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Estimating the Economic Impacts of Gull Lake View Golf Club and Resort

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Study Overview

Gull Lake View Golf Club and Resort, located in Augusta, Michigan, operates several golf courses in the greater Kalamazoo region. A significant portion of its clients is not only from outside the region, but also outside the state of Michigan. Along with golf operations, Gull Lake View offers lodging, spa services, eating and drinking establishments, and meetings, weddings, and other events. The Resort wanted to better understand from where outside the region its patrons come and the economic impact resulting from the activities generated by these patrons.

Gull Lake View engaged the W. E. Upjohn Institute for Employment Research (Upjohn) to estimate the impacts of its activities and visitors on its two-county study region. The Upjohn team used a two-pronged approach to provide estimates of impacts. First, Gull Lake View's revenue data were used, coupled with the home zip codes of its patrons. Second, the use of season-long patron data was collected by survey during the Resort's 2017 season to capture patron spending while off site of the golf resort.

What makes an economic impact?

The source of money in an economy determines whether it changes the wealth curve of a region, and economic activities within an economy impact the flow of monetary sources. Industries are economic activities and are often defined as "basic" or "non-basic." Basic industries are those that "export" a good or service outside the study region. In this case, the use of the term export is not meant to necessarily be international in nature, but rather to be anywhere outside of the defined study region. Non-basic industries are those that exist to support the population and businesses within the study region.

Why is this important? When new money from basic industries comes into a study region, it changes the wealth curve by infusing additional money into the economy. These new monies create a "virtuous cycle" that facilitates additional rounds of spending by suppliers and households

Study Overview

(supplying labor to both the base firms as well as suppliers). These additional rounds of spending are called multipliers, and by using economic models, we can estimate the value of the additional rounds of spending for each job created or dollar brought into the region.

Non-basic industries do not create additional rounds of spending due to the "substitution" effect. As non-basic industries do not bring new money into the region, the spending on these industries is redeployed from one use to another, or substituted from one use to another. A simple example of this is when a new retail establishment opens in a study area. Since the wealth in a region is generally fixed, it is likely that some spending will shift from existing retail to the new retail. The amount of total dollars from this fixed pool spent on retail, however, will have little effect on the economy, as employment in the new establishment will increase but reduced sales in the other establishments will likely drive lower employment for a net neutral outcome for the region.

When Gull Lake View asked about its economic impact, which is driven by base industries, it was initially thought that its "economic" impact would be close to zero dollars and employment. This was primarily due to the assumption that most golf courses are population serving. However, in working with Jon Scott and his team, the Upjohn team found that, depending on the unit of analysis or study region, a significant portion of revenues were derived from outside of Kalamazoo and Calhoun counties. These two regions were thought to be the study region, as this is the home to its portfolio of golf courses.

As part of the conversation and the Upjohn team's research methodology, Upjohn learned about the assets of the resort, including a housing portfolio for visitors. These facts and other data suggested that the Gull Lake View complex, including golf services, eating and drinking components, and accommodations, did have a wealth-changing effect on the Resort's study region of Kalamazoo and Calhoun counties.

MODELING THE NET IMPACT

The Net Impacts of Gull Lake View

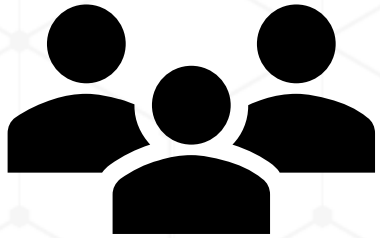
The Upjohn Institute uses a model designed to regional specifications from Regional Economic Models, Inc. (REMI) to create a rigorous set of economic impact *estimates*. It is important to note that all outcomes from the model are based on the best data available and all results are estimated; it is not possible to prove the outcomes using empirical data or evidence. Based in economic geography, the model uses a series of equations to estimate the impacts of spending directly on industries affected, their supply chains, and the households that support them.

REMI is a dynamic model that creates estimates using equations rather than a simple input/output (I/O) table. This allows sensitivity in the analysis for both timing and scale / scope issues that are not found in other models. Features that are unique to REMI include:

- It is calibrated to local conditions using a relatively large amount of local data, which is likely to improve its performance, especially under conditions of structural economic change.
- It has an exceptionally strong theoretical foundation.
- It actually combines several different kinds of analytical tools (including economic-base, input-output, and econometric models), allowing it to take advantage of each specific method's strengths and compensate for its weaknesses.
- It allows users to manipulate an unusually large number of input variables and gives forecasts for an unusually large number of output variables.
- It allows the user to generate forecasts for any combination of future years, allowing the user special flexibility in analyzing the timing of economic impacts.
- It accounts for business cycles.
- It has been used by a large number of users under diverse conditions and has proven to perform acceptably.

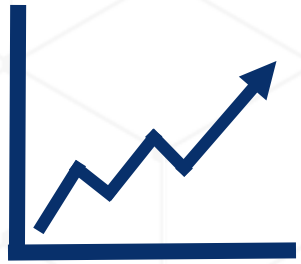
The Net Impacts of Gull Lake View

Gull Lake View Golf Club and Resort adds an estimated 250 jobs to Kalamazoo and Calhoun counties that would not have been created or retained without the Resort's operations. Resort activities helped to increase gross domestic product (GDP) by $7.4 million, in addition to increased output and personal income. These data are estimates of the economic impact of visitors to Gull Lake View and all its locations on the combined region of Kalamazoo and Calhoun counties (the study region). The data are all revenues and expenditures attributable to patrons who are outside the study region, including the rest of Michigan (ROM), and all those from outside of Michigan (ROW). These estimates help to determine the economic impact of Gull Lake View, its resort locations, and villas on the local economy.



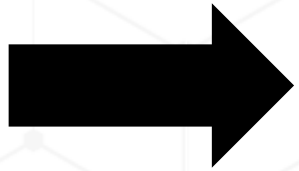
Jobs

250



GDP

$7.4 million



Output

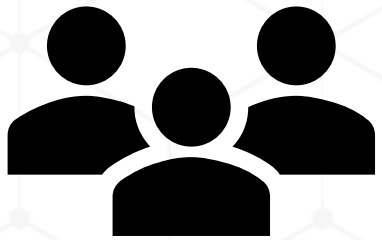
$12.9 million

Personal Income

$4.4 million

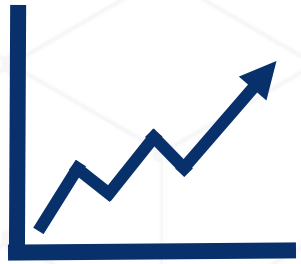
The Net Impacts of Gull Lake View

The operations of Gull Lake View adds an estimated 142 jobs to the state of Michigan's economy, which would not have been created or retained without the existence of the Resort. Gross domestic product increases by $8.5 million, as well as increases to both output and personal income. These data are estimates of the economic impact of visitors to Gull Lake View on the state of Michigan. As part of this analysis, only data for revenues and expenditures for patrons from outside of Michigan (ROW) were included.



Jobs

142



GDP

$8.5 million

Output

$4.9 million

Personal Income

$3.3 million

The Net Impacts of Gull Lake View

Impacts for Gull Lake View are estimated from the best data available and are based on the following data sources provided by the Resort and through a survey of patrons during the 2017 season:

- Revenue data provided by Gull Lake View
- Visitor survey data collected by Gull Lake View
- Shares of Resort patrons identified by home residence from Kalamazoo and Calhoun counties (the study area); the rest of Michigan (ROM), or the other 81 Michigan counties; and the rest of world (ROW), or anyone from outside the state of Michigan.

Table 1 shows the sources of revenue provided by Gull Lake View for each of its facilities, excluding lodging revenues. These data are used proportionally in the REMI model as inputs based on shares as defined by residency. Gull Lake View was able to provide shares of patrons from: (1) Kalamazoo and Calhoun counties, combined as the study area, (2) patrons from the other 81 counties in Michigan (rest of Michigan-ROM), and (3) patrons from outside of Michigan (rest of world-ROW).

Table 1

	Gull Lake View	Bedford Valley	Stonehedge	Stoatin Brae
Pro Shop	$1,334,400	$634,200	$1,607,500	$763,400
Merchandise	$131,300	$32,700	$111,000	$37,900
Food and Beverage	$984,600	$131,300	$308,600	$710,100
Total	$2.450,300	$798,200	$2,027,100	$1,511,400

The Net Impacts of Gull Lake View

The estimates of economic impacts are based in the question of, “Who is the unit of analysis?” To answer the question of the impacts of Gull Lake View on the state of Michigan, only the data for patrons from outside the state (ROW) are used. In this case, 30.35% of golf course revenues and 52% of accommodations revenues were applied to create these estimates. For the Villa Suites accommodations, it assumed that all revenues were non-local and were shared out at a higher proportion. To answer the question of, “What is the economic impact on Kalamazoo and Calhoun counties?” all revenues from the Villa Suites accommodations were included, as well as 58.17% of course revenues.

The sources of inputs used in the REMI model for these questions were:

- Villa Suites at $2,407,300
- Patron sources
  - Kalamazoo and Calhoun counties (**41.83%**)
  - ROM Michigan, excluding Kalamazoo and Calhoun counties **(27.92%)**
  - ROW, outside of Michigan **(30.35%)**
- Unit of analysis breakdown with impacts based on
  - ROW, outside of Michigan **(30.35%)**
  - ROW + ROM, outside of Kalamazoo and Calhoun counties **(58.17%)**
  - Villa Suites lodging, shared ROM at **48%** and ROW at **52%**

Gull Lake View staff collected patron data by survey during its 2017 season on spending that occurred off site. This included spending on transportation (local and non-local), lodging, eating and drinking, entertainment, and retail. Of the 990 usable surveys (e.g., those with relatively complete data), 871 had data for respondents that were either outside of Michigan (ROW), n=560, or outside of the two counties (ROM), n=311.

Gull Lake View also maintains a database of “stay and play” patrons, which includes 1,949 data observations. Of these, 1,787 data observations were from outside of Kalamazoo and Calhoun counties. Outside of Michigan (ROW) data were for available for 1,023 observations and data for outside of the two counties (ROM) were available for 764 observations. The survey

The Net Impacts of Gull Lake View

data were used to develop a “per patron” spending that was applied to the visitors from the stay and play data.

Table 2 contains the average spending per patron that occurred off site. As a mean or average, it is important to recognize that, while spending is per person, some reported spending $0 off site and others reported significant spending.

Table 2

	Lodging	Food	Enter-tain-ment	Retail Purchases	Travel Trans	Local Trans
ROW	$9.84	$9.78	$4.63	$2.38	$7.38	$0.70
ROM	$9.92	$8.09	$7.53	$3.35	$3.30	$0.47

The total of spending off site by category is shown in Table 3. These are estimates based on the mean spending reported from the patron surveys, combined with the number of visitors from the play and stay data reported in Table 4.

Table 3

	Lodging	Food	Enter-tain-ment	Retail Purchases	Travel Trans	Local Trans
Non-Kalamazoo / Calhoun	$136,157	$125,331	$80,272	$38,275	$78,672	$8,374
Non-state of MI	$80,003	$79,501	$37,622	$19,320	$59,996	$5,688

The Net Impacts of Gull Lake View

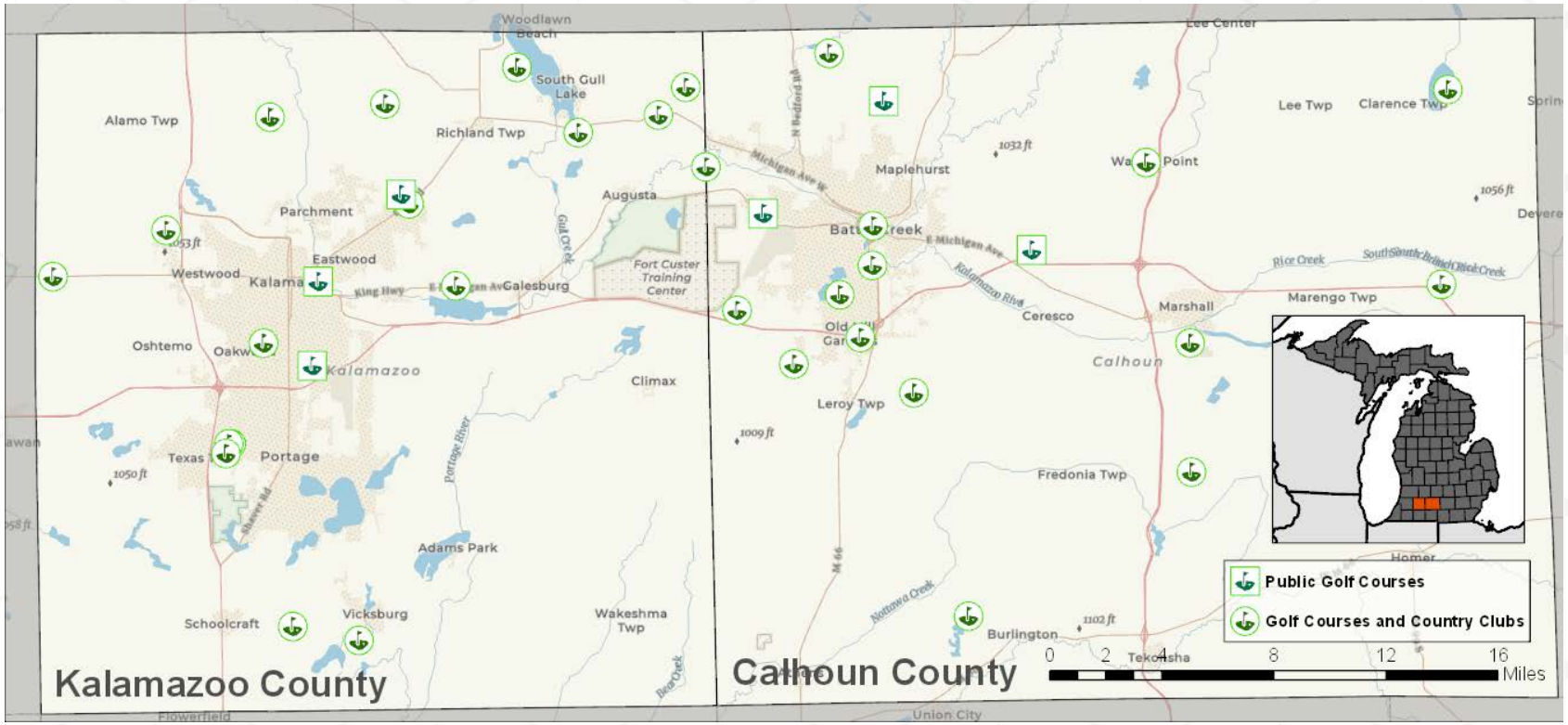
The data in Table 4 are from the play and stay database provide by Gull Lake View. As expected, at almost 96%, most of the patrons staying onsite were from outside of the study region. Only slightly more than 2% were from Kalamazoo and Calhoun counties and slightly less than 2% of these data were unusable.

Table 4

	Visitors	Share / All
ROW	8,130	56.53%
ROM	5,663	39.37%
Local	309	2.15%
Questionable	203	1.41%
Omitted	78	0.54%
Total visitors	14,383	100.00%

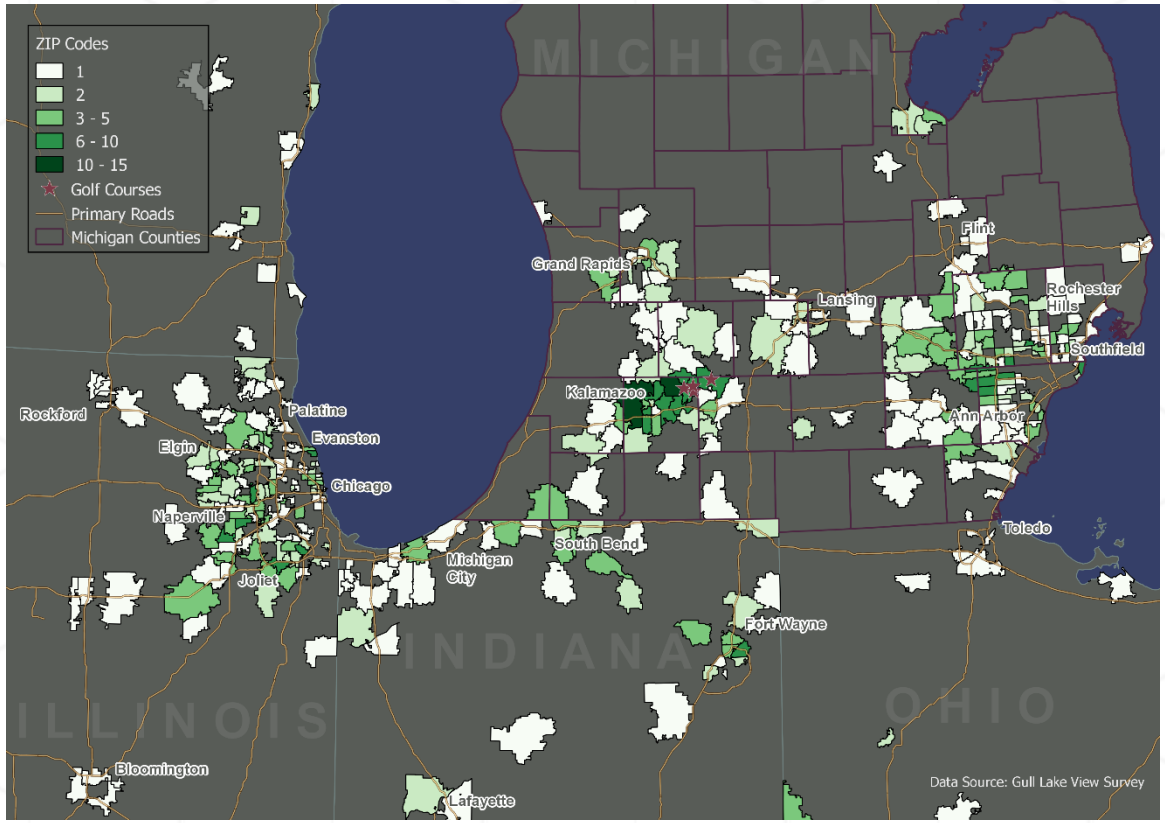
SURVEY RESPONSES OF GULL LAKE VIEW PATRONS

Locations of Golf Courses and Country Clubs in Kalamazoo and Calhoun Counties (NAICS: 71391)



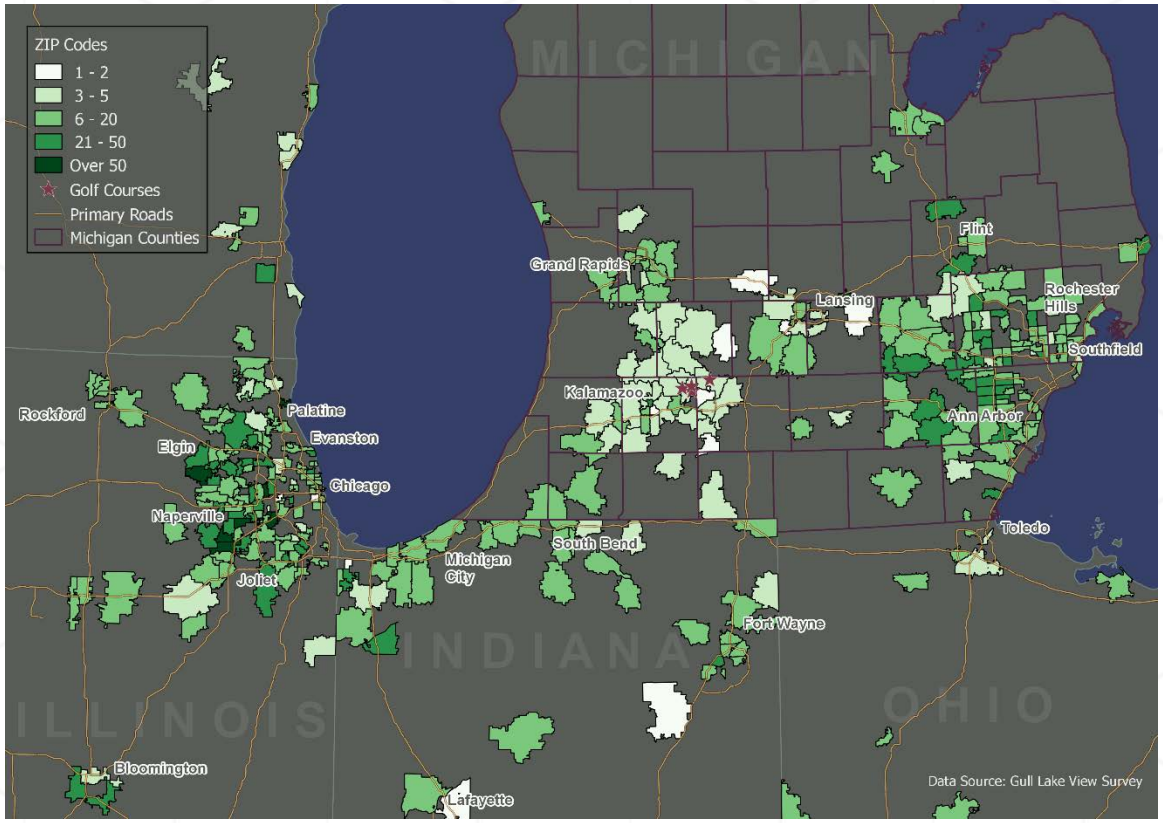
As shown in the map, Kalamazoo and Calhoun counties have a significant number of golf courses from which patron's may choose to visit. The concern is that local residents utilizing the local courses do not change the wealth curve in the study region, thus invoking the substitution effect.

From Where Did Survey Responders Come?



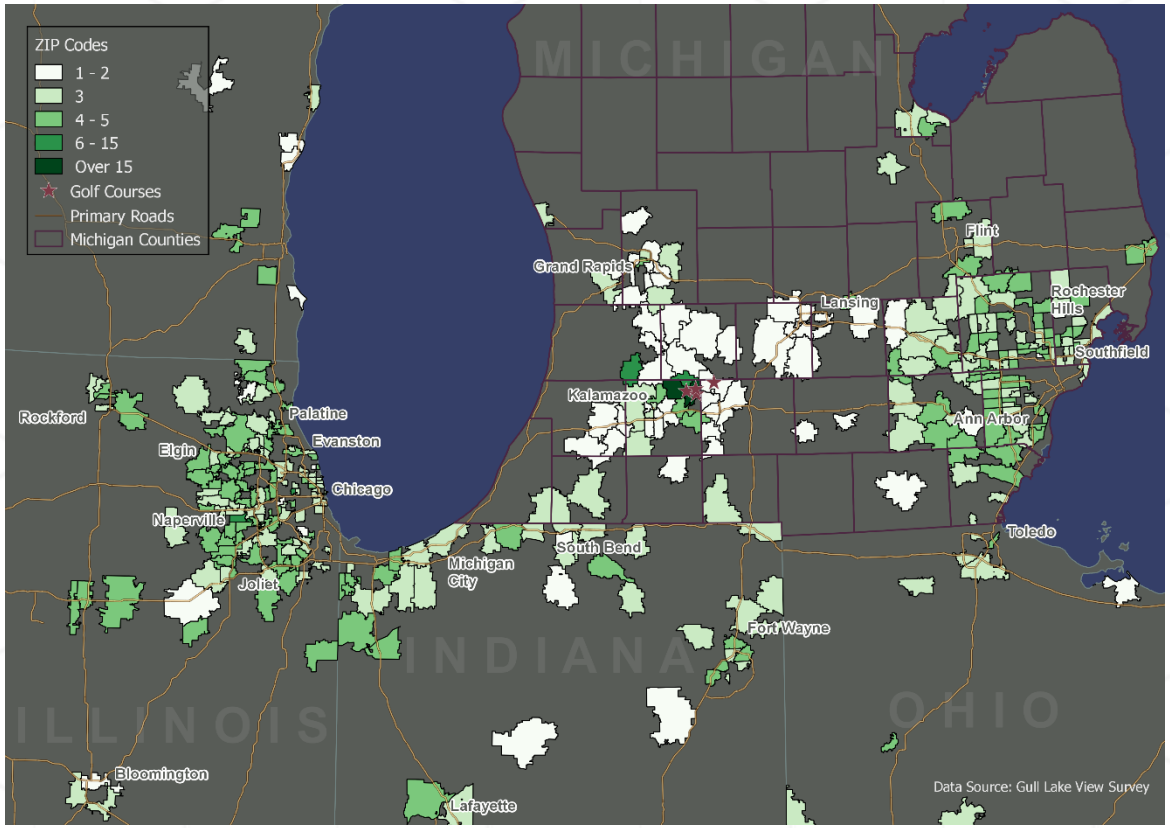
Although a significant number of survey responses were from the study area, several responders were from west Michigan, southeast Michigan, Ohio, Indiana, and Illinois. While this map focuses on the primary geographic locations of responses, there were responders from across the United States and internationally. (Note that dollars and patrons imported into the region are treated equally, whether from the rest of Michigan, the rest of the United States, or internationally.)

Survey Responses by Size of Party/Group



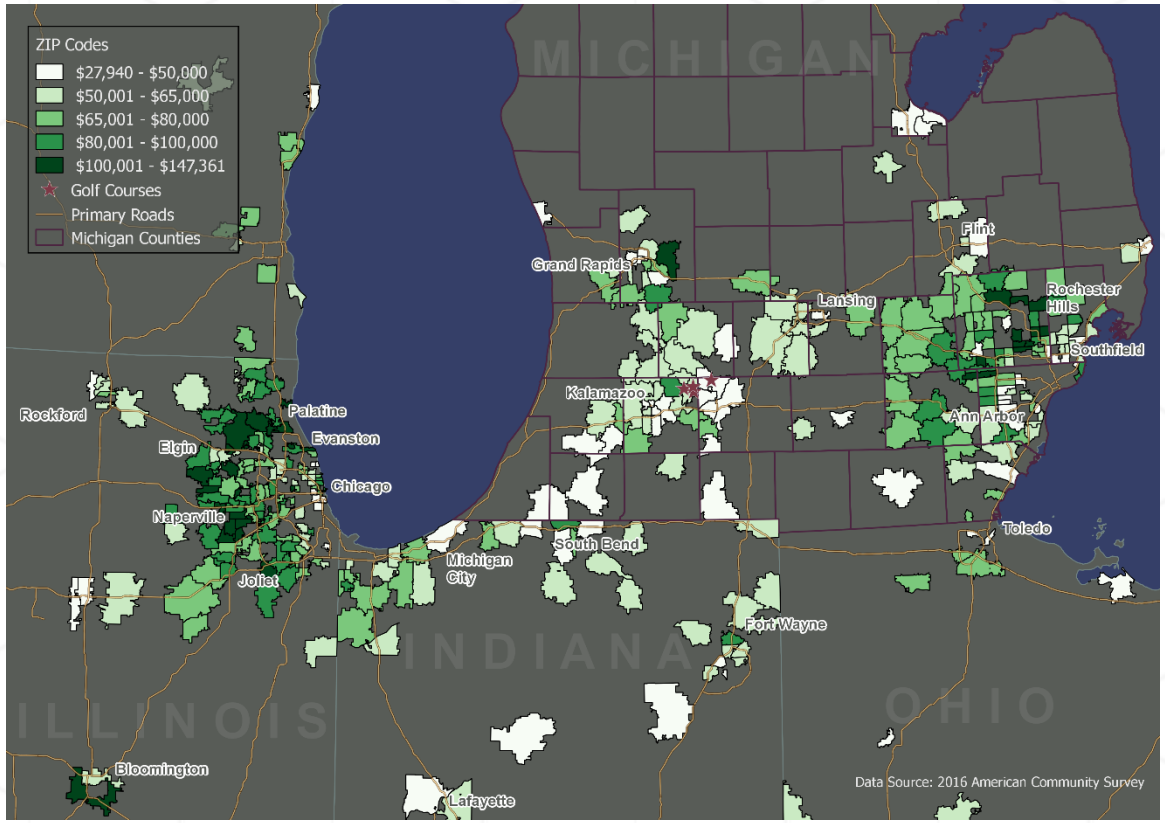
The map shows the spatial distribution of the number of patrons in the respondent's party or group. Although the mean party size was nearly 16, there was no clear finding in the relationship between distance and party size. It is interesting to note that parties from Indiana and southeast Michigan are more consistent in size than were the west Michigan and Illinois parties.

Distance Didn’t Seem to Affect Length of Stay



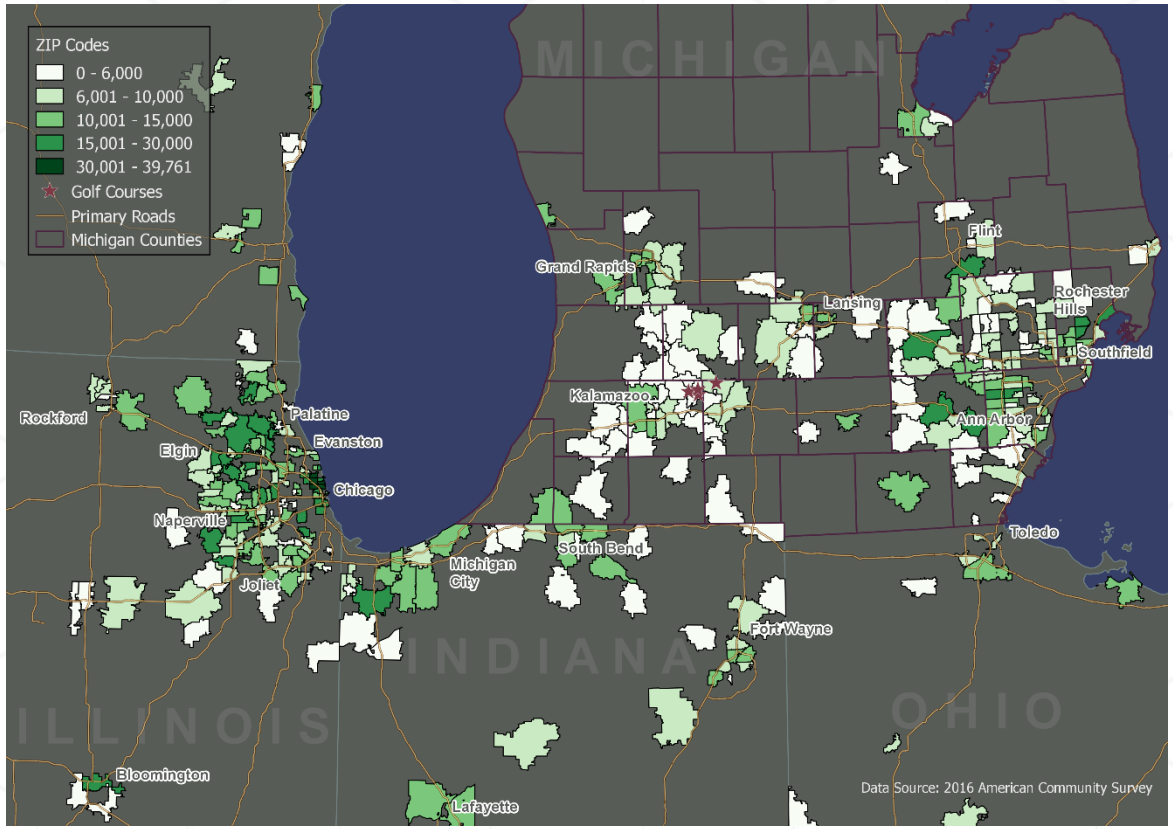
The unweighted average length of stay per party/group was about 3.3 days. The weighted (sum of days per party multiplied by the number of people in the party divided by the total number of patrons) was about 3.75. The map, however, shows that length of stay was consistently distributed across the region and was between 3 and 4 days. Not surprisingly, the more “local” stays, those from west Michigan, tended to be shorter, with some even being “day trippers” and staying only for the day.

Median Household Income of Resort Patrons



This map shows median (or middle) incomes in the home zip codes for patrons visiting Gull Lake View during the study period. These data differ from some of the earlier-reported data, as location does appear to matter. Areas west of Chicago and north of Detroit tended to have higher incomes than those in west Michigan, Indiana, and Ohio.

West Chicago and Northwest Indiana are Home to Highest Number of Resort Patrons



The map depicts the number (or density) of workers per zip code where Resort patrons reside. These are workers employed full time and year-round. While there are some similarities to household income data, the densest zip codes are in the urban core of Chicago, with substantial but lower densities in the west Chicago and northern Detroit suburbs. Interestingly, the northwest Indiana suburbs also have relatively high densities.

ECONOMIC OUTCOME DEFINITIONS

Economic Outcome Definitions

As with most economic impact studies, this study focuses on four main economic outcome variables:

- Jobs created or retained
- Change in gross domestic product (GDP)
- Change in income
- Change in output

The REMI model generates these outcomes for the national economy using the survey responses as inputs. Each of five variables are described in this section.

Jobs Created or Retained

- The estimated number of jobs created or retained by patrons expenditures, both on property as well as off site.
- These jobs are simply "jobs" as counted by the U.S. Bureau of Economic Analysis (BEA) and can be either full- or part-time positions.
- These jobs are likely distributed across a number of industries.
- In any given industry, a "job" may represent a summation of positions across a number of industries in which each industry has less than one complete position.
  - The impact study may report one "job" but the spending patterns in the study may generate positions in three industries; however, each industry may require only one-third of a person.
  - In this case, the three industries that employ one-third of a person each to meet demand would sum to one "job" in the REMI model.

Employment is comprised of three elements:

- Direct – The employment created by actual investment, growth, or change
- Indirect – Employment created by the need of the new firm to purchase goods and services, essentially the local supply chain
- Induced – The household that supplies goods and services to the workers in the prior two elements. Examples include education, dry cleaners, accountants, gas stations, lawyers, and grocers.

Economic Outcome Definitions

Gross Domestic Product

Gross domestic product (GDP) is an economic measure of the value of goods and services produced within the United States. It is the broadest measure of economic activity within a region or country. It consists of compensation of employees, taxes on production and imports, less subsidies, and gross operating surplus. It does not include intermediate inputs, so it is a measure of the value labor and capital contribute to production.

Gross Output

Gross output includes both GDP and expenditures on intermediate inputs. In that way, it is considered double counting but is an essential statistical tool to understand the interrelationships between industries. Gross output is principally a measure of an industry's sales or receipts. For the purposes of the REMI model, the sales and receipts are aggregated at the national level.

Income

National income is the goods and services produced by citizens and residents of the United States (i.e., gross national product) minus the consumption of fixed capital (i.e., depreciation).

W.E. UPJOHN INSTITUTE FOR EMPLOYMENT RESEARCH

About the Upjohn Institute

The W.E. Upjohn Institute for Employment Research is an activity of the W.E. Upjohn Unemployment Trustee Corporation, which was established in 1932 to address issues of unemployment during the Great Depression. The Upjohn Institute is a private, nonprofit, nonpartisan, independent research organization devoted to investigating the causes and effects of unemployment, to identifying feasible methods of insuring against unemployment, and to devising ways and means of alleviating the distress and hardship caused by unemployment. Upjohn's broad objectives are to: (1) link scholarship and experimentation with issues of public and private employment and unemployment policy; (2) bring new knowledge to the attention of policy makers and decision makers; and (3) make knowledge and scholarship relevant and useful in their applications to the solutions of employment and unemployment problems.

The Upjohn team thanks Gull Lake View for collecting patron data and for providing detailed data on revenues and patron home zip codes. Upjohn particularly wishes to acknowledge Jon Scott, Paul Perks, and Tim Maclam for their time and patience throughout this project. Upjohn Institute professionals contributing to this report are Jim Robey, Ph.D., Director, Regional Economic and Planning Services; Stephen Biddle, Katie Bolter, Marie Holler, Brian Pittelko, and Claudette Robey. For additional information or questions, contact Jim Robey at 269-385-0450 or jrobey@Upjohn.org.