25.00	25.00	32.05	30.75
	General Admission + Motion Simulator	21	5.00	100.00	24.00	25.00	26.18	18.14
	General Admission + All Inclusive ²	70	5.00	208.00	33.00	35.00	37.06	26.29
	Annual Family Membership	69	5.00	500.00	120.00	150.00	122.42	60.04
7+	General Admission Only	18	10.00	35.00	20.00	20.00	21.11	5.75
	General Admission + Special Exhibit	8	20.00	40.00	26.55	30.00	27.51	6.14
	General Admission + Giant Screen movie	8	15.00	40.00	25.01	35.00	27.13	8.64
	General Admission + Planetarium	11	10.00	35.00	23.00	22.00	23.18	6.63
	General Admission + Adventure	11	12.00	40.00	23.00	23.00	24.10	7.60

	General Admission + Motion Simulator	8	20.00	35.00	24.00	23.00	25.38	4.87
	General Admission + All Inclusive	18	10.00	50.00	33.00	35.00	30.14	10.47
	Annual Family Membership	19	22.00	200.00	120.00	120.00	110.37	41.98

1. Families of size 5-6 have statistically significantly higher price than families with 1 or 2 members (0.05 level).
2. Families of size 5-6 have statistically significantly higher price than families with 1, 2, or 4 members (0.05 level).

In addition to the one-way analyses presented above, we performed a series of two-factor ANOVAs combining the response group with each of the other factors (state, county, family size). In these analyses, we were primarily interested in interaction effects. An interaction effect occurs when the difference between the levels of one factor are not consistent across values of the second factor. For example, if the mean general admission price differs by \$2 between the COSI and panel respondents for Franklin County residents and differs by \$8 between COSI and panel respondents outside of Franklin County, there is an interaction effect between response group and county.

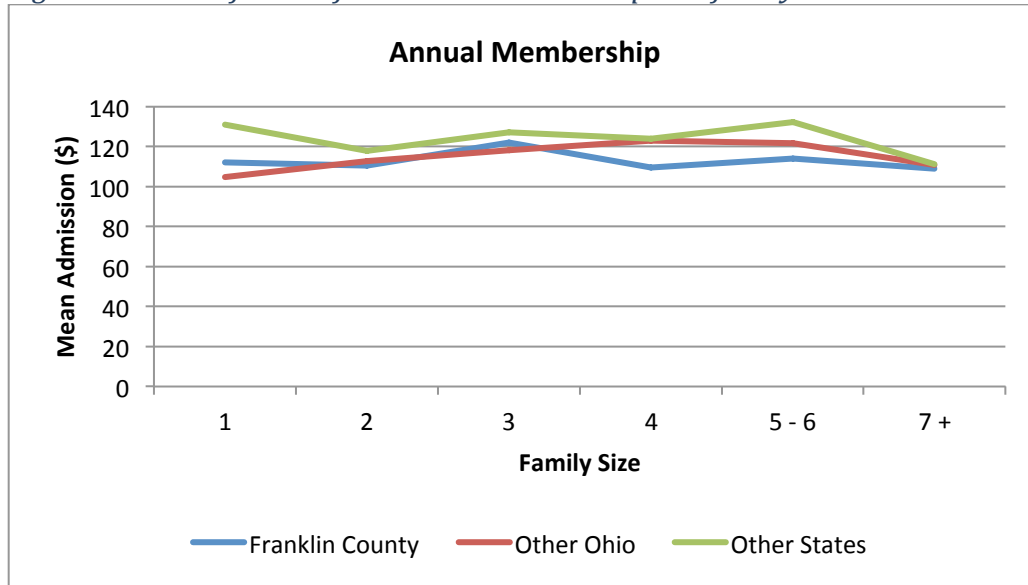
For response group and state of residence, there is no interaction – that is, the difference between COSI and panel respondents is consistent across the three state residence groups. Similarly, there is no interaction effect between response group and Ohio county of residence (Franklin vs all others) and between response group and family size.

Table 12 and Figures 16-18 present relationship between family size, location (Franklin County, State of Ohio, and other) and selected admission types (annual membership, general admission and general admission plus all inclusive. This analysis demonstrated significant interaction for family size and location for general admission plus all inclusive. I also showed an interaction for location for general admission. The effects of these variables are described in the figures below.

Table 12: Comparison of Summary Statistics for Admission Prices between Franklin County, Other Ohio County Residents, and other States

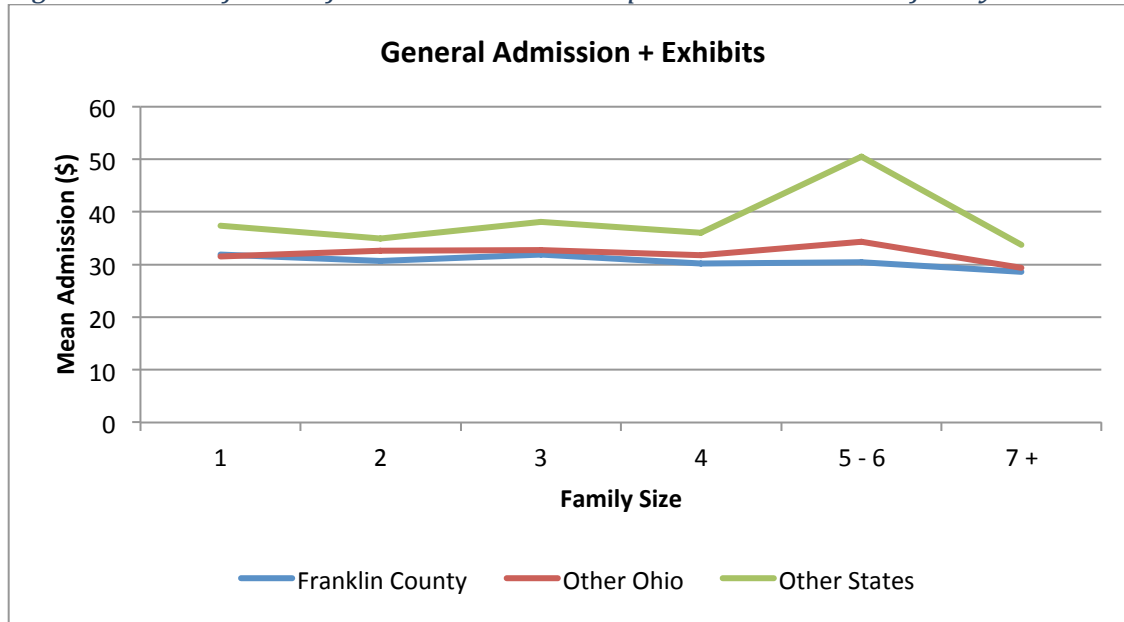
Family Size	Location	Admission Type	N	Min	Max	Med	Mode	Mean	SD
1	Franklin	General Admission Only	61	6.00	35.00	20.00	20.00	20.88	5.19
		General Admission + All Inclusive	62	1.00	115.00	33.25	35.00	31.93	14.11
		Annual Membership	60	25.00	200.00	116.00	115.00	112.23	34.45
	Other Ohio	General Admission Only	73	1.00	30.00	20.00	20.00	20.54	5.94
		General Admission + All Inclusive	73	1.00	50.00	33.00	35.00	31.56	9.92
		Annual Membership	70	1.00	200.00	115.00	115.00	104.79	40.53
	Other State	General Admission Only	39	2.00	50.00	25.00	25.00	25.43	11.43
		General Admission + All Inclusive	39	17.00	67.00	35.00	35.00	37.37	10.47
		Annual Membership	39	23.00	289.00	120.00	115.00	131.10	47.25
2	Franklin	General Admission Only	132	6.50	30.00	20.00	20.00	20.07	4.46
		General Admission + All Inclusive	133	6.50	50.00	33.00	35.00	30.67	6.92
		Annual Membership	130	6.50	150.00	116.00	115.00	110.50	30.33
	Other Ohio	General Admission Only	158	5.00	50.00	21.00	25.00	22.34	5.82
		General Admission + All Inclusive	158	5.00	55.00	34.00	35.00	32.67	8.22
		Annual Membership	152	1.00	250.00	120.00	115.00	112.72	36.48
	Other State	General Admission Only	79	10.00	45.00	24.95	25.00	23.31	4.97
		General Admission + All Inclusive	79	17.95	50.00	35.00	35.00	35.00	6.57
		Annual Membership	79	20.00	200.00	120.00	125.00	117.86	34.79
3	Franklin	General Admission Only	44	10.00	30.00	19.95	20.00	20.10	4.20
		General Admission + All Inclusive	46	15.00	60.00	32.50	35.00	31.87	7.59
		Annual Membership	45	50.00	250.00	120.00	115.00	122.13	34.51
	Other Ohio	General Admission Only	70	10.00	50.00	20.00	20.00	21.95	6.19
		General Admission + All Inclusive	70	10.00	50.00	34.98	35.00	32.74	8.59
		Annual Membership	68	25.00	200.00	120.00	150.00	118.22	34.75
	Other State	General Admission Only	30	10.00	125.00	25.00	25.00	28.24	19.46
		General Admission + All Inclusive	30	20.00	50.00	35.50	35.00	38.07	6.66
		Annual Membership	30	15.00	300.00	125.25	150.00	127.05	45.66
4	Franklin	General Admission Only	38	10.00	35.00	19.98	20.00	19.73	4.88
		General Admission + All Inclusive	40	10.00	49.99	32.50	35.00	30.26	8.39
		Annual Membership	39	50.00	150.00	116.00	115.00	109.69	30.42
	Other Ohio	General Admission Only	86	10.00	50.00	20.00	20.00	21.25	5.86
		General Admission + All Inclusive	88	10.00	75.00	33.00	35.00	31.82	8.13
		Annual Membership	87	15.01	250.00	120.00	115.00	123.08	36.77
	Other State	General Admission Only	35	15.00	78.00	25.00	25.00	24.99	9.93
		General Admission + All Inclusive	35	19.00	45.00	35.00	40.00	36.03	5.22
		Annual Membership	35	33.00	200.00	125.00	125.00	124.14	29.20
5 - 6	Franklin	General Admission Only	17	13.00	25.00	18.00	18.00	19.63	3.58
		General Admission + All Inclusive	18	18.50	35.00	32.50	32.50	30.49	4.93
		Annual Membership	18	50.00	200.00	115.00	115.00	114.17	28.61
	Other Ohio	General Admission Only	33	10.00	50.00	20.00	20.00	21.80	6.62
		General Admission + All Inclusive	36	20.00	62.00	33.25	40.00	34.33	8.04
		Annual Membership	34	30.00	200.00	120.00	150.00	121.79	29.22
	Other State	General Admission Only	17	5.00	50.00	20.00	20.00	20.52	9.74
		General Admission + All Inclusive	16	5.00	208.00	35.00	35.00	50.56	52.31
		Annual Membership	17	5.00	500.00	125.00	150.00	132.41	111.82
7 +	Franklin	General Admission Only	4	18.00	25.09	19.00	18.00	20.27	3.35
		General Admission + All Inclusive	5	20.00	35.01	33.00	20.00	28.60	7.90
		Annual Membership	5	75.00	150.00	120.00	75.00	109.00	33.06
	Other Ohio	General Admission Only	10	12.00	25.00	20.00	20.00	19.90	3.35
		General Admission + All Inclusive	9	12.00	40.00	32.51	25.00	29.39	9.19
		Annual Membership	10	22.00	200.00	117.51	120.00	110.70	46.33
	Other State	General Admission Only	4	10.00	35.00	27.50	.	25.00	10.80
		General Admission + All Inclusive	4	10.00	50.00	37.50	.	33.75	17.02
		Annual Membership	4	35.00	150.00	130.00	130.00	111.25	51.70

Figure 16 *Dist. of Prices for Annual Membership and family size*



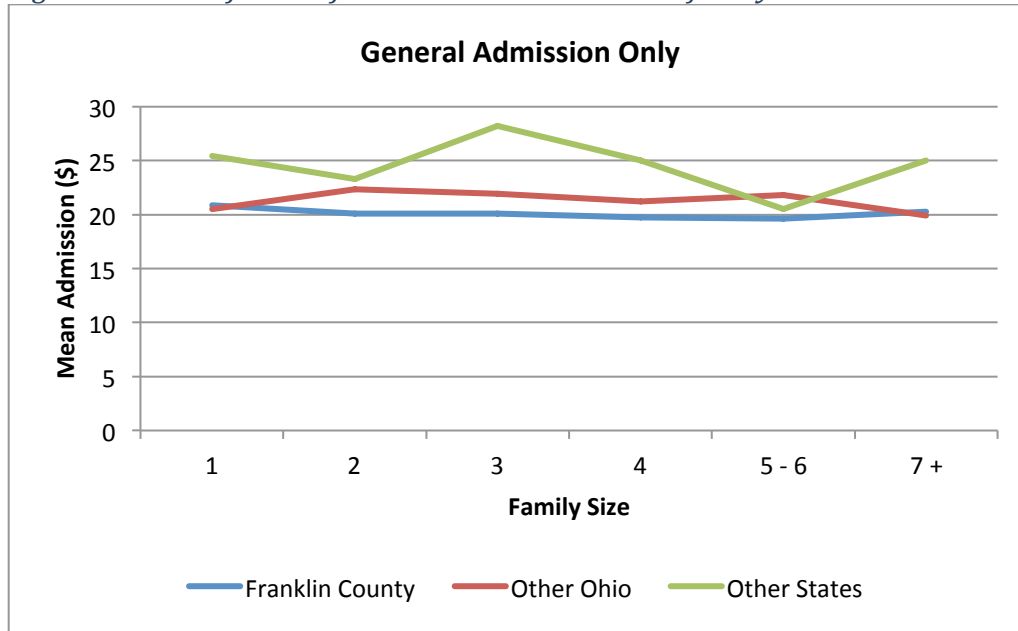
Annual Membership. There was not a significant family size effect. There was a significant location effect – Other states had higher admissions than the two Ohio groups. There was not a significant interaction.

Figure 17 Dist. of Prices for General Admission plus all Inclusive and family size



General Admission plus all Inclusive. There was a significant family size effect. In general, families with 5 – 6 members had higher-than-average admissions. There was a significant location effect. Other states had higher admissions than the two Ohio groups. There was a significant interaction. The main difference is that families from other states with 5 – 6 members had higher-than-average admissions.

Figure 18 Dist. Of Prices for General Admission and family size



General Admission Only. There was not a significant family size effect. There was a significant location effect. The location effect was that Franklin county and Ohio were similar, and they both differed from Other States. There was a significant interaction. The interaction effect shows well in the plot – Ohio locations had fairly similar admissions for all family sizes, but in other states, a family size of 3 had a higher-than-average admission, while a family size of 5 – 6 had a lower-than-average admission.

Summary of Findings

- Overall results support higher prices for admission combinations, most notably for a general admission ticket.
- Both the distribution and comparative price analysis demonstrates respondent agreement on similar price levels for similar combination admission types (particularly for 1) general admission plus Giant Screen, 2) general admission plus planetarium, 3) general admission plus Adventure and, 4) general admission plus simulator).
- There is a significant correlation between the location of respondents and pricing expectations. Respondents who resided closer to COSI were less willing to pay higher prices for COSI experiences.
- Panel database respondents have a significantly higher willingness to pay than the COSI database respondents, reflecting the “distance effect” since the profile of the panel demographic included respondents from throughout the region and U.S.
- In general, there were no statistically significant differences between prices and family size although 5 or 6 member families were more willing to pay higher prices for the all-inclusive general admission or admission with adventure.
- A significant majority of respondents, 66%, are either moderately or extremely interested in visiting COSI, indicating a strong interest in the program and facility.
- Over 50% of respondents had visited COSI or some other similar facilities and are familiar with science center offerings.
- 39% of respondents were either "somewhat or extremely interested" in purchasing a COSI membership.
- Age, income and location are determining factors in whether there is interest in purchasing a COSI membership. Younger adults or families under the age of 45 demonstrate greater interest in becoming a member of COSI. Interest also rises with income. The higher the income, the higher the interest in purchasing a membership. Zip code data also demonstrates that the closer the respondent, the more interested they are in a membership.
- Among the five general admission combination choices, respondents chose to add them in the following ranked order: 1) Planetarium (28%), 2) Temporary Exhibition (20%), 3) Giant Screen Movie (19%), 4) Adventure! (17%) and, 5) Motion Simulator (16%).

- When considering only mean results, pricing increases are not as strongly supported but when including both the median and mode, it becomes clear that there is support for price increases almost across the board.
- A series of two-factor ANOVA's determined that there is no interaction effect between the response groups for other factors included in the analysis (location, age, family size, income) to indicate any major anomaly or unexplained difference.

Conclusions

The analysis demonstrates general overall agreement among combined survey respondents on levels of pricing. Table 13 offers suggested prices by admission type based on the distribution and comparative analysis of this study.

Researchers recommend increasing prices in all but one admission category. These changes will keep consistent the admission price for all but two other choices, general admission only and general admission plus all inclusive. Consistent levels will simplify pricing to assist customers in choosing an admission level and contributing to a more user-friendly experience. In addition, simplicity of pricing and ease of exchange at the cash register is reached by rounding the dollar amount for admission prices.

We recommend a \$35 price for general admission plus all inclusive since the customer can utilize the entire COSI experience which includes not just one, but five separate exhibits. The distribution showing choice frequency, also supports this price. We also recommend raising the annual family membership by \$5 per year. This is a conservative increase based on median and mode results.

Table 13 presents author recommendations for price changes as supported by study data analysis.

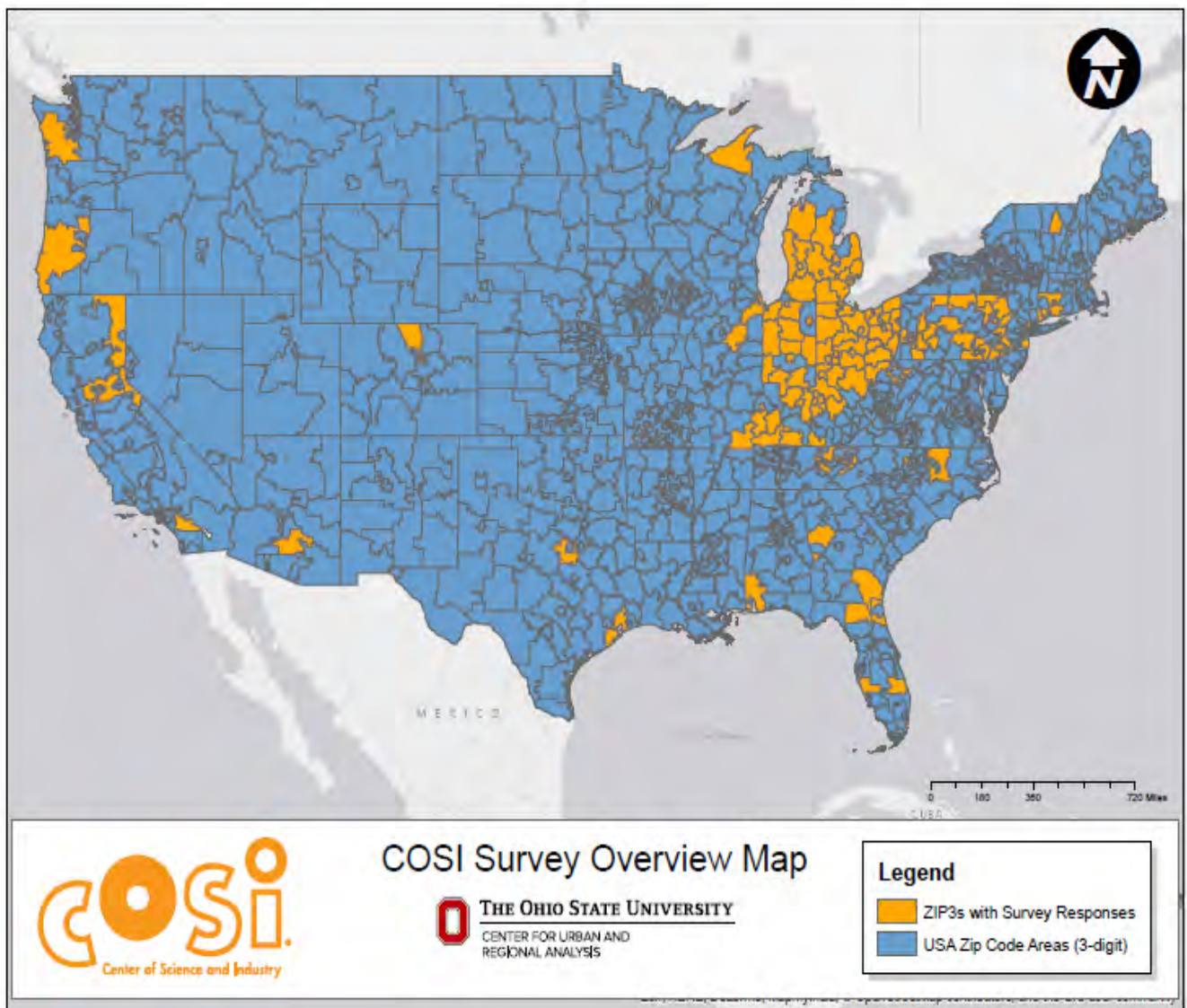
Table 13: Distribution by Admission Category and Suggested Price

Admission Type	Med	Mode	Mean	Current Price	Suggested Price	Difference	% Change
General Admission Only	20.00	20.00	21.71	17.95	20.00	2.05	11.4%
General Admission + Special Exhibit	27.95	30.00	28.03	25.95	25.00	(.95)	(3.6)
General Admission + Giant Screen movie	25.00	25.00	26.78	24.50	25.00	.50	2%
General Admission + Planetarium	25.00	25.00	25.15	22.95*	25.00	2.05	9%
General Admission + Adventure	25.00	25.00	26.04	22.95	25.00	2.05	9%
General Admission + Motion Simulator	25.00	25.00	25.83	22.95	25.00	2.05	9%
General Admission + All Inclusive	33.00	35.00	32.97		35.00	2.50	7.7%
Annual Family Membership	120.00	150.00	116.34	115.00	120.00	5.00	4.3%
Average Overall Increase							6.1%

*Assumption

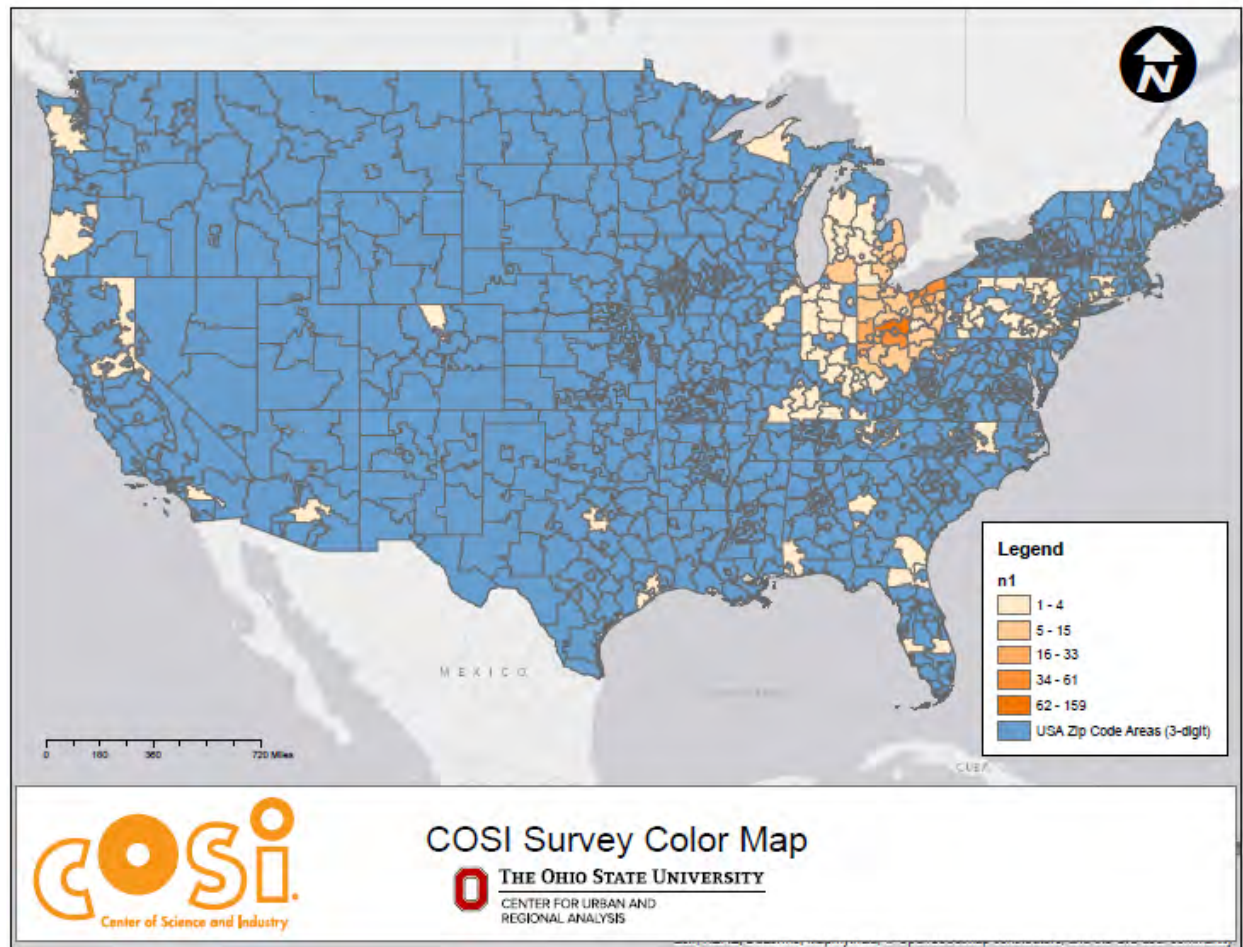
Appendix

Map #1: COSI Survey Overview Map



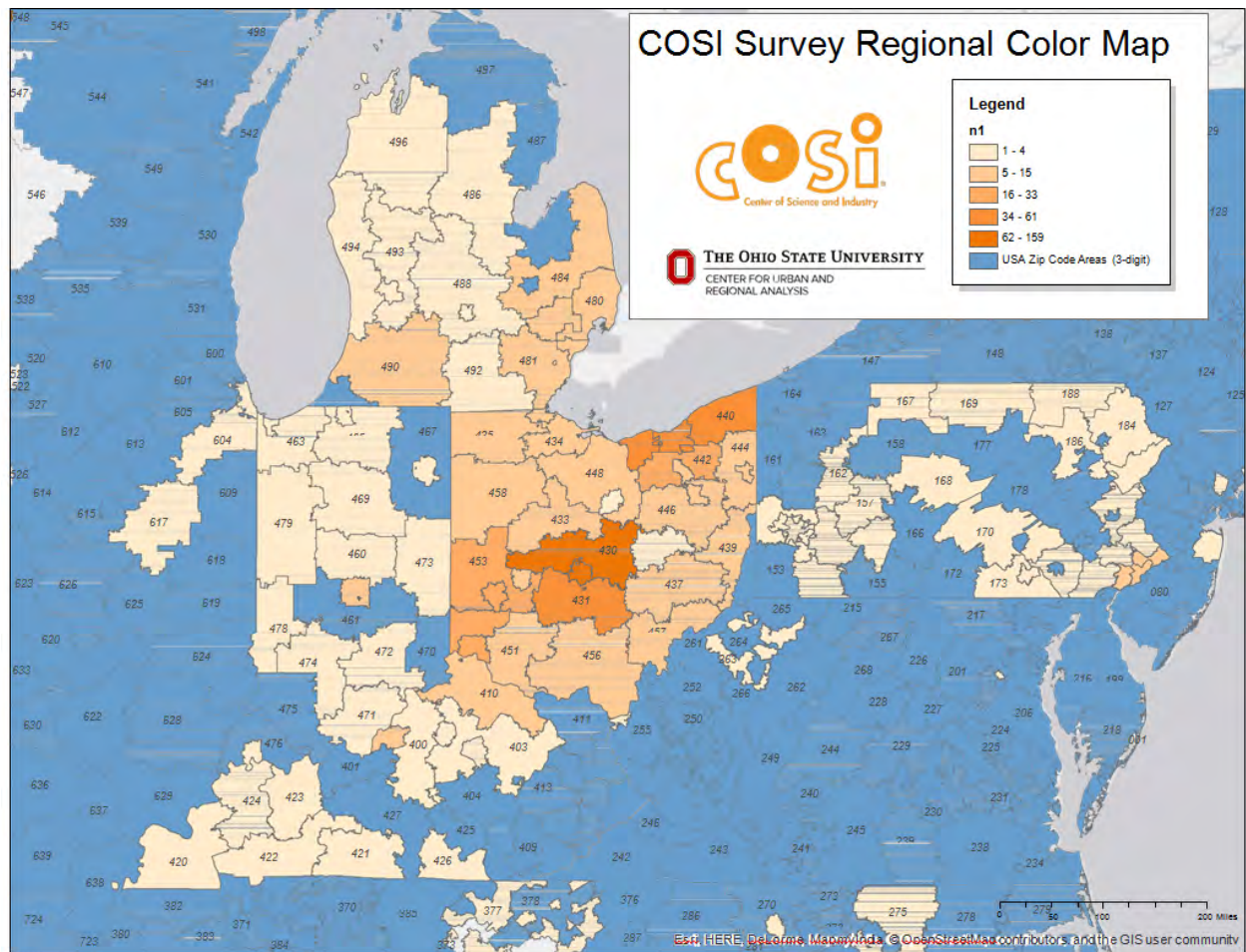
Source: CURA

Map #2: COSI Survey Color Map



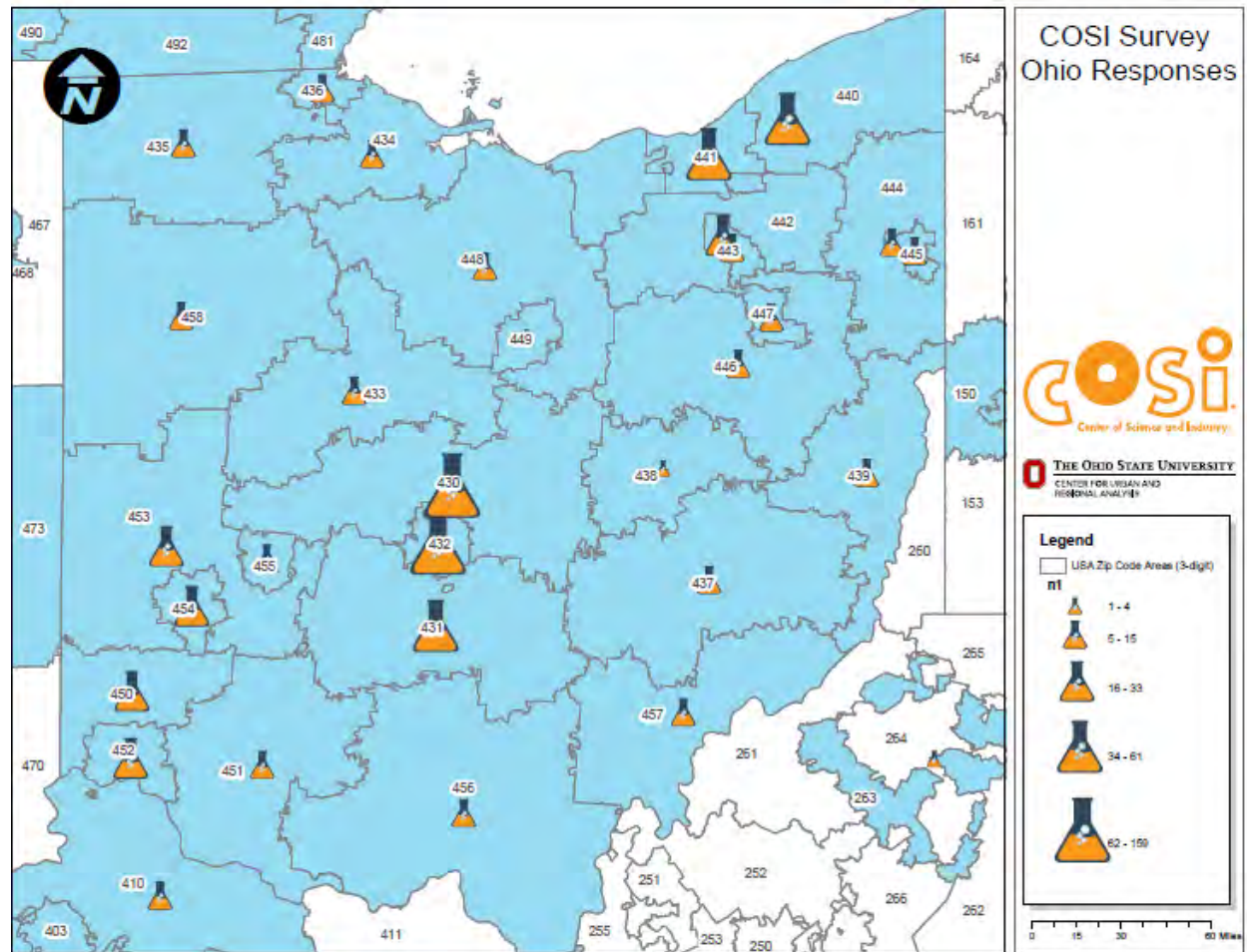
Source: CURA

Map #3: COSI Survey Regional Color Map



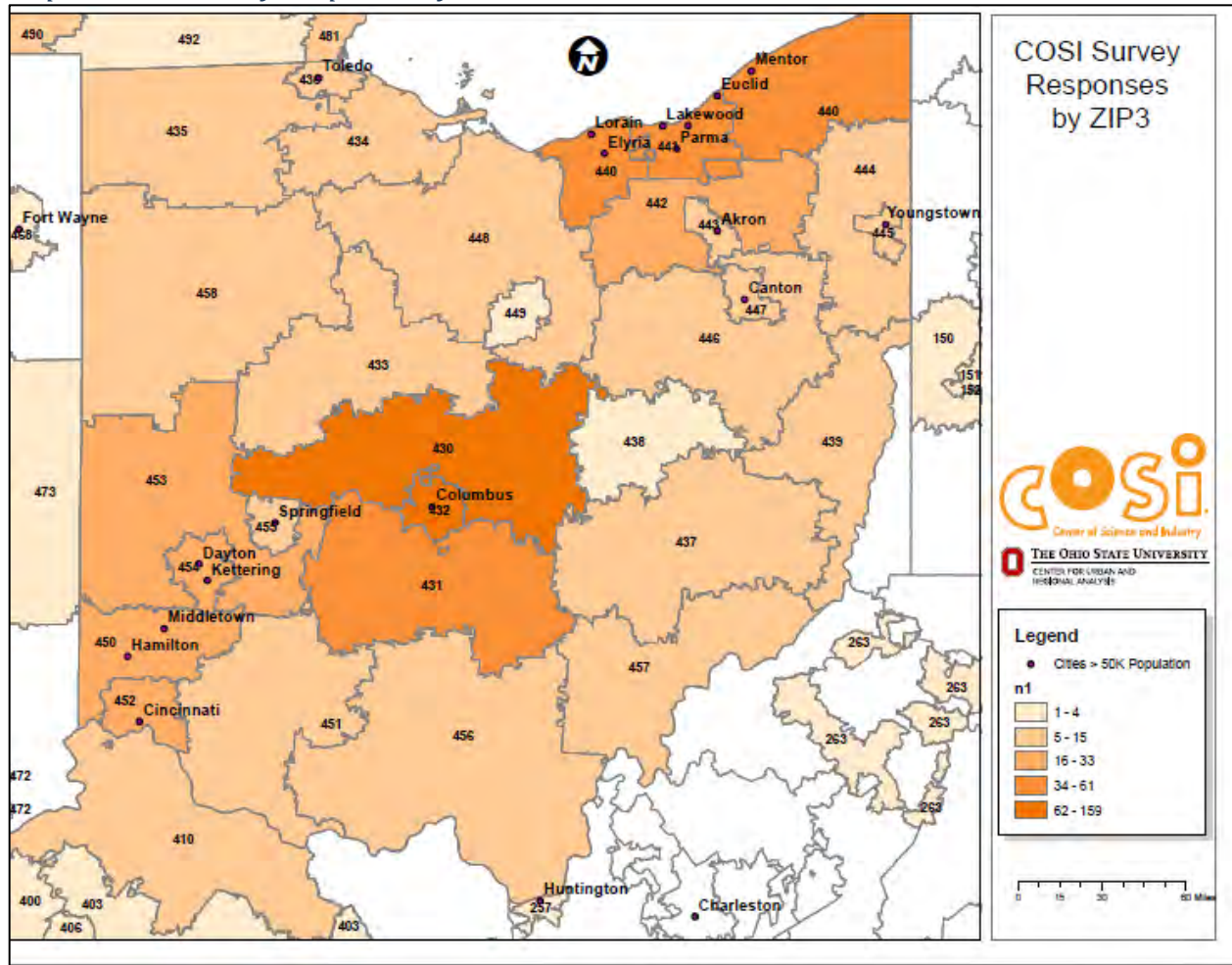
Source: CURA

Map #4: COSI Survey Ohio Responses



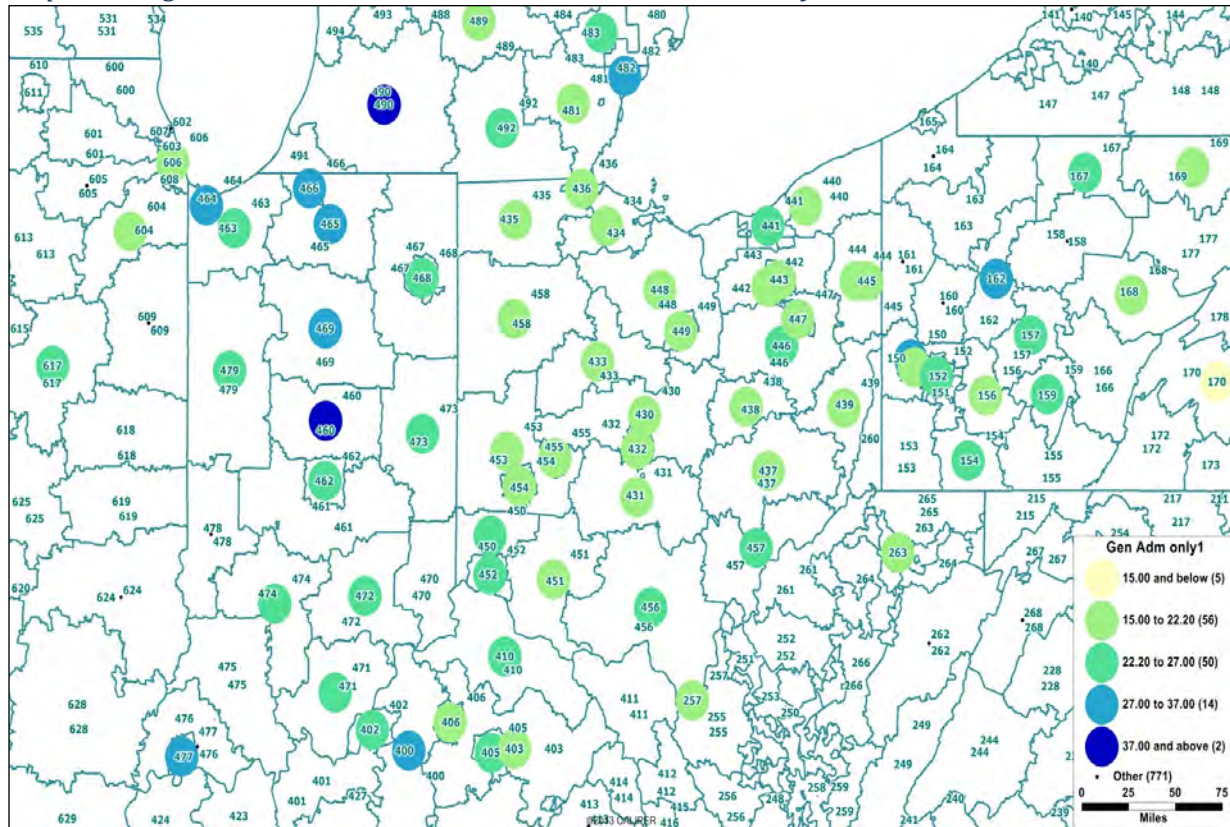
Source: CURA

Map #5: COSI Survey Responses by ZIP3



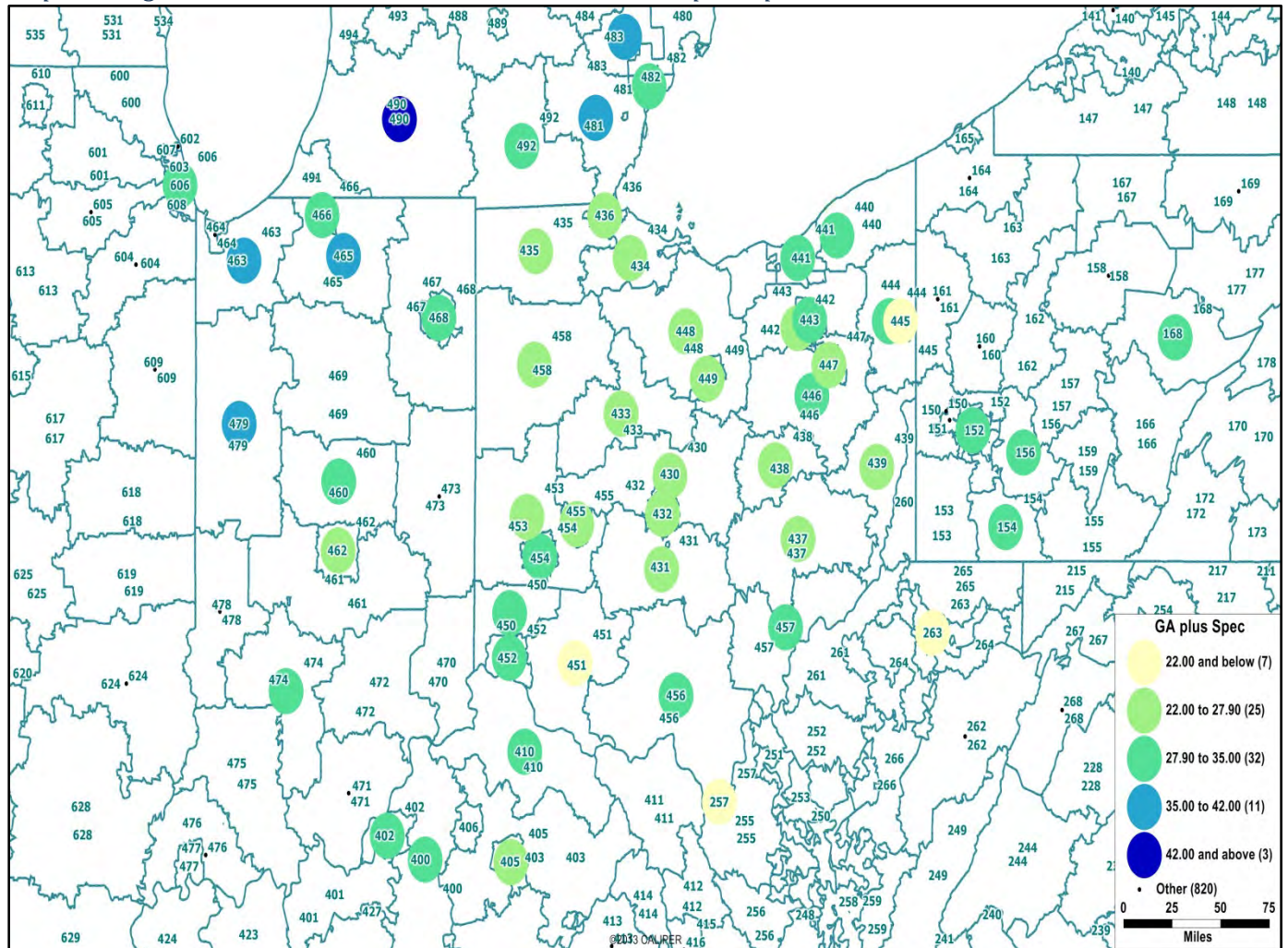
Source: CURA

Map #6: Regional Price Distribution, General Admission Only



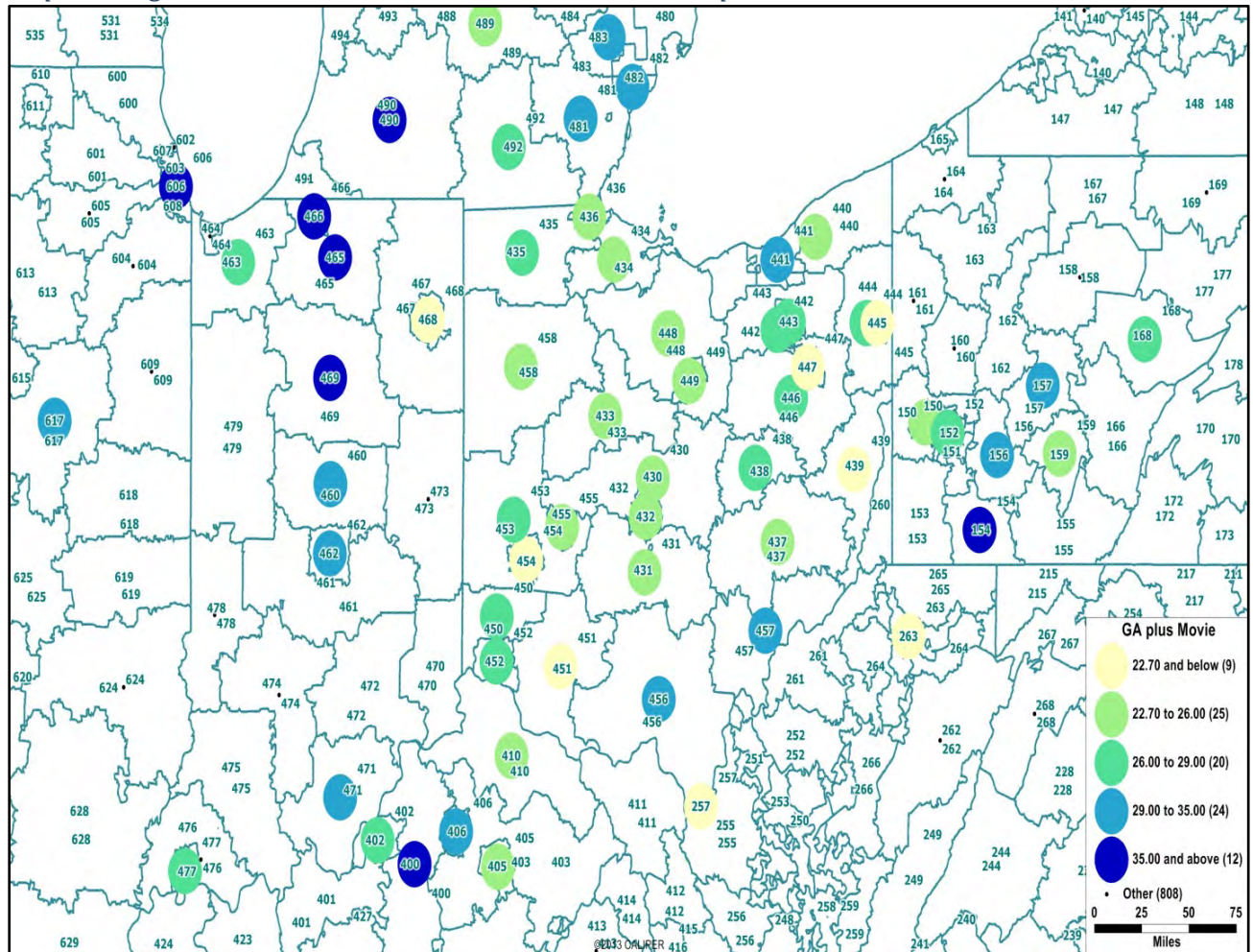
Source: CURA

Map #7: Regional Price Distribution, General Admission plus Special



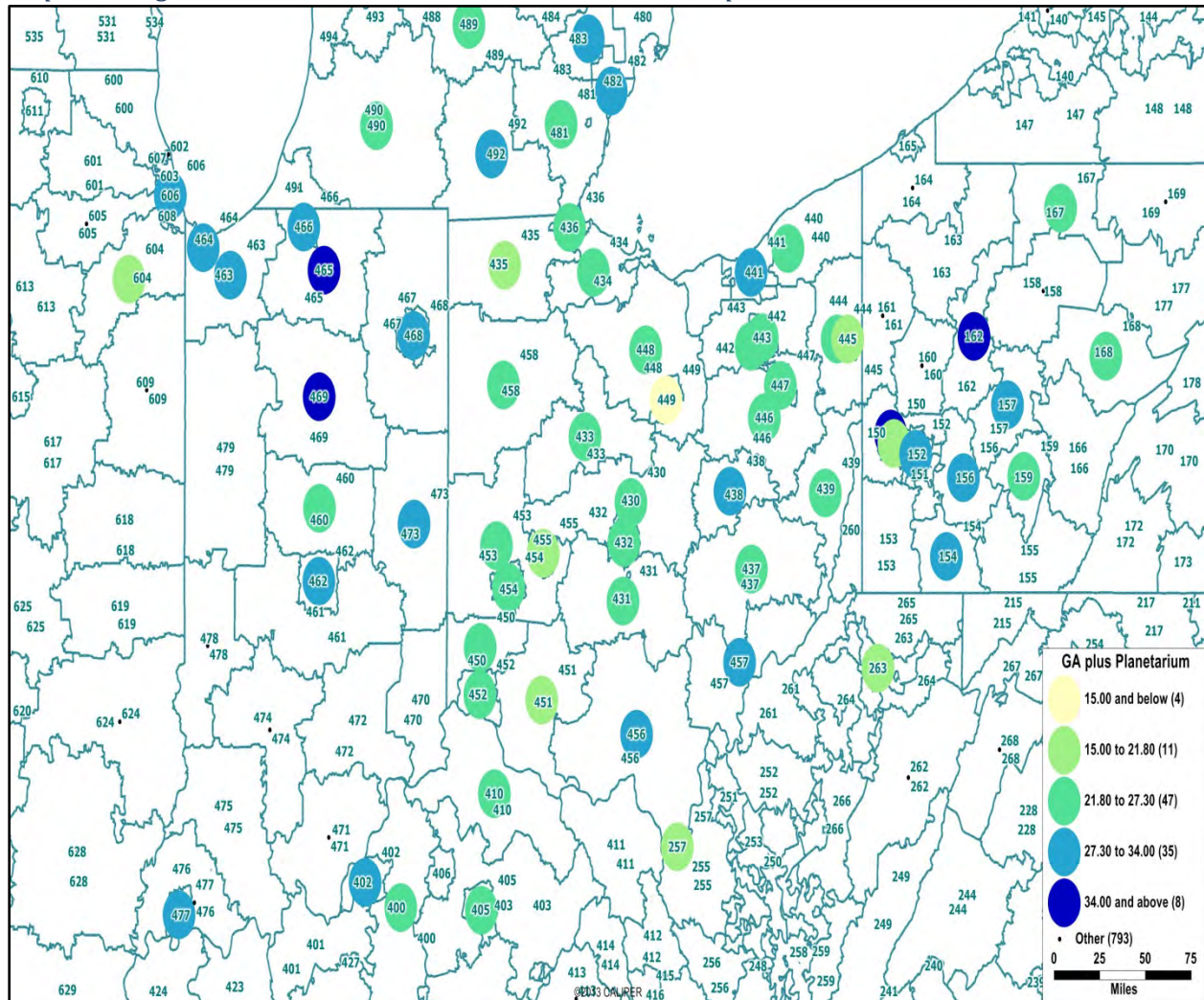
Source: CURA

Map #8: Regional Price Distribution, General Admission plus Movie



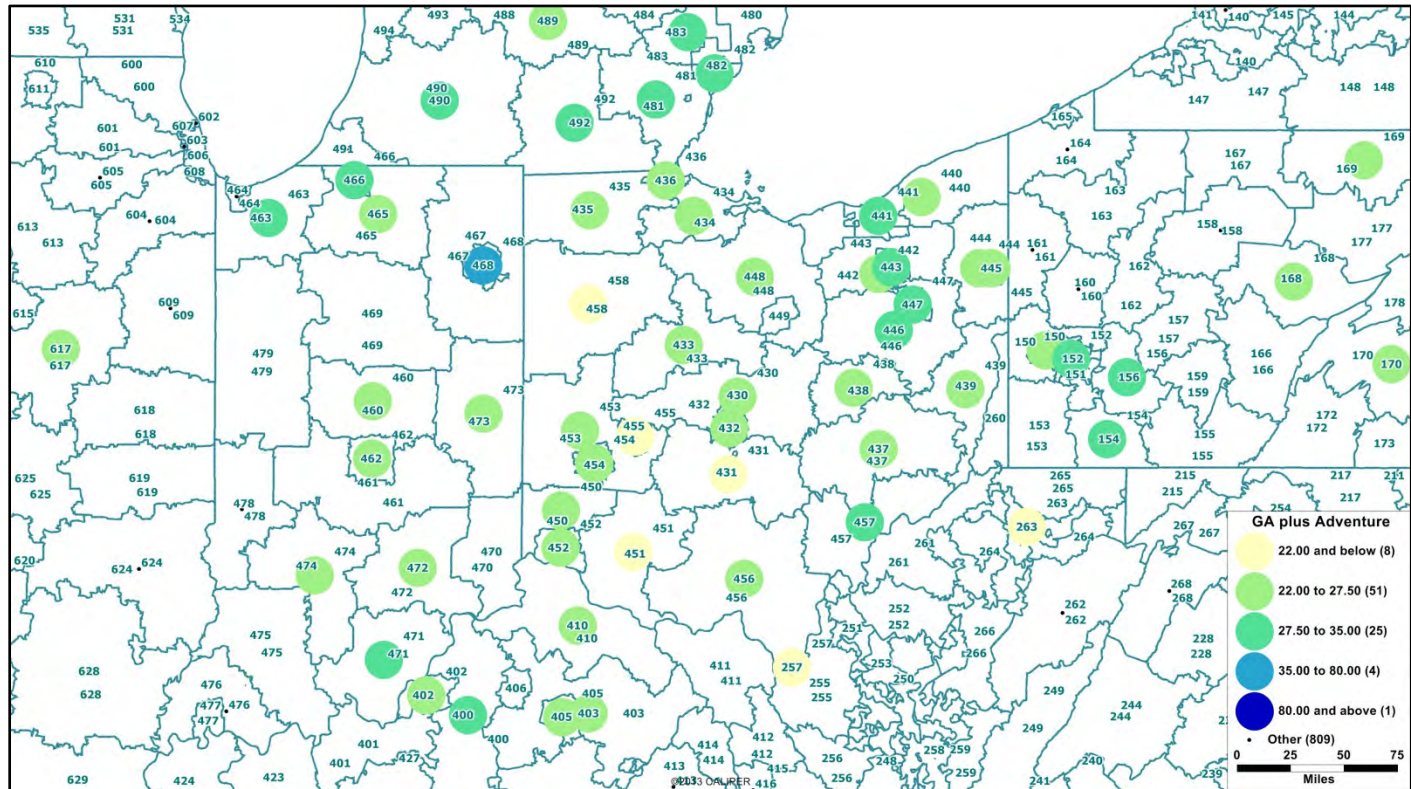
Source: CURA

Map #9: Regional Price Distribution, General Admission plus Planetarium



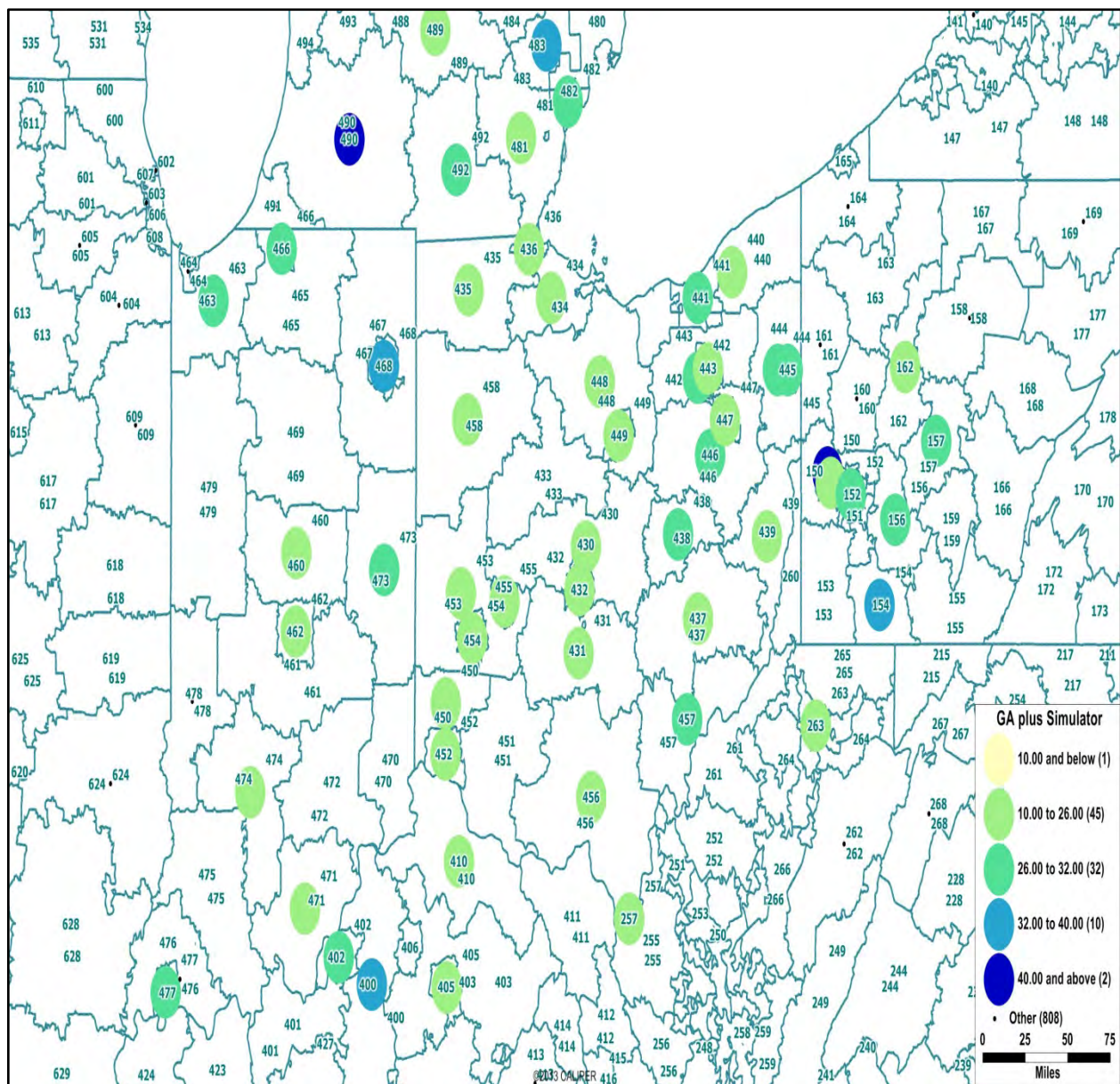
Source: CURA

Map #10: Regional Price Distribution, General Admission plus Adventure



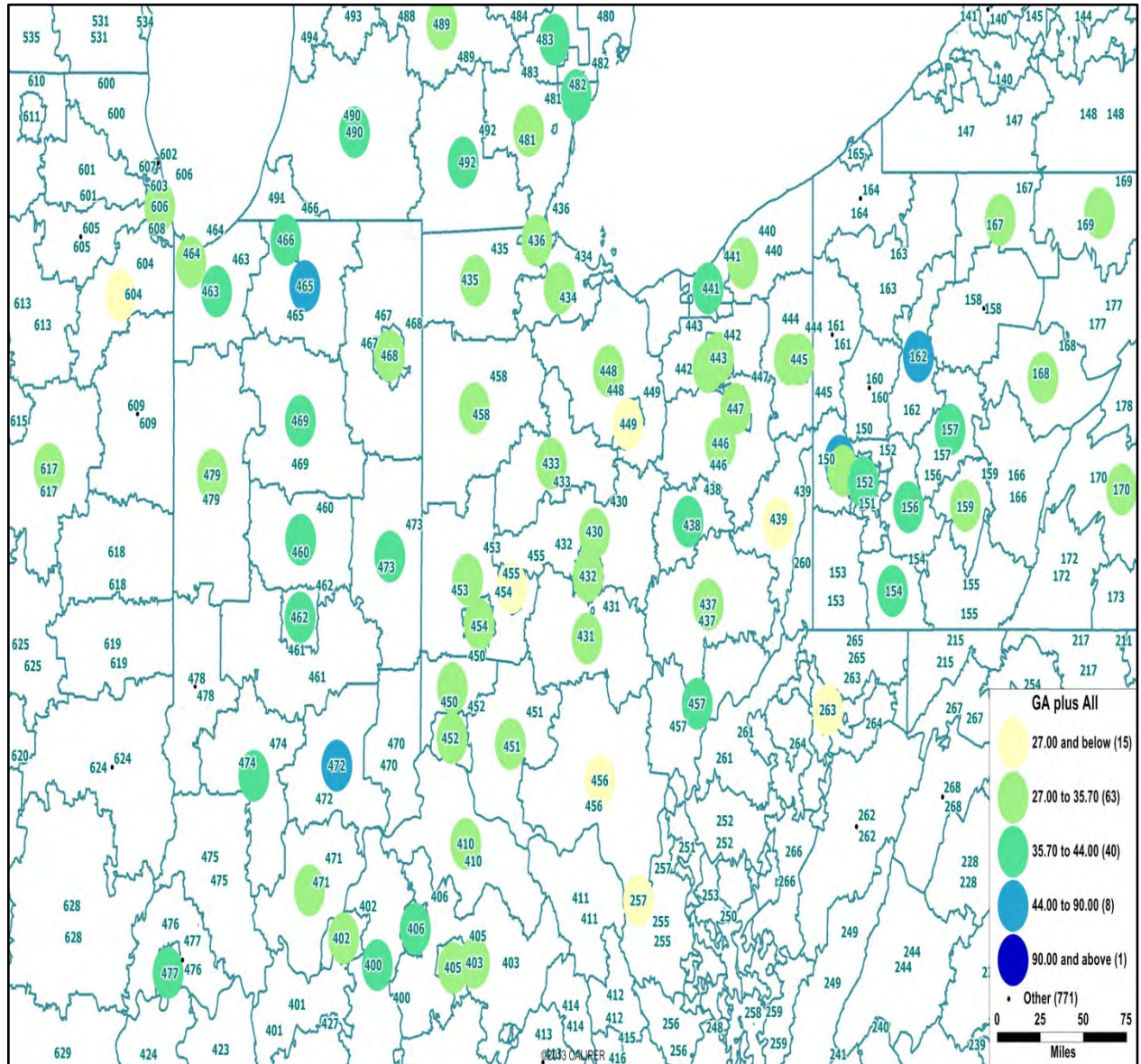
Source: CURA

Map #11: Regional Price Distribution, General Admission plus Simulator



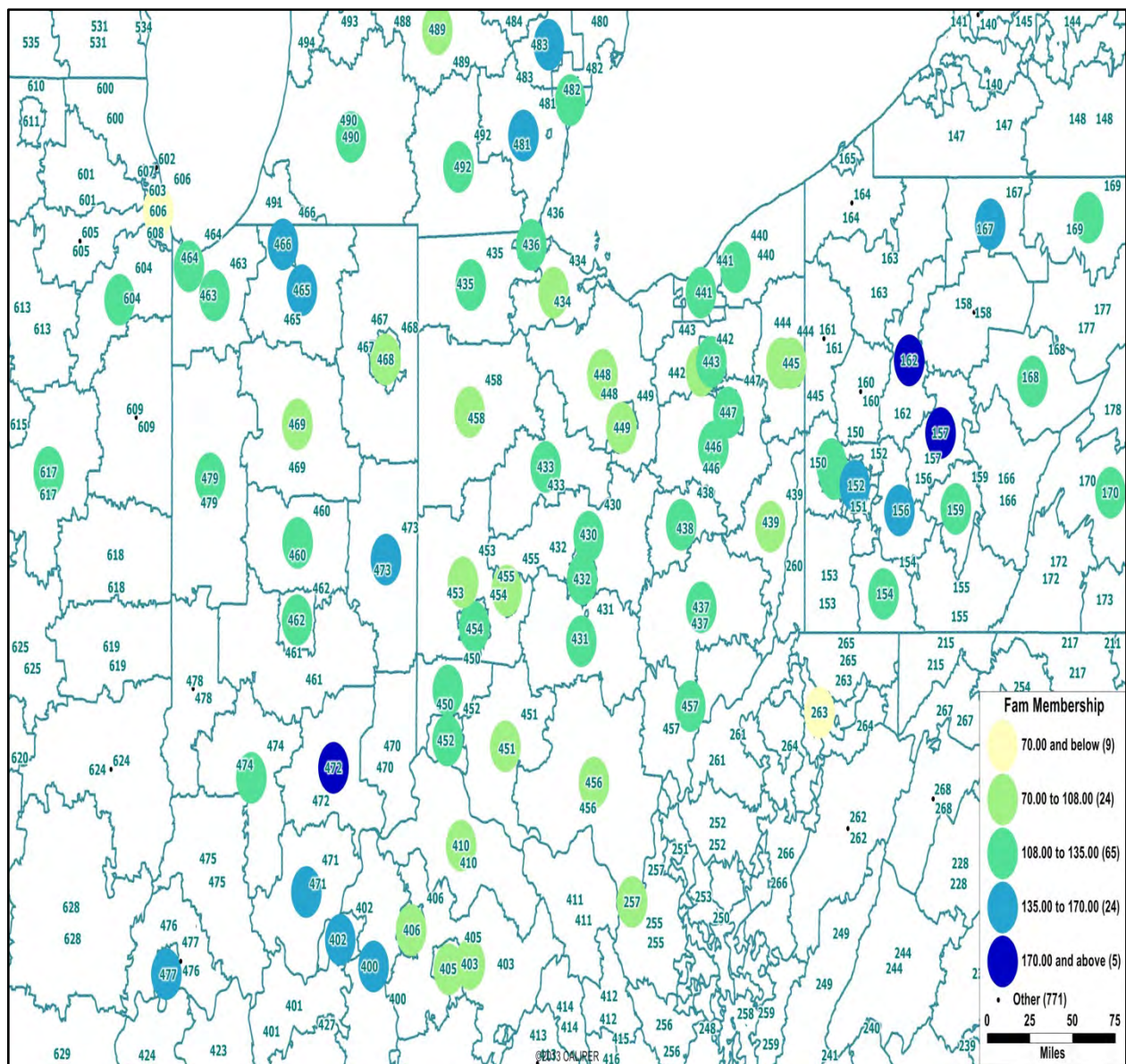
Source: CURA

Map #12: Regional Price Distribution, General Admission plus All



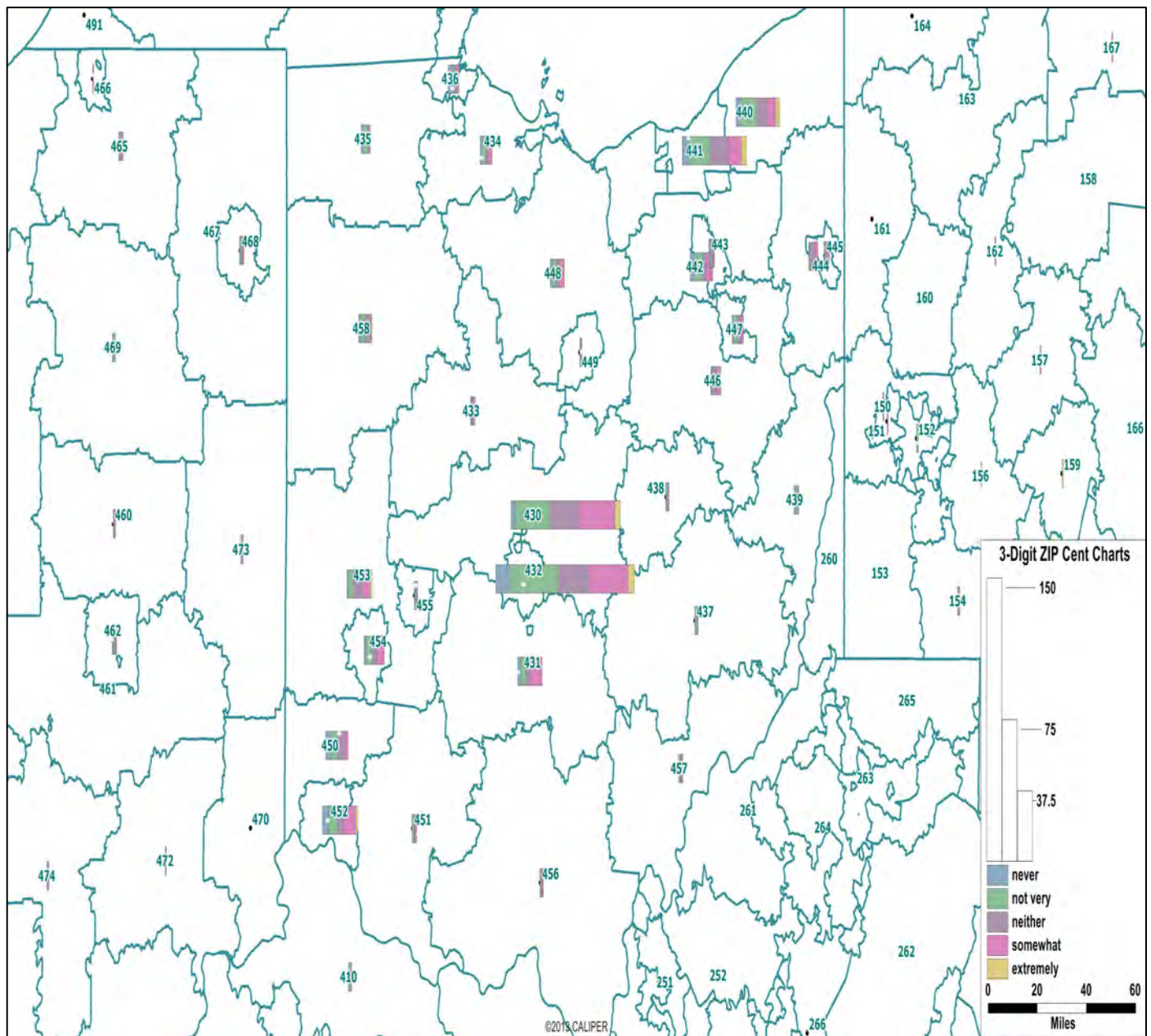
Source: CURA

Map #13: Regional Price Distribution, Family Membership

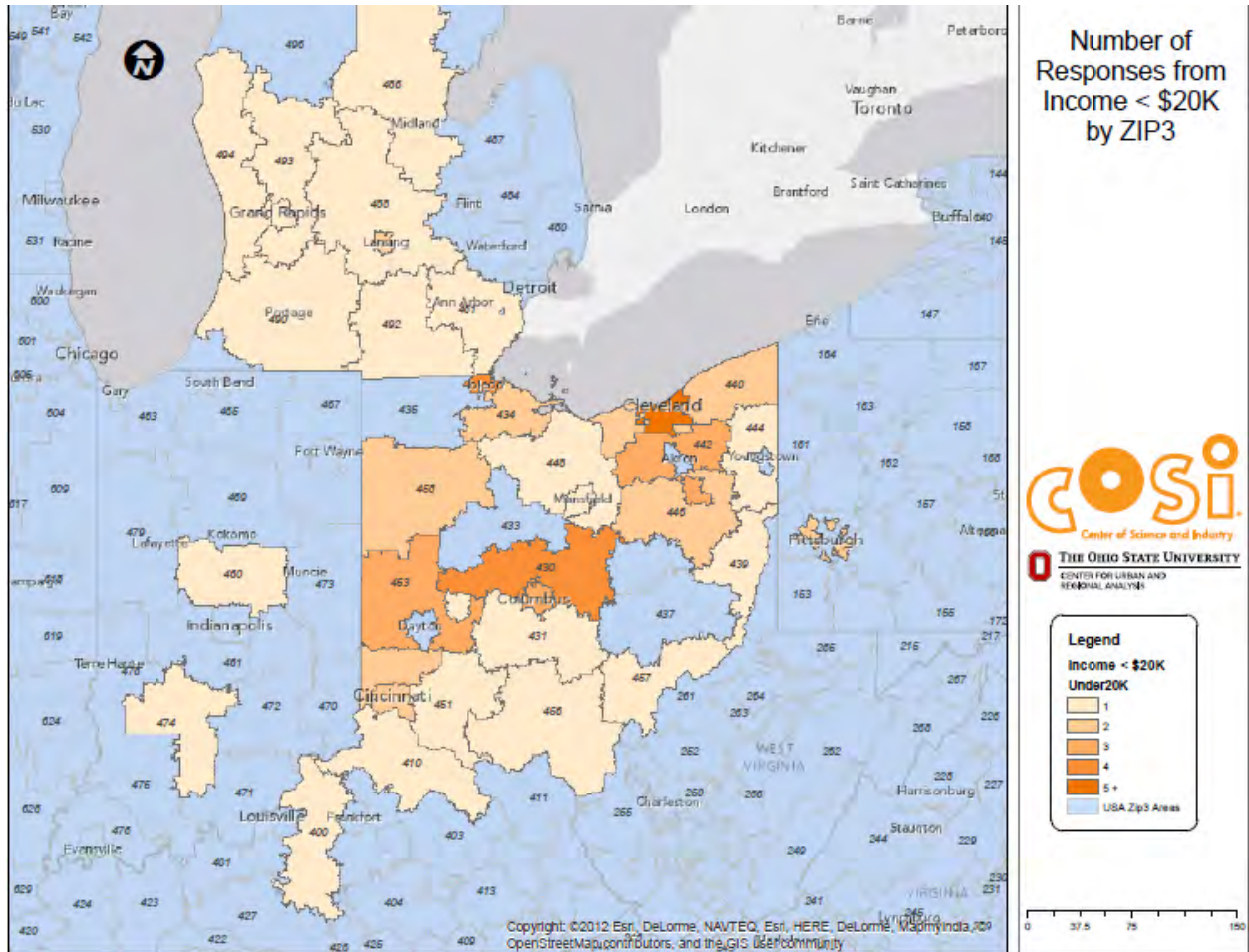


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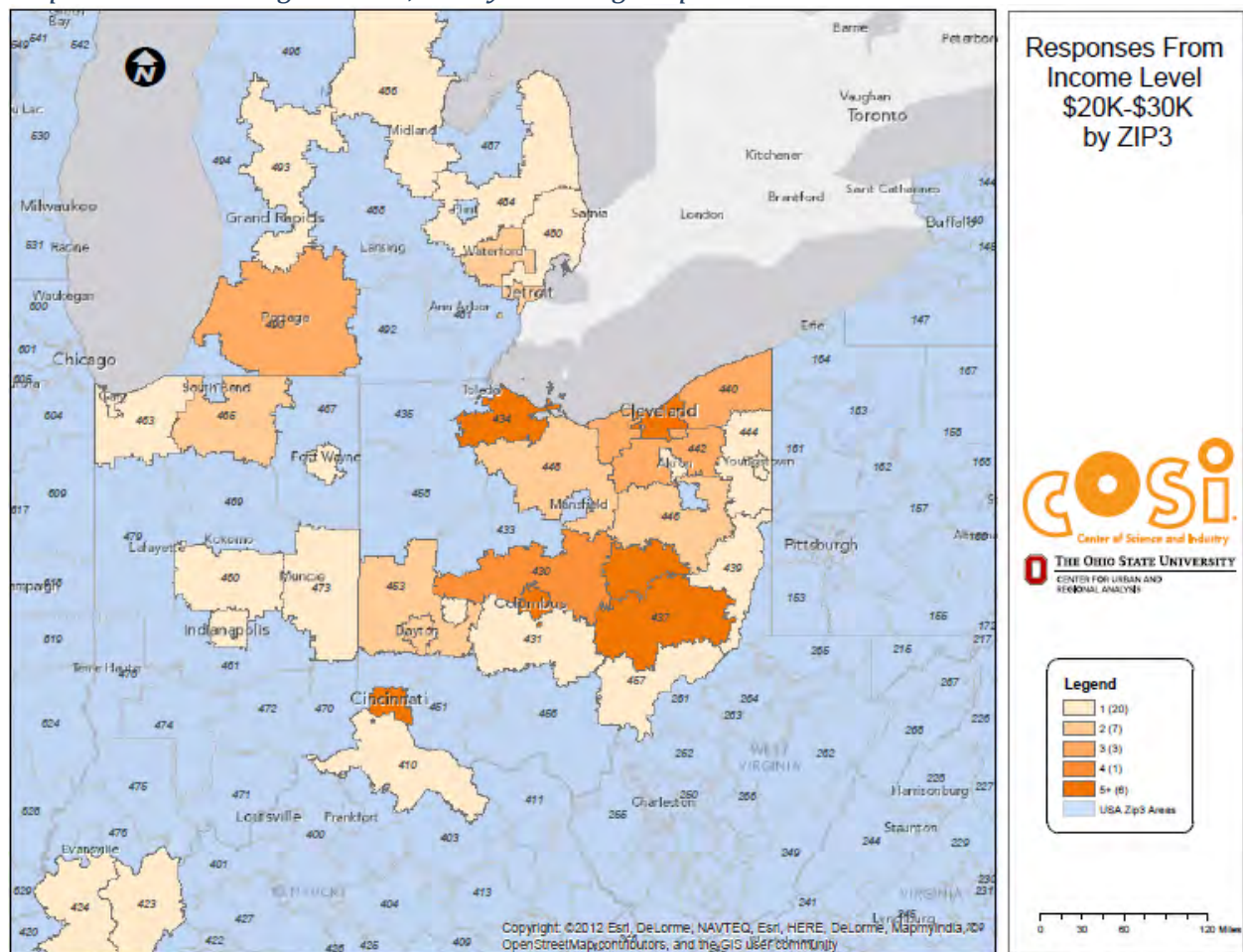
Map #14: Membership Interest



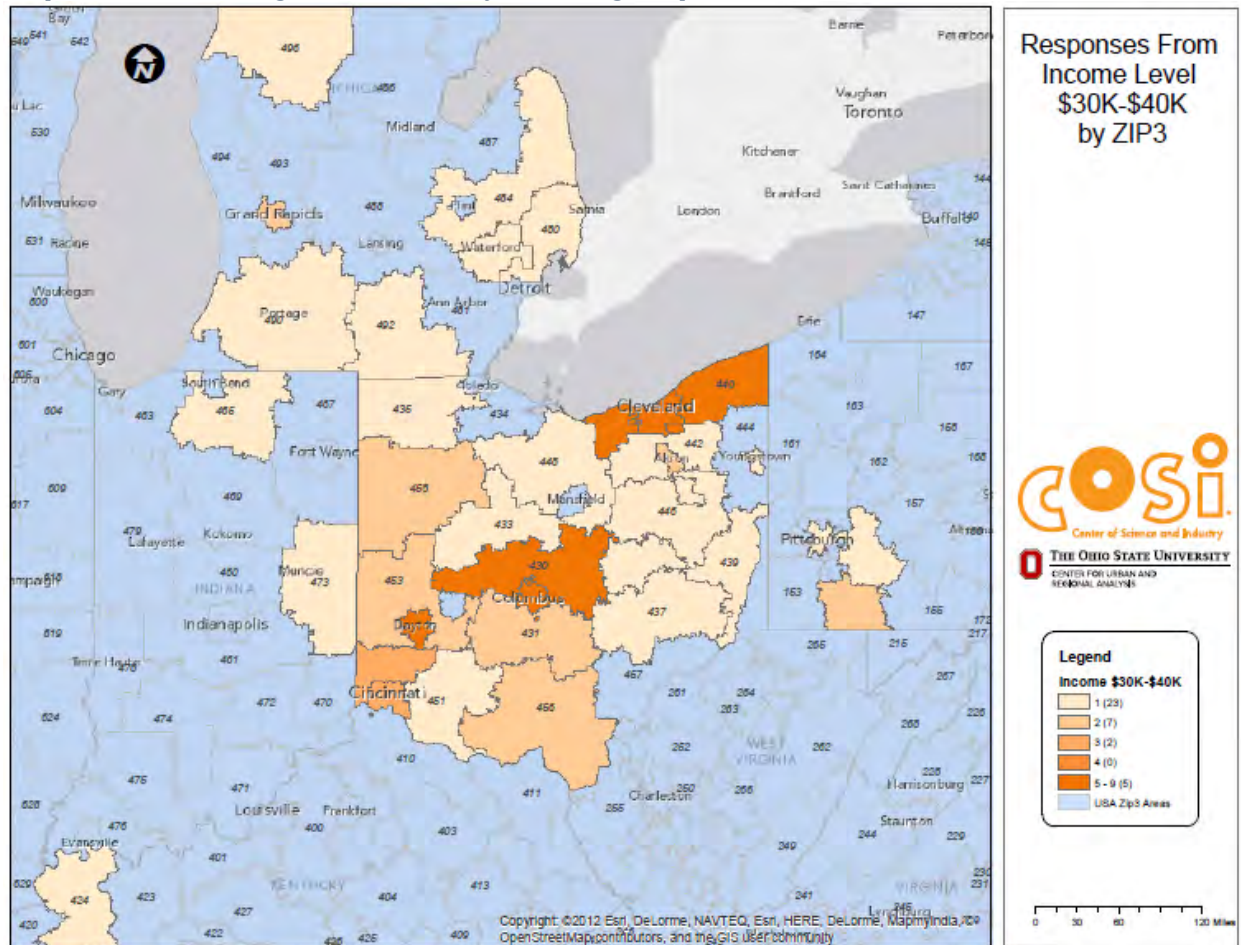
Map 15: Income Range <\$20,000 by three digit zip



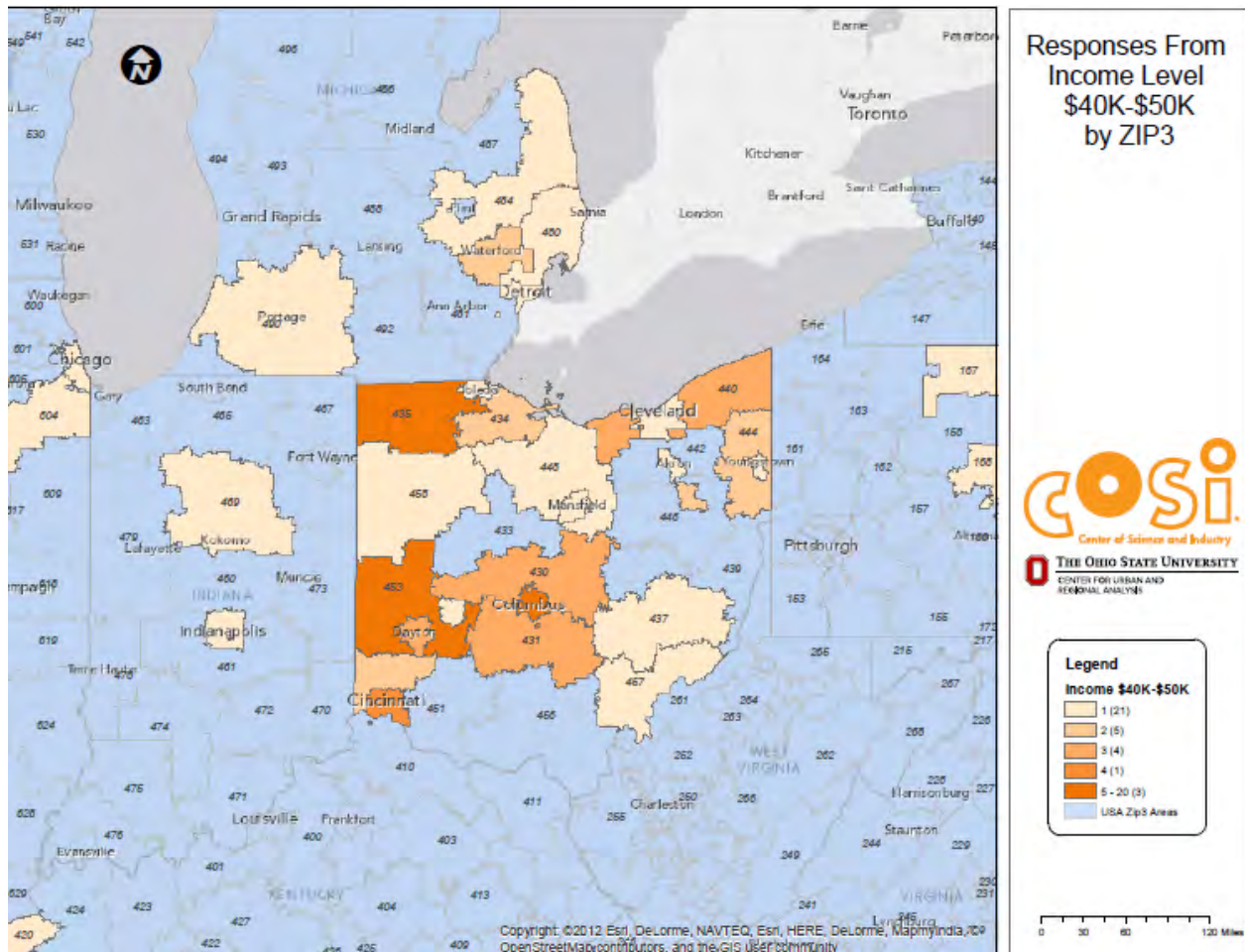
Map 16: Income Range \$20-30,000 by three digit zip



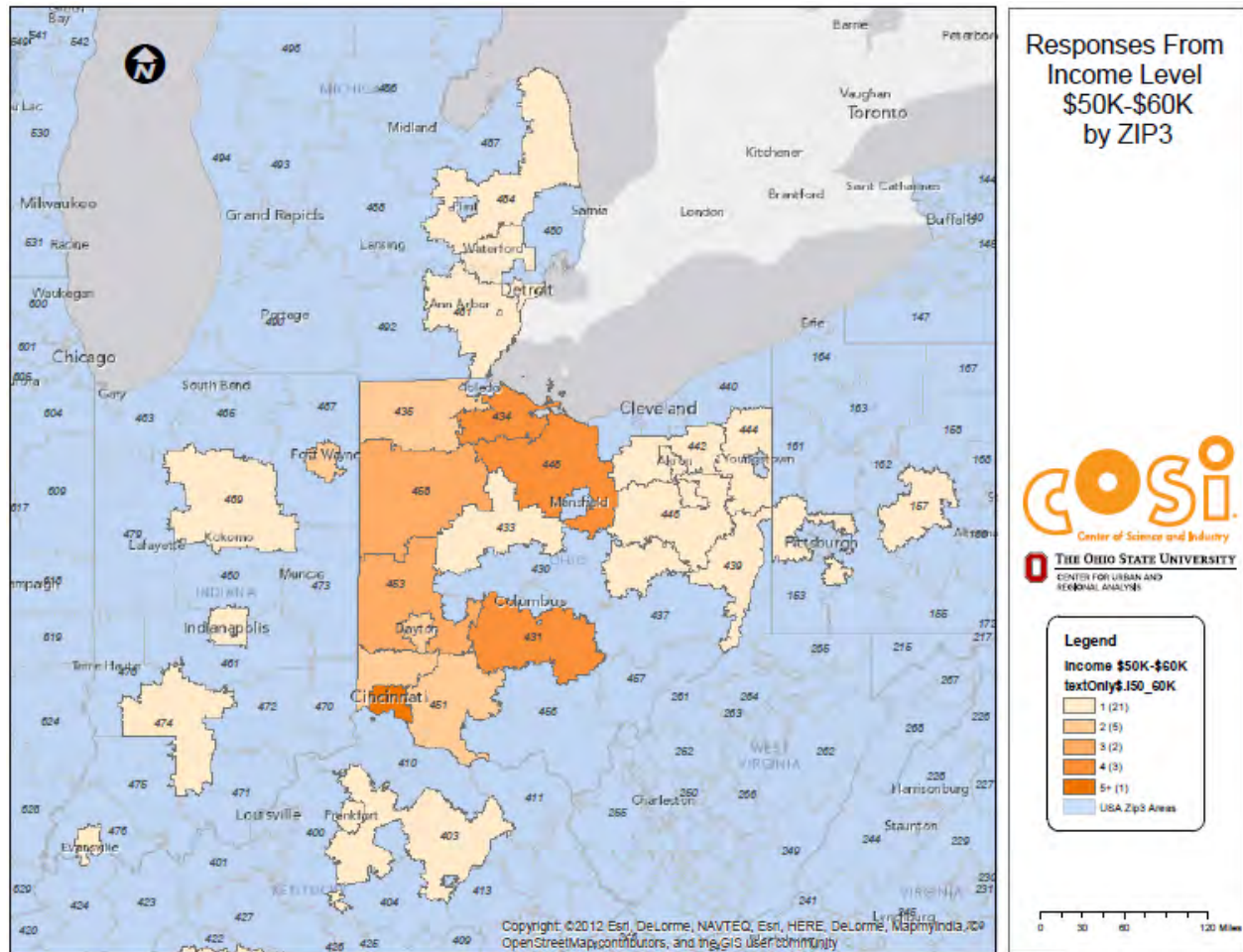
Map 17: Income Range \$30-40,000 by three digit zip



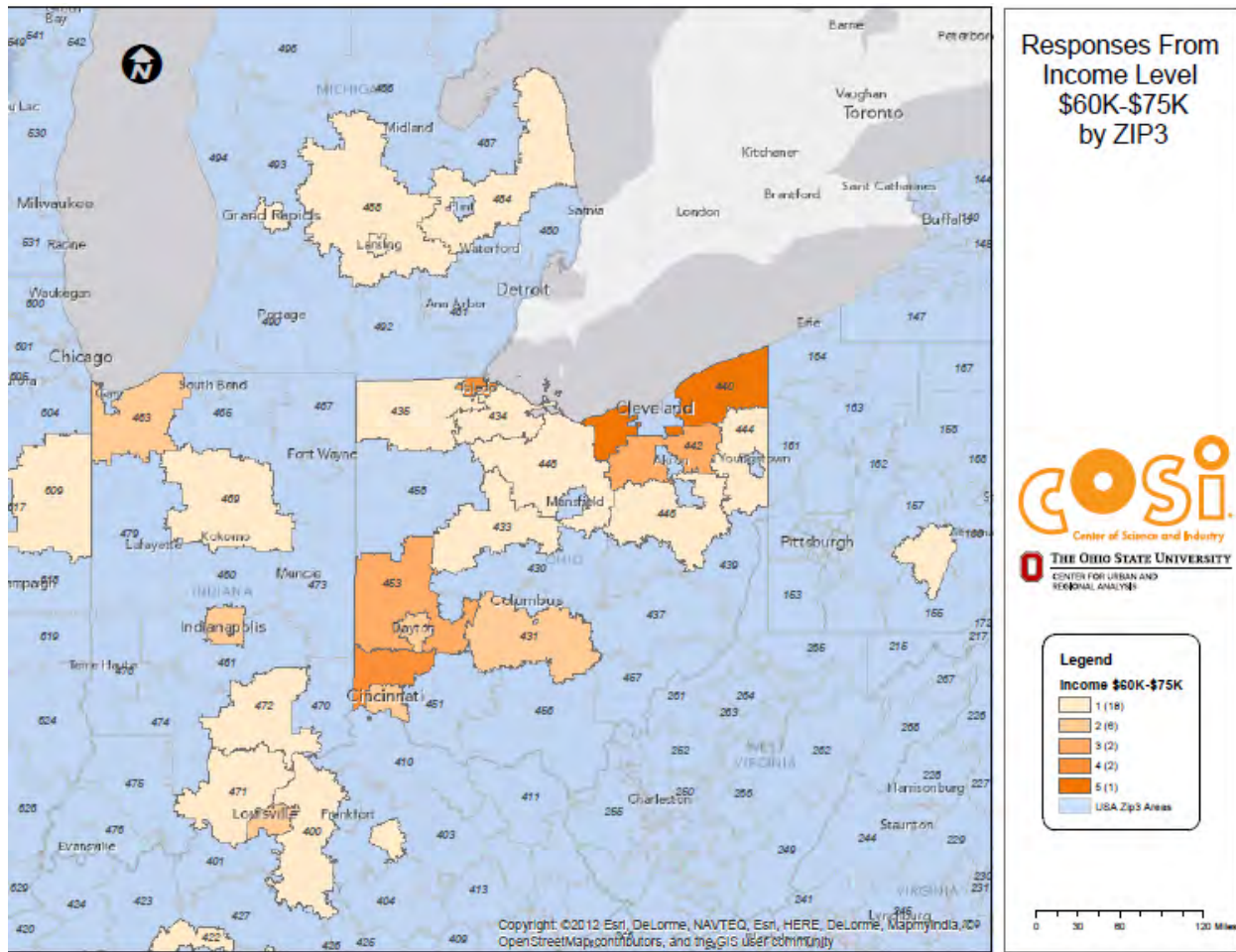
Map 18: Income Range \$40-50,000 by three digit zip



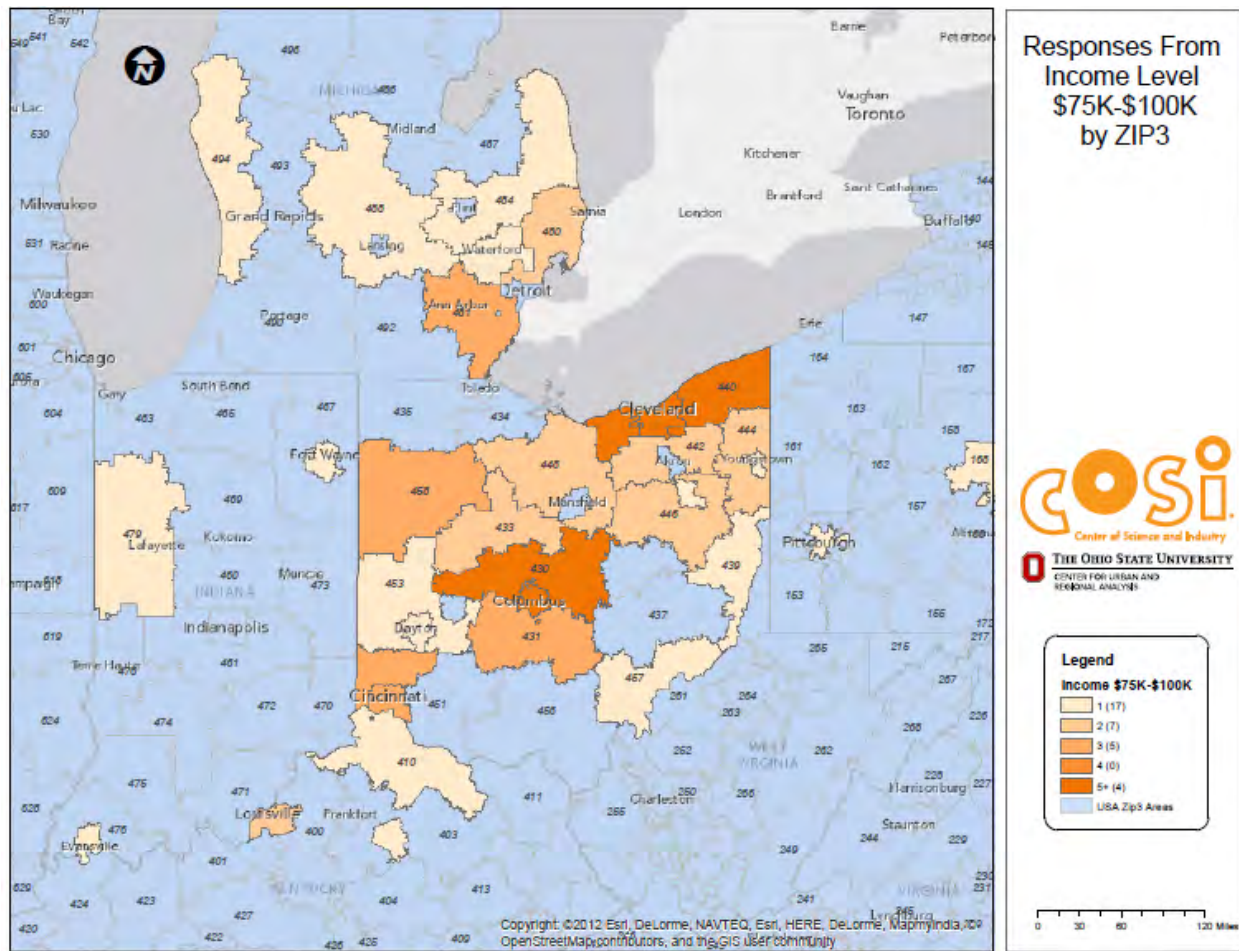
Map 19: Income Range \$50-60,000 by three digit zip



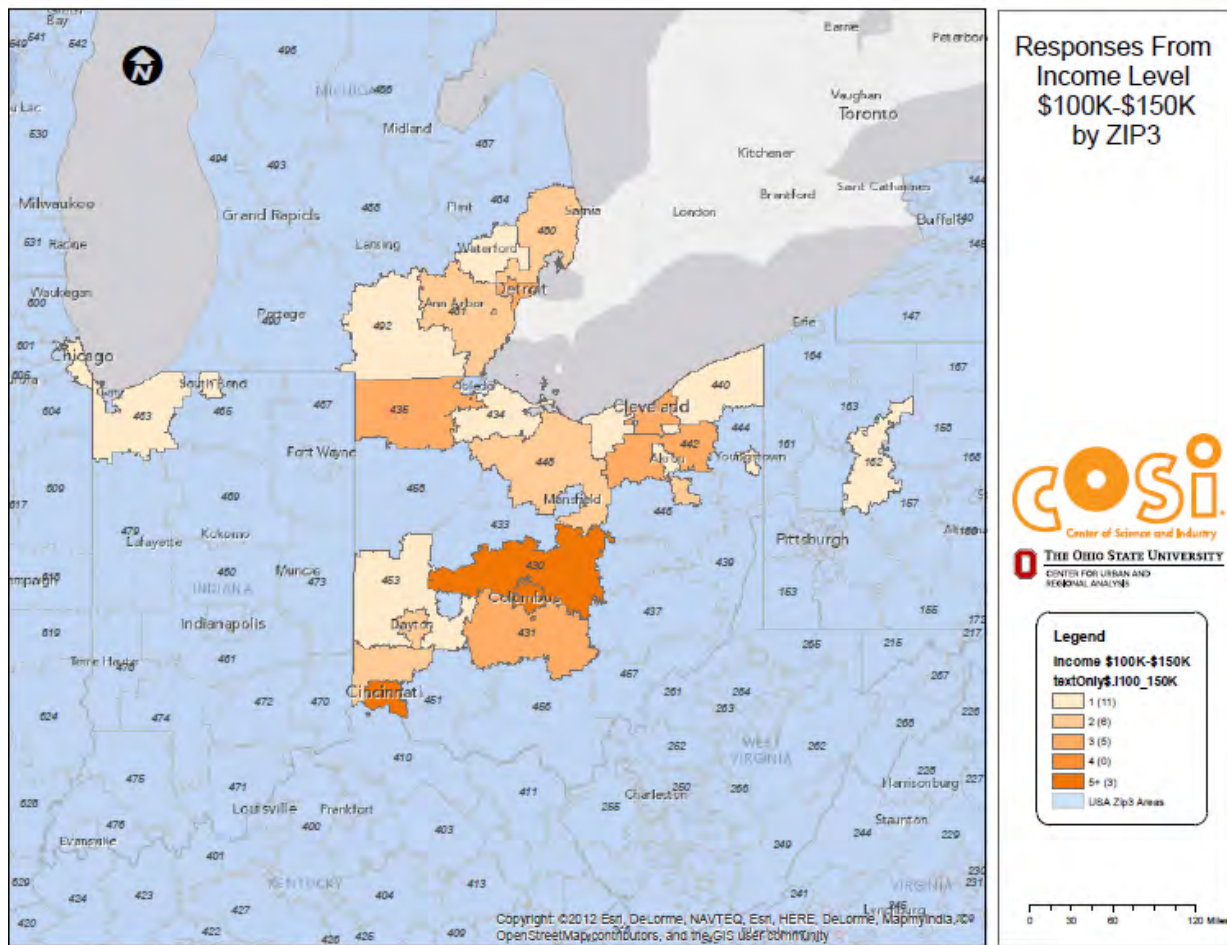
Map 20: Income Range \$60-75,000 by three digit zip



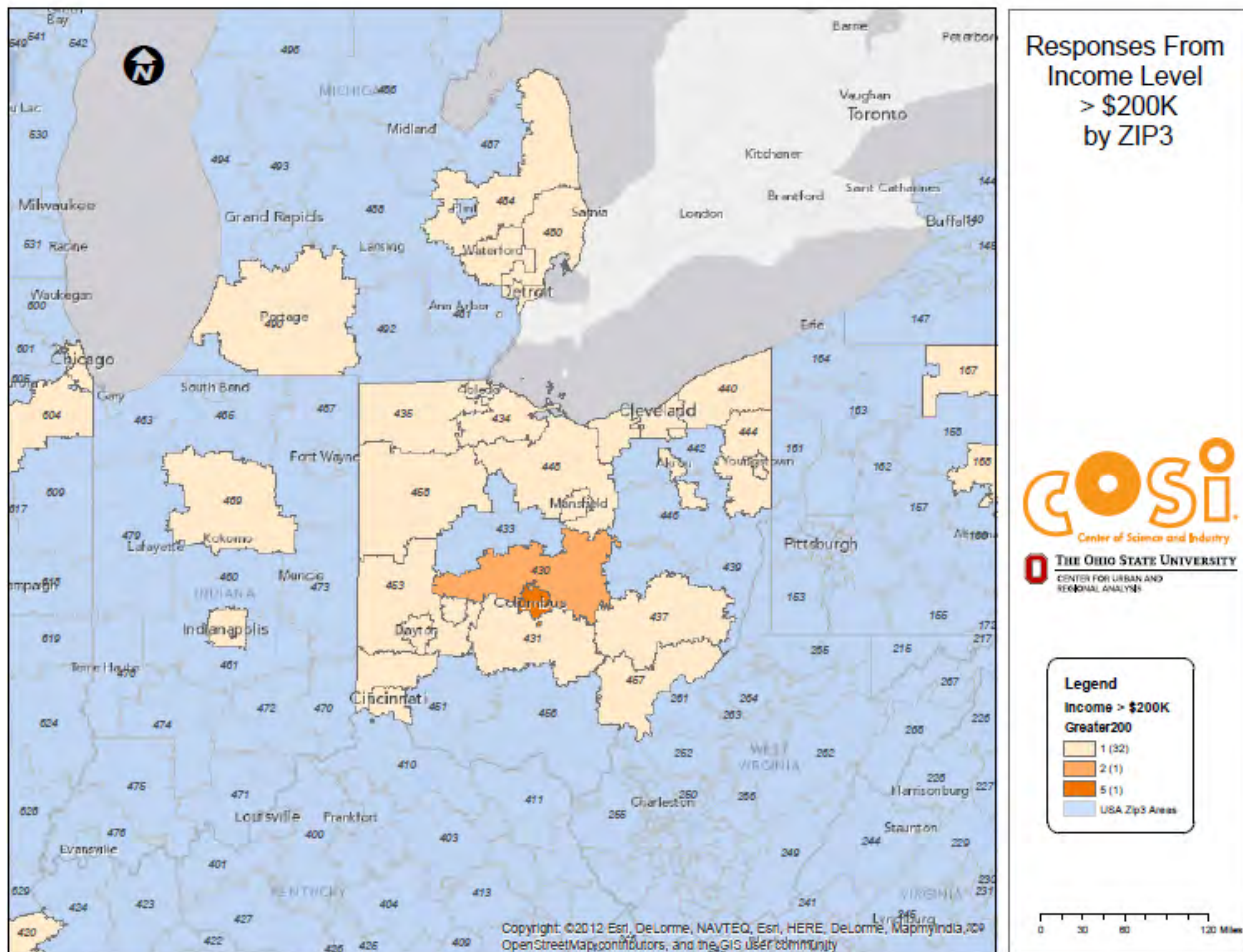
Map 21: Income Range \$75-100,000 by three digit zip



Map 22: Income Range \$100-150,000 by three digit zip



Map 23 Income Range \$200,000 and above by three digit zip



COSI 2 Visitor Satisfaction Survey

Q1 This survey should take approximately 10 minutes to complete. Please read the following description before moving to the next page. COSI - the Center of Science and Industry in Columbus - is one of the largest modern--built science centers in the world. A visit to COSI includes live shows and demonstrations as well as interactive, hands-on exhibits in 10 permanent exhibit areas, each designed around a theme, such as "Space," "Ocean," and "Gadgets." Open to adults and children of all ages, guests can also view artifacts from Columbus' past in the Columbus Historical Society exhibit space, and visit "little kidspace," an area exclusively for children kindergarten and younger. In addition to these exhibit areas and live programming, guests may choose to add a number of experiences for an additional fee. These include: a giant screen theater, motion simulator, temporary exhibitions, and a planetarium (opening in fall 2014). This survey will help COSI determine potential new pricing for a variety of COSI experiences. Your input is important - thank you for taking the time to complete this survey.

Q2 After reading the description above, how interested are you in visiting COSI?

- Extremely Interested (1)
- Very Interested (2)
- Moderately Interested (3)
- Slightly Interested (4)
- Not at all interested (5)

If Not At All Interested Is Selected, Then Skip To End of Survey

Q24 COSI's general admission includes all permanent exhibit areas, live shows and demonstrations, the Columbus Historical Society exhibit space, and "little kidspace". Current ticket price for adults age 13 and older is \$17.95.

	Price in
	Dollars (\$) (1)
If this price were to change, at what price would it be so expensive that you would not buy a ticket? (1)	

Q3 COSI offers a number of experiences that guests can choose to add to general admission for an additional fee. These are: Giant screen movie - a 40 to 45-minute film shown in COSI's National Geographic Giant Screen Theater on the largest movie screen in central Ohio
Temporary exhibition - a special exhibition that travels from city to city and is available at COSI for a limited time
Motion simulator - a 5-minute ride-like experience that uses high-definition

imagery, sound, and motion to take riders into simulated flight Planetarium - a 30 to 40-minute digital experience in a state-of-the-art domed theater space Adventure! In the Valley of the Unknown - a fully immersive, archeology-themed experience where guests use puzzles and games to solve a problem Which of the following COSI experiences would you be interested in adding to a general admission ticket? (choose one or more)

1. Temporary exhibition (2)
2. Giant screen movie (3)
3. Planetarium (opening fall 2014) (4)
4. Adventure! (5)
5. Motion simulator (6)

Answer If Which of the following COSI attraction combinations would you be interested in purchasing?(choose one or more) General admission PLUS special, temporary exhibition Is Selected
Q6 The COSI general admission ticket PLUS the special temporary exhibition is currently priced at \$25.95.

	Price in
	Dollars (\$) (1)
If this price were to change, at what price would it be so expensive that you would not consider buying a ticket? (1)	

Answer If Which of the following COSI attraction combinations would you be interested in purchasing? (Select one) General admission PLUS giant screen movie Is Selected

Q7 The COSI general admission ticket PLUS giant screen movie is currently priced at \$24.50.

	Price in
	Dollars (\$) (1)
If this price were to change, at what price would it be so expensive that you would not consider buying a ticket? (1)	

Answer If Which of the following COSI attraction combinations would you be interested in purchasing?(choose one or more) General admission PLUS planetarium (opening fall 2014) Is Selected
Q8 The COSI general admission ticket PLUS planetarium may be priced at \$22.95.

	Price in
	Dollars (\$) (1)
If this price were to change, at what price would it be so expensive that you would not consider buying a ticket? (1)	

Answer If Which of the following COSI attraction combinations would you be interested in purchasing?(choose one or more) General admission PLUS "Adventure!" ("Adventure!" is an immersive, archeology -themed experience that uses puzzles and games for problem-solving) Is Selected
Q10 The COSI general admission ticket PLUS Adventure is currently priced at \$22.95.

	Price in
	Dollars (\$) (1)
If this price were to change, at what price would it be so expensive that you would not consider buying a ticket? (1)	

Answer If Which of the following COSI attraction combinations would you be interested in purchasing?(choose one or more) General admission PLUS flight simulator Is Selected
Q11 The COSI general admission ticket PLUS motion simulator is currently priced at \$22.95.

	Price in
	Dollars (\$) (1)
If this price were to change, at what price would it be so expensive that you would not consider buying a ticket? (1)	

Q12 COSI may be offering a ticket option that includes general admission PLUS all experiences including giant screen movie, temporary exhibition, the motion simulator, a planetarium experience, and Adventure!. Proposed ticket price for adults age 13 and older is \$32.50.

	Price in
	Dollars (\$) (1)
If this price were to change, at what price would it be so expensive that you would not consider buying a ticket? (1)	

Q26 If you could choose ticket combinations not previously listed, what combinations would you choose (i.e. general admission, giant screen movie, temporary exhibition, motion simulator, planetarium experience, or Adventure!)? List up to three combinations, including the price you would be willing to pay.

Combination #1 (2)

Combination #2 (3)

Combination #3 (4)

Q5 Many science centers and museums offer annual memberships, which typically include free general admission for the member household, as well as member--only discounts for additional experiences and amenities. How interested are you in buying a membership to COSI?

- We never would be interested (1)
- Not very interested (2)
- Neither interested nor uninterested (3)
- Somewhat interested (4)
- Extremely interested (5)

Q14 The current price of a basic COSI family membership is \$115 annually.

	Price in
	Dollars (\$) (1)
If the price were to change, at what price would it be so expensive that you would not consider buying a membership? (1)	

Q17 Where do you reside?

State (1)

Zip Code (2)

Q16 Which of the following places have you visited in the last five years? (Check all that apply)

6. COSI, Center of Science and Industry (Columbus, OH) (1)
7. Boonshoft Museum of Discovery (Dayton, OH) (2)
8. Carnegie Science Center (Pittsburgh) (3)
9. Children's Museum of Pittsburgh (4)
10. Cincinnati Museum Center (5)
11. Clay Center for the Arts and Sciences (Charleston, WV) (6)
12. Cleveland Museum of Natural History (7)
13. Cranbrook Institute of Science (Michigan) (8)
14. Great Lakes Science Center (Cleveland) (9)
15. Imagination Station (formerly COSI Toledo) (10)
16. Indianapolis Children's Museum (11)
17. Kentucky Science Center (formerly Louisville Science Center) (12)
18. Michigan Science Center (formerly Detroit Science Center) (13)
19. Please Touch Museum (Philadelphia) (14)
20. The Franklin Institute (Philadelphia) (15)
21. The Works: Ohio Center for History, Art and Technology (Newark) (16)

Q19 Please tell us about your household

Number of adults (1)

Number of children, age 13 to 18 (2)

Number of children, age 6 to 12 (3)

Number of children, age 2 to 5 (4)

Number of children, under age 2 (5)

Q20 Are you:

- Female (1)
- Male (2)
- Transgender (3)

Q21 What is your age?

- 18 to 24 (1)
- 25 to 34 (2)
- 35 to 44 (3)
- 45 to 54 (4)
- 55 to 64 (5)
- 65 to 74 (6)
- 75 or older (7)

Q22 In which of the following ranges is your gross annual household income?

- Under \$20,000 (1)
- \$20,000 - \$29,999 (2)
- \$30,000 - \$39,999 (3)
- \$40,000 - \$49,999 (4)
- \$50,000 - \$59,999 (5)
- \$60,000 - \$74,999 (6)
- \$75,000 - \$99,999 (7)
- \$100,000 - \$149,999 (8)
- \$150,000 - \$199,999 (9)
- \$200,000 or more (10)

Q23 THANK YOU!

Answer If Which of the following COSI attraction combinations would you be interested in purchasing?
(Select one) General admission PLUS giant screen movie Is Selected

Q7 The COSI general admission ticket PLUS giant screen movie is currently priced at \$24.50.

	Price in
	Dollars (\$) (1)
If this price were to change, at what price would it be so expensive that you would not consider buying a ticket? (1)	

Answer If Which of the following COSI attraction combinations would you be interested in purchasing?(choose one or more) General admission PLUS planetarium (opening fall 2014) Is Selected

Q8 The COSI general admission ticket PLUS planetarium may be priced at \$22.95.

	Price in
	Dollars (\$) (1)
If this price were to change, at what price would it to be so expensive that you would not consider buying a ticket? (1)	

Answer If Which of the following COSI attraction combinations would you be interested in purchasing?(choose one or more) General admission PLUS "Adventure!" ("Adventure!" is an immersive, archeology -themed experience that uses puzzles and games for problem-solving) Is Selected

Q10 The COSI general admission ticket PLUS Adventure is currently priced at \$22.95.

	Price in
	Dollars (\$) (1)
If this price were to change, at what price would it be so expensive that you would not consider buying a ticket? (1)	

Answer If Which of the following COSI attraction combinations would you be interested in purchasing? (choose one or more) General admission PLUS flight simulator Is Selected

Q11 The COSI general admission ticket PLUS motion simulator is currently priced at \$22.95.

	Price in
	Dollars (\$) (1)
If this price were to change, at what price would it be so expensive that you would not consider buying a ticket? (1)	

Q12 COSI may be offering a ticket option that includes general admission PLUS all experiences including giant screen movie, temporary exhibition, the motion simulator, a planetarium experience, and Adventure!. Proposed ticket price for adults age 13 and older is \$32.50.

	Price in
	Dollars (\$) (1)
If this price were to change, at what price would it be so expensive that you would not consider buying a ticket? (1)	

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Combination #1 (2)

Combination #2 (3)

Combination #3 (4)

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- ☐ Not very interested (2)
- ☐ Neither interested nor uninterested (3)
- ☐ Somewhat interested (4)
- ☐ Extremely interested (5)

Q14 The current price of a basic COSI family membership is \$115 annually.

	Price in
	Dollars (\$) (1)
If the price were to change, at what price would it be so expensive that you would not consider buying a membership? (1)	

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Zip Code (2)

Q16 Which of the following places have you visited in the last five years? (Check all that apply)

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- ☐ Children's Museum of Pittsburgh (4)
- ☐ Cincinnati Museum Center (5)
- ☐ Clay Center for the Arts and Sciences (Charleston, WV) (6)
- ☐ Cleveland Museum of Natural History (7)
- ☐ Cranbrook Institute of Science (Michigan) (8)
- ☐ Great Lakes Science Center (Cleveland) (9)
- ☐ Imagination Station (formerly COSI Toledo) (10)
- ☐ Indianapolis Children's Museum (11)
- ☐ Kentucky Science Center (formerly Louisville Science Center) (12)
- ☐ Michigan Science Center (formerly Detroit Science Center) (13)
- ☐ Please Touch Museum (Philadelphia) (14)
- ☐ The Franklin Institute (Philadelphia) (15)
- ☐ The Works: Ohio Center for History, Art and Technology (Newark) (16)

Q19 Please tell us about your household

- Number of adults (1)
- Number of children, age 13 to 18 (2)
- Number of children, age 6 to 12 (3)
- Number of children, age 2 to 5 (4)
- Number of children, under age 2 (5)

Q20 Are you:

- ☐ Female (1)
- ☐ Male (2)
- ☐ Transgender (3)

Q21 What is your age?

- ☐ 18 to 24 (1)
- ☐ 25 to 34 (2)
- ☐ 35 to 44 (3)
- ☐ 45 to 54 (4)
- ☐ 55 to 64 (5)
- ☐ 65 to 74 (6)
- ☐ 75 or older (7)

Q22 In which of the following ranges is your gross annual household income?

- ☐ Under \$20,000 (1)
- ☐ \$20,000 - \$29,999 (2)
- ☐ \$30,000 - \$39,999 (3)
- ☐ \$40,000 - \$49,999 (4)
- ☐ \$50,000 - \$59,999 (5)
- ☐ \$60,000 - \$74,999 (6)
- ☐ \$75,000 - \$99,999 (7)
- ☐ \$100,000 - \$149,999 (8)
- ☐ \$150,000 - \$199,999 (9)
- ☐ \$200,000 or more (10)

Q23 THANK YOU!