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Michigan's Profit-Oriented Golf Industry
Michigan State University Agricultural Experiment Station and Cooperative Extension
Service
Research Report
Lewis W. Moncrief, John A. Scholtz, Park and Recreation Resources
Issued March 1977
16 pages
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# RESEARCH 

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FROM THE MICHIGAN STATE UNIVERSITY AGRICULTURAL EXPERIMENT STATION EAST LANSING

# Michigan's Profit-Oriented Golf Industry 

Lewis W. Moncrief and John A. Scholtz


# Michigan's Profit-Oriented Golf Industry 

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## PREFACE

This research report describes the private profitoriented golf industry as it was in 1972-1973. Although the data are several years old, this report is produced for two purposes. First, it provides benchmark data for an industry that has, heretofore, not been scientifically studied in Michigan. Second, the methodology is comprehensive in viewing the industry from both an economic and a management analysis standpoint.

This report should help potential investors, golf course managers, and the professional and business interests which serve this important recreation industry.

## PURPOSE

The number of private and municipal golf courses has increased rapidly in response to demand pressures created by the growing golfing population. The total golf industry in Michigan is comprised of 450 known facilities, of which over $50 \%$ have gone into active operation since 1960. Because of rapid growth of the industry, information is lacking which describes the industry as it presently exists in Michigan.

This study will specifically focus on that segment of the industry (approximately $65 \%$ ) which is privately owned and profit oriented. This group has been responsible for most of the industry's recent expansion.

The information presented here includes both a financial-economic profile and a management analysis aimed towards assisting current operators and potential investors. The specific objectives of this study are stated as follows:

1) A general assessment and description of the total golf industry as it exists in Michigan.
2) The development of a financial profile of the profit-oriented golf industry including analysis of investment, net present worth, competition, fixed and variable costs, advertising, accounting practices, fees, revenues, and net incomes.
3) Calculations of rates of return on investment to provide a look at the financial health of the industry.
4) A description of management characteristics and the identification of those management variables associated with the more successful golf courses.

## STUDY LIMITATIONS

Because this study focuses on privately owned and profit oriented golf enterprises, the following types of golf enterprises were excluded from the study:

1) All municipal and public courses operated by a unit of government.
2) Country clubs established by the membership for the primary purpose of pleasure and business entertainment and not for profit maximization.
3) Par 3 golf courses.
4) Driving ranges.
5) Miniature golf facilities.

## GENERAL CHARACTERISTICSMICHIGAN'S GOLF INDUSTRY

This study focuses exclusively on those enterprises whose orientation is one of profit maximization. However, valuable background information on the total golf course industry, obtained through an extensive inventory compilation, provides insight into how the golfing boom within recent years has manifested itself in Michigan.

Research produced a preliminary inventory list of 481 courses, of which 450 responded to mailings designed to gain basic operational data. Figure 1 shows the statewide distribution of the state's golf enterprises. Note the similarity of golf course concentration with respect to population densities in the state. This pattern is particularly evident in the heavily populated counties of the southeast Lower Peninsula.


Fig. 1. Distribution of Total Golf Enterprises in Michigan for 1972.

Size and scale of golf operations, on the basis of the number of holes provided, is a significant way to differentiate. Fifty percent of the total golf courses in Michigan are 18 hole facilities. Nine-hole courses comprise $40 \%$ of the population with Par 3 and 27-36 hole courses comprising the remaining $10 \%$.

Golf course season reflects the climatic temperament of Michigan. The severity of the winter season, characterized by long periods of low temperatures and substantial snowfall, inhibits golf enterprises from operating on a year-round basis. Those few operators whose facilities are open 12 months a year (approximately $10.5 \%$ ) offer many subsidiary services including indoor tennis, restaurant services, bar and others. The largest number of golf course operators reported that their enterprise was open for only 7 months during 1972. Table 1 summarizes the responses of the remaining golf course operators.

Table 1. Total months enterprise was open in 1972

| Total Months During Year | Number of <br> enterprises | Percent |
| :---: | :---: | ---: |
| 7 Months | 168 | 37.75 |
| 6 Months | 82 | 18.42 |
| 12 Months | 47 | 10.56 |
| 5 Months | 46 | 10.33 |
| 8 Months | 42 | 9.43 |
| 9 Months | 28 | 6.29 |
| 10 Months | 18 | 4.04 |
| 11 Months | 9 | 2.02 |
| 4 Months | 3 | 1.22 |
| 3 Months | 2 | .45 |
| TOTAL | 445 | 100.00 |

Sixty-five percent, or 290 of the total 450 enterprises in Michigan are private, profit oriented golf enterprises. In analyzing golf course locational patterns on the basis of profit orientation, findings indicate that an overwhelming percentage of profit-oriented operators $(80.8 \%)$ located their enterprises in the southern portion of the Lower Peninsula. Table 2 summarizes these findings.

Table 2. Regional Distribution of profit-oriented enterprises

| Region | Number of <br> enterprises | Percent of total <br> in state |
| :--- | :---: | :---: |
| Southern Lower Peninsula | 325 | 80.8 |
| Northern Lower Peninsula | 51 | 17.5 |
| Upper Peninsula | 5 | 1.7 |
| $\quad$ TOTAL | 291 | 100.0 |

## SAMPLING

## Techniques

A sample size of $70,24 \%$ of the 290 enterprises possible, was selected by the use of random sampling techniques. To insure the probability of a representative sampling of golf courses throughout the state, the survey population was grouped into four arbitrary regions as shown in Fig. 2. A sample was than drawn from each region based on the proportion of the total study population located in the region.


Figure 2. Distribution Sample Size 70.

Note the disproportionate number of 18 sampled in Region 2, which represents $25 \%$ of the total sample. Although the region as a whole represents only $17.5 \%$ of the study population, a larger number was chosen to insure adequate frequency of responses in the data analysis for that region.

Golf courses in the Upper Peninsula were excluded from the study sample because of their insignificant numbers ( $1.3 \%$ of the study population) and the prohibitive transportation costs involved in researching them. Region 2 includes courses in the northern Lower Peninsula which exhibit similar characteristics to those found in the Upper Peninsula. It was felt that the disproportionate sample drawn from Region 2 would insure an adequate frequency of response from rurally located courses.

## Study Design

The survey instrument was designed with the dual purpose of gathering both financial and management data. The personal interview method was used; it provided the advantages of increased accuracy and rate of response over mailed questionnaires. Interviews were conducted during the summer of 1973 and reflect financial data for 1972 .

## Limitations

Several problems were encountered in attempting to collect complete information necessary for an accurate analysis of the profit-oriented golf industry. (1) Many managers were suspicious and reluctant to divulge financial information. (2) Inconsistencies in the financial information provided difficulties in data analysis. (3) Research is of a short term nature reflecting the state of the industry at only one point in time.

## FINANCIAL PROFILE

## Design

Professionally recognized golf course architects, whose expertise allows them to incorporate golf features unique to a specific location into the design, were utilized by only 32 of the 70 enterprises sampled. Fifty-eight percent of the 18 -hole courses were found to be designed by golf course architects in comparison to a surprisingly low $38 \%$ of the 9 -hole facilities. This data suggests that the 18 -hole courses receive more professional attention in the planning stage, an important stage for operations involving high investments of a long-term nature.

## Greens Fees

Tables 3 and 4 provide summaries of both weekend and weekday greens fees charged for 18 holes of golf.

Green fees for an 18 -hole round of golf on a 9 -hole course were calculated by the operators as twice the price of a 9-hole round.

Table 3. Green fees-weekend

| Price | $\begin{gathered} \text { Region } 2 \\ \mathrm{~N}=18 \end{gathered}$ | $\begin{gathered} \text { Region 3A } \\ \mathbf{N}=19 \end{gathered}$ | $\begin{gathered} \text { Region 3B } \\ \mathrm{N}=33 \end{gathered}$ | $\begin{aligned} & \text { 9-Hole } \\ & \mathbf{N}=33 \end{aligned}$ | $\begin{gathered} \text { 18-Hole } \\ \mathrm{N}=36 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | \# \% | \# \% | \# \% | \# \% | \# \% |
| 3.00 | 15.6 | 633.3 | 26.1 | 618.8 | 38.3 |
| 3.01-4.00 | $6 \quad 33.3$ | 950.0 | $8 \quad 24.2$ | $10 \quad 31.2$ | 1233.3 |
| 4.01-5.00 | $10 \quad 56.5$ | 316.7 | 1545.5 | 1546.8 | $13 \quad 36.1$ |
| 5.0116 .00 | 00.0 | $0 \quad 0.0$ | $7 \quad 21.2$ | 00.0 | $7 \quad 19.5$ |
| 6.01-7.00 | 15.6 | $0 \quad 0.0$ | 00.0 | 13.2 | 00.0 |
| 7.01 | $0 \quad 0.0$ | $0 \quad 0.0$ | 10.0 | 00.0 | 12.8 |
| TOTAL | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Table 4. Green fees-weekday

| Price | $\begin{aligned} & \text { Region } 2 \\ & \mathrm{~N}=18 \end{aligned}$ | $\begin{gathered} \text { Region } 3 \mathbf{A} \\ \mathbf{N}=19 \end{gathered}$ | $\begin{gathered} \text { Region 3B } \\ \mathrm{N}=33 \end{gathered}$ | $\begin{aligned} & \text { 9-Hole } \\ & \mathbf{N}=33 \end{aligned}$ | $\begin{aligned} & \text { 18-Hole } \\ & \mathbf{N}=36 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | \# \% | \# \% | \# \% | \# \% | \# \% |
| 2.00 | 15.5 | 15.5 | 00.0 | 26.2 | 00.0 |
| 2.01-3.00 | 00.0 | 950.0 | $4 \quad 12.2$ | 515.7 | $8 \quad 22.2$ |
| 3.01-4.00 | 844.5 | 739.0 | $19 \quad 57.6$ | 1650.0 | 1747.2 |
| 4.01-5.00 | 844.5 | 15.5 | 824.2 | 825.0 | 925.0 |
| 5.01-6.00 | 15.5 | $0 \quad 0.0$ | 13.0 | 13.1 | 12.8 |
| 6.01 | $0 \quad 0.0$ | $0 \quad 0.0$ | 13.0 | 00.0 | 12.8 |
| TOTAL | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

In analyzing greens fees for weekend use, charges in the $\$ 4.01-\$ 5.00$ range represented the largest category. Region 3A is the exception, where $50 \%$ of the sampled enterprises reported fees in the range of \$3.01-\$4.00.

Only one enterprise in the combined regions of 2 and 3 A charged greater than $\$ 5.00$ for 18 -hole round of golf, in contrast to $25 \%$ of the operators sampled in Region 3B. Such a variance could be explained by the increased population density and greater per capita incomes of Region 3B contributing to an increased demand for the limited facilities in the area or perhaps because of product differentiation which permits charging of higher prices to attract a different clientele.

The level of greens fees, in combination with a number of demand variables, has a direct correlation with the revenues generated from course play. Survey questions were included to ascertain how individual operators determined what levels of greens fees to charge. By far, most of the sampled operators indicated their greens fees were determined by the price charged by the local competition. Evidence indicates that many operators are charging slightly less than their competition in an attempt to cut into their competition's market area. The second-largest category of responses entailed setting greens fees by analyzing operational costs.

In analyzing revenues generated from course play, courses in Region 3B were found to have the highest
mean level of greens fee revenues at $\$ 53,593$. This was expected due to the higher average greens fees charged and greater demand for golfing opportunities expressed by residents of the region. Operators in Regions 2 and 3A received mean revenues totaling $\$ 32,166$ and $\$ 37,421$ respectively.

The mean revenue from greens fees for 18 -hole courses was $\$ 57,666$, while the mean for 9 -hole courses was $\$ 25,906$. Although 18 -hole courses appear to have a distinct financial advantage over their 9 -hole counterparts, calculations of rates of return on investment (discussed later in this report) were significantly higher for 9 -hole courses.

## Consulting Services

Eighty-four percent of all operators sampled indicated that they used some form of professional consulting assistance in the initial development, expansion, or operation of their golf enterprise. Of these, $44.3 \%$ of the operators used the services of the National Golf Foundation, a non-profit organization dedicated to assisting both established golf courses and future potential enterprises. Chemical consultants represented the second largest category of assistance followed by the Cooperative Extension Service and the Soil Conservation Service.

## Advertising

Advertising is an important variable in building a clientele group and expanding an individual enterprise's potential market area. Information was collected to determine what types of advertising media were being utilized by golf course operators, the extent of expenditures on these various advertising media and whether operators used information on customer origin to help them determine where their advertising campaign should be directed. Table 5 illustrates the diversity of media available and to what extent they were utilized by golf course operators.

Newspapers appear to be the most popular advertising medium with $73 \%$ of the sampled operators spending an average of $\$ 387$ for newspaper advertisements in 1972.
Table 5. (Advertising) number and percent of operators who used these various forms of advertising

| Types advertising used (a) | $\begin{gathered} \text { Region } 2 \\ \mathbf{N}=18 \end{gathered}$ | $\begin{gathered} \text { Region 3A } \\ \mathrm{N}=19 \end{gathered}$ | $\begin{gathered} \text { Region } 3 \mathbf{B} \\ \mathbf{N}=33 \end{gathered}$ | $\begin{gathered} 9-\mathrm{Hole} \\ \mathrm{~N}=33 \end{gathered}$ | $\begin{aligned} & 18 \text {-Hole } \\ & \mathrm{N}=36 \end{aligned}$ | Total sample $\mathrm{N}=70$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{array}{ll} \# & \% \\ \hline \end{array}$ | $\begin{aligned} & \#_{2} \% \\ & \hline 10.5 \end{aligned}$ | \# \% |  |  | $\text { \# } \%_{7}$ |
| Brochures | 527.7 | 210.5 | 26.1 | 39.1 | 616.6 | 912.8 |
| Telephone |  |  |  |  |  |  |
| Book | 527.7 | 1142.4 | 1442.4 | 1339.4 | 1747.2 | 3042.8 |
| Radio | 633.3 | 1157.9 | $10 \quad 30.3$ | 1236.4 | 1448.9 | 2738.6 |
| Newspapers | 1161.1 | 1578.9 | 2575.8 | 2472.7 | 2775.0 | 5172.9 |
| Directories | 16.6 | $0 \quad 0.0$ | 824.2 | 515.2 | 513.9 | 1115.7 |
| Chamber of |  |  |  |  |  |  |
| Other | 1055.6 | 631.5 | 1545.4 | 1854.5 | 1233.3 | 3144.3 |

(a) Multiple responses were elicited, therefore, the percentages do not total to 100 .

The telephone book, intuitively felt to be an effective way to reach potential customers, was used by only $42.8 \%$ of the sample at mean cost of $\$ 261$ for the year. Radio, the third most popular category of advertising, had the highest mean level of expenditure with the 27 participating enterprises absorbing an average cost of $\$ 1,161$ for its use in 1972. Overall, a total of 61 of the 70 sampled enterprises reported using some form of media advertising. The total average expenditure for these enterprises was calculated at $\$ 1,030$.

Although golf courses are spending much money on advertising, few use customer origin information to direct the operator's advertising efforts toward their most receptive targets. Only $25.7 \%$ of the sample, 18 enterprises, utilized customer origin information in directing their advertising efforts. Most reported that they used a shotgun approach to spread advertising to various areas rather than concentrating on those areas from which their present customers are drawn.

## Customer Origin

We tried to ascertain from what distances golf course operators drew their customers. They were asked to estimate the distance which their clientele traveled to reach their enterprise. Table 6 provides a summary of the responses.

Table 6. Average percent of users that used facilities

| Distance <br> from enterprise | $\begin{array}{r} \text { Region } 2 \\ \mathrm{~N}=18 \end{array}$ | $\begin{gathered} \text { Region 3A } \\ \mathbf{N}=19 \end{gathered}$ | $\begin{aligned} & \text { Region 3B } \\ & \mathrm{N}=33 \end{aligned}$ | $\begin{aligned} & 9-\text { Hole } \\ & \mathrm{N}=33 \end{aligned}$ | $\begin{aligned} & \text { 18-Hole } \\ & \mathbf{N}=36 \end{aligned}$ | Total sample $\mathrm{N}=70$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 mile or |  |  |  |  |  |  |
| less | 5.9 | 7.9 | 12.9 | 13.6 | 6.2 | 9.7 |
| 1-15 | 51.1 | 58.0 | 49.4 | 54.1 | 49.7 | 52.2 |
| 16-25 | 14.6 | 21.6 | 25.9 | 14.4 | 28.8 | 21.8 |
| 26+ | 28.0 | 12.4 | 12.0 | 17.9 | 15.2 | 16.2 |

The figures in Table 6 show the market area for golf courses is confined to fairly small areas. Region 2 respondents estimated their market areas to be slightly larger than those in Regions 3A and 3B. Perhaps rural locations and diminished competition for many of these enterprises is a partial explanation.

## Present Investment

Golf courses, like many recreational enterprises, require large capital investments. Figures on total capital investment were obtained from enterprise operators and are summarized in Table 7.

Eighteen hole courses comprised most enterprises reporting very high capital investment costs. This is to be expected considering the extensive land costs and development requirements for these regulationsize facilities. In many cases, subsidiary services were provided at those facilities reporting high investment costs. These included restaurant, bar and additional recreation services.

Table 7. Present total investment in golf course enterprises

| Level of investment | Number of <br> enterprises | Percent of <br> enterprises |
| :--- | :---: | :---: |
| $\$ 200,000$ and less | 14 | 20.0 |
| $\$ 200,001-400,000$ | 24 | 34.3 |
| $\$ 400,001-600,000$ | 9 | 12.9 |
| $\$ 600,001-800,000$ | 6 | 8.6 |
| $\$ 800,001-1,000,000$ | 6 | 8.6 |
| $\$ 1,000,000+$ | 11 | 15.6 |
| TOTAL | 70 | 100.0 |

Investment costs are broken down and analyzed according to six major categories in the Table 8. Note the large investment directed toward land and land improvement in comparison with maintenance equipment, pro shop inventory, golf carts and restaurant supplies. Despite the low figure reported for restaurant supplies, it should be pointed out that, in some instances, restaurant and beverage investments commanded substantial portions of the larger enterprises.

Table 8. Present investment: Percent of average firm's total capital investment

| Category | $\begin{aligned} & \text { Region } \\ & \mathrm{N}=18 \end{aligned}$ | $\begin{gathered} \text { Region } \\ \mathbf{N A A}^{=} \end{gathered}$ | $\begin{aligned} & \text { Region } \\ & \mathrm{N}_{3}=33 \end{aligned}$ | $\begin{aligned} & \text { 9-Hole } \\ & \mathrm{N}=33 \end{aligned}$ | $\stackrel{\text { 18-Hole }}{\mathrm{N}} \mathrm{=} \mathbf{3 6}$ | $\begin{gathered} \text { Total } \\ \text { sample } \\ \mathbf{N}=\mathbf{7 0} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Land/land improvements | 79.1 | 74.9 | 75.6 | 80.7 | 73.8 | 76.1 |
| Maintenance equipment | 4.8 | 4.8 | 3.3 | 4.1 | 3.9 | 3.9 |
| Buildings | 10.3 | 17.1 | 16.5 | 10.5 | 17.8 | 15.5 |
| Pro shop | 1.9 | 1.4 | 1.1 | 1.3 | 1.4 | 1.3 |
| Golf carts | 1.9 | 1.2 | 1.2 | 1.4 | 1.3 | 1.3 |
| Restaurant supplies | s 2.0 | 0.6 | 2.3 | 2.0 | 1.8 | 1.9 |
| TOTAL | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

## Future Investment

Estimates for future investment appear surprisingly high considering the financial condition of the industry, discussed later in this report. Fifty-four of our seventy sampled enterprises reported tentative plans for future investments with the average investment of each of these enterprises totaling $\$ 150,333$ to be expended between 1973 and 1976. Enterprises in Region 3 B anticipate future estimated investments averaging $\$ 182,846$ per enterprise. Enterprises in the northern rural areas of Michigan, Region 2, reported substantially less average future investments of $\$ 61,153$.

Information pertaining to the specific types of investment projects to be undertaken was also gathered. Over $25 \%$ of those enterprises planning investment expenditures between 1973 and 1976 indicated that the redesign of their courses was among the top priority projects. Plans to expand their facilities to accommodate future diversified recreational services were indicated by $27.8 \%$ of those operators planning future investment expenditures. Tremendous outlays for land demanded by golf course development may have per-
suaded some operators to develop multi-use of their land resource. Orienting their facilities to crosscountry skiers may be one way to reap additional income during winter months when facilities are unavailable for golfing pursuits.

Forty-eight percent of the operators indicated that providing new buildings would be an investment project in the near future. Other categories for future investment include renovation of grounds, the additions of 9 or 18 holes, major repairs to existing structures, and parking lot improvements.

## Variable Costs

The following table provides information illustrating the types of expenses associated with golf course operation. As would be expected, non-family labor commands the largest percentage of golf enterprises operating expenses. The 70 sampled facilities reported that $33.3 \%$ of their operating expenses were allocated to the purchase of non-family labor inputs. Paid family labor accounted for an additional $5.4 \%$.

Table 9. Percent of average firm's operating expenses

| Category | $\begin{aligned} & \text { Region } \\ & \mathbf{N} \stackrel{2}{=} 18 \end{aligned}$ | $\begin{aligned} & \text { Region } \\ & 3 \mathrm{~A} \\ & \mathrm{~N}=19 \end{aligned}$ | $\begin{aligned} & \text { Region } \\ & 3 \mathrm{~B} \\ & \mathrm{~N}=33 \end{aligned}$ | $\begin{aligned} & \text { 9-Hole } \\ & \mathbf{N}=33 \end{aligned}$ | $\begin{gathered} \text { 18-Hole } \\ \mathrm{N}=\mathbf{3 6} \end{gathered}$ | $\begin{aligned} & \text { Total } \\ & \text { sample } \\ & \mathrm{N}=70 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Advertising | 3.3 | 2.0 | 1.1 | 1.9 | 1.6 | 1.6 |
| Non-family labor | 36.0 | 38.6 | 30.8 | 34.3 | 33.0 | 33.3 |
| Paid family labor | 8.2 | 6.4 | 4.4 | 6.6 | 5.1 | 5.4 |
| Paid management | 10.2 | 11.0 | 10.5 | 9.7 | 10.7 | 10.6 |
| Professional services | 1.7 | 1.3 | 1.7 | 1.2 | 1.8 | 1.6 |
| Interest on loans | 2.9 | 11.5 | 14.8 | 6.9 | 14.3 | 12.2 |
| Taxes | 8.7 | 7.7 | 12.3 | 12.0 | 10.3 | 10.7 |
| Insurance | 12.0 | 5.1 | 6.3 | 10.3 | 5.7 | 6.9 |
| Utilities | 3.5 | 5.4 | 5.5 | 5.1 | 5.2 | 5.2 |
| Maintenance |  |  |  |  |  |  |
| supplies | 13.5 | 11.0 | 12.6 | 12.0 | 12.3 | 12.5 |
| TOTAL | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

In many cases, individual entrepreneurs hired professional management personnel. Such expenditures accounted for approximately $10.6 \%$ of an average firm's operating expenses.

Unpaid family labor seems to be very important to some enterprises. Although many enterprises use volunteer family labor in operating their facilities, it was impossible to determine how much impact the variable had on the profitability of the enterprises in this study. Therefore, in subsequent portions of this report, income and rates of return on investment figures shall presume to be return to capital, management and unpaid labor.

Other large categories of operating expenses are the purchasing of maintenance supplies, interest payments and insurance costs.

## Revenues

The following section presents the data in the form of mathematical means. These mean figures do not reflect the tremendous variance in revenues among individual enterprises.

## Golf Cart Rentals

A large portion of rental fees for golf cart use accrues to the enterprise as profit (see Table 10). Approximately $50 \%$ of the rental revenue received is earmarked for operating expenses of these vehicles, with the remainder included in net revenues. Approximately $87 \%$ of the sampled enterprises stated that golf cart facilities were available at their enterprise, illustrating that golf cart services represent an integral part of golf course operations.

Table 10. Golf cart receipts

| Category | Percent of Enterprises <br> Offering Golf Carts | Mean Gross | Mean Net |
| :--- | :---: | :---: | :---: |
| Region 2 <br> $\mathrm{~N}=18$ | 100.0 | $\$ 5494$ | $\$ 2189$ |
| Region 3A <br> $\mathrm{N}=19$ <br> Region 3B <br> $\mathrm{N}=33$ | 84.2 | 7636 | 3792 |
| $9-\mathrm{Hole}$ <br> $\mathrm{N}=33$ | 81.8 | 6762 | 3469 |
| $18-\mathrm{Hole}$ <br> $\mathrm{N}=36$ | 81.8 | 3703 | 1647 |

## Liquor Facilities

The availablity of a bar at a golf enterprise is considered an important variable. As illustrated in Table 11, liquor sales generate much money.

Table 11. Liquor receipts

| Category | Enterprises having <br> bar facilities | Mean gross | Mean net |
| :--- | :---: | :---: | :---: |
| Region 2 | $(\%)$ |  |  |
| $\mathrm{N}=18$ <br> Region 3A <br> $\mathrm{N}=19$ | 33.3 | $\$ 45,498$ | $\$ 22,383$ |
| Region 3B | 57.8 | 23,889 | 16,599 |
| $\mathrm{~N}=33$ | 39.4 | 31,522 | 15,837 |
| $9-\mathrm{Hole}$ |  |  |  |
| $\mathrm{N}=33$ | 27.3 | 36,421 | 13,753 |
| $18-\mathrm{Hole}$ |  |  |  |
| $\mathrm{N}=36$ | 55.6 | 28,389 | 18,450 |

These findings suggest that high levels of net revenues can be realized through liquor sales. However, it is important to consider the normally high fixed costs of liquor license acquisition and bar construction when examining this data.

It appears that the larger facilities, usually 18 hole courses, are necessary to generate adequate levels of clientele to support a bar. Fifty-five percent of the 18 hole courses surveyed indicated that their enterprises contained a bar while only $27.3 \%$ of the 9 -hole courses indicated such.

## Restaurant Receipts

Table 12 provides a summary of restaurant revenues received by many enterprise operators. As indicated, relatively few enterprises offer full restaurant facilities. Again, it appears that larger courses seem to be a prerequisite for restaurant development. Thirty-six and one tenth percent of 18 -hole golf courses reported offering restaurant services, while a relatively few 9 -hole enterprises, $12.1 \%$ indicated they offered dining opportunities.

While restaurant facilities appear to be characterized by large gross revenues, very little actually accrues to the enterprise as net income. The only notable exception appears to be those enterprises located in Region 3B where $12.0 \%$ of received revenue is classified as net income.

Table 12. Restaurant receipts

| Category | Enterprises offering <br> restaurant facilities | Mean gross | Mean net |
| :--- | :---: | :---: | :---: |
| Region 2 <br> $\mathbf{N}=18$ <br> Region 3A <br> $\mathbf{N}=19$ | $(\%)$ |  |  |
| Region 3B <br> $\mathbf{N}=33$ | 22.2 | $\$ 18,925$ | $\$ 5,571$ |
| -Hole <br> $\mathbf{N}=33$ <br> $18-\mathrm{Hole}$ <br> $\mathrm{N}=36$ | 21.1 | 34,095 | 3,572 |

## Pro Shop Receipts

Almost all enterprises sampled in this study indicated that they offered pro shop services. While this study does not critically analyze pro shop operations, it does provide valuable information regarding dollar exchanges in this phase of golf course operations.

Table 13 provides a summary of pro shop revenues as reported by the 70 golf course enterprises surveyed for this study. The tremendous variance in reported pro shop revenue figures between individual enterprises is particularly significant with this revenue source.

## Operator's Overall Reported Net Income

Individual operators were requested to report their enterprise's overall net income (revenues minus costs) for all phases of their golf course operation during 1972. Their responses are shown in Table 14.

Table 13. Pro shop receipts

| Category | Enterprises offering <br> pro shop services | Mean gross | Mean net |
| :--- | :---: | :---: | :---: |
| Region 2 | $(\%)$ |  |  |
| $\mathrm{N}=18$ | 94.2 | $\$ 19,658$ | $\$ 5,110$ |
| Region 3A |  |  |  |
| $\mathrm{N}=19$ | 90.0 | 14,952 | 7,358 |
| Region 3B | 90.0 | 15,336 | 3,966 |
| $\mathrm{~N}=33$ | 90.0 | 12,049 | 3,363 |
| -Hole <br> $\mathrm{N}=33$ | 91.6 | 19,909 | 6,820 |
| 18-Hole <br> $\mathrm{N}=36$ |  |  |  |

Table 14. Operator's reported net income for all phases of golf course operations

| Level of Income | Enterprises <br> (number) | Enterprises <br> $(\%)$ |
| :--- | :---: | :---: |
| $\$-0$ | 13 | 18.6 |
| $\$ 1,000-\$ 10,000$ | 21 | 30.0 |
| $\$ 10,001-\$ 20,000$ | 15 | 21.4 |
| $\$ 20,001-\$ 30,000$ | 14 | 20.0 |
| $\$ 30,001$ | 7 | 10.0 |
| TOTAL | 70 | 100.0 |

As indicated, $18.6 \%$ of the sample reported net losses for 1972. Such large figures seem to suggest that severe economic difficulties are being experienced by a significant portion of the profit-oriented golf course population.

In light of the large capital investment associated with golf course development, many of those enterprises reporting positive net returns for 1972 are realizing extremely low rates of return on their investment. A detailed discussion of this topic will be provided in a subsequent portion of this report entitled, "Analysis of Rates of Return on Investment."

## Market Value

As illustrated in Table 15, tremendous variance exists in the net present worth of sampled enterprises. Such variance can be attributed to a number of factors, including quality of the facilities, property values in

Table 15. Operator estimated market value for the enterprises by region and by the number of holes

| Operator's estimated market value | $\begin{gathered} \text { Region } 2 \\ \mathrm{~N}=18 \end{gathered}$ | $\begin{gathered} \text { Region 3A } \\ \mathbf{N}=19 \end{gathered}$ | $\begin{gathered} \text { Region 3B } \\ \mathrm{N}=33 \end{gathered}$ | $\begin{gathered} 9-\text { Hole } \\ \mathrm{N}=33 \end{gathered}$ | $\begin{aligned} & \text { 18-Hole } \\ & \mathbf{N}=36 \end{aligned}$ | Total sample $\mathrm{N}=70$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \# \% | \# \% | \# \% | \# \% | \# \% | \# \% |
| \$200,000 | 738.9 | 631.6 | 721.2 | 1648.5 | 411.1 | 2028.6 |
| $\begin{aligned} & \$ 200,001- \\ & \$ 400,000 \end{aligned}$ | 527.8 | 736.8 | 824.2 | 1133.3 | 925.0 | 2028.6 |
| $\begin{array}{r} \$ 400-001- \\ \$ 600,000 \end{array}$ | 15.5 | 15.3 | 412.1 | 13.0 | 514.0 | 68.6 |
| $\begin{array}{r} \$ 600,001- \\ \$ 800,000 \end{array}$ | 316.7 | 15.3 | 618.2 | 26.1 | 719.4 | 1014.3 |
| $\begin{aligned} & \$ 800,001- \\ & \$ 1,000,000 \end{aligned}$ | $0 \quad 0.0$ |  | 26.1 | 13.0 | 411.1 | 57.1 |
| \$1,000,001 | 211.1 | 15.3 | 618.2 | 26.1 | 719.4 | 912.8 |
| TOTAL | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

specific areas, subsidiary recreational services and clientele base.

Approximately $81.8 \%$ of the 9 -hole course operators reported market values of $\$ 400,000$ or less, while only $36 \%$ of the 18 -hole courses were valued in this range. Since land represented over $75 \%$ of an average enterprise's capital investment, such striking differences in market values are easily understandable.

## MANAGEMENT

## Introduction

Management skills and variables considered crucial to the overall management operation were compiled and separated into two groups. The first group, management profile variables, consists of those pre-established conditions such as age, education, and previous experience. The second group, management practices, includes those variables reflecting the dynamic aspect of the total management operation involving active participation by the manager.

## Methodology

Analyses of the collected management information was a two part process. Each of the management variables was analyzed using percentage/frequency statistics to identify characteristics associated with both successful and unsuccessful enterprises. The second part of the analysis involved the use of the Pearson product moment correlation statistic to determine the relationship between management variables and the success of the enterprise. Several variables were found to have a significant bearing upon enterprise success and will be discussed here. A significance level of .05 has been used in conjunction with the Pearson product moment correlation coefficients.

Due to wide variances and inconsistencies exhibited by net income data, reported gross income was used to determine the degree of enterprise success. Those enterprises with gross incomes above the mean of their respective 9 and 18 -hole groups have been considered as "more successful" than those falling below. The mean 9 -hole gross is $\$ 52,468$, whereas the 18 -hole mean is $\$ 127,411$. The measure of success should be viewed as an analytical tool only. The designation of an operation as less successful than another implies a degree of success and does not unequivocally categorize such a course as being a failure.

## Sample Adjustment

The sample used in the economic analysis was adjusted because of inadequate response to the manage-
ment section resulting in the representation of 66 enterprises in the management analysis. This includes a total of 329 -hole and 3418 -hole courses.

## Management Profile

The following is a comprehensive list of 13 management variables which were analyzed in this research. For the purposes of this report, however, only those variables found significant to the success of either the 9 or 18 -hole courses will be discussed.

1. Age of manager
2. Level of education
3. Previous golf experience
4. Number of years of golf experience
5. Type of golf experience
6. Number of years golf course manager
7. Prior occupation
8. Membership in professional organizations
9. Number of seminars attended in last three years
10. Hold another job during season
11. Number of hours devoted to management
12. Manager's salary
13. Number of years course has been established

## Variables Significant for 18 -Hole Courses But Not Significant for 9-Hole Courses

## Education

Successful 9 and 18 -hole managers were found to have higher levels of education than managers of unsuccessful enterprises. The following table clearly shows the greater amount of education displayed by successful operators.

Ninety percent of the successful 18-hole managers reported some college education whereas the corresponding figure for successful 9 -hole managers was $73 \%$. When applying the Pearson product moment

Table 16. Level of education for 9 and 18 -hole golf course managers

| Level of $\begin{gathered}\text { Com- } \\ \text { bined }\end{gathered}$ | Level of $\begin{aligned} & \text { Com- } \\ & \text { bined }\end{aligned}$ |
| :---: | :---: |
| Education \% \% | Education \% \% |
| Successful 9 ( $\mathrm{N}=11$ ) | Unsuccessful 9 ( $\mathrm{N}=21$ ) |
| Some High School 9 | Some High School |
| High School 18 | High School 43 |
| Some College 55$\} 73$ | Some College 33 \} |
| College Graduate 18 ( ${ }^{7}$ | College Graduate 24 \} 57 |
| Successful 18 ( $\mathrm{N}=10$ ) | Unsuccessful $18(\mathrm{~N}=24)$ |
| Some High School - | Some High School 4 |
| High School 10 | High School $4 ¢$ |
| Some College 50$\} 90$ | Some College 29$\} 50$ |
| College Graduate 40 \} | College Gràduate 21 ¢ |

correlation analysis a significant relationship was found between the 18-hole manager's level of education and the success of the enterprises. However, level of education was not found significant to the success of 9 -hole operations.

There could be many factors causing this discrepancy between 9 and 18 -hole operations. Nine hole operations are smaller and are often pursued as an avocation or retirement business. Under these conditions the drive for profit becomes less intense. Many 9 -hole operators enter the market with a risk venture attitude and are not totally dependent on the enterprise for financial survival.

The 18 -hole operations require a larger investment of time and money and are more complex. The manager's livelihood often depends on the success of the business. Sophisticated business knowledge and marketing techniques are required to keep a competitive edge. Because of the size and complexity of operation it is predictable that successful 18 -hole managers have a higher level of education than the successful 9-hole managers.

## Off Season Employment

The successful 18 -hole managers responded $100 \%$ negatively to holding an off-season job. This significant relationship was expected because an 18 -hole operation demands full-time management on a yearround basis.

A typical 18-hole golf enterprise generally has a restaurant/bar combination and a sizeable pro shop. Some of the food and drink facilities remain open yearround requiring golf course manager's supervision during the off season. The maintenance, purchase and evaluation of new equipment is also taken care of during the off season. New supplies and merchandise for next season must be ordered months ahead of time to insure delivery. Planning of capital improvements, playing regulations, membership meetings, professional seminars, and public relations are all parts of the total year-round management responsibilities found in 18 -hole operations. All of these administrative responsibilities and duties characteristic of the 18 -hole operations require substantial input of management time leaving little time to devote to an off-season job.

In contrast, only $54 \%$ of the 9 -hole managers responded negatively to holding an off-season job. This variable was not significant in the 9 -hole operation. Many of the 9 -hole managers are retirees or part-time operators holding down other full-time jobs.

Using, the golfing business as a supplemental income source, most 9 -hole managers demonstrate their awareness of the risks involved in such a recreational
enterprise. There are, of course, exceptions in which the manager depends solely on the golf course for income. These 9 -hole courses are usually well established with a steady clientele built up over the years.

## Number of Years Course Established.

Through Pearson product moment correlation analysis, the number of years the course has been established was found to be a significant variable to enterprise success for 18 -hole enterprises. The length of establishment of 9 -hole golf course is comparable to the longevity of the eighteen hole courses but does not appear to be related to success. This longevity, in and of itself, denotes some success in just maintaining continuity. Reputation and experience cannot be bought or built overnight.

The substantial investments of time and money required to establish an 18 -hole course necessitates longterm commitments lending a degree of stability to the operation. Many 18 -hole courses were specifically designed and built as complete courses. Some started out as 9 -hole and then expanded to their present form.

## Significant Variables of 9-Hole Courses

## Seminars and Professional Organizations

The number of seminars attended had significant positive effect on the success of the 9 -hole operations. Similar results were found concerning membership in professional organizations.

The 9-hole managers generally have not spent as much time on the job in acquiring competitive managerial skills as the 18 -hole managers. It appears that they may seek to supplement their lack of experience by frequently attending seminars. The 18 -hole managers, usually established longer, have gained managerial skills by having a longer time frame to gain experience.

Belonging to professional organizations such as the PGA, USGA, etc., promotes a sense of professional identity and recognition among the developing 9-hole courses. The public accepts and recognizes various professional organizations which lend certain qualities and economic advantages to businesses. ${ }^{1}$ Many 9 -hole courses are in competition with the longer established 18-hole enterprises and must avail themselves of every opportunity to gain acceptance by the public.

## Manager's Salary

Forty-three percent of the successful 9-hole managers made $\$ 10,000-\$ 15,000$ a year. None of the unsuccessful 9 -hole managers received this salary. In fact, $66 \%$ of the unsuccessful received $\$ 5,000$ or less compared to only $29 \%$ of the successful managers.

Table 17. Manager's salary for 9 -hole golf course operations

| Successful 9 <br> (Total $\mathrm{N}=11$ ) |  | Unsuccessful 9 <br> (Total $\mathbf{N} \%$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Salaries <br> reported | $\%$ | $\mathbf{N}=\mathbf{7}$ | Salaries <br> reported | $\%$ | $\mathbf{N}=3^{\circ}$ |
| 5,000 or less | 29 | 2 | 5,000 or less | 66 | 2 |
| $5,001-10,000$ | 28 | 2 | $5,001-10,000$ | 33 | 1 |
| $10,001-15,000$ | 43 | 3 | $10,001-15,000$ | - | - |
| $15,001+$ | - | - | $15,001+$ | - | - |

Seventy-two percent of the successful 18 -hole managers made $\$ 10,000$ or more. Only $34 \%$ of the unsuccessful 18 -hole managers were in this income bracket. In comparison to $72 \%$ of the successful 18 -hole managers, only $43 \%$ of the successful 9 -hole managers made $\$ 10,000$ or more. This data substantiates the fact that 18 -hole operations, overall, provide higher salaries to their managers than do 9 -hole operations. However, it should be kept in mind that 9 -hole courses tend to be open for shorter seasons, therefore, a monthly income comparison for the months the courses are open might tend to diminish the income differential. Data for such an analysis were not available (Table 18).

The manager's salary appears significant in the 9hole operations, however, for 18 -hole courses it is insignificant. This difference could be the result of the separate systems of paying managers' salaries. The 18 hole managers are paid a basic flat salary whether they are hired or part owners. This is considered as part of the operating costs. Managing the 18 -hole operation is essentially a full-time occupation and is paid as such. Usually the manager gets the same salary whether the enterprise gains or loses during the year.

Table 18. Manager's salary for 18 -hole golf course operations

| Successful 18$($ Total $\mathrm{N}=10)$ |  |  | Unsuccessful 18 (Total $\mathrm{N}=24$ ) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Salaries reported | \% | $\mathbf{N}=7$ | Salaries reported | \% | $\mathrm{N}=17$ |
| 5,000 or less | 14 | 1 | 5,000 or less | 6 | 1 |
| 5,001-10,000 | 14 | 1 | 5,001-10,000 | 60 | 10 |
| 10,001-15,000 | 44 | 3 | 10,001-15,000 | 34 | 6 |
| 15,001+ | 28 | 2 | 15,001+ | - | - |

Managing the 9-hole operations is often not financially rewarding. All of the 9 -hole managers interviewed were either owners or part owners. Many owners await the actual monthly or weekly receipts before determining how much salary they draw. In bad seasons, it is not unusual for a manager to go

[^0]without his periodic salary and to experience a substantial decrease in earnings. Therefore, when the managers' salaries are larger in the 9-hole operations, it is likely more of a direct reflection of the financial success of the enterprise. This may not be true in most 18 -hole enterprises where the managers may still get the same salaries even though their overall operation is losing money.

## Management Practices

The second group of variables associated with this two-dimensional view of golf management are those identified as describing management practices. The following is a list of 10 management practices. As with the profile variables, only those found significant to enterprise success through Pearson product moment correlation will be analyzed.

1. Has manager designed or modified the course and/or its operation to speed up play?
2. Sponsor community events
3. Cooperative relationships with schools
4. Cooperative relationships with business
5. Special hiring practices toward youth
6. Have any of the customers or members suggested changes in golf course operations which the manager has implemented?
7. Provide special services for customers
8. Direct advertising based upon customer address information
9. Use financial records to influence management decisions
10. Use discounted or donated labor

## Significant Variable of 9 -Hole Courses

## Sponsor Community Events

Pearson product moment correlation analysis identified a positive relationship between enterprise success and sponsoring community events for 9-hole courses. The 9 -hole enterprises, more so than the larger 18 -hole operations, need to rely upon the local communities for their business volume. The 9-hole operators depend more heavily upon a solid core of satisfied customers to sustain their operations, whereas the 18 -hole operators can rely upon their greater volume and attraction of non-local customers. It has become important for the 9 -hole manager to cultivate his clientele and establish a reputation. The management actions suited for these purposes are the setting up of local leagues, tournaments, and clinics.

The 18 -hole enterprises must also be responsive to their communities, but local patronage does not have as great an impact on their business. In the 18 -hole operation a larger volume of golfers is necessary to offset fixed and variable costs. The 18 -hole managers
spend more money advertising to draw outsiders within reach of their markets. Generally, the smaller 9-hole managers do not have surplus cash to advertise and most have no advertising budget to speak of.

## Cooperative Relations with Business

The solicitation and establishment of cooperative agreements with businesses has a significant impact upon the success of the 9 -hole courses. The 9 -hole operations that attract business outings during a season can substantially increase their gross income. A business outing on a 9 -hole course can and usually does produce above average income. These peak periods of increased income can offset losses from slow days or inclement weather.

Most 18-hole operations accommodate and solicit business outings but the effects of their resulting injections of income upon the overall success of the 18hole operation are minimal in comparison with the effect they have on the success of the more sensitive 9 -hole enterprises.

## Conclusion

Four of the five significant variables associated with the successful 9 -hole enterprises become inseparably linked with the characteristics of newness and transience. The number of seminars attended in the last 3 years, membership in professional organizations, sponsoring community events, and cooperative relations with businesses are the significant variables which indicate efforts of the 9 -hole operations toward establishing reputations and clientele.

These variables were not found to be significant in the 18 -hole enterprises, which usually have been established longer. The 9 -hole operations generally have less business volume compared to their 18 -hole counterparts. Therefore, the management of these smaller courses must take advantage of every opportunity to gain a foothold in the competitive business of golf.

None of the significant variables appearing in the 9 -hole courses are found in the 18 -hole operations and vice versa. Conspicuously absent are the lack of any significant management practices in the 18 -hole enterprises.

An extensive range of management practices was included in the survey instrument to assure a complete evaluation of common management practices as they occur throughout the golf industry. The lack of significance of any practice variables in the 18 -hole operations suggest that there are possibly other critical factors which could affect success. Among other possible factors affecting success are physical quality of the course, geographical location, and public relations.

In seeking a general financial and management picture of the golf industry in Michigan, it was not possible to focus on these specific areas in this report. Future research efforts should explore these subjects.

## ANALYSIS OF RATES OF RETURN ON INVESTMENT

Calculations of rates of return on investment were done in an attempt to ascertain the financial health of the profit-oriented golf industry in Michigan. This effort represented a three-stage process.

First, figures representing total capital investment were obtained for each enterprise based upon six main categories of investment. These include: 1) Land and land improvements, 2) Maintenance equipment, 3) Buildings and structures, 4) Pro shop inventory, 5) Golf carts, and 6) Restaurant and beverage supplies. Figures from each operator estimating investment costs for each of these six categories were compiled to represent, for purposes of this study, total capital investment.

The second phase in calculating rates of return on investment entails determining an operator's net income (the amount of income remaining after variable costs have been deducted). The seventy enterprise operators provided these net income figures used in calculating the rate of return on their investment.

The third phase in calculating rates of return on investment involves an assessment of depreciation costs. Since the variance of responses by golf course operators was so great in estimating the depreciation rates of their equipment and facilities, a $10 \%$ depreciation rate on all capital investment, excluding land, was utilized in calculating depreciation costs. This $10 \%$ rate represents approximately the average depreciation rate estimated by enterprise operators.

Table 19 provides a summary of the rates of return on investment both before and after depreciation costs were taken into account.

The net income figures that were utilized in calculating the rate of return on investment did not include land appreciation values. Only revenues generated

Table 19. Rates of return on investment based upon

|  | operator's reported net income <br> Region <br> Region <br> 3 A |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | | Region |
| :---: |
| 3 B |$\quad$| $9-$ Hole | 18 -Hole | Total <br> sample |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Before depre- <br> ciation | $4.4 \%$ | $2.8 \%$ | $1.4 \%$ | $3.6 \%$ |
| After depre- <br> ciation | $2.4 \%$ | $.3 \%$ | $-.9 \%$ | $1.7 \%$ |

from various phases of golf course operations were included.

Enterprises located in Region 2 realized the highest rate of return on their investment, $2.4 \%$. Region $3 B$, intuitively thought to be the most economically viable sector due to the high population density, high per capita income and moderate climate characteristics of the area, demonstrated the lowest level of returns.

Rates of return on investment for 9-hole golf courses, as a group, were found to be higher than those of 18 -hole facilities. Nine hole courses realized a $1.7 \%$ return on their investment while 18 -hole courses produced a $-.9 \%$ return on investment.

These rates of return on investment percentages, calculated on the basis of each operator's reported net income, depict an industry suffering from severe economic pains. Because the results indicate that the industry is in such a severe financial condition, the validity of the data used is brought into question.

The net income figures reported by individual enterprise operators that were used in the analysis should be viewed with some skepticism. During the course of interviewing operators, some individuals referred to detailed financial records in providing the financial information while over $40 \%$ of the operators simply estimated their net income figures for 1972. As a result, some of the net income information utilized in calculating rates of return on investment are subject to questions of validity and reliability. It was also felt that, in many cases, operators reported net income levels far below levels received in an attempt to benefit from possible tax shelters.

Because of the above data limitations, the rates of return on investment portrayed in Table 19 are not felt to be an accurate representation of the financial well-being of the profit-oriented golf industry. As a result, an experimental approach was undertaken in an attempt to provide the reader with a more accurate appraisal of rates of return on investment being experienced by profit oriented golf enterprises.

Instead of using net income figures provided by individual operators, an attempt was made to arrive at a more realistic net revenue figure by deducting his reported expenses from his reported gross income. These expenses included: 1) Advertising, 2) Nonfamily labor, 3) Paid family labor, 4) Paid manager, 5) Professional services, 6) Interest, 7) Taxes, 8) Insurance, 9) Utilities and 10) Maintenance Supplies.

A summary of rates of return on investment calculations derived by this experimental approach are provided in Table 20.

These figures provide a much more positive picture of the financial condition of the profit-oriented golf in-

Table 20. Rate of return on investment--experimental approach

|  | Region <br> $\mathbf{2}$ | Region <br> $\mathbf{3 A}$ | Region <br> $\mathbf{3 B}$ | 9-Hole | 18-Hole | Total <br> sample |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Before depre- <br> ciation | $24.2 \%$ | $10.3 \%$ | $7.9 \%$ | $15.6 \%$ | $9.6 \%$ | $11.5 \%$ |
| After depre- <br> ciation | $22.1 \%$ | $7.8 \%$ | $5.4 \%$ | $13.7 \%$ | $7.0 \%$ | $9.1 \%$ |

dustry in Michigan. According to these findings, golf course operators are realizing a $9.1 \%$ return on their investment (representing a substantial return on investment).

In putting this rate of return on investment analysis into proper perspective, it is felt that the true picture of the financial condition of the profit-oriented golf industry lies somewhere between the $-.03 \%$ calculated on the basis of the operators' net income, and the $9.1 \%$ rate of return on investment calculated through the experimental approach. Future research efforts should be able to provide a further refinement in the financial status of the profit-oriented golf industry through the collection of more complete and accurate financial data on a long term basis. Financial data will probably always be very difficult to obtain.

## Factors Affecting Return on Investment

Various factors were tested with a multiple regression model to determine their influence upon rate of return on investment. The dependent variable, representing a measure of financial success, is rate of return on investment calculated on the basis of the operators' reported net income for 1972. The independent variables used in the analysis included: 1) Greens fees, 2) Number of hours devoted to management of enterprise, 3) Management experience, 4) Education level of operator, 5) Access from major transportation artery, 6) Size of facility, 7) Population density of county, 8) Availablity of bar facilities, and 9) Local competition.

In analyzing the statistical results provided by the regression analysis, the group of independent variables was found collectively to be significant at the .05 level in determining an operator's rate of return on investment. However, it is important to point out that the group of independent variables was only able to explain .29 of the total variation in the dependent variable.
Specific variables seemed to play a more dominant role in the linear regression model than others. In analyzing the data, it appears that there is a fairly strong relationship between the number of years of management experience accumulated by the course operator and the rate of return on his investment.

Indicators measuring county population and distance from major transportation arteries appear to have little effect on the overall predictive capability of the regression formula. A surprising finding based upon this model indicates that there is an inverse relationship between rate of return and size of the facility. The greater number of holes a course had, the lower the corresponding rate of return on investment.

Putting crude and inconsistent financial information into sophisticated statistical models results in data which must be viewed with some skepticism. Refinement of the financial data through subsequent research efforts should result in greater validity and reliability in future multiple regression model formulation.

## ECONOMIC IMPACT

Very little research is available which adequately assesses the economic impact which recreational enterprises exert on local economies. While it was beyond the scope of this study to quantitatively analyze the economic impact derived by local communities as a result of golf enterprise expenditures, a brief discussion of the topic is provided.

Total customer expenditures for the 70 profit oriented golf enterprises sampled for this study totaled $\$ 8,762,000$ for 1972 . Careful consideration must be taken when trying to equate figures representing total customer expenditure with economic impact. While figures depicting total spending are necessary in computing economic impact, they in themselves are not determinant variables in evaluating the true economic stimulation derived by the local economy.

The degree of economic impact centers around two important variables. First, the degree of economic impact varies directly with the level of "vertical integration"2 which exists in a local economy. Secondly, the number of rounds of respending of the new dollars that occurs in the community, commonly called the multiplier effect, is also directly related to the level of economic impact generated.

The flow chart shown in Fig. 3 depicts an economy where a substantial amount of vertical integration exists. The larger the number of transactions, the greater the effect dollar expenditures have upon the local community.

Future research into the area of economic impact will provide planning bodies and decision makers with valuable information for analyzing the economic benefits derived by a community attributable to golf enterprises.

[^1](Note: Arrows Point to Dollars Changing Hands)
Number of Transactions


This model depicts the economic impact of customer expenditures on local economies where a substantial level of vertical integration exists

## CONCLUSION

In this study we have attempted to provide initial information about the privately owned, profit oriented golf industry in Michigan-an area previously ignored by researchers. While much of the financial data used was suspect, the report is valuable in that it provides the foundations upon which future research projects can be initiated.

Golf courses in Michigan are characterized by a high level of capital investment when compared to other types of commercial recreation enterprises. The corresponding rates of return for most operations, however, were quite low. Future research in the area of production functions should provide valuable information on whether enterprises are making optimum use of their inputs with respect to maximizing output.

Such information could provide insight into the optimum scale of operation for individual enterprises.

Despite the low returns on investment, substantial future investments were planned by $77 \%$ of the sampled operators. Investment in new equipment as well as repair and construction of buildings represented the largest categories of planned investment. Also, a substantial number of enterprises indicated that they planned to diversify their enterprise to provide new recreational services. By offering a variety of recreational activities and developing multiple use of their land resources, operators may be able to increase their rate of return on investment. Studies designed to delineate potential types of recreational services based upon regional characteristics as well as needs and preference of residents in the immediate market area could provide valuable direction for future recreational development complimentary to the existing golf facilities.

## Acknowledgment

The authors want to recognize Gary Davis and Mike Broderick, former graduate students in the Department of Park and Recreation Resources, for the preliminary generating and analyzing of the data contained in this report.


# Outlying Field Research Stations 

These research units bring the results of research to the users. They are geographically located in Michigan to help solve local problems, and develop a closeness of science and education to the producers. These 15 units are located in important producing areas, and are listed in the order they were established with brief descriptions of their roles.

Michigan Agricultural Experiment Station. Headquarters, 101 Agriculture Hall. Established 1888. Research work in all phases of Michigan agriculture and related fields.

South Haven Experiment Station, South Haven. Established 1890. Breeding peaches, blueberries, strawberries, cherries. Small fruit management.

Upper Peninsula Experiment Station, Chatham. Established 1899. Beef, dairy, soils and crops. In addition to the station proper, there is the Jim Wells Forest.

Graham Horticultural Experiment Station, Grand Rapids. Plots established 1919. Varieties, orchard soil management, spray methods, orchard physiology.

Dunbar Forest Experiment Station, Sault Ste. Marie. Established 1925. Forest management.

Lake City Experiment Station, Lake City. Established 1928. Breeding, feeding and management of beef cattle and aquatic studies.
W. K. Kellogg Farm and Bird Sanctuary, Hickory Corners, and W. K. Kellogg Forest, Augusta. Established 1928. Forest management, aquatic and wildlife studies and dairy nutrition and management.

Muck Experimental Farm, Laingsburg. Plots established 1941. Crop production practices on organic soils.

Fred Russ Forest, Cassopolis. Established 1942. Hardwood forest management and forest genetics.

Sodus Horticultural Experiment Station, Sodus. Established 1954. Production of small fruit and vegetable crops. (land leased)

Montcalm Experimental Farm, Entrican. Established 1966. Research on crops for processing, with special emphasis on potatoes. (land leased)

Trevor Nichols Experimental Farm, Fennville. Established 1967. Studies related to fruit crop production with emphasis on pesticides research.

Saginaw Valley Beet and Bean Research Farm, Saginaw. Established 1971, the farm is owned by the beet and bean industries and leased to MSU. Studies related to production of sugar beets and dry edible beans in rotation programs.

Kalamazoo Orchard, Kalamazoo. Established 1974. Research on integrated control of grape, cherry and apple pests.

New Horticultural Field Station, Clarksville. Established 1974. Research on all types of tree fruits, small fruits, vegetable crops, and ornamental plants. Site development began during 1975.


[^0]:    ${ }^{1 " P r o f e s s i o n a l ~ A s s o c i a t i o n s, " ~ S c i e n c e ~ N e w s ~(S e p t e m b e r ~ 27, ~ 1969), ~ p . ~}$ 266, and (December 6, 1969), p. 525.

[^1]:    ${ }^{2}$ "Vertical integration" refers to the extent of internal economic development that exists within a defined economy.

