# Impact of Light, Medium and Heavy Spenders on Casino Destinations: Segmenting Gaming Visitors Based on Amount of Non-gaming Expenditures

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## Abstract

This article discusses the viability of targeting heavy spenders on non-gaming products and services in gaming travel marketing. A sample of visitors to two commercial casinos was divided into light, medium and heavy spenders based on spending per person per day, excluding gambling. Findings indicated that a large number of heavy-spending tourists were not interested in gaming, but in the destination's other tourism products. This suggests that the region's tourism assets play an important role in enhancing casino visitation. Promoting the casino as part of the overall tourism attractions may benefit both the casino and related businesses in the community.

Key words: market segmentation, volume segmentation, casino gaming, tourism.

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## Introduction

The idea that all markets can be profitably segmented has now received widespread acceptance (Russell, 1995). In marketing, companies tailor their marketing programs to the needs and wants of narrowly defined geographic, demographic, psychographic, or behavioral segments (Kotler and Armstrong, 1996). Kotler and Armstrong (1996, p. 238) identified twenty-five major segmentation variables for consumer markets. One of these segmentation variables is "usage rate." Marketing researchers have found that in the case of many products a small percentage of users account for a large percentage of sales. These consumers are referred to as the heavy users (Crisp, 1948; Twedt, 1964; Cook and Mindak, 1984). Clearly, a company would prefer to attract one heavy user to its brand rather than several light users (Kotler and Armstrong, 1996). Consequently, learning more about the heavy users is often instrumental to successful marketing (Spotts and Mahoney, 1991).

Travel marketers have long recognized that consumers are not homogeneous; rather, they consist of individual travelers with varying characteristics, needs, and preferences. Examples of travel market segmentation include geographic segmentation, purpose of trip segmentation, socio-demographic segmentation, seasonal segmentation, (Holecek,

Yoon and Spotts, 1998) and volume segmentation (LaPage, 1969; Pizam and Reichel, 1979; Stynes and Mahoney, 1980; Woodside, Cook and Mindak, 1987; Spotts and Mahoney, 1991). Travel researchers have adopted usage rate principle segmentation and have segmented travel markets based on either their length of stay or the volume of their trip expenditures. Spotts and Mahoney (1991) suggested that segmenting travel markets on the basis of their travel expenditures could be a useful alternative to the more common approach of segmenting on the basis of travel activity when some type of volume segmentation is desired.

Volume segmentation has also been adopted by gaming marketers. It is generally known that a small number of casino gamers, often referred to as whales or high rollers, accounts for the bulk of casino wins. For example, it was found that 13.2 percent of casino player club members generated about 84 percent of the total tracked revenue associated with loyalty club members and that 2.1 percent of this larger group was actually responsible for generating 52.4 percent of the total tracked revenue (Palmer, 2002). This group represents a significant target market for casinos. Yet, it has been recognized that casino visitors are not a homogeneous group; there are local casino visitors and visitors who are considered tourists. The latter represent a significant portion of casino visitors (Moufakkir and Holecek, 2001) and their monetary economic impact on the gaming community is well documented (Moufakkir, 2002).

## Review of the literature

*Market Segmentation*

Marketing strategists have developed many alternative ways to segment markets, including using demographics, psychographics and lifestyles (Mitchell, 1981; Dolvicar and Leisch, 2003), and benefits segmentation (Russell, 1995). Furthermore, brand (Kennedy and Ehrenberg, 2001), decision-making behavior (Hudson and Ritchie, 2002), motivation (Ercan, Uysal and Yoshioka, 2003), and environmental attitudes (Formica and Uysal, 2002), are other segmentation criteria. Finally, usage or volume (Twedt, 1964; Cook and Mindak, 1984; Stynes and Mahoney, 1980; Goldsmith, Flynn and Bonn, 1994; Goldsmith and Litvin, 1999; Spotts and Mahoney, 1991) is also used to segment markets.

Understanding consumers and their behavior is vital to the success of any business, and gaming is no exception (Moufakkir, 2002). Kotler and Armstrong (1996, p. 235) define market segmentation as the act of "dividing a market into distinct groups of buyers with different needs, characteristics, or behavior who might require separate products or marketing mixes." They explain that market segmentation is prerequisite to successful market targeting and defines market targeting as the "process of evaluating each market segment's attractiveness and selecting one or more segments to enter" (Kotler and Armstrong, 1996, p. 235). Market targeting thus is a style of marketing where the organization distinguishes between different segments of the market, chooses one or more of these segments to focus on, and develops market offers and marketing mixes tailored to meet the needs of each target market (Kotler and Armstrong, 1996). Types of usage segmentation include brand loyalty, product and brand use, and volume. Volume segmentation is "simple to use, easy to understand, and logically compelling" (Goldsmith and Litvin, 1999, p. 127).

Marketing researchers have found that in the case of many consumer products heavy users account for a disproportionately large percentage of sales (Cook and Mindak, 1984; Crisp, 1948; Twedt, 1964). Because heavy users are a relatively small portion of the market but account for the largest spending volume, they form an

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attractive market segment for many firms (Goldsmith and Litvin, 1999). However, Clancy and Shulman (1994) argued that even if heavy users are successfully identified, targeting them is not always successful because they are price conscious, deal prone, disloyal to the brands they buy, may have demographic and media use profiles similar to everyone else in the category, and as a segment they may be more heterogeneous than homogeneous. Goldsmith and Litvin (1999), on the other hand, argue, "the fact remains that heavy user segment encompasses those consumers who purchase the majority of a company's products and services, and whether or not they represent the ideal customer, they are the most important customers of most enterprises" (p. 128).

Travel marketers have also adopted usage segmentation. However, instead of using usage rate travel marketers have used volume of trip expenditures as a segmentation base. Applications of the volume segmentation technique in travel marketing have also yielded mixed results and not all market analysts are enthusiastic about volume segmentation (Spotts and Mahoney, 1991). In travel marketing, researchers have employed different volume segmentation techniques to segment their market. LaPage (1969), for example, segmented heavy campers based on the number of days they had camped in the past year. He found that heavy campers were distinguishable from light campers only regarding camping activities (e.g., equipment ownership) and not demographic and socioeconomic characteristics. Similarly, Stynes and Mahoney (1980) in a study of Michigan's downhill skiing found that heavy skiers were distinguishable from light skiers in terms of skiing activities and not in terms of demographic and socioeconomic characteristics. Pizam and Reichel (1979) used travel expenditures rather than a measure of travel activity as the segmentation variable and found that "big spenders" on vacation trips during the previous year differed markedly from "little spenders" in terms of demographic and socioeconomic characteristics.

Spotts and Mahoney (1991), segmented visitors in the Upper Peninsula, a destination region of Michigan, based on the volume of their trip expenditures. They found that "heavy spenders" were distinguishable from "medium spenders" and "light spenders" on the basis of their larger party sizes, longer length of stay, greater involvement with recreation, and greater propensity to use information disseminated by the travel industry of the region. They explained that segmenting travel markets on the basis of travel expenditures is a useful alternative to the more common approach of segmenting on the basis of travel activity when some type of volume segmentation is desired (Spotts and Mahoney, 1991). They observed a relatively modest correlation between total trip expenditures and length of stay in various travel surveys in Michigan, and argued that in regional travel marketing specifically targeting the heavy spenders in a region might be more useful than seeking to attract either travelers who will spend a relatively high percentage of their total trip-nights there. Table 1 presents the correlation coefficients between total trip expenditures and length of stay observed in various travel surveys in Michigan and compiled by Spotts and Mahoney (1991). We have adapted the table to include the correlation coefficient observed by the present study. The moderate correlation coefficient observed by the present study supports Spotts and Mahoney's argument.

**Table 1. Summary of Studies Correlating Expenditures In Geographic Area to Length of Stay**

| Study | Units Analysis | Geographic Area of Expendiutre | Location Where Length of Stay Measured | Percentage Spending Night(s) Study Area | Number of Cases in Analysis | Correlation between Expenditures and Length of Stay (No. Nights |
|---|---|---|---|---|---|---|
| DeRosa et al. (1989) | Visitors to Frankenmuth | City of Frankenmuth | City of Frankenmuth | 30 | 1,418 | +. 32 |
| Mahoney, Na, and Holecek (1989) | Visitors staying in selected B&Bs in Michigan | Area within 20 miles of B&B | In B&B | 100 | 969 | +. 25 |
| Fridgen et al. (1986) | Campers staying in 64 selected state parks | Area within 20 miles of state park | State park campground | 100 | 3,727 | +. 40 |
| Mahoney, Oh, and Ou (1989) | Attendees of National Campers and Hikers Association | On-site survey: State recreation area used as campvention site and near by communities | On-site survey: Campvention site | 100 | 181 | +.03 |
| Spotts and Mahoney (1991) | Summer visitors Tri-County region in Michigan's Upper Peninsula | Alger, Luce, and Schoolcraft counties | Alger, Luce, and Schoolcraft counties | 70 | 17,477 | +. 56 |
| Present Study | Non-resident visitors to two casinos in Michigan | Macomb, Wayne, and Oakland counties | Macomb, Wayne and Oakland counties | 27 | 853 | +. 33 |

## Segmenting Spenders

When using volume segmentation, researchers arbitrarily choose the number of categories on which they want to base their segmentation analysis. For example, while Twedt (1964) identified three meaningful categories of consumers: nonusers, light users, and heavy users, Goldsmith and Litvin (1999) categorized their market into two segments: heavy and light. Spotts and Mahoney (1991) partitioned their market into light, medium, and heavy. According to these researchers, this was considered a better way to partition the sample than the more common approach of dividing the sample into heavy and light halves. The latter method tends to minimize differences in the characteristics of heavy versus light users, since most users fall in the middle of the frequency distribution of the segmentation variable (Spotts and Mahoney, 1991).

The characteristics of a market segment must be distinguishable from those of other consumers so that product or service offerings and appeals can be tailored to the segment's unique characteristics (Spotts and Mahoney, 1991). The segmentation variable identified and analyzed for this study was total expenditures *per person per day* in the study region. Values on this variable were calculated as the sum of responses to the expenditure questions provided by the respondents. The unit of analysis was casino visitors who did not reside in the study area. Expenditures were measured by asking

respondents to estimate how much they had spent on their trip in the study region on the following items

1. Lodging
2. Food and beverages inside the casino
3. Food and beverages outside the casino
4. Gasoline purchases
5. Other local transportation (such as taxi, bus, or parking)
6. All other expenses (such as gifts and souvenirs).

After identifying the expenditure categories, travel parties were segmented into three groups based on the amount of their trip expenditures in the study region.
*Light* spenders were defined as those in the lower third of this variable's frequency distribution, including nonspenders; *Heavy* spenders were defined as those in the upper third of the distribution; *Medium* spenders were defined as those in the middle third of the distribution. Nonspenders represented 22 percent of the sample. Although they are excluded in volume segmentations of consumer markets, in this study all travel parties in the sample, including nonspenders, were considered part of the study by virtue of their visit to the casino. Nonspenders were included in the light spenders segment because an attempt to increase the expenditures of travelers other than medium or heavy spenders probably would focus on nonspenders and light spenders alike (Spotts and Mahoney, 1991).

## Significance and Purpose of Study

This paper focuses on the expenditure of tourists visiting casino destinations versus those who spend money on gambling games. The study will seek to clarify a popular misconception: casino visitors tend to spend money only on gambling and do not patronize other community tourism-related businesses. Furthermore, it is important to understand the overall role of visitors to casino destinations and their interaction and use of other tourism products. This understanding will encourage community businesses to offer additional incentives to attract tourists and increase the average length of stay. Therefore, the purpose of this study is to apply the technique of volume segmentation to casino tourists, profile them, identify ways to target heavy spenders and examine whether volume segmentation is a viable segmentation approach to gaming marketing. Specifically. The primary objectives of this study are as follows:

1. To segment casino visitors based on the volume of their expenditures into three groups: light, medium, and heavy, based on total number of dollars spent on their casino trips and determine total amounts spent by each segment.
2. After defining and identifying the expenditure-based market segments, the study will seek to summarize differences among three segments based on expenditure patterns, demographic characteristics, trip purpose, trip characteristics, participation in recreation at destination and the use of media for travel planning.

Results of this study will provide a profile of the three gamer market segments. This information could help gaming communities develop more effective marketing strategies for their target markets. Information about heavy spenders, their demographics, trip characteristics, gambling behavior, and information propensity could help to accommodate varied activities for them and offer appropriate packages to contribute to their travel experience, make them stay longer in the gaming community and spend more. Further, results will provide information on the facilities/attractions that are more appealing to heavy spenders. This information may help existing and potential gaming communities to plan better and develop their resources to meet this market segment's needs and desires.

## Methodology

The casinos investigated are two large commercial land-based casino facilities close to a major metropolitan area. To obtain information from visitors to these casinos, a mixed mode survey technique was used in this study. The first phase of the sampling strategy consisted of a brief on-site interview designed to identify non-resident casino patrons and recruit them to participate in a follow-up telephone survey. In the second phase, those who agreed to participate in the follow-up telephone interview were contacted by telephone at a time they indicated would be most convenient for them to be interviewed. Visitors were intercepted in the non-gaming spaces of two casinos. Intercept surveys took place at both casinos on the same sampling days and time. The casino facilities have multiple entrances.

To obtain a representative sample of casino visitors, interceptors were stationed at each entrance for varying periods. The period of the sampling period was five months (May 28, 2000 to September 9, 2000). Two weekends and two weekdays were randomly selected from each month as intercept days. Weekend days included Saturday and Sunday. Intercepts took place between 10:00 a.m. and 4:00 p.m. or between 4:00 p.m. and 10:00 p.m. Data for this study were based on 832 cases.

The questionnaire consisted of 42 questions and took an average of 12 minutes to complete. It was designed to gather information about visitors' most recent trips to the gaming destination including trip characteristics, gaming and non-gaming expenditures, gaming behavior, data for marketing purposes, and general demographic information. The final version of the instrument was piloted on 50 casino patrons.

## Analysis of Results

The results analyze important casino travel characteristics of Light, Medium and Heavy spenders in order to identify effective programs and strategies to attract these market segments. The data were summarized and analyzed using a series of bivariate statistical tests such as Chi-square and F-Ratio, to determine if differences exist between these expenditure based market segments. Furthermore, two-group discriminant analysis was computed to validate the results and thereby show which travel characteristics are useful in differentiating Light, Medium and Heavy spenders.

According to Kotler and Armstrong(1996, p. 248-249), market segments, to be maximally useful, must exhibit four traits. First, they should exhibit *measurability* (the degree to which the size and purchasing power of all segments can be measured); second, *substantiality* (the degree to which the segments are large and/or profitable enough); third, *actionability* (the degree to which effective programs can be formulated for attracting and serving the segments); and fourth, *accessibility* (the degree to which the segment can be effectively reached and served). Each of these segment characteristics was considered in our analysis and discussion of the results.

## Measurability

The measurability of the segment is assumed since the number of tourists visiting the casino and the volume of their expenditures are measurable phenomena. In a previous study (Moufakkir, Holecek, van der Woud, and Nikoloff, 2000), 21 percent of all visitors to the investigated casinos were identified as tourists. However, the reliability and validity of such estimates can certainly be improved (Moufakkir, 2002).

## Substantiality

A market segment's substantiality depends on the degree to which the segment is large and/or profitable. While the segments were arbitrarily predetermined (light spenders were defined as those in the lower third of the frequency distribution, including nonspenders, heavy spenders were defined as those in the upper third of the distribution, and medium spenders were defined as those in the middle third of the distribution), the volumes of their expenditures differ. While each segment represented a third of the distribution, the expenditures of heavy spenders accounted for 90.5 percent of the expenditures of the sample as a whole. In contrast, the expenditures of light and medium spenders represented 0.6 percent and 8.9 percent respectively.

**Table 2. Comparative Trip Expenditures of Light-Medium-Heavy Casino Visitors**

| Segment | Frequency | Total spending | Percentage |
|---------|-----------|----------------|------------|
| Light | 271 (32.6%) | $ 672.95 | 0.6 |
| Medium | 283 (34.0%) | 10347.94 | 8.9 |
| Heavy | 278 (33.4%) | 105753.70 | 90.5 |
| Total | 832 (100%) | 116774.59 | 100.0 |

Heavy spenders on the average had greater per-trip expenditures in each of the six spending categories, and spent over 24 times as much per trip as light spenders and over 10 times as much per trip as medium spenders. Heavy spenders spent more on lodging, food and beverages and other expenses outside the casino than on the other spending categories. Heavy spenders were also the segment that patronized lodging businesses, as opposed to light and medium spenders, who are primarily day-trippers. The differences in expenditure category are significantly different for all three segments.

**Table 3. Mean Non-Casino Expenditures of Light-Medium-Heavy Casino Visitors**

| Non-Casino Expenditures | Total N=832 | Light N=271 | Medium N-283 | Heavy N=278 | F Ratio | Sig |
|---|---|---|---|---|---|---|
| Lodging | $ 41.38 | $.00 | $.50 | $123.35 | 31.28 | <.0001 |
| Food & Beverage (Inside casino) | 20.95 | 1.25 | 13.67 | 47.56 | 54.44 | <.0001 |
| Food & Beverage (Outside casino) | 35.12 | .48 | 9.64 | 94.82 | 90.71 | <.0001 |
| Gasoline | 12.04 | .62 | 9.00 | 26.28 | 54.01 | <.0001 |
| Other expenses | 29.32 | 5.53 | 3.00 | 84.64 | 32.79 | <.0001 |
| Local Transportation | 1.54 | 7.70 | .75 | 3.70 | 9.43 | <.0001 |
| Total | $140.35 | $15.58 | $36.56 | $380.35 | $99.05 | <.0001 |

## Actionability

As can be seen in Table 4, heavy spenders spent more nights in the study region than their counterparts. Their party size was larger and they participated in more recreational activities while on their trip than did the light and medium spenders. Heavy spenders spent fewer hours in the casino than the other groups. Furthermore, the average number of visits to a casino during the last 12 months was lowest (13 visits) compared with the medium (16 visits) and the light spenders (24 visits). In addition, heavy spenders took fewer charter bus trips to casinos in the past year (.82) than light (2.19) and medium spenders (1.10).

Heavy spenders were less likely to travel alone and more likely than their counterparts to travel with family/friends or co-workers, and on the average had larger travel party size. The average number of recreational activities they engaged in was 1.22, which was over twice and four times as high as the medium and light segments respectively.

**Table 4. Trip Characteristics: Light-Medium-Heavy Casino Visitors**

| Trip Characteristics* | Total | Light | Medium | Heavy | F Ratio | Sig. |
|---|---|---|---|---|---|---|
| Length of Stay (nights) | 1.34 | .38 | .50 | 3.17 | 63.43 | <.0001 |
| Party Size | 1.75 | 1.48 | 1.70 | 2.06 | 30.98 | <.0001 |
| Recreation activities | .66 | .30 | .47 | 1.22 | 105.21 | <.0001 |
| Hours spent in casino | 4.20 | 4.42 | 4.27 | 3.90 | 3.66 | .026 |
| Annual casino charter bus trips | 1.36 | 2.19 | 1.10 | .82 | 10.03 | <.0001 |
| Annual casino visits | 17.51 | 23.81 | 15.94 | 12.96 | 7.85 | <.0001 |

*Results represent calculated mean.

In terms of demographics and socioeconomic characteristics, on the average, heavy spenders were more likely than their counterparts to be younger, employed, and more affluent (Table 5).

**Table 5. Demographic Profile: Light-Medium-Heavy Casino Visitors**

| Demographic Profile | Total | Light | Medium | Heavy | Chi-Square | Sig. |
|---|---|---|---|---|---|---|
| **Employment status** | N=828 | N=270 | N=283 | N=275 | 14.75 | .022 |
| Employed | 32.6% | 44.1% | 51.9% | 58.5% | | |
| Self-employed | 51.6 | 13.0 | 13.4 | 8.4 | | |
| Retired | 28.6 | 34.4 | 27.2 | 24.4 | | |
| Other | 8.2 | 8.5 | 7.4 | 8.7 | | |
| Mean age of visitor | 51.40 | 53.72 | 51.30 | 49.29 | 7.602 | .001 |
| **Household income (1999)** | N=720 | N=218 | N=256 | N=246 | 30.66 | <.0001 |
| Under $37,000 | 29.2% | 36.7% | 31.2% | 20.2% | | |
| $37,001-$50,000 | 22.9 | 19.2 | 22.3 | 26.8 | | |
| $50,001 or more | 47.9 | 44.1 | 46.5 | 52.8 | | |

For Light and Medium spenders the primary purpose for traveling to a casino destination was to visit the casino (Table 6). On the other hand, Heavy spenders were equally likely to visit a casino destination because of the casino or to visit friends and relatives (approximately 32 percent in both cases). Among Heavy spenders 12 percent visited a casino destination for work or business, eight percent for a sporting event and seven percent for a recreation/vacation related purpose.

**Table 6. Primary Purpose of Visit: Light-Medium-Heavy Casino Visitors**

| Purpose of Trip | Total N=832 | Light N=271 | Medium N=283 | Heavy N=278 | Chi-Square | Sig. |
|---|---|---|---|---|---|---|
| Casino | 60.3 | 80.1 | 68.9 | 32.4 | 154.73 | <.0001 |
| Recreation/vacation | 3.6 | 2.2 | 2.5 | 6.1 | | |
| Visit relatives/friends | 17.8 | 7.0 | 13.8 | 32.4 | | |
| Sporting activities | 5.0 | 1.8 | 5.3 | 7.9 | | |
| Shopping | 1.9 | 1.1 | 1.8 | 2.9 | | |
| Work/business | 7.9 | 3.7 | 5.7 | 14.4 | | |
| Passing through | 3.4 | 4.1 | 2.1 | 4.0 | | |

A little over three-quarters of the heavy spenders participated in recreational activities other than gaming at any point on their trip. Moreover, dining (21 percent), shopping (16 percent), sightseeing, (10 percent) and attending a sporting event (9 percent) were most popular among the heavy spender segment. Differences among the three groups concerning recreation activities were all statistically significant. While visiting a casino destination, heavy spenders were more likely to use overnight accommodations at hotels or motels (62 percent) compared to the other two expenditure categories. Light and Medium spenders mostly stayed with friends and relatives, and thus have a minimum impact on lodging businesses.

**Table 7. Recreation Activities: Light-Medium-Heavy Casino Visitors**

| Recreation Activities | Total | Light | Medium | Heavy | Chi-Square | Sig. |
|---|---|---|---|---|---|---|
| Dining/restaurants | 14.3% | 8.5% | 13.1% | 21.2% | 18.69 | <.0001 |
| Shopping | 8.1 | 4.1 | 3.5 | 16.5 | 40.73 | <.0001 |
| Attend a sporting event | 5.4 | 1.5 | 5.7 | 9.0 | 15.21 | <.0001 |
| Sightseeing | 5.0 | 2.2 | 2.8 | 10.1 | 22.09 | <.0001 |
| Explore the city | 3.6 | 2.2 | 1.4 | 7.2 | 15.72 | <.0001 |
| Visit museum/hall fame | 2.2 | 0.0 | 0.0 | 6.1 | 30.89 | <.0001 |
| Visit other attractions | 2.0 | 1.0 | 1.4 | 4.0 | 7.95 | .019 |
| Nightlife | 1.3 | 0.0 | 0.0 | 3.6 | 16.71 | <.0001 |
| Attend festival | 1.1 | 0.0 | 1.0 | 2.5 | 8.69 | .013 |
| Visit friends/relatives | 10.8 | 3.7 | 8.5 | 20.1 | 64.71 | <.0001 |
| Nothing else | 52.5 | 73.4 | 60.4 | 24.1 | 144.66 | <.0001 |

**Table 8. Preferred Accommodation: Light-Medium-Heavy Casino Visitors**

| Travel Accommodation | Total N=827 | Light N=271 | Medium N=281 | Heavy N=275 | Chi-Square | Sig. |
|---|---|---|---|---|---|---|
| Hotel/motel | 53.0% | 18.8% | 23.3% | 62.0% | 25.07 | <.0001 |
| Friends/relatives | 42.0 | 56.3 | 74.4 | 34.1 | 29.40 | <.0001 |
| Campground | 1.5 | 12.5 | 2.3 | .5 | 14.58 | .001 |
| Other | 3.5 | 12.4 | 0.0 | 3.4 | | |

Approximately 66 percent of the heavy users were first time visitors to the casino where they were intercepted, while only less than one-half of the light spenders (41.3 percent) and about 47 percent of the medium spenders were first time visitors. Additionally, about 63.7 percent of the heavy spenders patronized other casinos while on their trip compared with 22 percent and 21 percent for the medium and light spenders respectively. Over three-fourth (87 percent) of the heavy spenders were very likely to recommend others to visit the community, and nearly 86 percent would recommend the casino where they were intercepted.

## Accessibility

Compared with their counterparts, heavy spenders (21 percent) were more likely to obtain information about the community they visited than light spenders (7 percent) and medium spenders (11 percent).

Although there is no statistically significant result among the sources of information of the three groups, it remains that the heavy spenders got much of their information about the community from: Internet/online service (30 percent), friends (26 percent), travel guides, relatives and co-workers (9 percent), and magazines (5 percent) (Table 9).

**Table 9. Primary Information Channels: Light-Medium-Heavy Casino Visitors**

| Information Channels | Total | Light | Medium | Heavy | Chi-Square | Sig. |
|---|---|---|---|---|---|---|
| Newspapers | 9.3% | 15.0% | 16.1% | 3.5% | 4.77 | .092 |
| Chamber of commerce | 3.7 | .00 | 6.5 | 3.5 | 1.43 | .489 |
| Relatives/co-workers | 10.2 | 10.0 | 12.9 | 8.8 | .37 | .829 |
| Magazines | 5.6 | 5.0 | 6.5 | 5.3 | .07 | .966 |
| Radio/Television | .9 | .00 | .00 | 1.8 | .90 | .637 |
| CVB | 1.9 | .00 | .00 | 3.5 | 1.82 | .402 |
| Travel agency | 1.9 | .00 | 6.5 | .00 | 5.06 | .080 |
| Direct mail from casino | 4.6 | 10.0 | 3.2 | 3.5 | 1.61 | .448 |
| Internet/online services | 27.8 | 25.0 | 25.8 | 29.8 | .26 | .880 |
| Friends | 25.9 | 30.0 | 22.6 | 26.3 | .36 | 836 |
| Other travel guides | 12.0 | 10.0 | 6.5 | 15.8 | 1.75 | .417 |
| Other sources | 18.5 | 5.0 | 22.6 | 21.1 | 3.00 | .223 |

A discriminant analysis was performed to find out the variables that differentiate the most between the three segments. As such, results will substantiate the above discussion and strengthen the viability of the market segmentation.

Table 10, presents the results of the discriminant analysis. The Wilks' Lambda and associated $X^2$ statistics indicate that the models did significantly discriminate between the three groups (low, medium and heavy).

**Table 10. Differences: Light-Medium and Heavy Spenders**

| Test of Function(s) | Wilks' Lambda | Chi-square | Df | Sig. |
|---|---|---|---|---|
| 1 through 2 | .509 | 551.028 | 34 | <.0001 |
| 2 | .974 | 21.428 | 16 | .163 |

| Group Centroids | | | | |
|---|---|---|---|---|
| Function | Eigenvalue | % of Variance | Cumulative % | Canonical correlation |
| 1 | .915 | 97.2 | 97.2 | .691 |
| 2 | .027 | 2.8 | 100.0 | .161 |

## Categorizing spending groups

The canonical correlations suggest a moderate to strong association between the discriminating variables and the discriminant models. Further evidence of this association is indicated in the percent of variance accounted for by the canonical correlation for function 1 (97.2 percent) (Table 11). Function 1 discriminates between low and medium spenders. The variables that discriminated most between these two groups were: "first trip to the casino", "casino as the primary reason for the trip", "visit other casinos while on trip", "spending on food and beverages outside the casino", and "travel alone" (Table 11). Function 2 discriminates between medium spenders and heavy spenders. Most discriminating variables between these two groups besides the spending variables were: "number of persons in spending unit", "employment status", "annual household income" and "whether or not they were on a charter bus trip". Results of the discriminant analysis corroborate what has been found based on a series of bivariate statistical tests, performed previously, and strengthens the results of the viability of the segmentation.

**Table 11. Correlation of Discriminating Variables: Light-Medium and Heavy Spenders**

| Variables | Function | |
|---|---|---|
| | *Function 1* | *Function 2* |
| First trip to casino visited | .484* | .371 |
| Casino was primary reason for trip | -.480* | .121 |
| Number of hours spend in casino | .465* | .043 |
| Visit other casinos | .377* | -.236 |
| Nothing else besides gambling | .375* | -.105 |
| Traveled alone | .217* | .020 |
| Number of nights spent in Detroit Area | .172* | .161 |
| Spending on lodging | .159* | .044 |
| Spending on food & beverages inside casino | -.091* | .023 |
| Spending on food & beverages outside casino | .400 | .426* |
| Spending on gasoline in the study area | .045 | .378* |
| Spending on other local transportation | .281 | .359* |
| Spending on miscellaneous | .288 | -.342* |
| Number of persons in spending unit | .289 | .322* |
| Employment status | -.239 | .305* |
| Annual household income | -.085 | .301* |
| Charter bus trip visit | -.011 | .266* |

*\* Largest absolute correlation between each variable and the discriminant function.*

## Summary and conclusions

The findings indicate that segmentation based on expenditure appears to hold some promise as one possible way of segmenting the gaming travel market. The heavy spenders had significantly higher expenditure levels for all non-gaming expenditures than their counterparts. Furthermore, contrary to what other volume segmentation indicates, substantive differences between segments were found in terms of age distribution of gamers and in terms of household income. The heavy spenders were relatively younger, more affluent than their counterparts, first time visitors to the casino where they were intercepted, not on a charter bus trip, engaged in several recreational pursuits other than gaming, traveled with others, and stayed longer in the study region. The greatest majority of the heavy spenders patronized hotels or motels. The primary purpose of trip for the greatest majority of heavy spenders was visiting friends and relatives, work or business, recreational and sporting activities.

Contrary to their counterparts, the heavy spenders were not attracted to the community because of the casinos. The greatest majority reported that gaming was not the primary reason for their trip. However, they were more likely to patronize several casinos while on their trip than the other segments. Almost one-fourth of the heavy spenders obtained information about the community before their trip. In terms of origin of destination, there was a substantive difference between the three segments. More than three-fourths of the heavy spenders were from outside the gaming state while 32 percent were from a neighboring state and the rest from other states. The greatest majority of medium spenders (45 percent) and light spenders (39 percent) came from the gaming state.

Based on volume segmentation of casino tourists, the findings indicate that the heavy spenders are a viable market segment. They are measurable, substantial, actionable, and accessible. They are measurable because they represent an important number of casino tourists. They are substantial because they account for over 90 percent of the total spending of the three segments. They are actionable because they have different socioeconomic characteristics and trip behavior than the other two segments.

They are more accessible than their counterparts. Accessibility can be indicated by the fact that, unlike light spenders or medium spenders, heavy spenders are more likely to seek information about the community before they depart on their trip and also because they heavily patronize several community tourism-related attractions while on their trip. Reaching them would be facilitated by disseminating informational literature about the community's offering on-site in hotel/motels, gas stations, sport arenas, shopping venues and retail shops, museums and halls of fame, etc. In addition, as Spotts and Mahoney (1991) proposed, repeat visits might be encouraged through direct mail advertisements sent to all persons who registered at such facilities.

There is recognition that tourists are attracted to urban destinations by the combination and variety of attractions, events, and services they have to offer (Crompton, 1999), and casino visitors are no exception. Heavy spenders are interested in a package of attractions that the gaming community offers. According to Crompton (1999), the challenge for tourism providers is not merely to provide services that people want; it is to package them so they can be accessed conveniently. Packaging means that the agency links with other sources and necessary support services to offer a desired experience to targeted groups (Crompton, 1999). This could involve several recreation providers to develop successful packaged services. The gaming community can promote trip packages that include stops at several casinos and knowing that heavy spenders like to visit several casinos while on their trip, the casinos can jointly advertise to reach them. Thus, rather than competing with each other, community tourism providers can jointly advertise to the gaming market and optimize on the existence of the casinos that serve as secondary attractions for an important number of tourists. In other words, a combination of attractions would attract heavy spenders to the community. The casino is an extra attraction that is added to their trip itinerary.

Further, contrary to common belief that casino visitors spend all or most of their money inside the casino facility, like many other empirical studies (e.g., Moufakkir and Holecek, 2001; Moufakkir, 2002), this paper has demonstrated that a number of visitors who patronize casinos like to do other things in the gaming community other than gamble. At least this should be recognized for some gaming destinations that have commercial land-based casinos. More research is needed to examine gaming destinations that have Native Indian casinos.

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