Economic Scale and Dollar Exchanges in the Michigan Privately Owned Campground Industry
Michigan State University Agricultural Experiment Station and Cooperative Extension Service
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ECONOMIC SCALE AND DOLLAR EXCHANGES IN THE MICHIGAN PRIVATELY OWNED CAMPGROUND INDUSTRY
Some campgrounds feature facilities for the most fully-equipped vehicles with sites and equipment readied for an entire season.

This report represents one aspect of a three phase investigation into the economic scale and implications of the privately owned sector of the Michigan outdoor recreation industry. This research has been supported primarily by an allocation of Hatch Act Rural Development Funds through the Michigan State University Agricultural Experiment Station.

In addition to privately owned campgrounds, commercial horse enterprises and privately owned golf enterprises in Michigan are being studied. The planning unit of the Michigan State University Department of Park and Recreation Resources anticipates investigations into the economic opportunity of additional privately owned outdoor recreation facilities.

The objective of the total research project is to establish the economic worth of this industry to the rural areas of the state and to develop educational materials and programs for those currently operating or contemplating investment in private recreation in Michigan.

Primary resources being marketed in this manner consist of an available family labor supply and a rural land resource.

Dr. Lewis Moncrief
Associate Professor and
Director of Research and Planning Unit
Park and Recreation Resources
ECONOMIC SCALE AND DOLLAR EXCHANGES IN THE MICHIGAN PRIVATELY OWNED CAMPGROUND INDUSTRY

by Eugene F. Dice and Darsan Wang

SUMMARY

This study attempts to establish the economic stature of the privately owned campground industry in Michigan. One hundred enterprises were randomly chosen from a population of 226 Michigan private campgrounds with 30 or more sites. Two multiple regression models were applied to estimate the effects of several campground features and management skills on eight economic variables, such as occupancy rates, capital investments, annual operating expenditures, net returns, and basic camping fees.

The regression coefficients derived from one model were then used to estimate the economic variables for those campgrounds not sampled. The combination of the actual data from the sample campgrounds and the estimated figures for the rest of the private campgrounds was computed by county. A three-dimensional computer mapping technique (SYMVU) was applied to produce graphic presentations of selected variables of the Michigan private campground economy.

The Michigan private campground industry represents a total of $26.5 million in capital investment and $10 million (1972 data) in annual operating expenditures and camping fees. Based on this research it can be concluded that: (1) the privately owned campground industry in Michigan is not oriented toward natural resource activity like the publicly owned campgrounds but rather toward other human needs; (2) the economies of this industry are highly dependent upon such managerial decisions as fee charges, marketing as reflected by occupancy rates, and sales of supplemental goods and services; (3) the industry is highly affected by the primary traffic flow systems and population centers; and (4) the financial success of a campground is not entirely a function of the location, site, and size because production and marketing skills of management also play significant roles in business success.

PURPOSE

In 1971, Michigan State researchers made an introductory study to describe the rapidly-growing privately owned campgrounds in Michigan (1). Between 1954 and 1972, the number of campsites in these campgrounds increased from 342 to 18,921 (2). The cost of and income from this industry are expected to present a similar growth pattern, yet the significance of this growing industry has largely escaped consideration in the past. The size of the industry together with its space consuming nature testifies that it is an economic use of vast acreages of otherwise non-producing privately owned lands which provides a market opportunity for both marginal lands and marginal family labor.

The object of this research is to make an initial measurement of the industry's economic stature and to evaluate it's economic contribution to the rural community. Two measurements of the dollar flow originating in this industry were chosen: (1)
the dollars expended by the industry in development and in annual payments for operational costs, (2) the expenditures made by consumers while camping. Thus if measurement could be established for each of these on a sampling basis, the two could be summed to provide a useful total measurement of the dollar flow accruing to the community because of the industry. No attempt to trace second and third turnovers of the expended dollars was anticipated.

**STUDY AREA**

The study area includes the entire state which was divided into three regions to evaluate regional differences. The entire Upper Peninsula was given the designation of Region A, the northern half of the Lower Peninsula, Region B and the southern half of the lower peninsula, Region C. The Upper Peninsula differs from other areas of the state in that it is very lightly populated, has extensive natural attractions, and particularly in reference to camping, is influenced by major east-west travel arteries serving non-native users.

The northern Lower Peninsula is similar to the Upper Peninsula but lacks the east-west travel pattern and is more accessible to the lower Michigan population. The southern Lower Peninsula has fewer natural resource attractions and more extensive agriculture, industry and population than the other two areas. As a region of privately owned campgrounds, Region C draws heavily on the vast population as a market resource and has high patronage from the states directly south. The camping function here is significantly different from the more northern campgrounds.

**PROCEDURE**

**Sampling Procedures**

The Michigan Department of Public Health is the regulatory agency charged with the responsibility of inspecting and licensing campgrounds in the state. In February 1972, its files showed a listing of 346 privately owned, licensed campgrounds and 80 approved applications for construction. These records provided a population, exclusive of group and youth camps, from which a sample could be drawn.

Campgrounds with fewer than 30 sites were excluded from the study because they were not expected to generate enough business volume. Therefore, 226 campgrounds with 30 or more sites were left for the study.

The decision was then made to sample 100 campgrounds and 1000 users. Using the simple random sampling method, the needed 100 campgrounds were drawn and 1004 user units within these campgrounds were interviewed.

Interview in progress as MSU graduate student visits with camper family.
Making a comparison of the regional distribution of both the population of 226 campgrounds and the 100 in the sample proved the final sample was representative. The variances within the three regions ranged from 2% and 4.6%. This meant that none of the three regions had a disproportionate number of samples in relation to its actual number of campgrounds. Computer analysis showed that the geographic centers of both the total industry and the sample were in the same county (6). The following chart shows the close relationship between the campground population and sample, as indicated by the variable of number of sites in the campgrounds.

These tests sufficiently establish that the sample was representative of the population, and therefore warranted its use to portray the total industry.

Field Interviews

Two different interview instruments were designed and applied as interviewers went from campground to campground. The first was a management questionnaire used by two researchers to interview the manager or owner. The managers were asked to recall or verify certain annual expenditures and those made in developing the campground. Selected income and expense questions were also included.

The second instrument was designed for customers in the campground. The users were primarily questioned about spending habits related to the camping experience and reasons for camping rather than about social and economic status and educational attainment.

In each interview type (owner/manager and customer) additional information was sought. In the case of owner/managers, managerial function and skills were examined, and for the users an examination of certain psychological reasons for camping were included in the questions. These data are treated in separate reports and do not appear in this economic report (2, 3).

The Regression Models

The models are basically multiple regression models and are designed to test whether each of the campground economic factors is a function of several campground features, goods and services, and management skills.

The eight dependent variables representing campground economies are: (1) occupancy rate during weekends; (2) occupancy rate during holidays; (3) development investment; (4) construction expenditures; (5) equipment expenditures; (6) annual operating expenditures; (7) returns after cash costs and interest payment; (8) basic camping fees.

Two sets of independent variables related to campground features were tested against the dependent variables. (1) Region and (2) Number of campsites were used in testing the null hypothesis for Model I:

The location and size of Michigan private campgrounds do not exert a significant influence on selected campground economic factors.

Model I is:

\[
Y_i = \alpha + \beta_1 X_1 + \beta_2 X_2 + \mu_3 X_3 + \beta_4 X_4 + \mu_5 X_5^2 + \epsilon
\]

- \(Y_i\) = the dependent variables to be estimated.
- \(X_1\) = Occupancy rate during weekends
- \(X_2\) = Occupancy rate during holidays
- \(X_3\) = Development investment
- \(X_4\) = Construction expenditures
- \(X_5\) = Equipment expenditures
- \(X_6\) = Annual operating expenditures
- \(X_7\) = Returns and interest payment
- \(X_8\) = Basic camping fees
- \(\alpha\) = the \(Y\) intercept
- \(\beta\) = the regression coefficient
- \(\epsilon\) = error
- \(X_1 = 1\) if the campground is located in Region B, 0 if not;
- \(X_2 = 1\) if the campground is located in Region A, 0 if not;
- \(X_3 = \) Number of campsites in the individual campground
- \(X_4^2 = \) Number of campsites in quadratic function

*(Neil Greenfield, Steve Brown, and Kevin Green, Masters Students, Park and Recreation Resources; and Darsan Wang, Ph.D. Student, Resource Development, Michigan State University)*
This model was intended to expand the data derived from 100 sample campgrounds to the total population.

Additional independent variables on campground features, goods and services, and management skills were introduced for testing the null hypothesis of Model II:

The location, size, type, campground facilities, services, recreation activities, and management skills do not exert a significant influence upon selected campground economic factors.

Model II is basically the same as Model I except more independent variables were added:

\[ Y_j = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + \epsilon \]

\[ X_1 = 1 \text{ if the campground is location, type}, \]
\[ X_2 = 1 \text{ if the campground is size, destination type}, \]
\[ X_3 = 1 \text{ if the campground is size, overnight type}, \]
\[ X_4 = \text{Campground facility score} \]
\[ X_5 = \text{Campground service score} \]
\[ X_6 = \text{Campground recreation activity score} \]
\[ X_7 = \text{Score of management skills} \]

This second model was intended to explore possible effects of more factors on the economic variables.

In both models, the quadratic function of the campground size is added to allow non-linear relationships between the campground size and the campground economic variables.

An "ordinary least squares" computer program (5) was used for the regression models. It may be used to estimate relationships between a dependent variable and a set of independent variables and is, therefore, suitable for our purpose.

The confidence level specified for the analyses was set at 0.95. The null hypothesis is rejected if there is no relationship between each dependent variable and the independent variables if the confidence level exceeds 0.95. This constitutes a statistically significant relationship between Michigan private campground economy and the variables tested in the model.

After the exclusion of nine campgrounds in the sample due to large residuals in the preliminary runs, 91 campgrounds were left in the analyses. Therefore, the critical F value for Model I (4 independent variables) is 2.49 (.95 F 4.86), and for Model II (10 independent variables) it is 1.95 (.95 F 10.80). The F values on each dependent variable in the regression models are listed as follows:

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Model I</th>
<th>Model II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupancy rate during weekends</td>
<td>3.4810</td>
<td>2.2686</td>
</tr>
<tr>
<td>Occupancy rate during holidays</td>
<td>3.9375</td>
<td>2.0960</td>
</tr>
<tr>
<td>Development investment</td>
<td>7.7362</td>
<td>4.7088</td>
</tr>
<tr>
<td>Construction expenditures</td>
<td>2.0030*</td>
<td>2.2960</td>
</tr>
<tr>
<td>Equipment expenditures</td>
<td>7.8285</td>
<td>2.2296</td>
</tr>
<tr>
<td>Annual operating expenditures</td>
<td>17.0537</td>
<td>8.5391</td>
</tr>
<tr>
<td>Returns and interest payment</td>
<td>5.9489</td>
<td>3.3644</td>
</tr>
<tr>
<td>Basic camping fees</td>
<td>5.0210</td>
<td>5.6288</td>
</tr>
</tbody>
</table>

In all but one case (the asterisk in the above table) the F values exceed the critical values.

Based on the results from the tests, the following conclusions can be made:

For Model I, the null hypothesis was rejected for seven dependent variables. It was concluded that the location and size of Michigan private campgrounds do exert a significant influence on occupancy rates, development investment, equipment expenditures, annual operating expenditures, returns and interest payment, and basic camping fees; but the location and size do not exert a significant influence on the construction expenditures in the sample.

For Model II, the null hypothesis was rejected for all dependent variables. It was concluded that the location, size, type, campground facilities, services, recreation activities, and management skills significantly influence eight selected campground economic factors.

Computer Mapping

The first regression model obtained a series of constants and regression coefficients to estimate the dependent variables from the independent variables of location and size. Thus, estimates can be made with statistical validity for those campgrounds not used in the sample. In other words, for any private campground in Michigan, the occupancy rates, development investment, etc. (except for construction expenditures) can be predicted from its location (by region) and size (by the number of campsites). From the list provided by the Michigan Department of Public Health, the location and size of all the licensed private campgrounds are known. A simple computer program was able to estimate the economic factors of any Michigan private campground based on such information.

Each county in the state has a total value for eight economic dependent variables. This was derived from the combination of the actual data of the campgrounds investigated and the estimated values from the regression model for those campgrounds not in the sample. Nineteen counties have

\(^*\)The important statistics of Model I are: 2.000 < F < 17.09; 7 out of 8 dependent variables have SIG < 0.05; 0.05 < R² < 0.44.
no campgrounds with 30 or more campsites and are considered legitimate voids on the computer map. A few counties have only one campground each with 30 or more campsites. In such cases, an estimated figure was used instead of the actual figure even if this campground was investigated. The actual data may be an extreme case which could distort the picture; revealing the data could identify the owner.

Average figures were used for the occupancy rates and the basic camping fees. The other information on investments and the annual costs utilized total values.

SYMVU computer mapping technique has been developed by the Laboratory for Computer Graphics, Graduate School of Design, Harvard University (4, 7). Its product is a three-dimensional graphic which shows the heights of geographic points on a topography map. Outside the geography field, this method can be applied to illustrate the distribution of other values, such as dollars. For our purpose, the distribution of economic scales and dollar exchanges in the Michigan privately owned campground industry can be so mapped.

Each of Michigan's 83 counties has values for different economic variables, which in the SYMVU maps, are shown as heights in inches through the use of a Calcomp plotter. For example, Fig. 1 is a choropleth map of the number of campsites by county.

The viewer sees Michigan from a point Southwest of the state (roughly west of Chicago), looking downward at a 40° angle. Therefore, on the left-hand side of the map, the low hills represent the limited numbers of campsites in the private campgrounds in Region A (Upper Peninsula). In the case of a “plain,” it shows there are no campgrounds with 30 or more campsites for that county.

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The peak in the middle of the map is the highest number of campsites by county (Cheboygan Co.). The height on the map for Cheboygan Co. is 2.3 in., which indicates an equivalent of 1,133 campsites in that county. The numbers of campsites in other counties are measured by the same scale at the upper right corner of the map.

There are more campsites in each county in the Lower Peninsula than in the Upper Peninsula. The southern half of the lower peninsula (Region C) has more campsites than the northern half (Region B). The top ten counties with regard to the number of campsites are as follows:

- Cheboygan 1,133
- Branch 868
- Allegan 858
- Lenawee 755
- Mecosta 732
- Jackson 701
- Kent 581
- Mason 531
- Crawford 525
- Leelanau 516

With this SYMVU map one can grasp a visual impression of the whole state through a glance.

RESULTS

Development Investments

The following table portrays the development investment estimates of the campgrounds with more than 30 sites.

| Capital Investment | $26,465,730 |
| Paid Labor        | 4,269,140   |
| Purchased Construction Material | 4,056,858 |
| Equipment Purchases | 1,431,506 |

Figures for labor, materials, and equipment should not be expected to add up to the estimated capital investment for several reasons: Both land and buildings held in ownership by many current operators prior to going into the campground business have been converted to campground usage. While current value of land can be rather easily estimated by most, not many people can accurately estimate the residual value of buildings later converted to suit the needs of the campground.

In Model I, the dependent variable of Development Investment has: $F = 7.7262; SIG. < 0.0005; $F = 0.2644; Standard Error of Estimate = $92,036.
Likewise, a variety of equipment available before development of the campgrounds has become useful to the campground operation. Furthermore, some difficulty is encountered when an estimate of land value encompasses both the land directly associated with the developed campground area and other owned but undeveloped land not utilized directly by the campground.

There are two reasons for establishing both total investment values and values of labor, materials, and equipment. The first is to provide baseline data indicating economic scale of the industry which is achieved by the estimated capital investment. The second is to establish information relative to the expenditures made by the industry within the separate communities which, in turn, accrue to the income of various skills and trades within those communities.

The following is a list of the top 10 counties in development investment estimates:

<table>
<thead>
<tr>
<th>County</th>
<th>Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Branch</td>
<td>$1,537,000</td>
</tr>
<tr>
<td>Mecosta</td>
<td>$1,333,000</td>
</tr>
<tr>
<td>Allegan</td>
<td>$1,092,000</td>
</tr>
<tr>
<td>Jackson</td>
<td>$1,028,000</td>
</tr>
<tr>
<td>Huron</td>
<td>$913,000</td>
</tr>
<tr>
<td>Cheboygan</td>
<td>$797,000</td>
</tr>
<tr>
<td>Lenawee</td>
<td>$796,000</td>
</tr>
<tr>
<td>Oakland</td>
<td>$725,000</td>
</tr>
<tr>
<td>Kent</td>
<td>$723,000</td>
</tr>
<tr>
<td>Lake</td>
<td>$697,000</td>
</tr>
</tbody>
</table>

Fig. 2 is a SYMVU map for the $26.5 million in development investment. The greatest investment occurs in Branch Co. with $1 1/2 million in total private campground investment. Mecosta, Allegan, and Jackson Co’s. all exceed $1 million. The majority of the counties have less than $500,000. Each also has some smaller campgrounds not shown in these data.

Annual Operating Expenditures

The second measure of the dollar exchange in this industry in the rural community is derived from the annual expenditures for various goods and services to sustain the operation of the micro units. Cost items for the industry are income to the supporting community. These data, as portrayed in the following table (2), provide basic information on the scale of these expenditures in the state. These data indicate that the industry pays more than $2 1/3 million annually to providers of goods and services.

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplies for resale</td>
<td>$480,976</td>
</tr>
<tr>
<td>Interest payments</td>
<td>394,778</td>
</tr>
<tr>
<td>Supplies for operating</td>
<td>791,768</td>
</tr>
<tr>
<td>Payrolls6</td>
<td>451,322</td>
</tr>
<tr>
<td>Advertising</td>
<td>131,283</td>
</tr>
<tr>
<td>Equipment repair</td>
<td>126,424</td>
</tr>
<tr>
<td>Totals</td>
<td>$2,376,551</td>
</tr>
</tbody>
</table>

Among all the expenditures examined, the payroll is the most difficult to document. Not only does a great majority of this industry operate basically on unpaid family labor, numerous other labor providing devices are used. Among these are the gift of space rentals for one or more individuals who then perform some task of campground operation and temporary work done by friends of the children as a favor or to obtain some privilege. The end result is that the actual value of the total labor input is discussed with a very low level of confidence.

The following lists the 10 counties having the largest annual operating expenditures by privately owned campgrounds:

<table>
<thead>
<tr>
<th>County</th>
<th>Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Branch</td>
<td>$139,900</td>
</tr>
<tr>
<td>Crawford</td>
<td>97,800</td>
</tr>
<tr>
<td>Mecosta</td>
<td>83,000</td>
</tr>
<tr>
<td>Allegan</td>
<td>81,900</td>
</tr>
<tr>
<td>Kent</td>
<td>79,200</td>
</tr>
<tr>
<td>Cheboygan</td>
<td>76,900</td>
</tr>
<tr>
<td>Livingston</td>
<td>72,200</td>
</tr>
<tr>
<td>Jackson</td>
<td>70,500</td>
</tr>
<tr>
<td>Huron</td>
<td>63,800</td>
</tr>
<tr>
<td>Oakland</td>
<td>62,600</td>
</tr>
</tbody>
</table>

Fig. 3 is a SYMVU map for the $2.4 million in annual operating expenditures. The pattern is very similar to that of development investment. Branch Co. with an annual operating expenditure of $139,000 is first. Most counties expend less than $500,000.

---

6In Model 1, the dependent variable of Annual Operating Expenditures has
F = 17.0937, SIG< 0.0005, P = 0.4429, Standard Error of Estimate = $8.520.
6Only actual cash payments, not figuring unpaid labor inputs.
$30,000 a year. Ten counties exceed $60,000 annually; of these, eight are located in Region C, two (Cheboygan and Crawford Co.'s.) are in Region B, and none of the 10 are located in Region A.

Management Skills

Although seven out of eight economic variables in Model I showed significant effects of the location and size of the campground, the coefficients of determination ($R^2$) do not exceed 0.4429. Thus, location and size can explain no more than 45% of the variances in the economic variables. Usually, it explains only between 10 and 30%.

Attempts were made in Model II to include more independent variables to better explain the economics of the industry. These variables are: type (overnight, destination, or commuter), facilities, services, and recreation activities, as well as management skills.

After the model expansion, all analyses were able to exceed the significance level of 0.05, and the coefficients of determination have been improved up to 0.5163 with none below 0.2. This indicates that with the exception of location and size, these additional variables are important to Michigan private campgrounds.

Eighteen items were used on a management skills checklist: (1) contact with customers, (2) tidiness of grounds, (3) office efficiency, (4) evidence of quality, (5) variety of activities, (6) preparation of work crew, (7) clear division of jobs, (8) good traffic patterns, (9) water and plumbing working, (10) campers kept happy, (11) roadside direction easily followed, (12) type of records kept, (13) different prices realized, (14) campers' origins realized, (15) campers' activities realized, (16) occupancy rates known, (17) total investment known, and (18) building costs known.

For each item, a scale of from 1 to 6 was established. The highest score achieved was 93, out of a maximum possible score of 108.

All regression coefficients of the management scores were positive. While most regression coefficients did not reach a level of significance as shown earlier, the model was improved after additional variables of management skills, etc. were introduced. The evidences are sufficient to establish that management skills have an additional effect on the internal economies of the campgrounds.

Expenditures by Campground Users

Owner expenditures represent one of the two lanes of dollar flow from the campground industry into the community. The second lane consists of expenditures made by campground users. However, some of purchases made by users do not accrue to the community or state in which they are camping. Therefore, items like cost of camping rig and equipment, gasoline, food purchased ahead of time and depreciation on rig, auto, and equipment are excluded from the presentation of camping costs. Nevertheless, 77% of the 1,004 family camping units interviewed were residents of Michigan and most of their expenditures for the above items probably accrued to entrepreneurs in this state.

A method of simple averaging was used to provide a picture of the nature of user purchases in privately owned campgrounds.

Both user derived data and campground owner data were averaged as a base for determining the probable economic inputs by all users of privately owned, Michigan campgrounds.

The basic model for averaging was based on a single campground which incorporates the state-wide averages. Actual number of sites in this
Interesting design for campers featuring room dividers inside the tent.

campground is 87. The interviewed owner/managers estimated their occupancy at 45% over a 100-day season. However, use of campgrounds in winter is accounted for by adding 10 use-days at the same occupancy rate. Therefore, the campground had the equivalent of 47 filled campsites per day for a period of 110 days, a total of 5,170 use-days.

The average fee charged in the sample during the season for modern sites was $3.25 per day, leading to a gross income of $16,802.50 from site rentals for the "season." Multiplied by 226 campgrounds with 30 or more sites, this provides a total of $3,797,365.00 gross rental fees per season for the industry. This is the first figure in evaluating customer contribution to the dollar flow.

The family camping units interviewed estimated that they spent an average of $2.24 per day on "other" purchases in the campground. This figure multiplied by 5,170 use-days yields an income of $11,580.00 for the average campground used as the model and $2,617,260.00 for the 226 campgrounds per year. This is the second component of the users' contribution to the dollar flow.

Each family camping unit interviewed was asked to estimate how many days they camped at the campground, how often they ate away from the campground as a unit each week, and how much they typically spent for such meals. The results showed that 3/4ths of all camping units eat out during the camping experience at an average of 1.45 meals a week. The average camping stay is approximately 2 weeks and family meals cost an average of $7.00 each.

For the season, an average of 641 family meals were eaten away from the campground at an average price of $7.00, the equivalent of $4,587.00. Calculated for the entire 226 campgrounds with 30 or more sites, this results in a seasonal user expenditure of $1,014,062.00 for out-of-camp meals for the entire industry (Table 1). More than $7 million are accounted for by averaging the estimated data provided by interviewees. No estimates of value were made for food and beverages brought into the campground from home.

Table 1. Scale of certain expenditures by campground users in privately owned campgrounds in Michigan, 1972

<table>
<thead>
<tr>
<th>Type of Expense</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site rental</td>
<td>$3,797,365.00</td>
</tr>
<tr>
<td>Other in-camp expense</td>
<td>2,617,260.00</td>
</tr>
<tr>
<td>Out-of-camp meals</td>
<td>1,014,062.00</td>
</tr>
<tr>
<td>Totals</td>
<td>$7,428,687.00</td>
</tr>
</tbody>
</table>

By similar averaging methods, the investments can be computed for camping vehicles and non-vehicle camping equipment plus the annual depreciation for both. The estimated average value of each vehicle was $2,400.00, and the estimated average investment in other non-vehicle camping equipment was $300.00. A total of 83,394 units results when the camping units per campground is multiplied by the number of campgrounds. Thus, more than $225 million can be accounted for with annual depreciation in excess of $33 million at 15%. 
A set of three measures of economic inputs to the community by the privately owned campground industry were derived by the above procedures. These data represent only the first transaction, and no attempt has been made to evaluate the impact of respending the same dollars in successive transactions (such as hours of work created for producers and processors) within the community. The three measures are given in Table 2 as an initial indicator of the dollar input into rural Michigan economies by this industry.

### Table 2. Three measurements of dollar exchange resulting from the privately owned campground industry in Michigan

<table>
<thead>
<tr>
<th>Factor</th>
<th>Amount</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated campground investment (1)</td>
<td>$26,465,730</td>
<td></td>
</tr>
<tr>
<td>Estimated annual cash campground expenditures (2)</td>
<td>2,376,551</td>
<td></td>
</tr>
<tr>
<td>Estimated user expenditures (3)</td>
<td>7,428,687</td>
<td>$36,270,968</td>
</tr>
</tbody>
</table>

This evaluation is based on the licensed campgrounds operated by the private sector as of February 1972. At the beginning of this study there were 346 privately owned, licensed campgrounds (including those with fewer than 30 sites) in operation, but construction permits had been issued by the Michigan Department of Public Health for 80 prospective campgrounds.

Additional construction permit applications probably continued to increase throughout the remainder of 1972. Significant increases in the number of sites per campground suggest that much greater dollar flow can be anticipated as the industry grows.

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The privately owned campground industry in Michigan, developing at a rapid rate, represents a significant contribution to the total recreation system as well as to the rural economy of the state. Much of this industry exists in the southern parts of the state. However, the total dollar input value is difficult to establish as a result of the numerous small units that make up the industry.

This research has been directed toward developing the first comprehensive dollar exchange data for the total industry. Both the owner/managers in the industry and their consumers, the campers, have contributed well-thought-out estimates of their campground-related investments and annual expenditures. The dollar investment in the industry currently is in excess of $30 million, which has been paid into the economies of Michigan's rural communities.

The annual direct payment of dollars into the same communities, in the form of operational costs and expanded development, exceeds $3 million. To this can be added more than $7 million paid by the consumers for rental of camping sites, campground activities, and other goods and services directly related to the camping experience.

Overall, the industry has not yet developed the sound business routines of maximizing production and marketing techniques. Most of the earlier campground businesses were not developed to maximize return on invested dollars but to market an idle land resource and an unemployed family labor supply. That early trade can be represented more as a host-guest relationship than a business-customer relationship. Recent entrants have begun to verbalize interest in maximizing competitive returns on investment, and this trend can be expected to grow in the future.
The consumer responses in this study emphasize the differing role that the campground experience represents to the modern camping family. It is looking more for modern convenience away from home than for the back to nature or wilderness experience. This fact is meaningful for both current owners and future developers. Increasingly, urban and suburban families use the modern facility campground in a commuting fashion, perhaps substituting the camp site for a summer home.

Pricing (fee) systems within the industry have been negatively influenced by the high quality but low fee state and federal campgrounds in Michigan. If fees were based on cost inputs in development and operation using both a depreciation schedule and charges for unpaid family labor, then higher fees in the privately owned campgrounds would prevail.

Most important for both the industry and the supporting rural communities is a changed attitude and greater emphasis on an imaginative marketing program. An individual camping site (lot) constructed at a cost of from $700 to $1400 is too often unused in the middle of the week and during the winter months. Current marketing methods (mostly advertising) are chiefly responses to what was perceived in past decades as the camping urge. The new marketing systems must be directed toward urging more families to camp and urging present and potential consumers to camp at times they ordinarily are thinking least about the experience.

The authors believe the current industry is serving those exhibiting a latent desire for the experience. In the meantime, numerous potential campers have not been stimulated to enjoy this experience. Marketing procedures, proven in other fields, can be applied in this field to expand use of facilities. Full economic potential of the industry will be realized only when those procedures are invoked.

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REFERENCES