

Why Casinos are not Recession Proof: An Business Cycle Econometric Case Study of the Las Vegas Region

Mark P. Legg
Oklahoma State University

and

Hugo Tang
Purdue University

ABSTRACT

The gaming industry has long been considered recession proof. However, as the gaming industry has expanded it has increased its exposure to the lodging and convention industries. This is evidenced by the fact that the gaming industry is struggling alongside these industries. This study uses the Las Vegas region to investigate gaming revenues' exposures to the economy from the most recent recession (2007/2010) in comparison to the previous recession (2001) and the sources of the change in the exposure to the economy. Through logarithmic OLS-HAC regressions and rolling-correlations, the findings show that casinos were more exposed to economic conditions in the latest recession when compared with the previous recession. Furthermore, the increasing reliance on the lodging industry is found to contribute to this increasing exposure to economic downturns. With the gaming industry reaching a potential saturation point, casinos need to push for better understanding of economic conditions.

Keywords: *gaming revenue exposures, logarithmic OLS-HAC regression, business cycle, rolling correlations.*

INTRODUCTION

There is some evidence showing that the gaming industry could be recession proof (Linn, 2008). Even during the recession year of 2001, commercial gaming revenues rose by 3.1% (American Gaming Association, 2002). Literature on gambling has revealed a number of factors for casinos being less-sensitive to market downturns. These factors range from addicted gamblers and lack of competition from heavy regulation fueling large profits to individuals seeking reliefs from recession hardships patronizing casinos (Grinols & Mustard, 2001; Klempt & Pull, 2009; Shonkwiler, 1993).

As the conditions in the marketplace have changed, the gaming industry has increased its reliance on the lodging and convention industries to drive in gaming revenues by attracting gamblers to casinos (Plume, 2002; Yi & Busser, 2008). Meanwhile, the increased reliance of the gaming industry on the lodging and convention industries has increased the gaming industry's sensitive to economic downturns as lodging and convention industries are more-sensitive prone to market downturns (Friess, 2009; Smith, 2009). Furthermore, this sensitivity to economic downturns increased over the previous decade as the gaming industry expanded and a number of

states legalized lotteries, a casino gambling economic substitute (AGA, 2008; Elliott & Navin, 2002; Moss, Ryan & Wagner, 2003).

All these changes combined with decreasing gaming revenues over periods during the recession of 2007 to 2010 have led some to note that the gaming industry is no longer recession proof (AGA, 2008; Linn, 2008). Therefore, this study looks to investigate why casinos are no longer recession proof. To do so, this study will first investigate the exposure of gaming revenues to economic conditions during the recessions of 2001 and (2007/2010). Then this study investigates if the lodging industry, convention industry, inter-casino competition and lotteries play an increasing role on gaming revenues during recession (2007/2010) compared to recession (2001).

With the gaming industry no longer being considered recession proof, practitioners within the industry will need to better understand the role that the aligned hospitality industries play on gaming revenue during economic downturns. Furthermore, understanding these roles along with the sensitivity of the gaming industry to market conditions will give practitioners and researchers alike more insight as to forecast future risks to the industry.

LITERATURE REVIEW

Recessions and Gaming (2.1)

The National Bureau of Economic Research defines a recession as a decline in both economic activity and Gross Domestic Product (GDP) that lasts for more than a few months. Within the past decade, there were two periods of economic decline (02/2001-11/2001) and latest recession (12/2007-01/2010).

The decline in GDP is attributed to a number of factors ranging from decreased production from a range of economic sectors, lags in consumer spending as consumers' shift their buying behavior which can negatively impact a number of industries (Kotler & Casilione, 2009).

During the 2001 recession, the gaming revenues within the United States increased even as economic activity in the other industries decreased (AGA, 2008). However, casinos in all markets did not fare as well during the latest recession (2007/2010). This is shown in the two largest gaming markets as Nevada posted one of the worst decreases in year-year revenues at 9.73% decrease in total-win from 2007 to 2008, and a multiple casinos filed for bankruptcy in Atlantic City (Las Vegas Convention and Visitors Authority, 2008; USA Today, 2008). Meanwhile, various native-casinos held layoffs because of declining gaming revenues (Green, 2008; Phillips, 2009). Given the struggles of the gaming industry during the latest recession, we therefore expect the recession (2007/2010) will have a significant negative impact on gaming revenues when compared to the previous recession of 2001.

Hypothesis One: The recession of 2007-to-2010 had a greater negative impact on casino gambling revenues when compared to the recession of 2001.

Lodging, Conventions and Gaming (2.2)

Studies have found that hotels not only initially attract gamblers into casinos as they typically stay at them during their gambling trips, but they also are critical determinant of gamblers making repeat visitations to the casinos (Dandurand & Ralenkotter, 1985; Richard &

Adrian, 1996). Given this importance, casinos have expanded their lodging operations over the previous decade to drive in gambling revenue. In Las Vegas and Atlantic City from the end of the recession of 2001 to 2010 a total of ~20% and ~50% hotel rooms were added respectively (Las Vegas Convention and Visitors Authority, 2002, 2009; New Jersey Casino Control Commission, 2001, 2009). Even states legalizing gambling have pushed for casinos to establish hotels as a means to draw out-of-town visitors (Dense & Barrow, 2003).

Along with lodging operations, casinos in the past decade have also expanded their conventions facilities in order to attract one of the fastest growing segments, convention events travelers (Plume, 2002; Suh & West, 2010). In highly competitive markets, casinos have gone to great lengths to upgrade their conventions facilities in order to attract higher profile events ranging from sporting to music events (Campbell et al., 2006). By hosting these events, casinos are able to increase foot traffic on the property through the presence of events travelers while also increasing the likelihood that gamblers will make repeat visitations (Suh & West, 2010; Yi & Busser, 2008).

Even though the gaming industry increased reliance on lodging and conventions, both of these industries were adversely affected by the latest recession. Not only did over half of hotel respondents in a survey report being negatively impacted during the most recent recession, but this bearish view coincided with a decline in occupancy rate in all lodging segments (Pizam, 2009; Smith, 2009).

Meanwhile the convention industry saw declines as well. The top five cities¹ among convention travel experienced declining convention business (Baeb, 2009; Frederick, 2009; Friess, 2009; Hotel-Online, 2005; Orlando Conventions Visitors Bureau, 2009; Trubey, 2009). In addition, numerous other regions across the country also experienced declining convention travel (Kuhles, 2009; Reddy, 2007). Given the increased reliance on the mentioned sensitive-prone industries, we therefore expect that the gaming revenues will significantly influenced by these two industries during the latest recession when compared to the earlier recession.

Hypothesis Two: The lodging industry has greater impact on gaming revenues during the recession (2007/2010) when compared to recession of 2001.

Hypothesis Three: The conventions industry has greater impact on gaming revenues during the recession (2007/2010) when compared to recession of 2001.

Casino Gambling Substitutes and Competition (2.3)

The growth of lotteries has fueled a number of studies that have found that lotteries is an economic substitute and negatively influences casino gambling revenues (Elliott & Navin, 2002; Siegel & Anders, 2001; Walker & Jackson, 2008). In addition, after the recession of 2001, 6 states legalized some form of lotteries (Wikipedia, n.d.). Meanwhile, 11 states adopted multi-state lotteries (Multistate Lottery Association, n.d.), potentially further cannibalizing the lotteries and gaming industry (Elliott & Navin, 2002).

This growth in lotteries in the past decade coincided with an expansion in the gaming industry. Literature on the expansion of the gaming industry found that newly built casinos negatively impact established gaming revenues by attracting patrons who used to frequent established casinos (Hunsaker, 2001; Moss et al., 2003). Even though the literature indicates that competition negatively impacts established casinos, this has not stopped the expansion of the industry. During the previous decade after the recession of 2001, 17 casinos were added to the Nevada market while the Indiana market added ~43% and ~20% slots and tables respectively

¹ Chicago, Las Vegas, Washington DC, Orlando and Atlanta

(AGA, 2002, 2010; Indiana Gaming Commission, 2001, 2009). This growth was not limited to only these markets, as 97 class-III native-casinos were built and 10 states legalized casinos during this time period (AGA, 2001, 2010; National Indian Gaming Commission, 2006, 2009). Given the growth of the mentioned negative factors, we therefore expect these two factors will have a significantly negative influence on gaming revenues during the latest recession when compared to the previous recession.

Hypothesis Four: Casino-to-casino competition has greater negative influence on gaming revenues during the recession (2007/2010) when compared to recession of 2001.

Hypothesis Five: Lotteries have greater negative influence on gaming revenues during the recession (2007/2010) when compared to recession of 2001.

METHODS

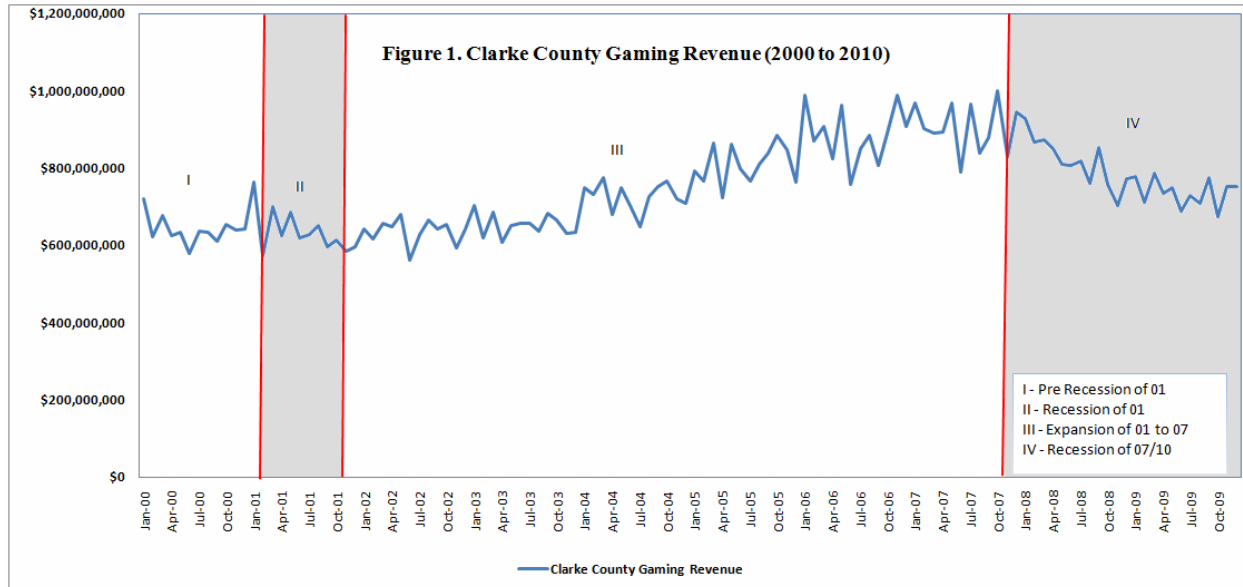
Data (3.1)

This study utilized monthly economic data from 2000 to the end of 2009. Since there is a lack of consistency and availability of macro gaming and hospitality data in different regions, this study will utilize Clarke County of Nevada (Las Vegas) to test the hypotheses. This is done since Las Vegas is the most mature and largest gaming market within the United States.

The dependent variable is the Clarke County gaming revenues (REV) sourced from LVCVA. The independent variables also sourced from LVCVA are derived Las Vegas lodging revenue (LODG)² and convention attendees (CONV) as the lodging and convention proxies. We also include GDP as the proxy for economic conditions, sourced from Division of Labor Statistics and the Bureau of Economic Analysis. Lastly, for proxies of the independent substitution and competition variables, we used the number of states attached with the Multistate Lottery Association (MUSL) and derived competition casino gambling revenue (COMP)³.

²To compute LODG, we took Las Vegas average daily room rate and multiplied it by average occupancy rate along with the total number of rooms available per each given month.

³ To derive COMP we utilized data sourced from state gaming boards and national agencies. First we calculated the ratio of private casino properties to native casino properties. Next we summed up the total of private casino gambling revenues from the gaming board agencies' reports. We then divided the figure by the ratio of private casino properties to native casino properties to come up with a figure for native casino revenue. For the final part of the calculating COMP, we took the sum of native casino revenue and the total of private casino gambling and subtracted Clarke County gambling revenue.



Hypotheses Testing (3.2)

Before testing the hypotheses, we ran rolling 12 monthly Pearson’s correlations to analyze where potential changes occur on the regressors effect on gaming revenue over the past decade (Liang & McIntosh, 1998). To create the rolling-correlations, we started with a 12 month correlation (01/2000-12/2000) and we shift this over one month (02/2000-01/2001) and repeated until time=120.

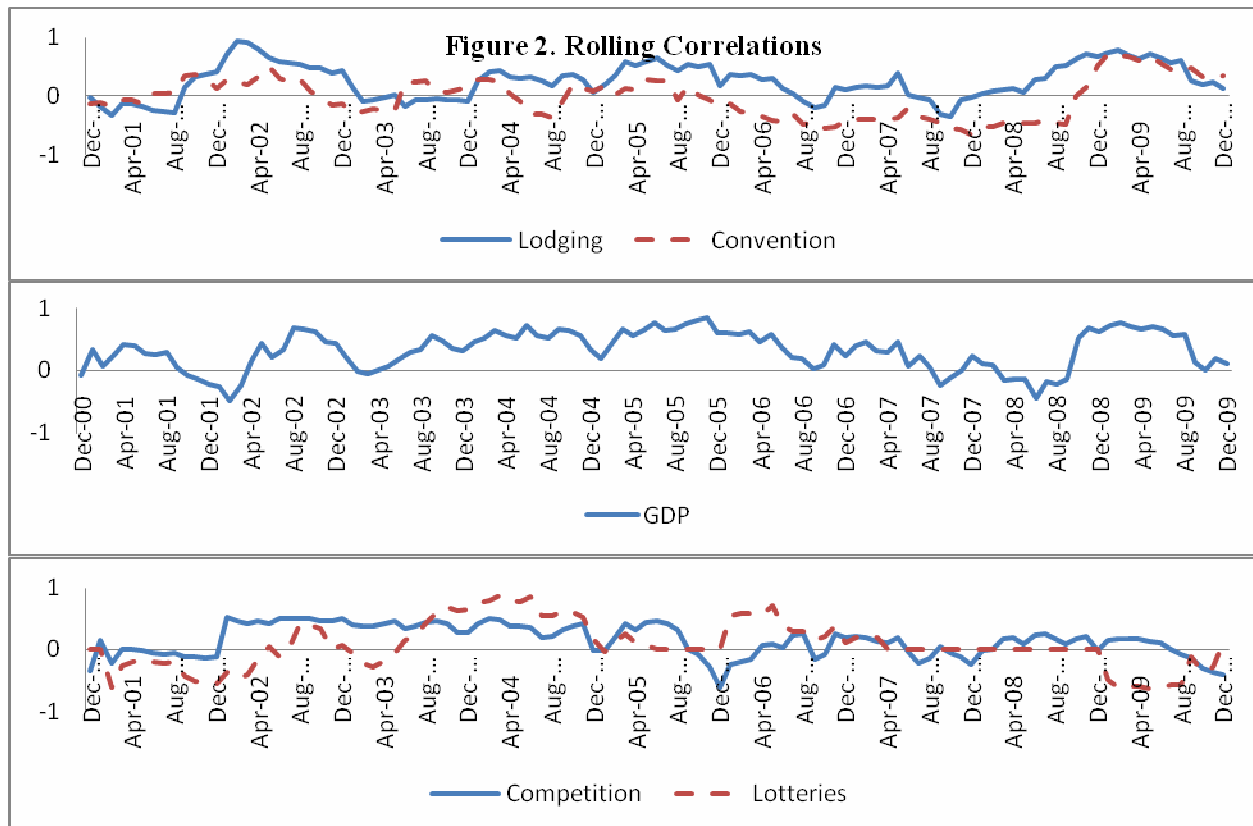
We utilized logarithmic ordinary least-squares (OLS) models with heteroskedasticity-and-autocorrelation (HAC) covariance matrix estimators to limit these errors in the models (Davidson & MacKinnon, 2004). To test the first hypothesis, we created two binary variables, recession 2001 (REC01) and recession (2007/2010) (REC07). We then include these two binary variables into the logarithmic OLS-HAC model to be run on a time series data from 2000 to 2010. The model is specified as $REV = \beta_0 + \beta_1 REC01 + \beta_2 REC07 + \beta_3 LODG + \beta_4 CONV + \beta_5 GDP + \beta_6 COMP + \beta_7 MUSL + \varepsilon$. We then took the binary estimates and tested them through a one-sided t-test to see if the recession (2007/2010) had a greater impact on gaming revenues than the recession (2001), $H_0: \beta_2(REC07) < \beta_1(REC01)$.

For the remaining hypotheses, we restrict the time period to only recession months. We then take REC07 and interact it with each of the independent variables with the exception being GDP since it is utilized as a control variable. Thus the model for the second stage becomes $REV = \beta_1 + REC07(\beta_2 LODG + \beta_3 CONV + \beta_4 COMP + \beta_5 MUSL) + \beta_6 GDP + \varepsilon$. We then look at the variables significance and magnitude to see if they are causes of casinos not being recession proof.

RESULTS

Rolling Correlations (4.1)

To better understand our results in the hypotheses testing we conducted rolling-correlation of the regressors on REV. The correlation-coefficients from each of the rolling-periods are graphed in Figure 2.



The correlations of the lodging and conventions industries indicated they followed similar paths in their relationships with gaming revenue as lodging is mostly positive while conventions oscillates below. This similarity between lodging and conventions should be expected as conventions attendees likely contributed to the lodging through booking of rooms during their visits.

The interesting result from the rolling-correlations is that competition showed periods of positive correlations with gaming revenue. This can be attributed to the expansion of the gaming industry outside of Las Vegas coinciding with growth in Las Vegas during economic expansions. From December 2002 to September 2005, gaming revenue in Las Vegas rose by 41% while 63 class-III native-casinos were built (LVCVA, 2002, 2005; NIGC, 2006). Lastly, lotteries showed greater differences than competition in its correlation with gaming revenue. This is potentially due to clustering of the timing with states entering into multi-state lotteries.

The Effects of Lodging, Convention, Competition and Substitutes (4.2)

To test the first hypothesis we first conducted the OLS-HAC model with the binary recession variables. Among the results indicated in Table 1, it is interesting to note that conventions held a significant negative influence on gaming revenues over the past decade even though the literature would indicate otherwise. This could be due to attendees spending money on non-gaming amenities instead of on gambling and crowding out conventional gamblers. Other results from the model show that GDP and lodging both held a significant positive correlation, while lotteries and inter-casino competition both did not significantly correlate to gaming

revenue. The significance of GDP indicates gaming revenue being influenced by economic conditions as this is likely due to the coinciding economic expansion (2002/2006) and the growth in the Las Vegas gaming industry.

Independent Variables	Parameter Estimates	Standard Error
Recession of 2001	-0.01	0.02
Recession of 2007 to 2010	-0.11	0.03
Lodging	0.28	0.08
Conventions	-0.05	0.03
GDP	1.91	0.64
Competition	-0.16	0.15
Lotteries	-0.05	0.19
Intercept	1.29	4.61
# Observations	120	
Overall F-value	102.55	
R-Squared	0.86	

Notes: Figures in bold are significant at 0.05 level

Next we took the coefficient results from Table 1 and conducted a one-way t-test of the binary recession variables. The t-statistic used for the test is as follows, $t = [\beta_2 \text{REC07} - \beta_1 \text{REC01}] / [\{SE(\text{REC07})^2 + SE(\text{REC01})^2\} / 120]^{1/2} < \{t_{\alpha} = -1.64\}$. Compiling the results into the formula, we get a t-statistic of -30.38 which is less than the critical value $\{t_{\alpha} = -1.64\}$. Thus, supporting hypothesis one of which the latest recession had a greater impact on gaming revenues than the recession of 2001.

With the results indicating the gaming industry was more adversely affected in the latest recession, we then conducted a similar OLS-HAC model only on recession time periods with the recession dummy of 2007 to 2010 to interact with the regressors. There were some interesting findings presented in Table 2. First, the reliance of gaming revenue on lodging significantly increased in the latest recession in relation to the previous recession, thus, supporting hypothesis two. Second, gaming revenues did not increase reliance on conventions in the latest recession, thus not supporting hypothesis three. Third, competition significantly increased in negative influence in the latest recession, thus supporting hypothesis four. Lastly, lotteries did not strengthen its influence on gaming revenues in the latest recession, thus not supporting hypothesis five.

Table 2. OLS(HAC) estimates of Clarke County gaming revenue on recession only time periods from 2000 to 2010		
Independent Variables	Parameter Estimates	Standard Error
Lodging * Recession of 07	0.69	0.29
Conventions * Recession of 07	-0.02	0.08
GDP	-1.04	1.93
Competition * Recession of 07	-0.61	0.26
Lotteries * Recession of 07	-0.05	1.71
Intercept	30.01	18.08
# Observations	34	
Overall F-value	29.68	
R-Squared	0.84	
Notes: Figures in bold are significant at 0.05 level		

CONCLUSION

Through testing of the hypothesis, it was shown that casinos are more exposed to economic downturns as the recession (2007/2010) impacted gaming revenues more than the recession of 2001. Given the increased exposure of the gaming revenue to economic downturns, casinos will need to gain a more thorough understanding of how business cycles influence their bottom line.

In addition, a number of casino projects recently have been delayed due to financial difficulties from the impact of the latest recession (Green, 2008; Phillips, 2009). These delays may be blessings in disguise, as the surge of casino projects has potentially pushed the gaming industry passed its market saturation point (Moss et al., 2003). This was shown in our results as competition played a more pronounced negative role on gaming revenues in the latest recession. State governments may want to take note of this result, as continually pushing for new casinos may further hurt their tax generated gambling revenues in the long run.

Even though convention attendance didn't increase in influence in the most recent recession, it still negatively correlated with gaming revenue as attendees increased floor volume more than they gambled (Roehl, 1996). Therefore, casinos may want to tie events on nights of which the gaming floor is at or near capacity levels, as this would limit the effect that event patrons have on the gaming floor. In addition, casinos reliance on lodging increased between the two economic downturns. If a casino feels overexposed to lodging, they may want to limit the exposure by promoting more local marketing initiatives.

This study holds some limitations. While the study has potentially implications for all markets in the US, the models were only tested on Las Vegas due to non-standardized reporting among hospitality agencies. Furthermore, the data was limited to the past decade (120 observations). In addition, we assumed non-constant relationships between the regressors and gaming revenue. The non-constant relationship and limited sample size influenced the decision to not use dynamic modeling⁴, since dynamic models with these properties can be inconsistent (Lebo & Box-Steffensmeier, 2008).

Hospitality agencies may want to work together to standardize their reporting of their data as this will improve econometric-time series modeling of the gaming industry. In addition,

⁴ i.e. GACH, Dynamic Conditional Correlation, etc.

the results indicate gaming revenue is becoming more influenced by economic downturns. Future studies may look to see how long it takes gaming revenues to respond to changes in market conditions.

REFERENCES

- American Gaming Association (2002). *State of the states: The AGA survey of casino entertainment*. Retrieved June 12 2010, from www.americangaming.org.
- American Gaming Association (2008). *State of the states: The AGA survey of casino entertainment*. Retrieved June 12 2010, from www.americangaming.org.
- American Gaming Association (2010). *State of the states: The AGA survey of casino entertainment*. Retrieved June 12 2010, from www.americangaming.org.
- Baeb, E. (2009, August 20). This guy wants more meetings. *Chicago Business*. Retrieved June 12 2010, from www.chicagobusiness.com.
- Campbell, D. Martinez-Jerez, F. A. & Epstein, M. J. (2006). *Slots, tables, and all that jazz: Managing customer profitability at the MGM Grand Hotel*. Harvard University, Harvard Business School Cases.
- Dandurand, L., & Ralenkotter, R. (1985). An investigation of entertainment proneness and its relationship to gambling behavior: The Las Vegas experience. *Journal of Travel Research*, 23(3), 12-16.
- Davidson, R. & MacKinnon, J. G. (2004). *Econometric theory and methods*. New York, NY; Oxford University Press.
- Dense, J. & Barrow, C. W. (2003). Estimating casino expenditures by out-of-state patrons: Native American gaming in Connecticut. *Journal of Travel Research*, 41(4), 410-415.
- Elliott, D., & Navin, J. (2002). Has riverboat gambling reduced state lottery revenue? *Public Finance Review*, 30(3), 235-247.
- Frederick, M. (2009, December 21). Economic slowdown lingers in D.C.'s hotel, convention business. *Washington Business Journal*. Retrieved June 12 2010, from <http://washington.bizjournals.com>.
- Friess, S. (2009, February 14). Las Vegas sags as conventions cancel. *New York Times*. Retrieved June 13 2010, from www.nytimes.com.
- Green, C. (2008, September 20). Casino selection is delayed. *The Hutchinson News*. Retrieved June 12, 2010, from <http://www.hutchnews.com/Todaystop/delaye2008-09-19T22-24-28>.

- Grinols, E. L. & Mustard, D. B. (2001). Business profitability versus social profitability: Evaluating industries with externalities, the case of casinos. *Managerial and Decision Economics*, 22(1-3), 143-161.
- Hotel-Online. (2005). *Business and convention travelers' habits tracked: Top 25 cities for convention / conference /seminar travelers*. Retrieved June 15 2010, from www.hotel-online.com.
- Hunsaker, J. (2001). Management and information issues for industries with externalities: The case of casino gambling. *Managerial and Decision Economics*, 22(1/3), 97-111.
- Indiana Gaming Commission. (2001). *Indiana Gaming Commission: 2001 Annual Report to the governor*. Retrieved February 10 2010, from www.in.gov/igc.
- Indiana Gaming Commission. (2009). *Indiana Gaming Commission: 2009 Annual Report to the governor*. Retrieved February 10 2010, from www.in.gov/igc.
- Kempt, C. & Pull, K. (2009). Generosity, greed and gambling: What difference does asymmetric information in bargaining make? *JENA Economic Research Papers*, 21, 1-24.
- Kotler, P. & Caslione, J. (2009). How marketers respond to recession and turbulence. *Journal of Customer Behaviour*, 8(2), 187-191.
- Kuhles, B. (2009, October 29). Conventions business down in the Woodlands. *Ultimate Woodlands*. Retrieved June 12 2010, from www.ultimatewoodlands.com.
- Las Vegas Convention and Visitors Authority. (2002). *2002 Las Vegas Executive Summary*. Retrieved January 10 2010, from www.visitlasvegas.com.
- Las Vegas Convention and Visitors Authority. (2005). *2005 Las Vegas Executive Summary*. Retrieved January 10 2010, from www.visitlasvegas.com.
- Las Vegas Convention and Visitors Authority. (2008). *2008 Las Vegas Executive Summary*. Retrieved January 10 2010, from www.visitlasvegas.com.
- Las Vegas Convention and Visitors Authority. (2009). *2009 Las Vegas Executive Summary*. Retrieved January 10 2010, from www.visitlasvegas.com.
- Lebo, M. J. & Box-Steffensmeier, J. M. (2008). Dynamic conditional correlations in political science. *American Journal of Political Science*, 52(3), 688-704.
- Liang, Y. & McIntosh, W. (1998). REIT style and performance. *Journal of Real Estate Portfolio Management*, 4(1), 69-78.
- Linn, A. (2008, November 17). Recession-proof? Maybe not this time. *MSNBC News*. Retrieved January 10 2010, from www.msnbc.msn.com.

- Moss, S. E., Ryan, C., & Wagner, C. B. (2003). An empirical test of butler's resort product life cycle: Forecasting casino winnings. *Journal of Travel Research*, 41, 393-399.
- Multi-State Lottery Association. (n.d.). *Member Lotteries*. Retrieved January 20 2010, from www.musl.com.
- National Indian Gaming Commission (2006). *Gaming Revenues 2001 – 2006*. Retrieved January 20 2010, from <http://www.nigc.gov>.
- National Indian Gaming Commission (2009). *Gaming Revenues 2005 – 2009*. Retrieved January 20 2010, from <http://www.nigc.gov>.
- Nevada Gaming Commission (2008). *State of Nevada Gaming Revenue Report: December – 2008*. Retrieved June 10 2010, from <http://gaming.nv.gov>.
- New Jersey Casino Control Commission. (2001). *2001 4th quarter New Jersey Casino Industry Reports*. Retrieved February 10 2010, from www.state.nj.us/casinos.
- New Jersey Casino Control Commission. (2009). *2009 4th quarter New Jersey Casino Industry Reports*. Retrieved February 10 2010, from www.state.nj.us/casinos.
- Pertrillose, M. J. & Brewer, K. P. (2000). An exploration of customer retention factors in Las Vegas casino resort properties. *Gaming Research & Review Journal*, 5(2), 1-14.
- Phillips, S. (2009, November 17). PA lawmakers losing patience with delayed project. *WHYY News*. Retrieved June 12 2010, from <http://whyy.org>.
- Pizam, A. (2009). The global financial crisis and its impact on the hospitality industry. *International Journal of Hospitality Management*, 28(2), 301.
- Plume, J. (2002). It's all about the amenities. *Casino Journal*, 15(11), 32-33.
- Orlando Conventions Visitors Bureau. (2009). *Metro Orlando Annual Occupancy Report, 2009*. Retrieved June 12 2010, from www.orlandoinfo.com.
- Reddy, S. (2007, February 10). Future Baltimore convention bookings decline: Drop in bookings comes as city financed \$301 million hotel with 757 rooms nears opening. *The Baltimore SunMcClatchy-Tribune Business News*. Retrieved June 12 2010, from www.hotel-online.com.
- Richard, M. D. & Adrian, C. M. (1996). Determinants of casino repeat purchase intentions. *Journal of Hospitality & Leisure Marketing*, 4(3), 25-39.
- Roehl, W. S. (1996). Competition, casino spending, and use of casino amenities. *Journal of Travel Research*, 34(3), 57-62.

- Shonkwiler, S. (1993). Assessing the impact of Atlantic City casinos on Nevada gaming revenues. *Atlantic Economic Journal*, 21(2), 50-61.
- Siegel, D. & Anders, G. (2001). The impact of Indian casinos on state lotteries: A case study of Arizona. *Public Finance Review*, 29(2), 139-17.
- Smith, R. A. (2009). The winds of change have reached gale force. *Cornell Hospitality Quarterly*, 50(2), 147-150.
- Suh, E. & West, J. J. (2010). Estimating the impact of entertainment on the restaurant revenues of a Las Vegas hotel casino: An exploratory study. *International Journal of Hospitality Management*, 29(4), 570-575.
- The National Bureau of Economic Research. (n.d.). *US business cycles expansions and contractions*. Retrieved January 10 2010, from www.nber.org.
- Trubey, J. S. (2009, January 2). Hospitality biz bids farewell to tough year. *Atlanta Business Chronicle*. Retrieved June 12 2010, from <http://atlanta.bizjournals.com>.
- USA Today. (2008, June 7). *Tropicana files for chapter 11 protection amid Jersey joust*. Retrieved June 12 2010, from www.usatoday.com.
- Walker, D., & Jackson, J. (2008). Do U.S. gambling industries cannibalize each other? *Public Finance Review*, 36(3), 308–333.
- Wikipedia. (n.d.). *Lotteries in the United States*. Retrieved June 12 2010, from www.wikipedia.com.
- Yi, S. & Busser, J. A. (2008). The influential attributes that affect resident slot gamblers' repatronage intentions and willingness to recommend casino to others. *Journal of Hospitality & Leisure Marketing*, 16(4), 343-367.