



Estimating the impact of entertainment on the restaurant revenues of a Las Vegas hotel casino: An exploratory study

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ABSTRACT

Considering the growing presence of non-gaming amenities in a mature casino market such as the Las Vegas Strip, this study examined the indirect contribution of showroom entertainment to casino-operated restaurant business volumes. Using the internal data of a Las Vegas hotel casino, this research found a statistically significant and positive relationship between daily showroom headcounts and food and beverage revenues. For each additional show attendee, daily food and beverage revenue increased \$6.96. This finding suggests that casino executives should consider leveraging show traffic with additional revenue-enhancing venues such as restaurants.

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1. Introduction

Casino operators commonly offer non-gaming amenities such as showroom entertainment, retail stores, night clubs, spas, hotels or food and beverage outlets on their properties in an attempt to attract customers who would otherwise not visit the casino. For example, showrooms in many casinos are offered for the primary purpose of increasing gaming volumes. Because casino operators historically viewed the role of non-gaming amenities as a complement to gaming revenues, it was not unusual to discover that these amenities routinely operated at a loss or break-even proposition. However, recently non-gaming amenities have become a significant source of revenue in many casinos. In fact, several properties on the Las Vegas Strip reported that non-gaming revenue had surpassed gaming revenue and represented more than half of their total revenue (Stratton, 2006; Yahoo! Inc., 2005).

As the number of non-gaming amenities offered by the casino grows, guests are more likely to patronize multiple outlets within the casino on the same trip. For instance, customers enticed by a show may also patronize a restaurant in the property before or after attending the show as well as the gaming area. If so, casino operators would be wise to develop strategies focusing on these guests and their propensity to increase their expenditures per visit. This strategy is similar to one used by mall operators who utilize high profile department stores to draw traffic to the mall thereby benefiting the other stores in the mall. In the same manner, a select

casino amenity can produce spillover traffic into other revenue-producing units in the casino.

To maximize the potential revenue contributions of non-gaming amenities, it is vital to understand their spillover-generating ability. However, little is known about the synergistic relationship between casino amenities. Considering the paucity of empirical evidence in this area of research, this study explored the indirect effect of showroom entertainment on casino-operated restaurant business volumes. More specifically, the current study examined the relationship between daily showroom headcounts and the aggregate food and beverage revenues of multiple restaurants in a Las Vegas hotel casino.

2. Literature review

2.1. Non-gaming amenities

Casinos in a mature and competitive market such as the Las Vegas Strip seek to appeal to a broader range of customers than just their primary gambling target market. A recent survey of Las Vegas visitors' gaming behavior conducted by the Las Vegas Convention and Visitors Authority (LVCVA) revealed that non-gaming activities were a main trip purpose cited by a large number of visitors to Las Vegas. According to the survey, 42% of visitors stated that their main intention in Las Vegas was vacation or pleasure whereas only 11% cited gambling (LVCVA, 2008).

Findings from the LVCVA surveys seem to imply a different need and priority for casino experiences between entertainment-oriented and gaming-oriented customers. In fact, entertainment was found to be of relatively low importance for casino patrons in Pfaffenberg and Costello's (2001) study. These authors surveyed

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the patrons of Indian casinos in Michigan and Arizona and riverboat casinos in Illinois and Indiana on the importance of various factors influencing their casino experiences. They found that safety, friendly staff, and courteous service were of relatively high importance. Compared to gaming-oriented customers, Dandurand and Ralenkotter (1985) found that entertainment-oriented visitors tended to assign more time and importance to entertainment activities than to gambling. This finding was based on the analysis of self-reported accounts of gaming and non-gaming behaviors collected from surveys of Las Vegas visitors. The study also reported that entertainment-oriented visitors were likely to spend more money on food and beverage per day than other visitors. However, gaming-oriented customers are likely to receive complimentary food and beverage from casino management because of their gaming activities, resulting in less spending on food and beverage.

Lucas and Kilby (2008) noted an emerging “epicurean” customer segment in the mature market such as the Las Vegas Strip. This segment was described as non-gaming oriented: seeking activities such as dining, shopping and shows. According to Lucas and Kilby, casino executives of some Las Vegas hotel resorts are considering creating non-gaming host positions responsible for providing non-gaming related customer services. Given the significant revenue contribution of non-gaming operations, understanding of the needs and behavior of the “epicurean” customers is increasing in importance.

2.2. Showroom entertainment in casinos

It is not uncommon for casino managers to invest a substantial amount of money in building and operating showrooms. Despite considerable investment in showroom entertainment, negative cash flows from showroom operations are frequently accepted by casino management (Atlas, 1995; CasinoMan, 2003; Guier, 1999; Rowe, 1994; Yoshihashi, 1993; Lucas and Kilby, 2008). Casino operators endure these losses because entertainment is assumed to enhance gaming revenues indirectly by attracting people who would not normally patronize the property (CasinoMan, 2003; Christiansen and Brinkerhoff-Jacobs, 1995; Dandurand and Ralenkotter, 1985; Gaming Industry, 1994; Lucas and Kilby, 2008). Despite the widespread assumption that entertainment attracts casino play, little is known about the indirect gaming contribution of entertainment (Suh, 2006).

Suh (2006) examined the relationship between paid showroom headcounts and gaming volumes using the internal data obtained from two Las Vegas Strip casinos. The study found a significant and positive relationship between showroom headcounts and table game business volumes in both properties, after controlling for the simultaneous influences of different days of the week, major holidays and special events on gaming volumes. The estimated incremental table game wins per show attendee at each property were \$3.44 and \$16.47. With respect to slot gaming volumes, only one property reported a significant and positive relationship between show headcounts and slot gaming volumes. The estimated incremental slot wins per show attendee at each property were \$7.84 and \$2.85. Given substantial investment in showroom entertainment, the author argued that the showrooms should produce sufficient cash flows to be financially attractive investments.

2.3. Marketing literature

Similar to showroom entertainment in the casino, entertainment offerings in shopping malls, such as movie theaters, video arcades, special events and exhibits (i.e., fashion shows), are believed to enhance traffic to malls (Shim and Eastlick, 1998; Sit

et al., 2003). These entertainment offerings provide excitement and pleasure, helping extend shoppers' stay and increasing the overall sales of the shopping mall (Shim and Eastlick, 1998; Sit et al., 2003). Given the similarity of entertainment investment between the gaming and retail industries, the authors reviewed the retail literature for empirical evidence. In particular, the work of Parsons (2003) and Sit et al. (2003) were relevant to the current study.

Parsons (2003) examined the effectiveness of shopping mall promotions in increasing the likelihood of consumers' shopping mall visits and spending at the mall. Parsons conducted a mall intercept survey in three regional shopping malls in New Zealand. The survey results indicated that entertainment-based promotions such as stage shows and exhibits were effective in increasing shopping mall visits but were not sufficient to increase spending. Price promotion was more likely to increase shoppers' spending. Parsons further compared weekly sales and mall visitor numbers by promotion type for one of the three shopping malls over a 13-week period. This comparative-period analysis indicated that the sales and traffic of the mall increased the most when both price promotion and entertainment were offered together. No notable increases in sales were observed during the entertainment-only promotion periods. However, this comparison failed to account for seasonal variations and/or temporal trends that might have influenced shopping mall sales and traffic.

In an attempt to understand consumer perceptions of shopping center image, Sit et al. (2003) examined 11 various attributes of the shopping center image such as merchandising, accessibility, service, security, food and entertainment. The focus of their research was to understand the contribution of entertainment to the shopping center's image. Using focus group discussions and mail surveys, the authors found that consumers visited shopping centers for various purposes including movies, video arcades, dining and socializing with friends or family. They further identified six distinct customer segments (clusters) using the attributes of the shopping center image. Of six segments, two segments were characterized as entertainment-seeking segments: “entertainment shoppers” and “service shoppers.” The “entertainment shoppers” segment was the second largest (22%) of the six segments; and, perceived shopping centers as places for entertainment/leisure activities including dining and movie theater patronage. The “service shoppers” segment (16%) placed high importance on special entertainment features such as fashion shows/bridal fairs as well as entertainment venues such as movie theaters.

Sit et al. (2003) also reported segments which demonstrated less interest in entertainment: “serious shoppers” and “convenience shoppers.” For “serious shoppers” (13%), shopping was an important responsibility. Compared to entertainment-seeking consumers, these shoppers were less likely to patronize a shopping center for entertainment or socializing but were more likely to patronize the food court for a break during or after shopping. Similar to “serious shoppers,” “convenience shoppers” (17%) exhibited little concern regarding entertainment. Overall, the findings of Sit et al. emphasized the importance of entertainment as a means of differentiating one shopping center from another. The “entertainment shoppers” identified in Sit et al. were found to be mostly single teenage males with low annual incomes. However, the study did not address the average spending of entertainment-prone shoppers per mall visit or their role in buying decisions.

2.4. Real estate literature

Several researchers have addressed the presence of inter-store externality whereby anchor stores in shopping malls draw

consumers to the mall and the resident non-anchor stores benefit from the spillover traffic generated (Brueckner, 1993; Eppli and Shilling, 1995; Gould et al., 2005). According to Brueckner (1993), externality occurs when shoppers patronize multiple stores in the shopping center during their shopping trips. One example of a large externality is a department store which draws traffic to the shopping mall by offering a variety of goods (Brueckner, 1993). The externality theory is applicable to the present study because showroom entertainment in the casino is commonly offered to generate traffic for the casino. This traffic-generating role of the showroom is similar to the externality-generating role of anchor store. Hence, the authors reviewed retail real estate literature on inter-store externality.

Brueckner (1993) constructed a model of shopping mall space allocation. The model assumed that externality is a function of the amount of space allocated to different stores, when all else is held equal. Under this assumption, Brueckner argued that more space should be allocated to stores with a strong externality such as anchor stores to maximize inter-store externalities, thereby optimizing overall shopping center profits. Eppli and Shilling (1995) also advanced a theoretical model for the cross-patronage effect between anchor and non-anchor stores. Eppli and Shilling argued that increases in the cross-patronage effects would raise developer profits, thereby offering greater development opportunities of large-scale shopping centers.

Gould et al. (2005) provided empirical support for the presence of positive externalities generated by anchor stores. Using the data of retail contracts for more than 2500 stores in over 35 large malls in the U.S., Gould et al. found that incentives such as rent subsidies were commonly offered to anchor stores because of their ability to generate spillover shopping traffic, thus increasing the sales of non-anchor stores. In fact, the more space dedicated to anchors, the higher the sales per square foot for non-anchor stores. For this reason, most anchor stores paid no rent or a reduced rent to the mall developer despite the significant amount of space they occupied. On the contrary, non-anchor stores paid higher rent per square foot than anchor stores. Additionally, the authors examined the overage sharing percentage requirement in the rents of non-anchor stores. This percentage represents an additional rent charged for the store's sales above a predetermined threshold level. When the store's sales exceed the threshold level, the store pays an overage rent in addition to a fixed base rent, providing the mall developer with a share of its sales. In contrast, most anchor stores in the study did not have an overage sharing percentage; and, if

they did, the overage rent was negligible. The authors noted that this leasing structure enables mall developers to better internalize externalities, thereby allocating mall space efficiently.

2.5. Purpose of the study

The purpose of this research was to provide some insight into the relationship between showroom headcounts and aggregate daily food and beverage revenues of casino-operated restaurants. The theoretical model, shown in Fig. 1, and the variables included in the model are based on the review of previous studies on restaurant sales volume prediction and discussions with casino managers.

2.6. Modeling restaurant sales volume

Researchers have introduced various forecasting models including multiple regression models to predict restaurant sales (i.e., Andrew and Cranage, 1992; Cranage, 2003; Davis and Berger, 1988/1989; Forst, 1992). In predicting restaurant sales volume, some researchers noted that restaurant sales can vary by the day of the week and holidays (i.e., Cranage, 2003; Davis and Berger, 1988/1989). In fact, a significant body of literature in the retail and gaming fields found a positive effect of major holidays and weekends on business volumes (i.e., Lam et al., 2001; Lucas, 2004; Lucas and Bowen, 2002; Lucas and Brewer, 2001; Lucas and Kilby, 2008; Lucas and Santos, 2003; Walters and MacKenzie, 1988; Walters and Rinne, 1986). Additionally, Forst (1992) reported that an indicator variable representing whether the campus was in full session or not in any given week (i.e., no session during the Christmas break) was a significant predictor in a regression model to estimate the weekly sales of a small campus restaurant.

Casinos commonly offer sporting and theatrical events (i.e., boxing matches and concerts) in the hope of attracting customers with varied gaming interests, thereby increasing gaming revenues (Christiansen and Brinkerhoff-Jacobs, 1995; Kilby et al., 2004; Lucas and Kilby, 2008; Suh, 2006). In fact, Lucas (2004) indicated a positive and statistically significant impact of special events on blackjack business volumes (cash drop) in a model designed to predict incremental blackjack cash drop associated with match play coupons redeemed by blackjack players. In his study, a special event variable indicated a day on which a mass appeal popular entertainer performed at a neighboring property. Hence, a variable representing special events was included in the current study

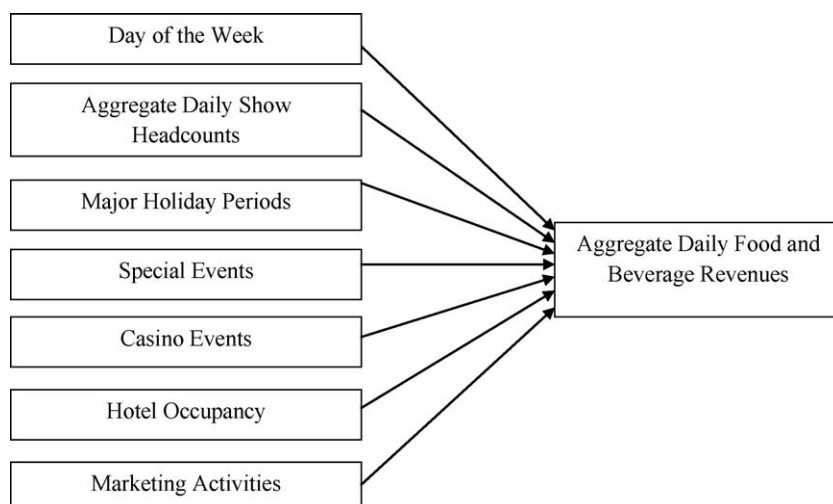


Fig. 1. Theoretical model of influences on aggregate daily food and beverage revenues.

model to account for the possible impact of such events on daily food and beverage revenues.

With respect to marketing activities of the property, the Casino Event variable representing events for invited casino guests such as slot tournaments was employed as an independent variable. It is possible that these events affect restaurant business volumes especially complimentary sales. However, other sources which could possibly influence daily restaurant volumes, such as hotel occupancy and promotional/marketing activities for showroom/restaurant, were not included in the model. Such data were not available for this study. However, omitting these sources may bias the expected relationships between variables. For example, restaurant revenues and hotel occupancy may be correlated as increased hotel occupancy can cause concomitant increases in restaurant revenues. Despite the lack of the hotel occupancy data, day-of-the-week and holiday variables are likely to account for the effect of hotel occupancy on daily restaurant revenues. This is because hotel occupancy generally rises over the weekend/holidays and declines during the middle of the week.

2.7. Hypotheses

The following hypotheses were advanced to test the indirect effect of showroom entertainment on aggregate daily food and beverage revenues. SH represented the daily showroom headcount. The first hypothesis stated in null form indicates that showroom headcounts will not have an effect on aggregate food and beverage revenue. The second alternative hypothesis states that showroom headcounts will have an effect on aggregate food and beverage revenue. A two-tailed hypothesis test was conducted at the .05 alpha level.

$$H_0: B_{SH} = 0$$

$$H_a: B_{SH} \neq 0$$

3. Methodology

3.1. Data sources

The hotel casino examined in the present study is located on the Las Vegas Strip, NV. The property attracts mainly tourists with its casino, thousands of hotel rooms as well as amenities for various non-gaming activities, such as dining, nightlife, and shopping. With respect to showroom entertainment, the property operates multiple showrooms featuring famous entertainers as well as a production show. The property management provided researchers with the daily headcount data from a single showroom hosting a production show. The showroom for the production show has a seating capacity for more than 1000 people, the largest showroom seating capacity on the property. The show performed regularly twice a day at 7:30 p.m. and at 10:30 p.m. except on the scheduled dark days (no performance).

In addition to the showroom headcount data, management provided the aggregate daily food and beverage revenue data of multiple restaurants on its premises. There are more than 15 diverse food and beverage outlets including buffet, cafés, and full service restaurants in the property. In this study, seven restaurants open only for dinner were examined because their operating hours coincided with the show's performance times. They were fine dining outlets operating from 5:00 p.m. until 10:30 p.m. The daily food and beverage revenue and showroom headcount data ranged from 18 February 2005 to 30 September 2005, resulting in 226 observations. Over the 226-day sample period, the show had 88 dark days whereas the restaurants were open every day for dinner.

3.2. Analysis

A multiple linear regression analysis was conducted to investigate the impact of showroom headcounts on the aggregate daily food and beverage revenue while controlling for the effects of other variables on the restaurant business volumes. SPSS 13.0 and E-views 3.0 were used to screen and analyze the data.

3.3. Variable operationalization

The Aggregate Daily Food and Beverage Revenue represented the total dollar amount of daily food and beverage revenues from the selected restaurants in the property. The food and beverage revenue is comprised of both complimentary and non-complimentary (cash) revenues. Complimentary meals for players are normally paid by the casino department while cash revenue is generated directly from customers paying at retail prices. The Showroom Headcount variable represented the number of attendees each day at a single showroom in the property.

Special events, major holidays, and different days of the week were effect coded. Wednesdays and Thursdays served as the base period from which food and beverage revenues on all other week days were compared. Both days had the lowest average daily restaurant revenues compared to other week days. Major holidays examined in this study were St. Patrick's Day, Independence Day and Labor Day, Easter, March Madness, Father's Day, Mother's Day, Memorial Day, and Presidents' Day. There were occasions where more than 1 day was coded as one for a particular holiday. This was done to account for changes in food and beverage revenues prior to or following a given holiday. Finally, a time-trend variable (TREND) was included to pick up any linear trend over time that is not being captured by other variables in the model. The trend variable increased one unit for each day.

4. Results

4.1. Descriptive statistics

Table 1 displays descriptive statistics for the variables used in the model. The mean of the food and beverage revenue variable (F&B REV) was \$144,194.14. The mean of the showroom headcount variable (SH) was 3447.80. The correlation matrix for the continuous variables used in the regression indicated a positive and significant bivariate correlation between the SH and F&B REV variables ($r = 0.506$, $p < .01$, two-tailed) and a negative and

Table 1
Descriptive statistics (N = 226).

	M	SD	f ^a
F&B REV [F&B Revenue]	\$144,194.14	54,365.45	–
SH [Showroom headcounts]	3,447.80	496.69	–
FRI	–	–	33.00
TUE	–	–	32.00
MON	–	–	32.00
SAT	–	–	32.00
SUN	–	–	32.00
LABDAY [Labor Day]	–	–	2.00
INDDAY [Independence Day]	–	–	2.00
PATDAY [St. Patrick's Day]	–	–	4.00
PREDAY [Presidents' Day]	–	–	1.00
EASTER	–	–	1.00
MOMDAY [Mother's Day]	–	–	1.00
MEMDAY [Memorial Day]	–	–	1.00
FATDAY [Father's Day]	–	–	1.00
CASEVENT [Casino Events]	–	–	49.00
MMADNESS [March Madness]	–	–	11.00
SPEVENT [Special Events]	–	–	24.00

^a Frequency of observations where the binary variable was assigned a value of 1.

Table 2

Summary of multiple regression analysis for variables predicting daily food and beverage revenue ($N = 226$).

Variable [VIF ^a]	B	SE B
(Intercept)	128,136.40**	10,375.67
CASEVENT [1.46]	(1,845.52) ^{ns}	5,290.20
EASTER [1.16]	(9,064.77) ^{ns}	20,330.29
FATDAY [1.06]	25,047.71 ^{ns}	19,658.96
FRI [2.25]	50,888.47**	6,292.15
INDDAY [1.06]	31,058.40 ^{ns}	18,845.34
LABDAY [1.07]	13,618.57 ^{ns}	19,134.60
MEMDAY [1.03]	(16,340.99) ^{ns}	19,497.57
MOMDAY [1.04]	14,482.16 ^{ns}	19,441.95
MON [1.80]	(1,646.27) ^{ns}	6,412.00
MMADNESS [1.64]	3,046.03 ^{ns}	10,953.57
PATDAY [1.36]	14,939.79 ^{ns}	18,126.30
PREDAY [1.03]	(8,054.92) ^{ns}	19,173.94
SAT [2.63]	82,964.28**	7,510.77
SHOWCNT [2.19]	6.96** ^b	1.56
SPEVENT [1.39]	44,806.03**	5,729.00
SUN [2.00]	(2,392.19) ^{ns}	6,846.82
TREND	(208.60)**	74.71
TUE [1.98]	10,245.01*	6,119.76
AR(1)	0.68**	0.05

ns: not significant.

^a Variance inflation factor.

^b ** $p < .01$ two-tailed.

* $p < .05$ one-tailed.

** $p < .01$ one-tailed.

significant bivariate correlation between the TREND and F&B REV variables ($r = -0.253$, $p < .01$, two-tailed).

4.2. Multiple regression results

Table 2 reports the result of multiple regression analysis. The adjusted R^2 indicated that approximately 84% of the variance in F&B REV was explained by the model. The model F statistic of 55.41 was statistically significant (d.f. = 213, 12, $p < .0001$). As shown in Table 2, the coefficient estimate of SH was statistically significant ($p < .001$), exerting a positive effect on F&B REV. A one-unit increase in showroom headcounts produced a \$6.96-increase in the aggregate daily food and beverage revenues ($t = 4.46$, d.f. = 213, $p < .0001$).

4.3. Multiple regression diagnostics

A visual inspection of a histogram indicated a normal curve. An examination of residual plots indicated equal error variances and a linear relationship between the independent and dependent variables. Variance Inflation Factor (VIF) values for independent variables in the model indicated no concern for multicollinearity issues. The regression summary table (Table 2) reports the VIF value of each variable in parenthesis. Additionally, no outliers were detected in the analysis of residuals and leverage statistics. Finally, the residuals were uncorrelated over time.

5. Discussion

5.1. The indirect contribution of a showroom to restaurant business volume

The regression results indicated that for each additional show headcount, daily food and beverage revenue increased \$6.96. This estimate can be multiplied by the average showroom attendance per day and the number of show days during the sample period to approximate the incremental F&B revenue associated with the showroom. Over the 226-day period, the average daily showroom attendance was 3447.80 (see Table 1), and there were 138 show

days. Hence, the showroom's indirect contribution to restaurant revenues during the sample period would equal \$3,311,547.12 or $(3447.80)(\$6.96)(138)$. Using these terms, the management can further estimate the annualized indirect contribution resulting from the showroom operation. The estimate, in turn, could be added to the direct profit or loss the showroom produced to approximate the showroom's return on investment.

5.2. Spillovers

This study found a significant and positive relationship between showroom headcount and the daily food and beverage revenues of casino-operated restaurants, supporting the alternative hypothesis. This result provides theoretical support for the externality theory in the retail real estate literature (i.e., Brueckner, 1993; Eppli and Shilling, 1995; Gould et al., 2005). Similar to anchor stores in shopping malls, the showroom examined in the present study appeared to generate spillover traffic to the restaurants within the casino. Given the positive relationship between showroom entertainment and restaurants, casino managers should focus on the propensity of show traffic to increase food and beverage sales in the property. For example, offering a promotional coupon on the back of the show tickets, redeemable for desserts or drinks from the casino's restaurants may help drive additional show traffic to restaurants before or after the show. The increased cross-patronage can contribute to increasing the marginal sales of restaurants. Although the net profit realized by the subject property's food and beverage department is unknown, it may be assumed that marginal increases in revenue are more profitable since most food and beverage outlets possess excess operating capacity such as labor. Hence, marginal increases have the effect of decreasing the excess capacity, resulting in a more efficient use of resources. In addition, fixed costs remain the same regardless of volume, and marginal increases have the effect of lowering the fixed cost as a percentage of sales. Finally, the indication of the cross-amenity patronage between showroom entertainment and restaurants presents opportunities for casino operators to drive show traffic to multiple amenities beyond food and beverage outlets to increase guests' spending per trip.

5.3. New customer segment

Despite emanating from a different industry, the findings of this study provide theoretical support to the results of Sit et al. (2003). Sit et al. identified entertainment-seeking consumer segments which perceived shopping centers as places for entertainment, dining and socializing with friends or family. In the gaming literature, Lucas and Kilby (2008) noted a growing number of "epicurean" customers whose primary purpose for visiting casinos are for non-gaming activities. Similar to entertainment-oriented shoppers and "epicurean" casino customers, the positive relationship between showroom headcounts and restaurant business volumes seems to indicate the possible presence of a non-gaming-oriented customer segment. In fact, a review of the donor property's financial reports indicated that the property has derived considerable revenue from non-gaming operations, supporting the idea of this customer segment emergence. Additionally, the findings of the current study could reflect the changing interests and expectations of today's casino guests along with the trend of mega-casino resort development with multiple entertainment venues.

5.4. Amenity mix

The results of this study imply the importance of careful selection and consideration of the amenity mix. Although the show

examined in the current study appeared to generate positive spillovers for casino-operated restaurants, other casino amenities may not have the same level of spillovers for other operations. Externality-generating ability can differ by amenity. Hence, casino operators should consider each amenity's projected externality in selecting/replacing an amenity. Such consideration would help casino operators achieve the best use of casino space and maximize the property's overall cash flows.

5.5. Limitations

There are several limitations associated with this work. Multiple regression analysis presents a limitation for determining a causal relationship. Hence, the positive relationship between showroom entertainment and restaurant revenues observed in this study does not imply any causal relationship. Nevertheless, this study adds valuable empirical evidence of the relationship between entertainment and restaurant revenues, contributing to the literature on the role of entertainment in the casino environment. Additionally, a single source of data limits the generalization of the current study's results. Results can vary by casino, market and competitive condition.

With respect to the data used in this study, the restaurant revenue data represented aggregate daily revenues including both complimentary and cash revenues. Therefore, examining only the cash revenues associated with showroom headcounts can provide a more accurate picture regarding the true spillover effects stemming from entertainment. Additionally, the data associated with hotel occupancy and marketing activities were not available for testing the model advanced in the current study. Hence, future research can include these variables in the model to expand our understanding of the entertainment's contribution to restaurant business volumes.

5.6. Future research

This study was the first attempt to examine the relationship between showroom entertainment and restaurant business volumes in the casino environment. Clearly, there is a need for continued research in this area. Interviewing or surveying show attendees as to their motives and the benefits they seek while patronizing casinos along with their multiple-outlet patronage intentions can help casino managers better understand the entertainment-oriented customers' needs and expectations. Benefits sought by these guests can be different from those sought by heavy gamblers. Additionally, the economic impact of spillovers demands further theoretical and empirical work.

The model and method advanced in this study can be applied to examine a relationship between other types of casino amenities such as retail shops and restaurants. As more and more casinos offer a variety of non-gaming amenities, such research will help casino managers optimize the benefits of traffic flow from a particular amenity and ultimately improve overall property cash flows. Finally, future work might also explore hourly variations in restaurant revenues associated with show traffic (i.e., restaurant revenues an hour before and after the show) to better understand the transiency of the entertainment effect on restaurant business volumes.

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