

A Market Analysis
Of
Current Applicants For 13th Gaming
License

(Prepared for the Chain of Rocks Applicant)

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Executive Summary

This analysis is designed to address the important question of "where" Missouri (through the Missouri Gaming Commission) should assign its final legal gaming license. From the state's perspective, this is an important issue as it will largely determine the incremental gaming-revenues, and resulting tax revenues associated with the use of the (last-remaining available) license.

To assess the relative revenue impact of any single new casino, two related prediction-issues must be resolved: (1) the overall revenue increase associated with a new entrant; and (2) the new market shares and where the new entrant's shares originated (from within or out-of-state).

The present study summarizes and applies a study preformed for the Missouri Gaming Commission ("MSC"), see pp. 1-18 for complete details; utilizing the results from this study coupled with data analysis yielded "updated" predictions based on the underlying MSC models. In addition, we present an econometric analysis (pp. 19 – 34) utilizing publically available data from the recent period since the opening of the Lumiere Place in St. Louis.

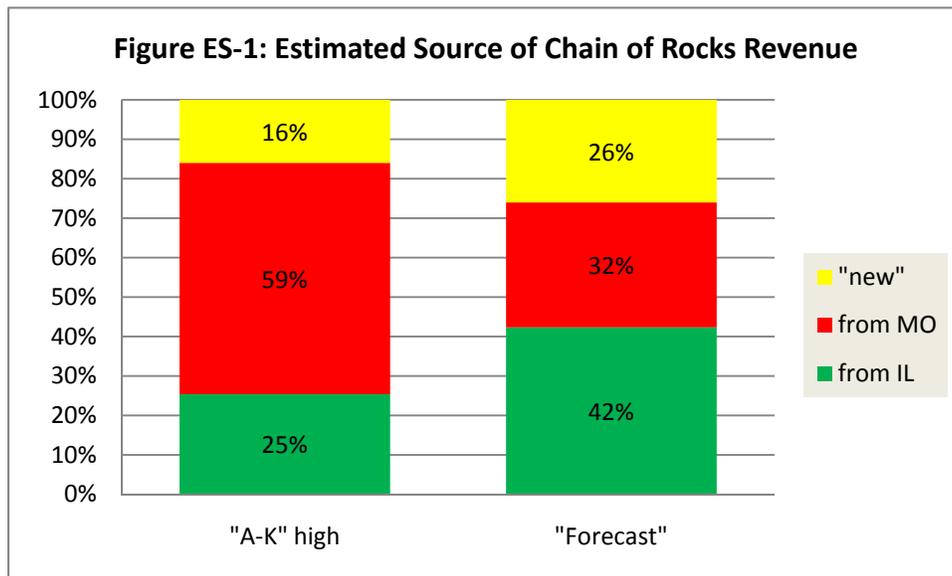
Below we summarize the findings for each of the three candidate casino locations considered in the present study.

Chain of Rocks

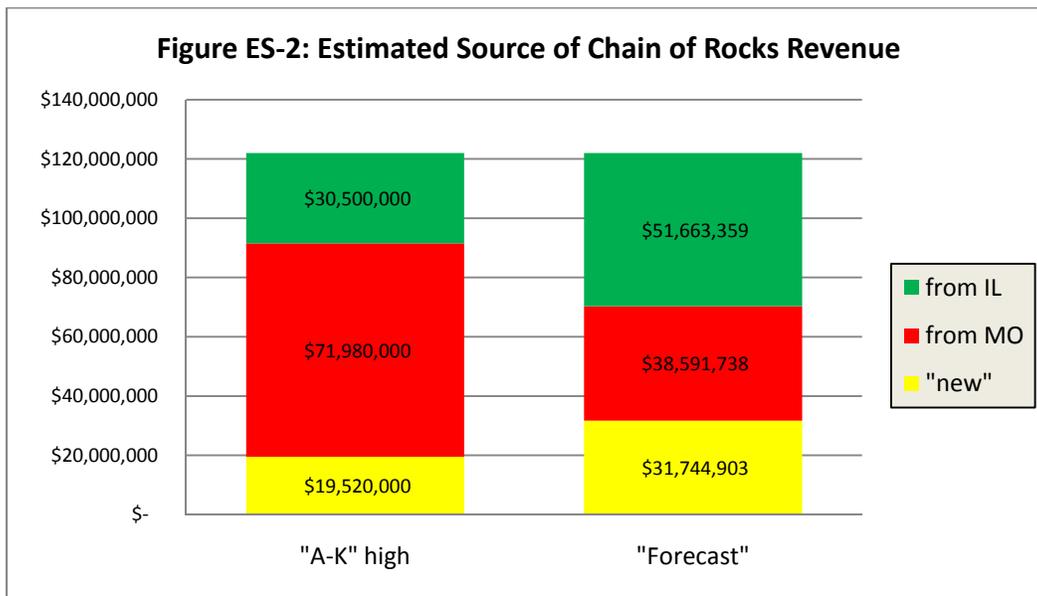
Table ES-1 summarizes the "new revenue" predictions for the Chain of Rocks casino.

Table ES-1: Chain of Rocks New Revenue Predictions	
A-K-based Analysis (Section 1)	Econometric Analysis (Section 2)
2% - 3.5%	2.5%

Likewise, the analysis suggests that the Chain of Rocks will be particularly effective in "stealing market share" from Illinois-based casinos (especially from the near-by Argosy Casino). Figure ES-1 summarizes the predicted source of revenues for an approved Chain of Rocks casino. From the perspective of gaming receipts for the state of Missouri, Figure ES-1 suggests that Chain of Rocks would be an ideal location for the new casino in Missouri, as St. Louis is the only regional market-area with a sizable "cross-border" potential.

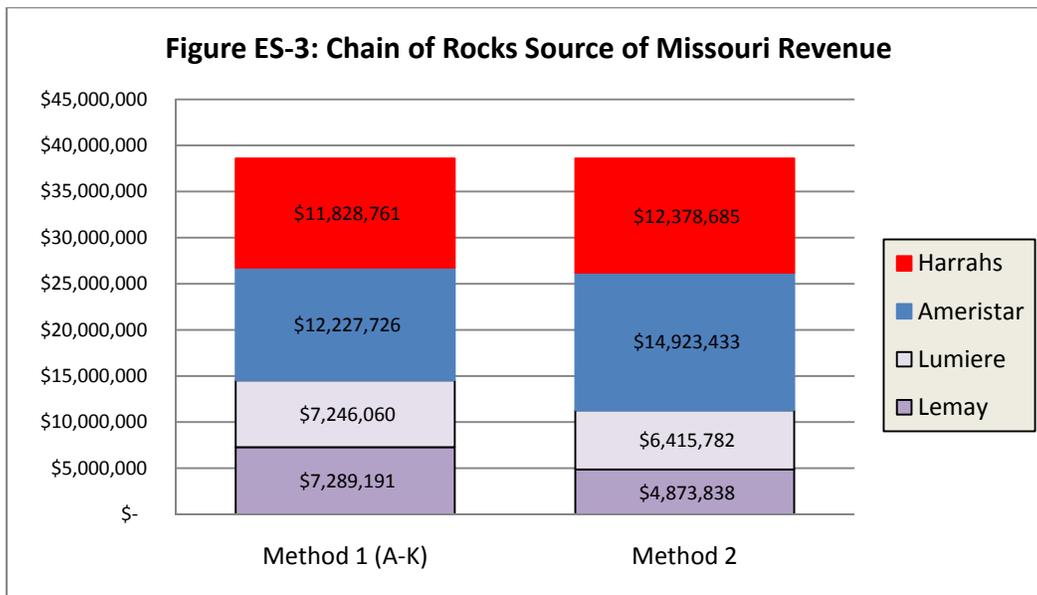


With a prediction for market share, Figure ES-1 can be used to assess how much of the overall Chain of Rocks casino revenue will lead to additional gaming receipts for Missouri. Based on the projections in A-K (see pp 6-15 for details) and interpretations of Section 2, a market share projection for Chain of Rocks to be in the 10% - 13% range seems reasonable. Using the midpoint of this range, we arrive at revenue estimate of \$122M (based on FY2010 St. Louis area revenues of \$1.07B). Figure ES-2 displays estimates of the revenue amounts by originating source (using ES-1 and this \$122M revenue estimate for Chain of Rocks,). It is estimated that approximately \$83M (of the \$122M total Chain of Rocks revenue) are “newly taxable” from the point of view of Missouri. The other \$39M is purely “casino substitution” from the state’s perspective; that is, the collection source “changes” from existing Missouri-based casinos to the new Chain of Rocks casino.



The revenue loss will be noticed by the existing casinos (and will almost certainly lead these casinos to lobby for a casino outside of St. Louis); however, it is quite unlikely that such a small loss in revenue will have a noticeable effect on the existing casino gaming operations. Given the proximity (in terms of drive time) and relative sizes, the majority of this \$38.6M could reasonably be expected to come from Harrah’s and Ameristar. In any case, the Chain or Rocks casino provides a large fiscal opportunity to the state of Missouri with little risk to the incumbent casinos. Indeed, the \$38.6M “flow” (from the current incumbents to Chain of Rocks) accounts for only about 4% of FY 2010 Missouri-side revenues of \$848M.

Figure ES-3 provides two estimates (based on A-K and previous analysis) of the originating source of Missouri revenue. Method 1 relies purely on A-K MNL approach which implies that each casino is equally harmed in percentage terms (-4.2%); Method 2 provides an adjusted estimate based on the observed differences in predicted and actual values for Lumiere. In this case, the percentage revenue impacts (based on “full-fiscal year” 2010 revenues) are approximately: -4.5% for Harrah’s, -5.2% for Ameristar, -3.8% for Lumiere, and -2.8% for Lemay.

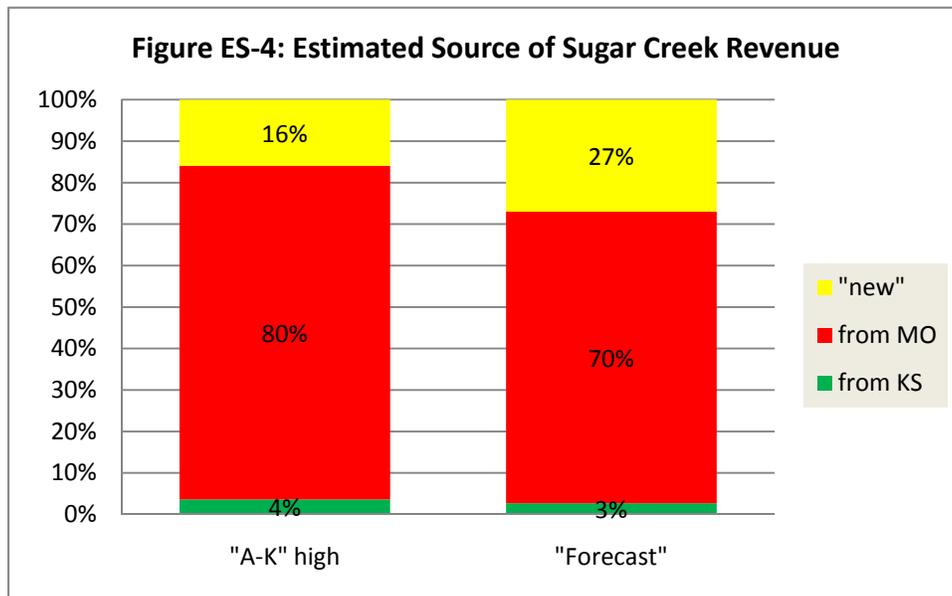


Sugar Creek

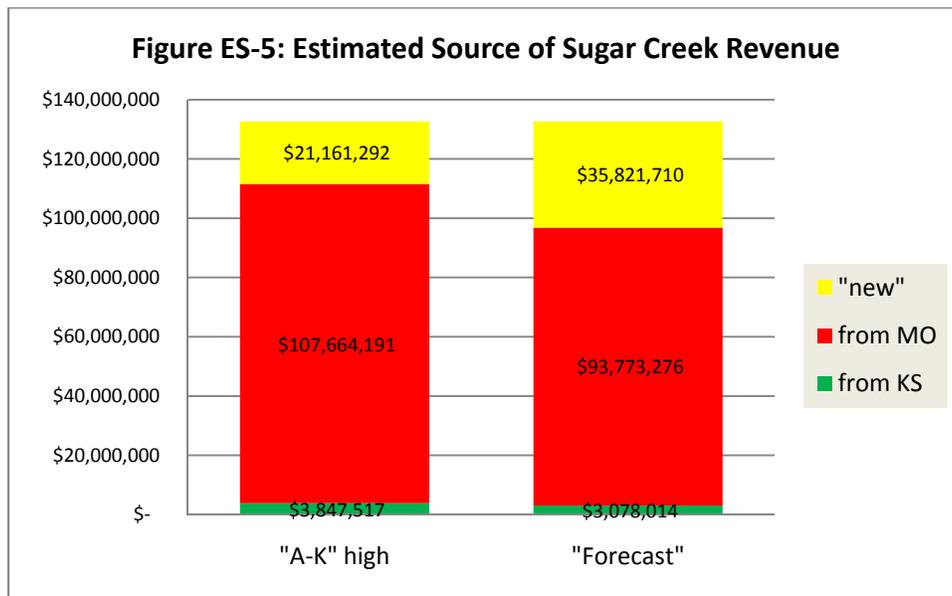
Table ES-2 summarizes the "new revenue" predictions for the Sugar Creek casino in Kansas City.

Table ES-2: Sugar Creek New Revenue Predictions	
A-K-based Analysis (Section 1)	Econometric Analysis (Section 2)
3.6% - 6.4%	2.0%

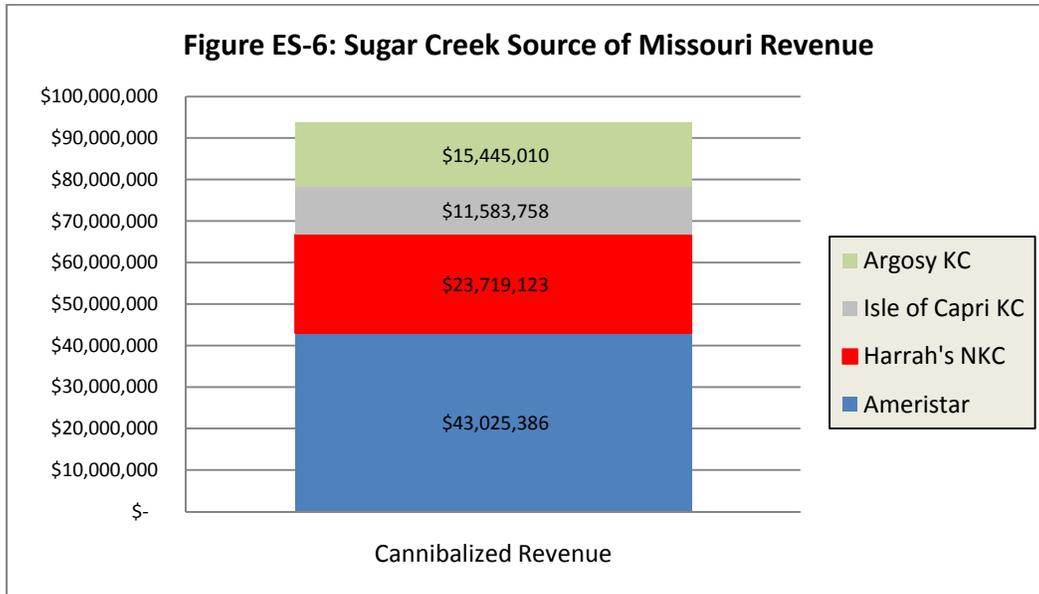
Figure ES-4 summarizes the predicted source of revenues for the Sugar Creek casino. As can be seen, the majority of revenues are cannibalized from other Missouri-based Kansas City casinos.



With a prediction for market share, Figure ES-4 can be used to assess how much of the overall Sugar Creek casino revenue will lead to additional gaming receipts for Missouri. Based on the projections in A-K (Table 2B) and actual revenue data presented in Section 2, a market share projection for Sugar Creek in the range of 17% - 19.2% is projected. Using the midpoint of this range (18.1%), we arrive at revenue estimate of \$133M (based on FY2010 Kansas City area revenues of \$733M). Figure ES-5 displays the revenue amounts by originating source (using the "Forecast" column from Figure ES-4 and this revenue estimate for Sugar Creek). The present analysis suggests that approximately \$39M (of the \$133M total revenue) are "newly taxable" from the point of view of Missouri. The other \$93M is purely "casino substitution" from the state's perspective; that is, the collection source "changes" from existing Missouri-based casinos to the new Sugar Creek casino and so has no impact on gaming receipts in Missouri.



Employing MNL-type projections (further detailed on pp. 6-10 and pp. 14-16) Figure ES-6 provides an estimate of the originating source of Missouri revenue. In this case, the percentage revenue impacts (based on fiscal-year 2010 revenues) are approximately: -12.1% for Harrah's, -18% for Ameristar, -14.2% for Isle of Capri, and -8% for Argosy.

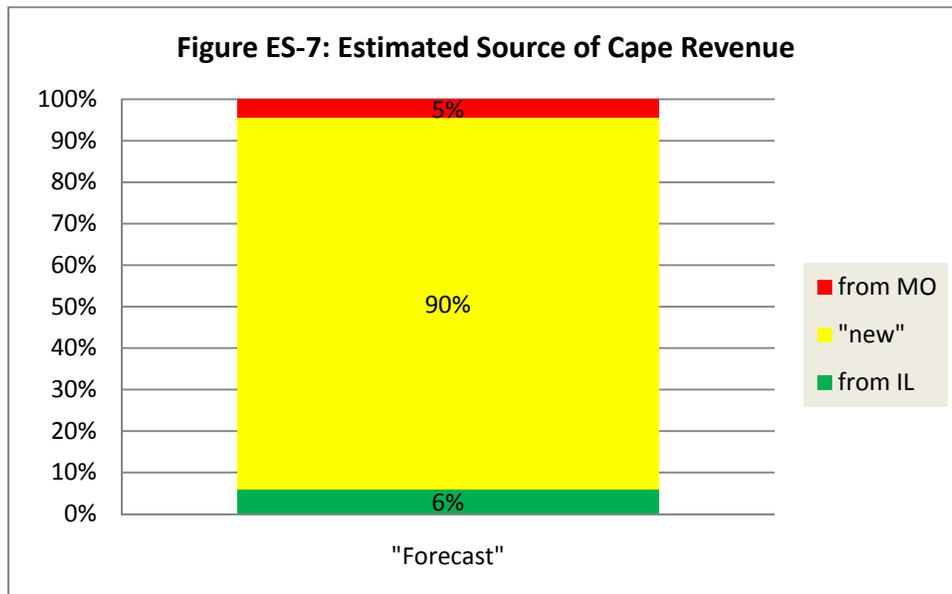


Cape Girardeau

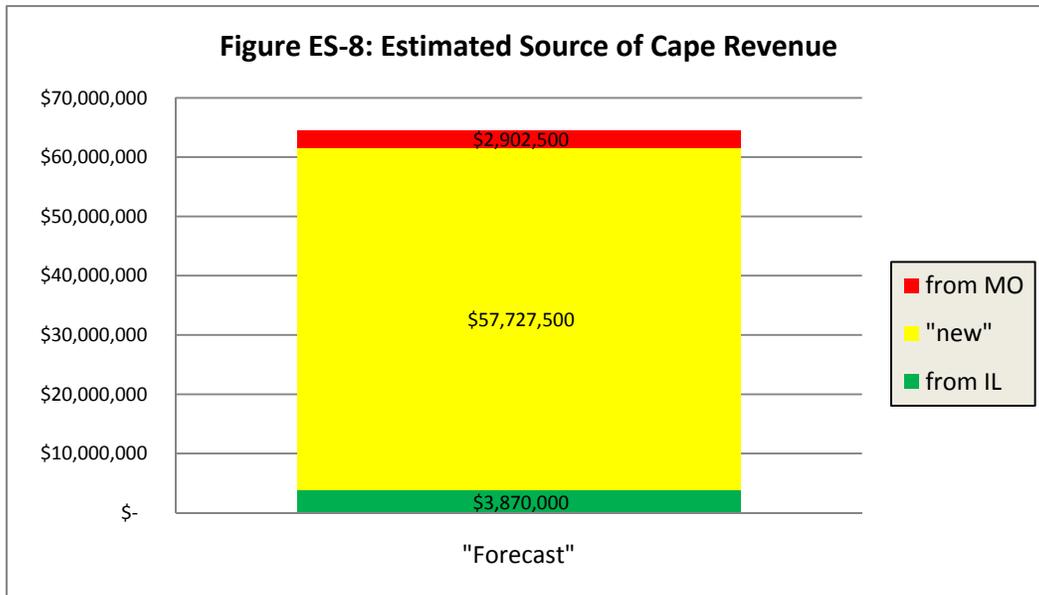
Table ES-3 summarizes the "new revenue" predictions for the Cape Girardeau ("Cape") casino.

Table ES-3: Cape New Revenue Predictions	
A-K-based Analysis (Section 1)	Econometric Analysis (Section 2)
4.2% - 6.4%	3.3%

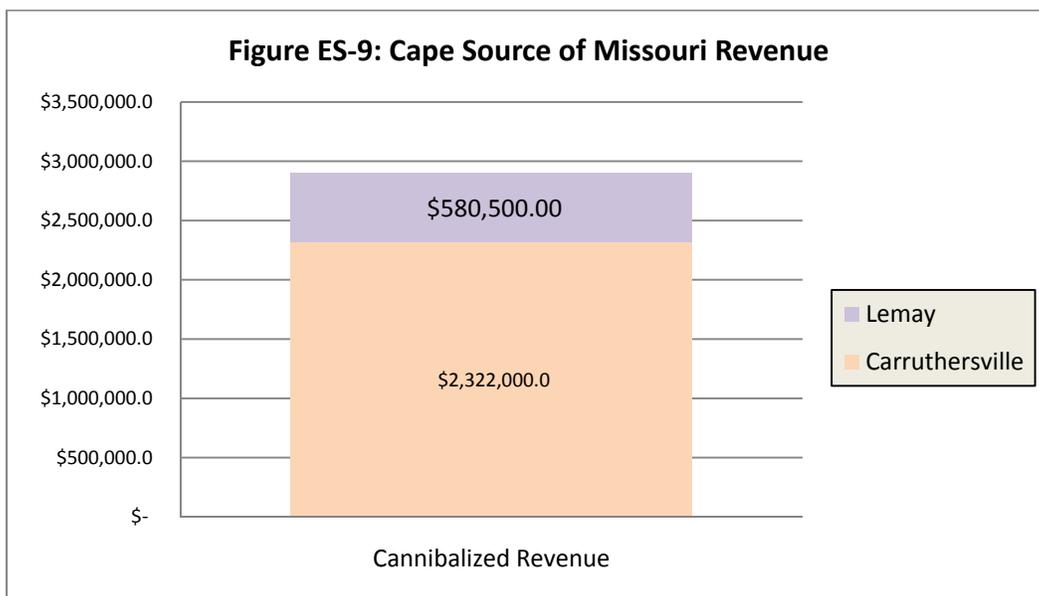
Extrapolating from the A-K (MNL) market share predictions, Figure ES-6 provides the revenue share by source for the Cape casino.



Given that Cape will essentially be its own market, and part of the larger Out State market, we utilized the benchmarking analysis, which analyzes future revenue projections from four separate methods (pp. 30 – 31) from Section 2 along with Figure ES-7 yields revenue predictions by source; these predictions are represented in Figure ES-8, with a base total revenue projection of \$64.5M. The present analysis suggest that approximately \$61.6M (of the \$64.5M total revenue) are “newly taxable” from the point of view of Missouri. The remaining \$2.9M is purely “casino substitution” from the state’s perspective, as stated before would have no impact on gaming receipts in Missouri.



Once again using MNL-type predictions, Figure ES-9 provides an estimate of the originating source of Missouri revenue. In this case, the percentage revenue impacts (based on fiscal-year 2010 revenues) are approximately: -7% for Caruthersville and -0.3% for Lemay.



OVERALL EXECUTIVE SUMMARY

Table ES-4 summarizes the "new to Missouri revenue" predictions for the three candidate casino sites. By "new to Missouri", we mean new taxable revenue (new + "cannibalized from nearby states"). From the perspective of gaming receipts for the state of Missouri, Table ES-4 suggests that Chain of Rocks would be the best location for the new casino in Missouri as it would generate the largest increase in gaming receipts.

Table ES-4: New Taxable Revenues in Missouri	
Casino	New to MO Revenue (\$M)
Chain of Rocks	\$83.4
Sugar Creek	\$38.9
Cape	\$61.6

A Market Analysis for Current Applicants For 13th Gaming License

The present analysis is designed to address the important question of "where" Missouri (through the Missouri Gaming Commission) should assign its final legal gaming license.¹ From the state's perspective, this is an important issue as it will largely determine the incremental gaming-revenues associated with the use of the license.

To access the relative revenue impact of any single new casino, two related prediction-issues must be resolved:

- (1) the overall revenue increase associated with the new entrant; and
- (2) the new market shares and where the new entrant's shares originated.

The latter issue relates to cross-border rivalry; if all casinos were within the "Missouri-taxing region", then an estimate of new revenues would be the only estimate required. Shifts in share would be irrelevant as gaming receipts would simply increase proportionately by the same amount as overall revenues. In other words, if a new entrant lures customers from another Missouri casino, then there is effectively no impact on state gaming receipts.

When some of the existing casinos are in other states (as is the current case for St. Louis), however, then the impact on Missouri gaming receipts will depend on market shares as well as the new revenue associated with the introduction of an additional casino.² In other words, if the customers are lured from across the state border, then the impact to state gaming receipts are "as if" these are new gaming revenues. In the current analysis, we attempt to predict both "new" revenues and changes in market share.

Both of these prediction questions are difficult estimation problems. We attempt to address both issues in the remaining sections of this analysis. In Section 1, we review and utilize an MSC study. The models employed in the study are sophisticated and are particularly useful for predicting market shares. In Section 2, we apply data analysis and econometric techniques to observed publically-available data that has been observed since the last new casino was opened in Missouri. Finally, we offer conclusions about the analysis and what it predicts for a new Chain of Rocks casino in St. Louis.

¹ The elimination of loss limits passed in November 2008; at the same time, the number of gaming licenses was capped at the number of currently approved licenses (13). Currently, the available license in question was revoked from the President's casino in downtown St. Louis.

² In the St. Louis metro area, there are two IL casinos (the Casino Queen and Argosy's Alton Belle). In KS, there is currently the Wyandotte 7th Street Casino (a small Native American casino downtown); the new Hollywood Casino is scheduled to open in early 2012 in the "Legends" area.

I. Utilizing the MSC A-K Study

We will briefly summarize the MSC study:

Missouri Gaming Market: Gamer Profiles and the Estimated Impact of New Gaming Facilities on the State of Missouri and Missouri's Gaming Industry³

G.P. Aubuchon and D.J. Kridel

January 16, 2008

(For the remainder of the document, the MSC study will be abbreviated as A-K.) Once reviewed, A-K will be applied to the Chain of Rocks property in 2010. The MSC study is a good point of departure for two reasons: (1) it is relatively recent so that timeliness should not be a large issue; and (2) the modeling employed was relatively sophisticated and should provide reasonable predictions for an inherently difficult problem.⁴ The actual models and data are not available; hence, the initial discussion will necessarily be qualitative in nature.

The A-K study is comprised of 2 parts: a survey based section covering some basic gaming information and opinions on gaming (the first 61 pages). The second section (pages 62-86) details various model predictions for the various "proposed new" casinos. To simulate the impact of new casinos, the authors simply selected a location (specified by latitude and longitude) and an approximate the number of gaming positions for that location. In the study, the authors considered several potential casino locations: those already under construction (Lemay and Lumiere Place in St. Louis) and others that had been "mentioned as possibilities in the news" (Chain of Rocks in St Louis). For the establishments that were under construction, the authors utilized public releases for estimates of the number of positions; for the other potential casinos, the authors selected "reasonable" values (based on news stories or assumptions based on industry interviews).

³ Available on the MSC website at: http://www.mgc.dps.mo.gov/market_analysis/FinalReport011608.pdf.

⁴ To be clear, no new analysis (simulations) can be performed as the data and models from A-K are not publically available. Further, updated data would be required to pursue this analysis. We simply summarize, describe and critique the existing results in A-K; primarily comparing the predictions with what happened and using this comparison to provide new predictions.

Table 1 (recreated from Table 2 in A-K) details the characteristics of the “proposed” establishments that were utilized in the MSC study.

“Proposed” Establishment	Gaming Positions
Chain of Rocks	2500
Lemay ⁵	3000
Lumiere Place ⁶	2000
Sugar Creek	2500
Legends ⁷	2500
Jeff City	1500
Hermann	1000
Cape Girardeau	1000

In the revenue models estimated by the authors, revenue and revenue per capita were related to zip-level demographics (e.g., income) and to zip-casino variables (e.g., the distance from the zip code to the nearest gaming establishment). The exogenous variables considered in model specification were (A-K, page 62):

- Population aged 21+ (the “target” market),
- Median income,
- Median home value,
- Percent of population aged 65+,
- Percent of population aged 25+ with college degrees,
- Percent of households with children,
- Percent of nonwhite and/or Hispanic,
- Household size,
- Distance between the zip code and each of the gaming establishments,⁸
- DUM25 =1 if at least one gaming establishment was within 25 miles of the zip code,
- DUM50 =1 if at least one gaming establishment was within 50 miles of the zip code
- A gravity variable was calculated for each of the gaming establishments, e.g.,

$$\text{GRAVITY} = (\text{\#positions} * \text{POP21+} / (\text{Distance} * \text{Distance})).$$

⁵ Lemay (River City Casino) opened in March 2010.

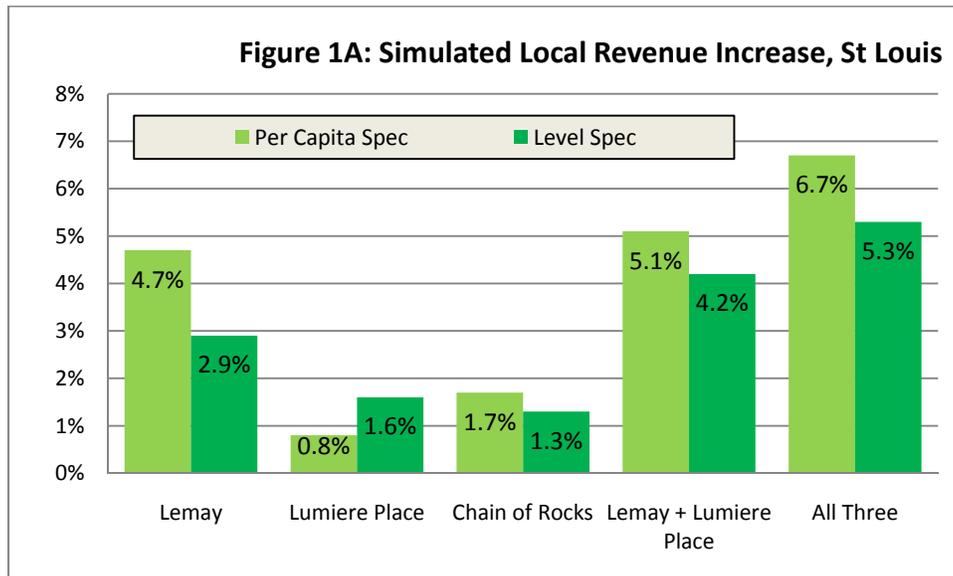
⁶ Lumiere Place opened in December 2007.

⁷ Scheduled to open in 2012.

⁸ For all distance calculations, the centroid of the zip code was utilized.

Various specifications were investigated; once the models were developed, the authors utilized the estimated models to simulate the impacts of the opening of the new casinos. For each of the variables of interest, two predictions were provided for two different preferred model specifications.⁹

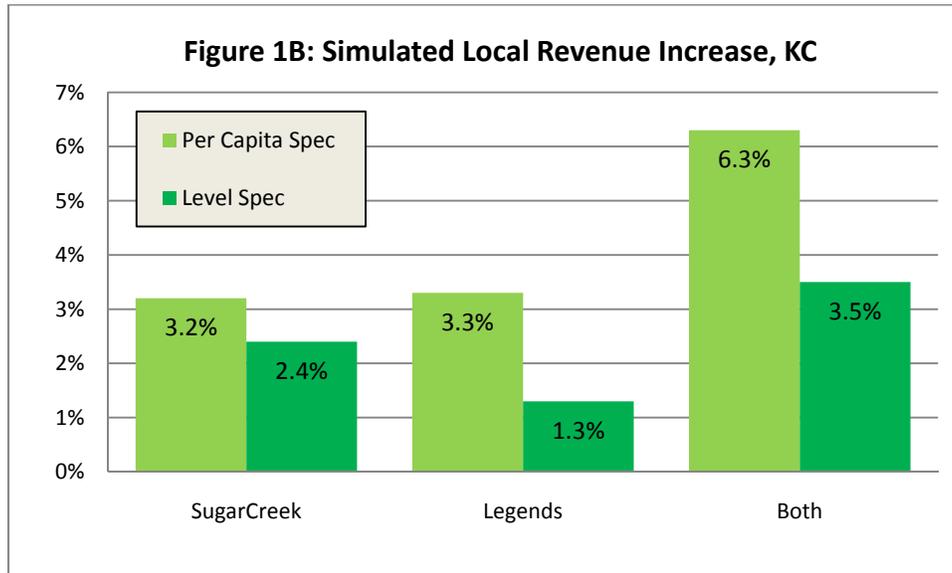
Figure 1A (Figure 88 in A-K) presents the simulated revenue increases associated with the “proposed” establishments for the St. Louis area. As can be seen in Figure 1A, the authors estimate that the simulated revenue increases for the addition of both Pinnacle casinos (Lemay and Lumiere Place) range between 4.2% and 5.1%.¹⁰ This percentage increase in revenue translates into over \$25M revenue for 2007 (see Table 2 below for specifics).



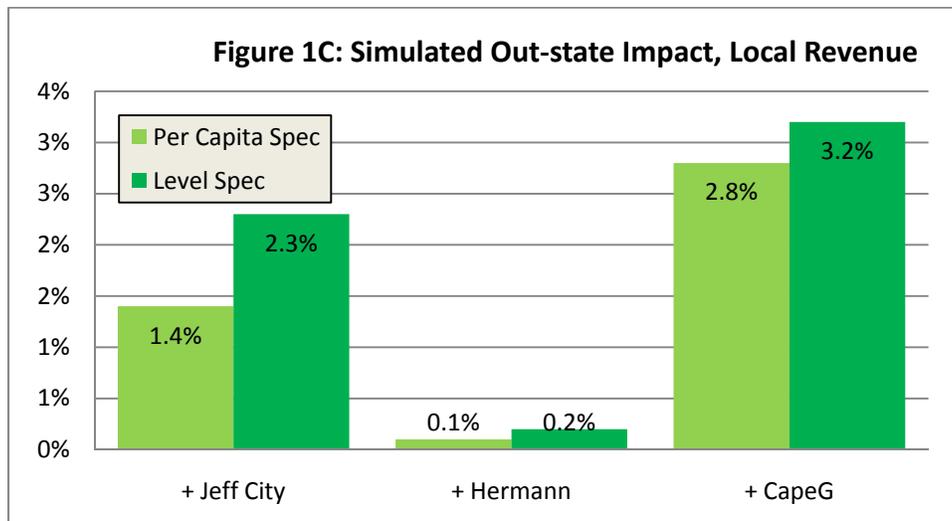
⁹ A-K predicted revenue, patrons, and admissions. Here we focus solely on revenue.

¹⁰ The range is based on different model specifications the authors that were estimated and simulated.

Figure 1B (Figure 89 in A-K) displays the same information for “new” casinos the authors considered for the Kansas City market.



Similarly, Figure 1C (Figure 90 in A-K) displays the prediction results for the "out-state" market area. As clearly demonstrated in the three figures, the overall revenue increases associated with new casino openings is rather modest.



It should also be noted that the authors also provided estimates of the increases in Patrons and Admissions (Figures 91-96 in the A-K study). Since the majority of state receipts accrues from total gaming receipts, this report will focus on revenues and market shares.

Using the percentage increases and “existing” revenues, a prediction of the increase in revenues can easily be generated. For this purpose, 2007 “local” revenues will be utilized.¹¹

Table 2 (taken from the first revenue sub-sections of Tables 3, 4, and 5 in A-K) presents a range of estimates for the revenue increases. Two additional columns for translating the percentage revenue increase into actual revenues have been added to the original table(s). The rather modest predicted increases in revenues (coupled with the simulated decreases in market share) imply that existing establishments will suffer some declines in revenue as new casinos are opened. This should not be a surprise as increased competition would be expected to have deleterious effects on existing market participants.

Table 2: Impact Range, REVENUE				
St. Louis	low	high	low	High
Lemay	2.9%	4.7%	\$17.9M	\$28.9M
Lumiere Place ¹²	0.8%	1.6%	\$4.9M	\$9.9M
Chain of Rocks	1.3%	1.7%	\$8.0	\$10.5M
Lemay + Lumiere Place	4.2%	5.1%	\$25.9M	\$31.4M
All Three	5.3%	6.7%	\$32.7M	\$41.3M
Kansas City	low	high	low	High
Sugar Creek	2.4%	3.2%	\$15.5M	\$20.8M
Legends ¹³	1.3%	3.3%	\$8.4M	\$21.4M
Both	3.5%	6.3%	\$22.7M	\$40.9M
Out-of-state	low	high	low	High
Jeff City	1.4%	2.3%	\$2.4M	\$3.8M
Hermann	0.1%	0.2%	\$0.2M	\$0.3M
Cape Girardeau	2.8%	3.2%	\$4.7M	\$5.4M

It should be reiterated that these predictions are *ceteris paribus* (or everything else equal). In other words, looking at the Lumiere Place row in Table 2, the interpretation is that St. Louis area revenues will be 1.6% (\$9.9M) higher than these would have been expected to be without the opening of Lumiere Place.¹⁴

¹¹ 2007 revenues were selected since the study was performed in late 2007 and officially released in early January 2008. As noted in the study, local revenues were used for modeling. Here we use 90% (based on footnote 18 of A-K) of total revenues as an approximation for local revenues.

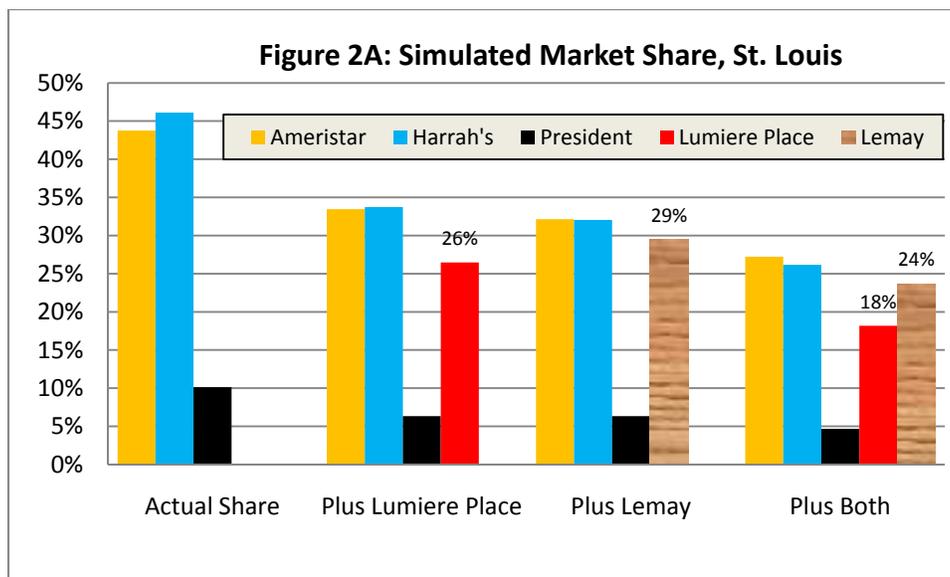
¹² The revenue estimates in the last two columns are based on the Missouri casinos (IL-based casinos are excluded).

¹³ The revenue increase associated with the Legends is likely understated due to the relative paucity of data from the Kansas side of the Kansas City metro area.

¹⁴ For example, if 2008 revenue growth for St. Louis had been expected to be 3%, then we should have observed an increase of 4.6% for 2008. This example ignores the issue of timing (ramping up of the new casino) but provides the correct way to interpret the A-K model results.

Nonetheless, since gaming revenues increase, state tax revenues will also increase. As a result, the state may have a legitimate interest in increasing the number of gaming licenses.¹⁵

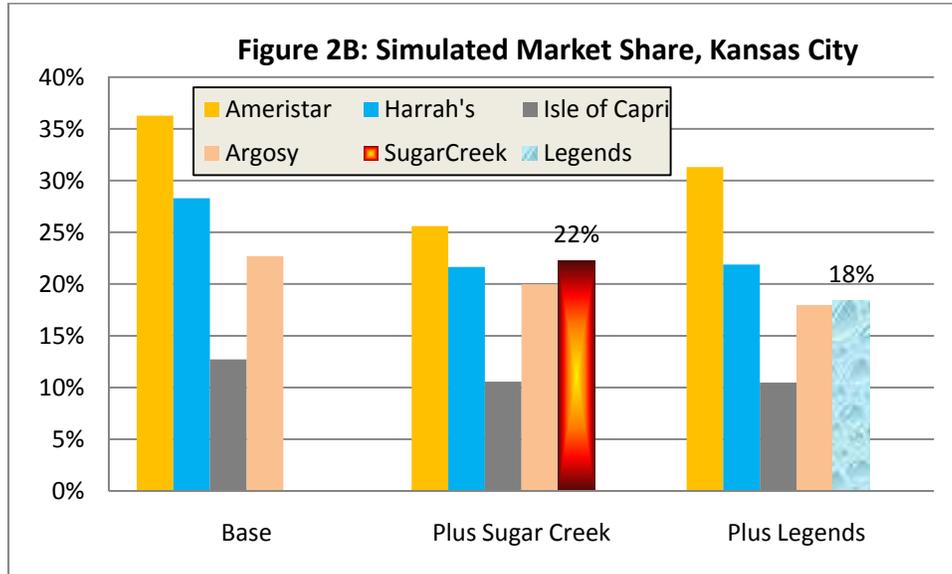
As with revenue models previously summarized, the authors related casino market shares to zip-level demographics (e.g., income) and to zip-boat variables (e.g., the distance to the nearest gaming establishment). The predicted market shares associated with the introduction of the “proposed” establishments in St. Louis are detailed in Figure 2A (Figure 97 in A-K).¹⁶ For example, Lumiere Place is expected to garner 26% of Missouri gaming revenues (if it were the only new establishment) in the St. Louis area. In this case, Harrah’s is expected to lose approximately 12% share (from 46.1% to 33.7%). Similarly Ameristar’s market share would fall 10.4% (in basis points, from 43.8% to 33.4%) and the President’s share would be predicted to fall from 10.1% to 6.3%.



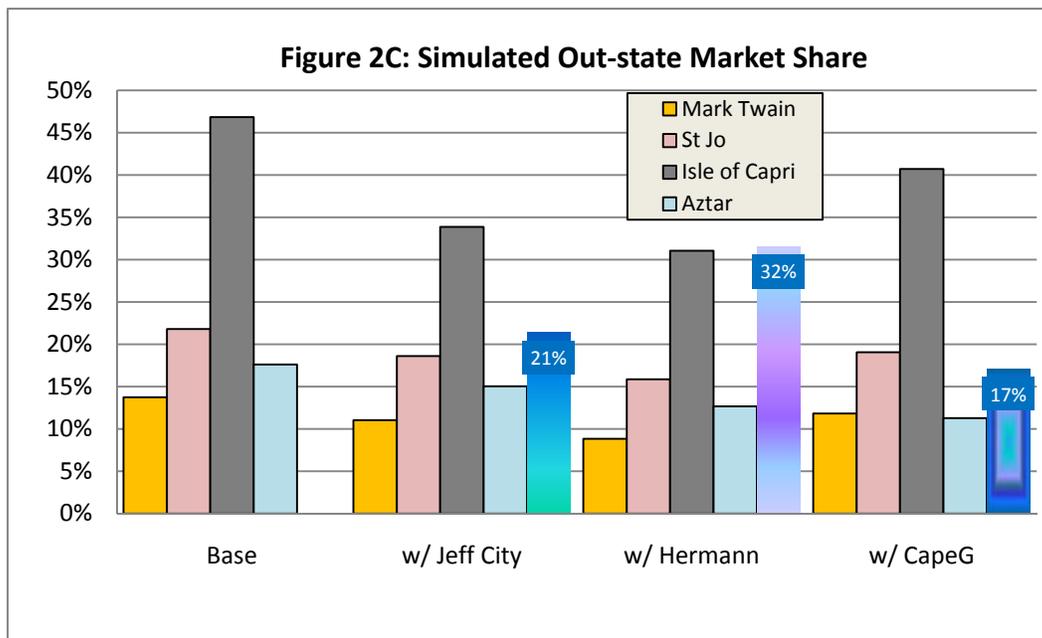
¹⁵ In the current situation, “re-assigning” an existing license to a new operator is similar.

¹⁶ These St. Louis simulations contain only the Missouri establishments. Market share predictions were not provided for the Chain of Rocks casino.

The predicted market shares associated with the introduction of the “proposed” establishments in Kansas City are detailed in Figure 2B (Figure 98 in A-K). For example, a new casino at the Sugar Creek would be expected to garner approximately 22% of the gaming revenues (if it were the only new establishment) in Kansas City. Concomitantly, Ameristar, Harrah’s, Argosy, and Isle of Capri were predicted to have declining market shares.



The predicted market shares associated with the introduction of the “proposed” establishments in out-of-state are detailed in Figure 2C (Figure 99 in A-K).¹⁷



¹⁷ Given the “spread” of out-state casinos, it is a little harder to see these casinos as “an area”. A-K used this metro and out-state designation.

A-K also estimated market share models based on the survey (reported on in the first part of the study).¹⁸ Figure 3A (Figure 106 in A-K) displays the market share predictions for the St. Louis area.¹⁹

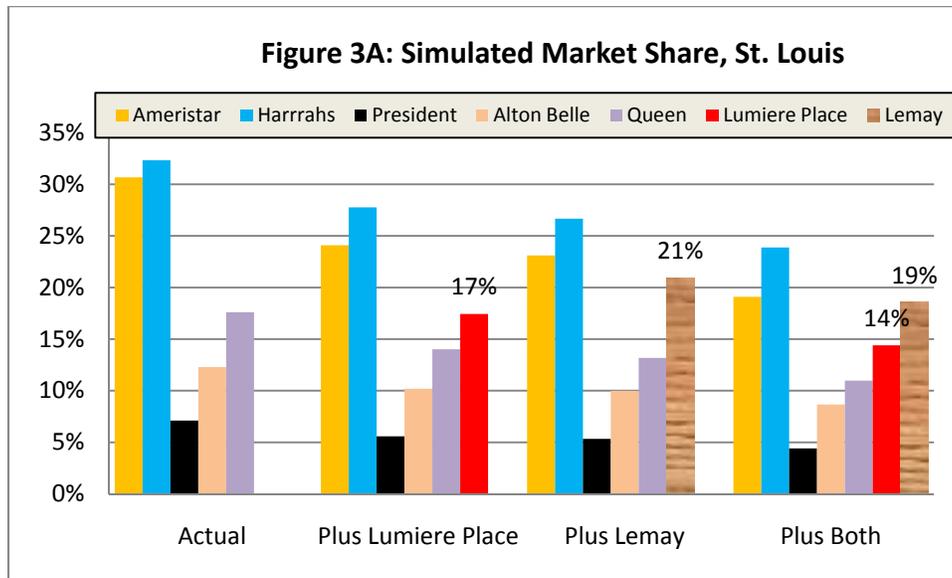
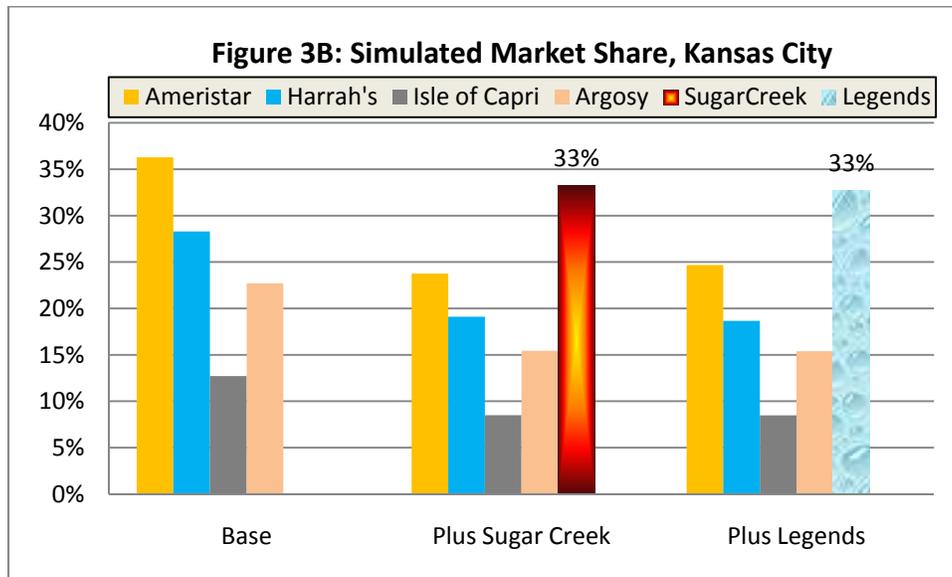


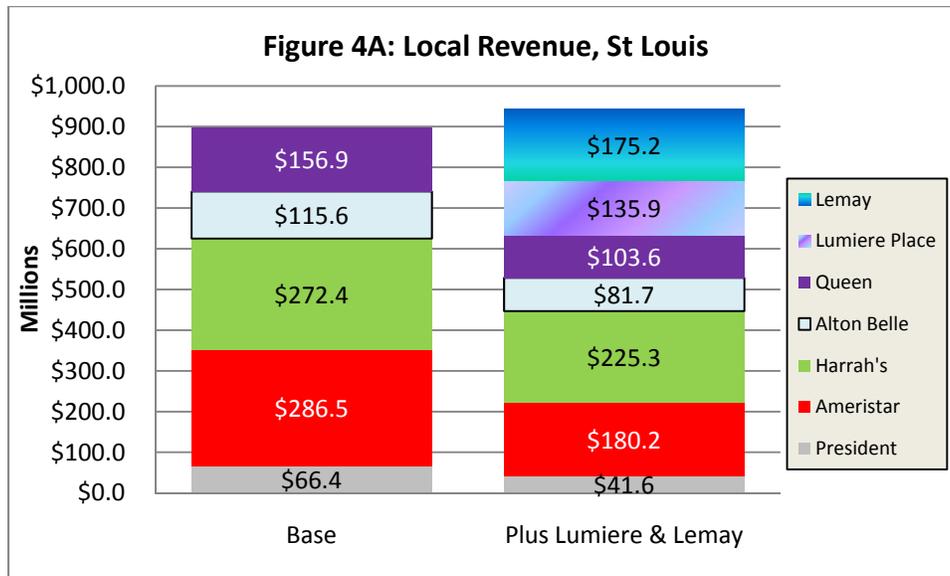
Figure 3B (Figure 107 in A-K) presents the predicted market shares associated with the introduction of the “proposed” establishments in Kansas City.



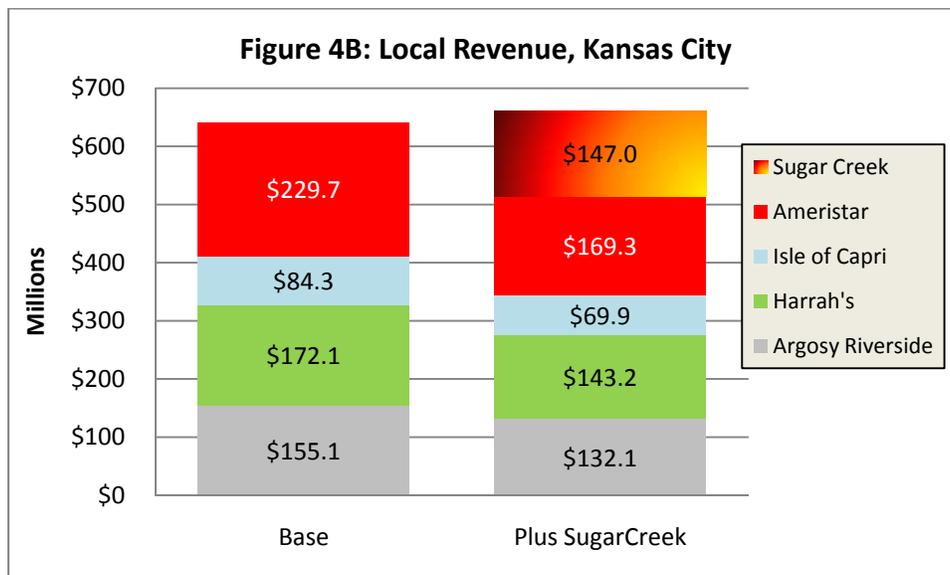
¹⁸ Survey-based market share predictions were performed only for the two metro areas.

¹⁹ These projections (since these are based on the survey) include IL area casinos.

Lastly, the authors produced revenue projections for the two approved casinos (under construction) in St. Louis at the time of the study. Figure 4A (Figure 109 in A-K) reproduce these projections here.



Similarly, Figure 4B (Figure 110 in A-K) reproduces these same market-share based predictions for the Kansas City metro area.



As mentioned previously, the A-K study provides a solid foundation for any market analysis for casino applicants that were considered in the study. Obviously, the study could not be used to assess a location not discussed in the original study, e.g., Branson. In the present case, this is not an issue as the A-K study considered a Chain of Rocks location.

Application of A-K to the Current Environment

Before turning to an analysis of the A-K result, a quick current market sizing is provided. Figure 5 summarizes the growth in Missouri casinos over the last decade. It is clear in Figure 5 that the St. Louis area has out-performed the market areas since 2008 (Lumiere Place opened mid-December 2007).²⁰

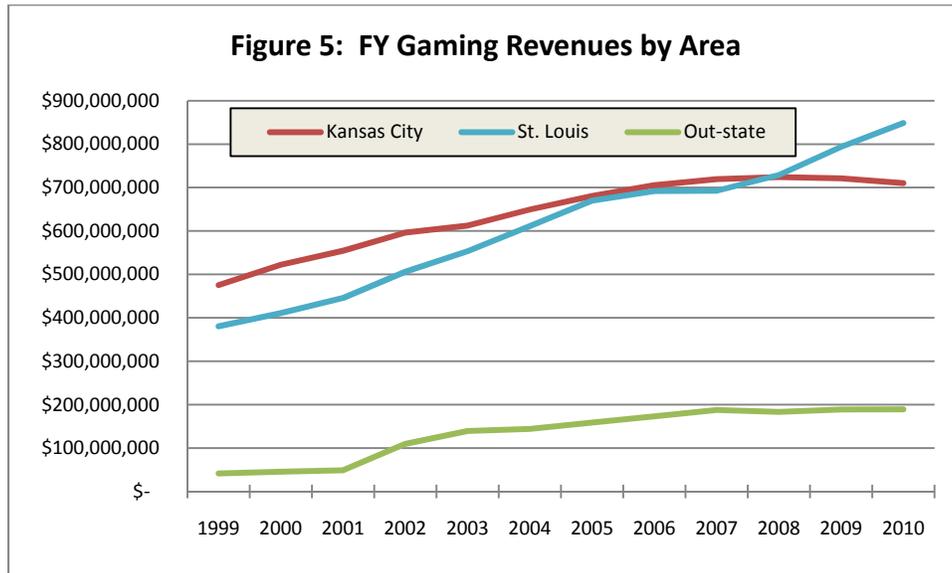
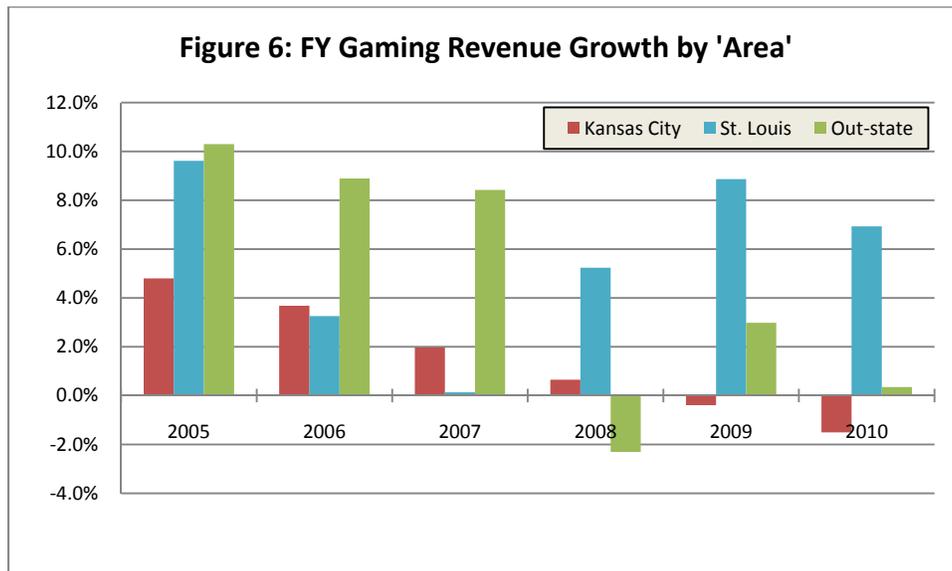


Figure 6 provides growth rates for the three market areas over the last several years. As can be seen, the St. Louis market has shown the most growth in the last three years.



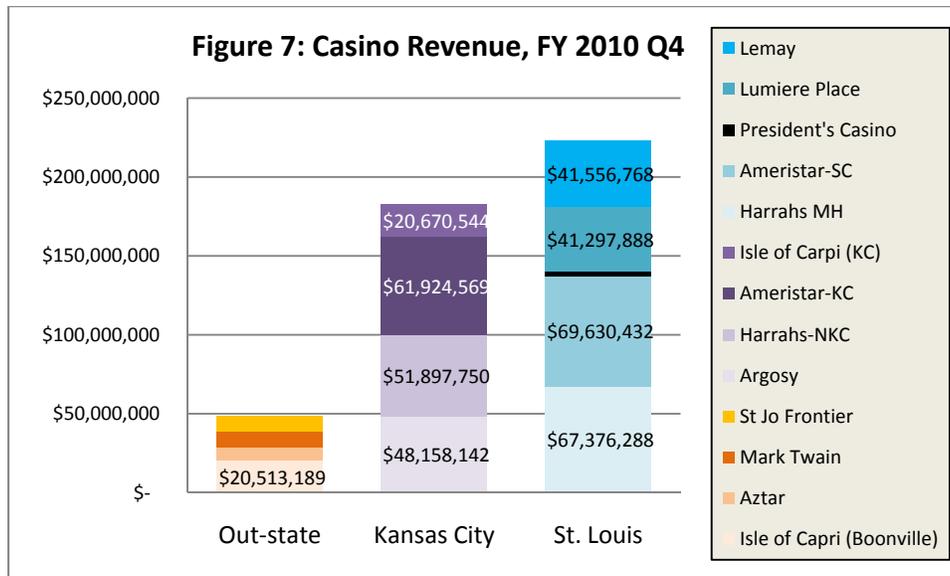
²⁰ Here we address Lumiere as there is enough history to do so. Lemay opened so recently that it does not provide the necessary data for a careful analysis.

Looking into St. Louis a little closer reveals that much of this apparent growth in revenues is the result of "shifting share from Illinois to Missouri" (in addition to "new" gaming revenue). The Missouri-share of St. Louis metro gaming revenues was consistently 70% in 2004-2006. During 2007, the share fell to 68.5%. Since the opening of Lumiere Place the Missouri-share has grown dramatically: 75.7% in 2008, 77.9% in 2009, and over 80% for the first half of 2010. This demonstrates that the new Pinnacle casino(s) (and perhaps due to market-share protecting responses from Harrah's and Ameristar) are taking market share from the IL casinos. Indeed for calendar-2008, the Missouri-side casinos grew at almost 14%, the Illinois-side casinos shrank by over 20% leading to an "average" growth rate for the total area of 3.1%. Clearly, these data demonstrate that new facilities can entice existing customers to a new (and presumably better) gaming experience.

This observed shift from Illinois to Missouri, during 2008 through 2010, suggests that a Chain of Rocks casino would perform even better than predicted in A-K. The property is very close to Argosy's Alton-Belle and would seem to be ideally situated to exacerbate the observed erosion of the Alton Belle. As a result, the "new to Missouri" revenue (and associated gaming receipts) should reasonably be expected to be larger than suggested by A-K.²¹

²¹ Note that this scenario was not contained in A-K.

Figure 7 displays the relative sizes of the Missouri casinos for the most recent quarter.²² As can be seen from Figure 7, the largest out-state casino generates less revenue than any of the metro-area casinos (except the President which has been “retired”).



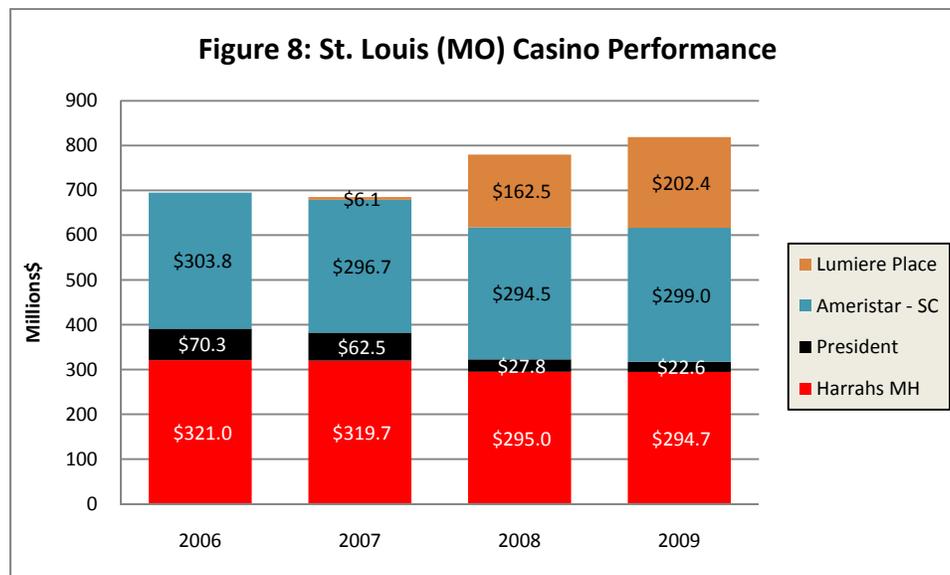
Assuming that the state’s primary interest is gaming receipts, the study results (summarized to this point) suggest that the two metro areas would provide a better revenue opportunity for Missouri than would an out-state location.

²² The most recent quarter (April 2010 – June 2010) was used since the Lemay casino has only been opened since March 2010.

Application of MNL Models

To generate the market share projection in A-K, the authors relied on the Independence of Irrelevant Alternatives (IIA) property of multinomial logit (MNL) models. The IIA property allows consistent estimation of model parameters utilizing a sample of the choice set.²³ IIA also allows a straightforward method for predicting the impact of expanding the choice set (in this case the number of available casinos that a consumer could choose). On the downside, however, the underlying assumptions could lead to under/over prediction of share shifting if some of the alternatives in the choice set have varying commonalities.²⁴

As a result these models will tend to lead to “steal equally” predictions rather than market share losses being more-predominate in alternatives that are more like the new choice that has been introduced. In this case, we would expect to see under-prediction of the shift in market share from casinos that are “closer” to the newer casino. In fact, something similar has been observed in the case of Lumiere Place: apparent lost market-share at Harrah’s and Ameristar are smaller than predicted in A-K, while the losses from the Illinois casinos and the President’s Casino appear larger than was predicted.²⁵ Figures 8 (Missouri-side casinos only) and 9 (casinos from both sides of the river) highlight these differences. In Figure 14, we see an apparent strong growth in revenues: from about \$700M to over \$800M (between 2007 and 2009). These are apparently high growth rates of over 13% for 2008 and 5% for 2009. Clearly, the President is biggest loser (in percentage terms). Ameristar suffers very small declines in revenues, while Harrah’s declines are still quite small (but slightly larger than Ameristar).²⁶



²³ See Train, McFadden, and Ben-Akiva for discussion and an application to telecom calling plans.

²⁴ The well-known extreme example when independence is violated is the travel mode choice problem involving auto, red bus, blue bus. MNL models will lead to over-prediction of the bus mode of travel and under-predict market share for auto.

²⁵ Caution should be exercised in trying to directly interpret the market share data as other events have conspired to make data analysis difficult, e.g., the economy.

²⁶ To reiterate, the market share predictions in Figure 3 are *ceteris paribus*; nonetheless, there seems to be a clear prediction error when comparing Figure 8 and Figure 3.

In Figure 9, we add the Illinois casinos to obtain a better picture of the entire St. Louis market area. Here we see a slightly different picture: the apparent overall increase is much smaller (than it would appear in Figure 8). For the market area including the Illinois-side casinos, growth is 3.1% in 2008 and 1.9% in 2009. In this figure, it is very clear that the much of Lumiere revenue is coming at the expense of the Illinois-based casinos. Indeed, comparing the 2007 and 2009 bars in Figure 9, it appears that approximately \$80M is coming from Illinois casinos, approximately \$60M is coming from other St Louis casinos, and about \$50M is “new” revenue.

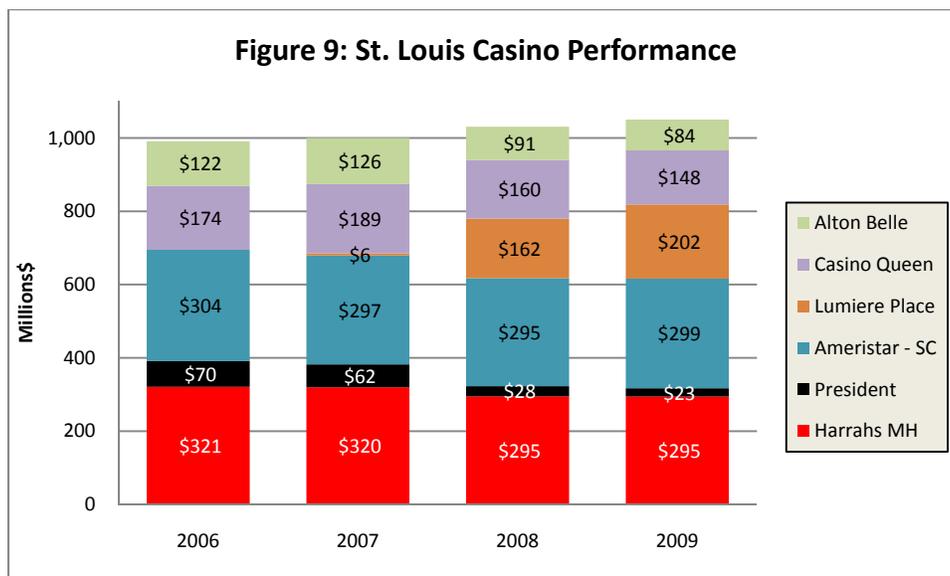
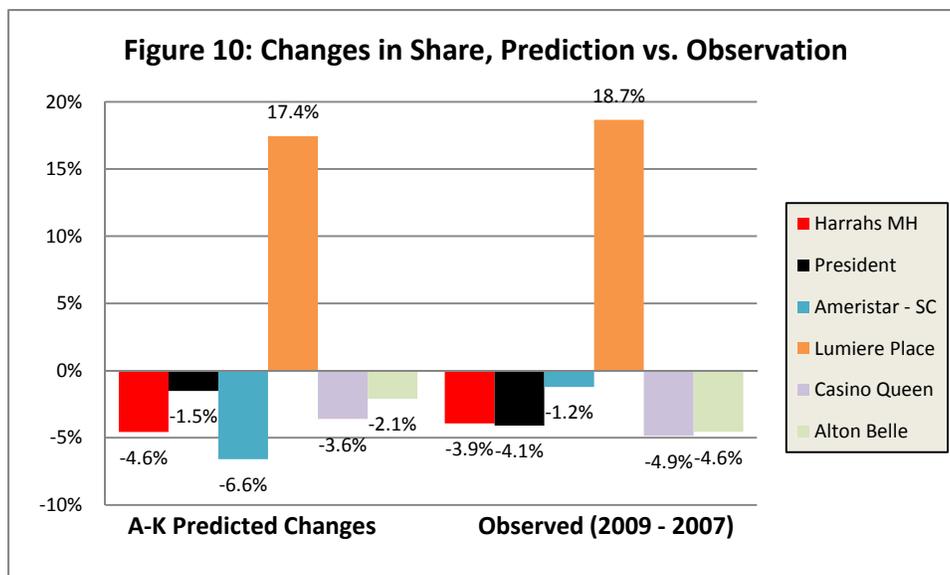


Figure 10, which compares Figure 9 to Figure 3, summarizes the differences in observed share and those predicted in A-K.²⁷ Lumiere Place, Harrah’s and Ameristar appear to perform better than expected; the Alton Belle, Casino Queen and the President perform worse than predicted.



²⁷ Once again, caution should be utilized in this assessment as the A-K predictions are *ceteris paribus*. For example, part of the observed loss in share for the President is related to closings as well as the opening of Lumiere Place.

From the view of the state, these IIA-based prediction issues will tend to lead to an under-prediction of the performance of new casinos near cross-border rivals. This has been observed for Lumiere place and as a result, the Chain of Rocks property will almost certainly out-perform the predictions suggested by A-K. A new modern casino will be close geographically to an aging first-generation casino; as a result, a new Chain of Rocks casino will almost surely increase the decline of the Argosy Alton Belle. From the perspective of Missouri, this can only be seen as a good thing as it will lead to increased gaming receipts for the state.

Impact of Other Factors

As mentioned before, A-K provides *ceteris paribus* predictions rather than forecasts of future market performance. There have been a variety of issues that have changed since A-K; to name a few: the economic downturn, housing market collapse, loss limit repeal, smoking ban, issues surrounding the President's casino. Each of these events affected the performance of Missouri casinos since the study and will affect the performance in the future as well. For example, the St. Louis smoking ban (from which the casinos are exempted) could increase the number of casino visitors as smokers "flee" non-smoking bars and restaurants. As such, a St. Louis-based casino may perform better than expected (as compared to an out-state casino) as this variable was not originally taken into account in the projections. Likewise, while the elimination of loss limits applies to all casinos in Missouri, the impacts will likely be larger in urban areas where there are more tourists, business visitors, and transportation is more convenient. While these variables impact is hard to estimate precisely, clearly the sign is positive: each should lead to better performance for St. Louis-based Chain of Rocks.

Interim Summary

To this point, we have discussed the general applicability of the A-K study. Further, we have highlighted some of the issues associated with the prediction problem as it relates to the IIA property of MNL. Explicit forecasts of revenues (from Section 2 of this analysis) are required to refine the estimates for the applicants, but based on the current analysis it seems clear that the net new revenues will be somewhat higher than predicted in A-K.²⁸ Based on revenues for 2008-2009, it appears that A-K under-predicted the increase associated with the opening of Lumiere Place by about one-half.

Assuming under-prediction similar to what was observed for Lumiere, this analysis suggests that opening the Chain of Rocks casino will cause a 2.0% – 3.5% increase in St. Louis area revenues; this increase is above-and-beyond normal (or organic) growth in revenues. Likewise, the analysis would suggest a 3.6% - 6.4% for Sugar Creek and a 4.2% - 6.4% for Cape.

As just noted, it seems clear that the St. Louis area revenue increase associated with the opening of Lumiere was larger than projected in A-K. More importantly, perhaps, the “source” of share should be expected to be primarily from “closer” casinos (Argosy and Casino Queen). As a result, looking forward, one should expect to see the same sort of results for Lemay²⁹.

For the Chain of Rocks casino, revenue “taken” from the Illinois casinos (especially the closer and more vulnerable Argosy) can reasonably be expected to be about the same size as (perhaps even larger than) what was observed for Lumiere Place. For Cape (due to its location), almost all revenue is “new” revenue (as its location effectively make “taking market share” unlikely). For Sugar Creek, it will be predicted to “take back” less from the new Legends (than will the other MO-based casinos in Kansas City) as it is the furthest from the new Legends casino.

²⁸ Here we utilize the observed growth in AGR for Kansas City and out-state to “control” for everything else; in the next section we explicitly forecast what would have happened (without the opening) then add the A-K predictions to these forecasts.

²⁹ Early indications are that Lemay is performing well. It has only been open for four months so it is too early to generate an assessment of prediction vs. actual. There is every reason to believe that we will observe something similar to what was observed for Lumiere Place.

Table IS1-1 summarizes the revenue predictions for this analysis.

Table IS1-1: New Revenue Predictions				
	A-K Results		“Updated” A-K Analysis³⁰	
Casino	Percent	\$Millions	Percent	\$Millions ³¹
Chain of Rocks	1.3% - 1.7%	\$8 - \$10	2% - 3.5%	\$20 - \$35
Sugar Creek	2.4% - 3.2%	\$18 - \$24	3.6% - 6.4%	\$28 - \$49
Cape ³²	2.8% - 3.2%	\$6 - \$7	4.2% - 6.4%	\$9 - \$13

Table IS1-2 summarizes the source of revenue predictions for this analysis.

Table IS1-2: Source of Revenue Predictions (%)						
	A-K Results			“Updated” A-K Analysis		
Casino	New ³³	Inside “MO”	Outside “MO”	New	Inside “MO”	Outside “MO”
Chain of Rocks	16%	59%	25%	26%	32%	42%
Sugar Creek	16%	84%	0%	27%	69%	4%
Cape	-NA-	-NA-	-NA-	89%	5%	6%

³⁰ To be clear, A-K has not been updated as the data and the models are not available; rather, the predictions have been updated based on “actual vs. predicted” comparisons using the most recent publicly-available data.

³¹ NOTE: this correctly includes IL boats in St Louis area; original estimates based on MO-side casinos only (which understate revenue impacts).

³² Using “out-state” as a market area (as is done in A-K) will lead to a significant under-prediction for Cape; this will be addressed in the next section.

³³ Use mid-point of new revenue projections from Table IS1-1.

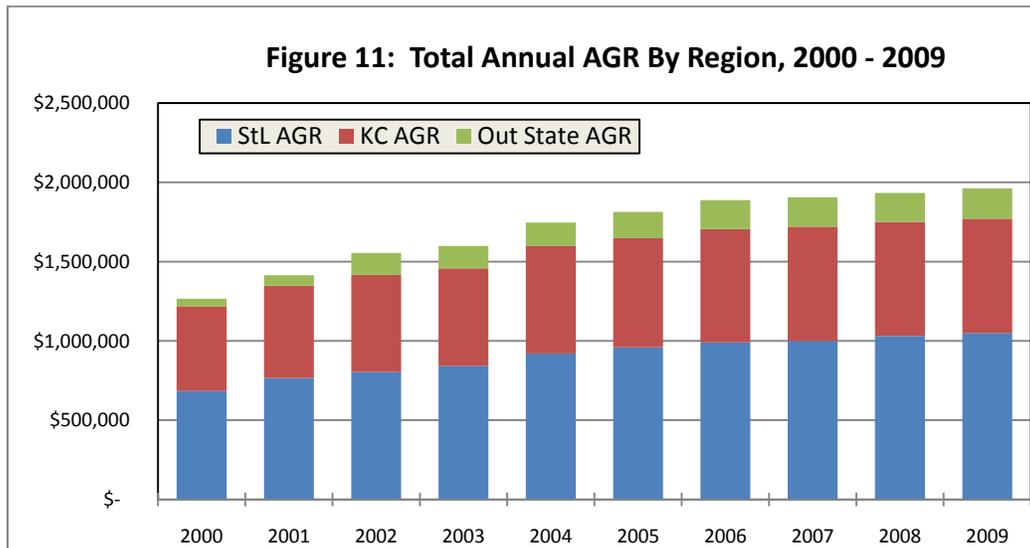
II. Prediction via Econometric Methods

The purpose of this section is to further evaluate the impact of additional Missouri casino locations on total gross revenues (AGR) by focusing on differing approaches to estimating incremental AGR. As noted, the A-K Study addressed the question of how much of the observed AGR can be attributable to the introduction of a new casino in a particular market. But since it operated under the condition that all other things are equal (*ceteris paribus*), this additional investigation is needed to isolate the impact of the casino (Lumiere Place) beyond the impacts of other important influences.

This investigation attempts to address that question more directly by focusing on the incremental increase in total market revenues after the introduction of various Missouri casinos in a direct quantitative fashion. First, a brief introduction of the quantitative information utilized in this study is briefly reviewed. That review is followed by an overview of the analytical techniques used to quantitatively address this issue. Finally, the quantitative results of the investigation are presented along with a summary and conclusions.

Background and Data Review

As demonstrated in Figure 5, AGR has increased for these regions over time. Figure 11 below again presents the nature of the expanding situation for the period 2000 - 2009.³⁴



As Figure 11 shows, total regional AGR has grown substantially since 2000 when revenues across the state were roughly \$1B. By 2009 the total AGR had grown to over \$1.6B.

³⁴ The AGR is calendar year. The St. Louis market area includes AGR from the two Illinois casinos.

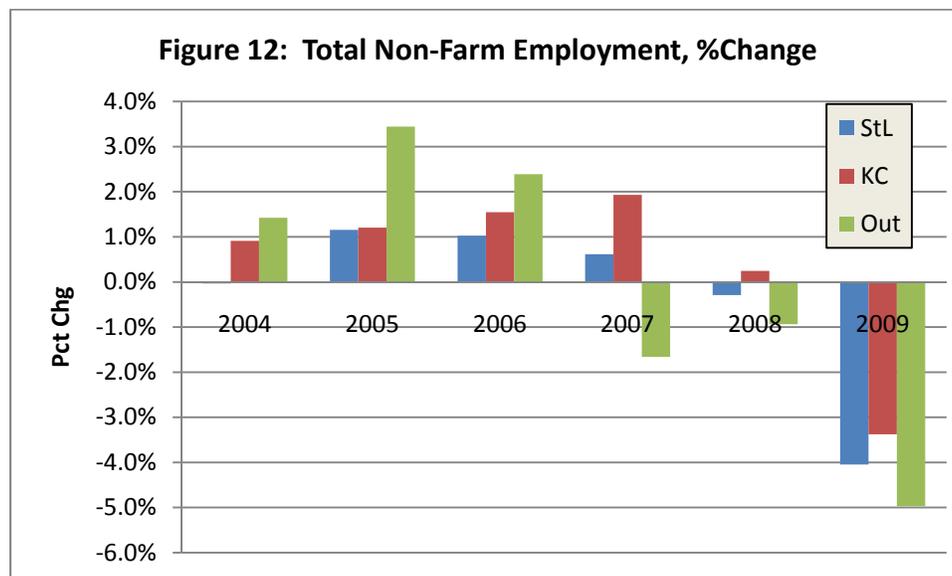
The growth in total AGR over this period can be observed in all three regions.

- The largest increase *amounts* have occurred on the Missouri side of the St. Louis area where AGR has nearly doubled from \$414M to about \$819M (CAGR = 7.8%). Total market revenue, which includes the 2 Illinois casinos, increased more modestly, however, exhibiting a 3.4% CAGR over the period.
- The out-state areas, when viewed as a region, provided the largest *percentage* increase, as AGR grew from almost \$47M in 2000 to over \$191M in 2009 (CAGR = 16.9%).
- The Kansas City Region grew more modestly over this period at about 3.4% per year on average (CAGR = 3.4%)

The various growth rates may be attributable to a variety of impactful factors. We briefly review overall economic conditions and changes in the number of operating casinos in each region.

Economic Conditions

As an environmental driver, general economic conditions have not always been favorable to the business climate over the period. We can see in Figure 12 that the economy weakened substantially in most regions in 2007 and turned from positive to negative in most of them by 2008.³⁵



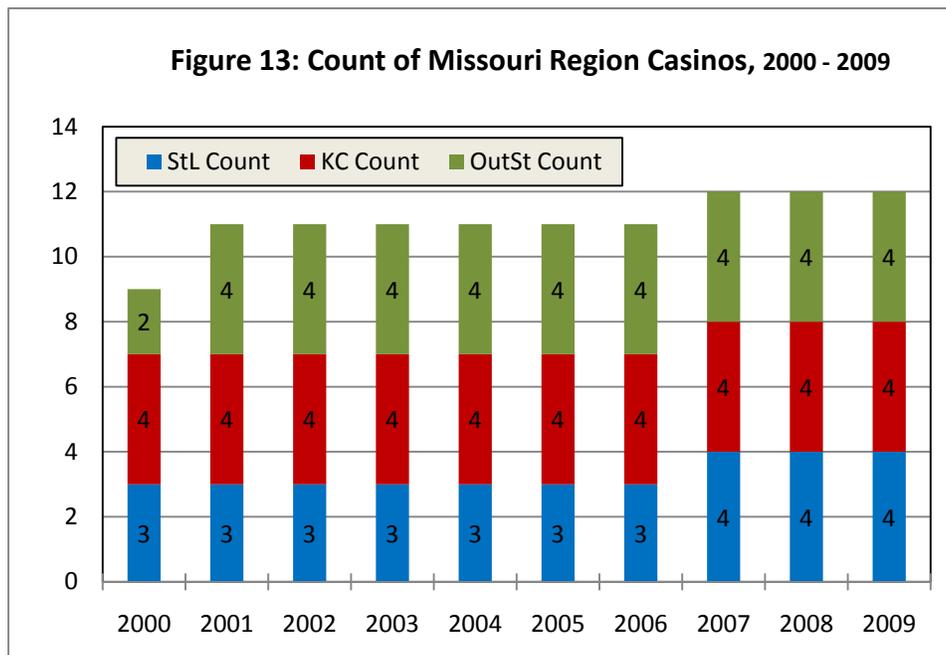
Economic performance declined across all regions in 2009 without exception. To the extent that economic activity drives casino AGR growth, this would be expected to produce poorer results. Indeed, based only on economics performance (as measured by regional employment), out-state casinos would have been expected to have the poorest results while Kansas City would have been expected to produce the best results.

³⁵ Total non-farm employment within the region--one objective measure of economic performance, is used as the proxy for overall economic activity. Source: bls.gov

Expansion in the number of Casinos

While the number of operating casino locations has increased in all regions since the advent of Missouri casino gambling in 1994, the more recent experience is mixed across regions. Figure 13 displays the number of casinos for the examination period.³⁶ By the end of 2009, where full calendar year results are available, an equal number of casinos were operating in each region across the state.³⁷

- The Kansas City region had already expanded to four locations by 2000 while the out-state region did so during 2001 and has held steady;
- Three casinos operated in the St. Louis region until 2007 when Lumiere Place opened in December;³⁸



³⁶ In each case, the casino count is taken at the end of the annual period. NOTE: *Harrah's Maryland Heights and Players* are treated as one operating unit for the Casino counts in this chart.

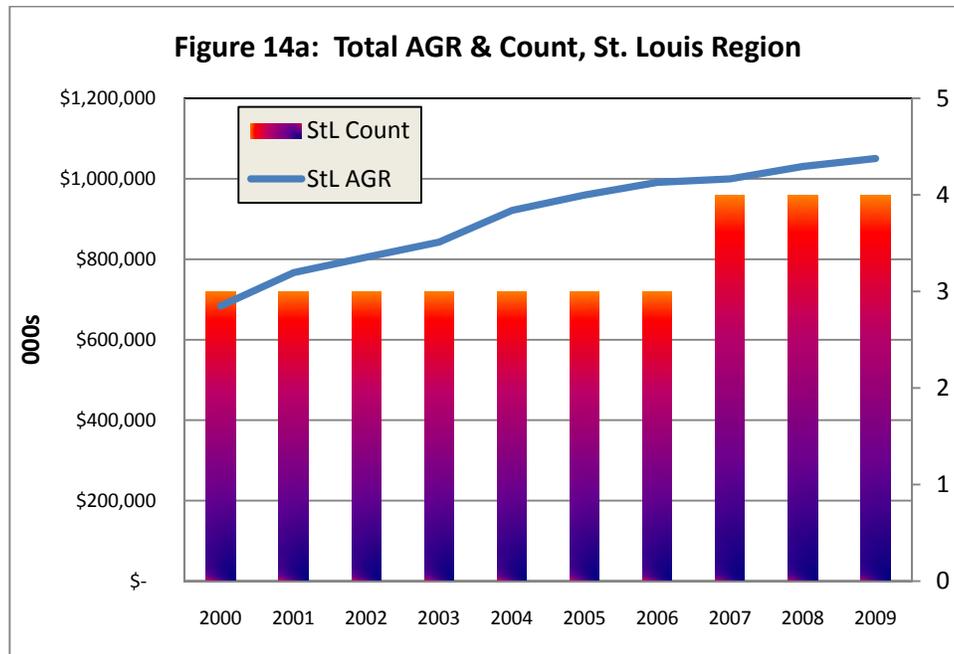
³⁷ With each new casino also comes increases in the number of ancillary metrics, such as square footage, table stations and electronic games. Since counts are highly correlated with these other metrics, the principle focus has been placed on the count of casinos.

³⁸ This is Missouri-based casinos; there are 2 Illinois-based casinos in the St. Louis area as well.

The association of AGR and the number of operating casinos within that region can be examined more closely below in Figures 14a-20c.

- The St. Louis region (Figure 14a)³⁹

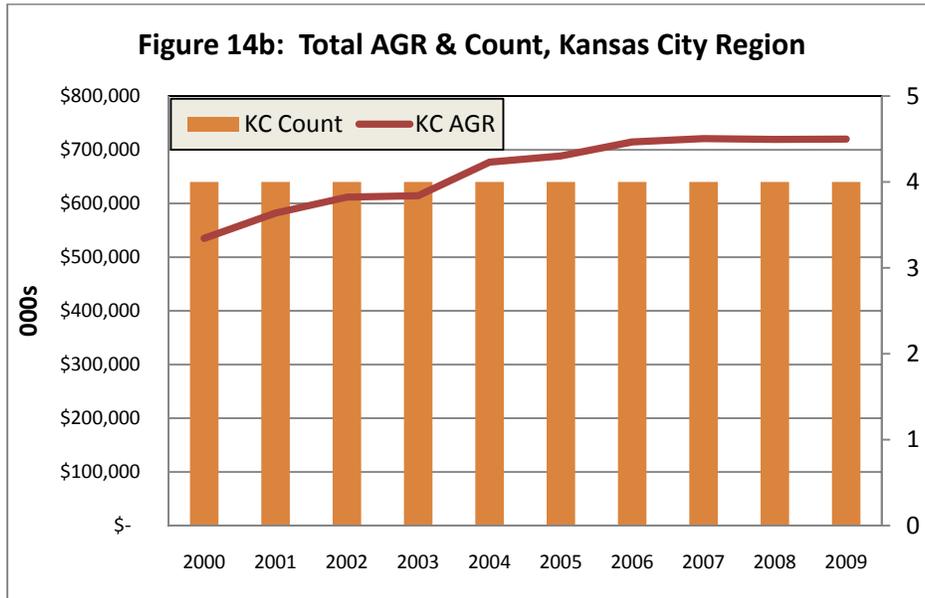
The St. Louis region exhibits AGR growth over the period despite the lack of change in the number of casinos. However, when a new casino is introduced in 2007 so that the count climbs from three to four, a more sustained increase in AGR growth appears to occur. Recall that economic growth occurred during 2005 through 2007 while conditions worsened thereafter. It seems that both are key factors driving AGR performance.



³⁹ Harrah's Maryland Heights and Players are treated as one operating unit for the Casino counts in this chart. The figure includes AGR from Illinois casinos in the St. Louis regional metrics.

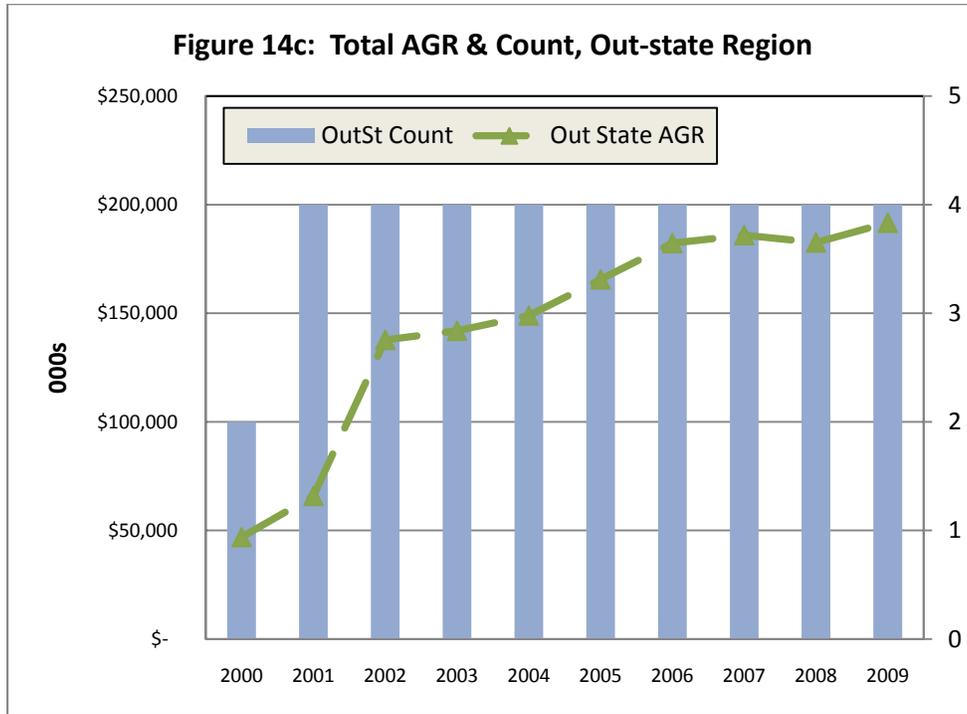
- Kansas City region (Figure 14b)

Like St. Louis, the Kansas City region experiences fairly substantial AGR growth during the era of solid market-area economic growth. But unlike St. Louis, the number of operating casinos does not increase. Interestingly, AGR performance flattens substantially in 2007 when economic activity subsides and turns negative in 2008. It remains basically flat in 2009.



- The Out-State region (Figure 14c)

The number of operating casinos double in 2001 in the out-state regions which drives significantly higher AGR. Thereafter, AGR continues to rise as time progresses until a fairly substantial dip is witnessed in 2008. A "recovery" in AGR appears to occur in 2009.



Taken together, these metrics, along with others, clearly indicate that multiple factors drive changes in AGR. The next section explains how the various factors are identified and analyzed.

Analytical Approach

The foregoing section illustrates the need to address numerous factors when addressing the question at hand. Given the nature of this question, a number of analytical techniques have been deployed to address the forecasting problem. In particular, a number of approaches were adopted to examine this prevailing question; the central approach is a pooled time-series cross-sectional analysis using econometric methods.

But since the operative question deals with the impact of a new casino opening, we require an ability to perform "what if" analysis. The "what-if" aspect of multiple regression will be utilized to address the current problem.⁴⁰

Econometric Modeling Results

In this case, regional AGR, non-farm employment, casino counts and other data was assembled for modeling. Each metric was collected and compiled for each casino and then aggregated into the different Missouri regions--St. Louis, Kansas City and Out-State-- as well as totals for the entire state of Missouri. These regional data were used to estimate an econometric model that explains the variation in AGR. Several specifications were tested to ensure the 'best model was created; the preferred model is presented herein.⁴¹

As previously hypothesized, the economy and the number of operating casinos in the region were vital factors in determining AGR performance in this forecasting model. The model also identified certain events as key to changes in AGR, such as regional indicators as well as a qualitative variable that indicated the month of major flooding on the St. Louis riverfront in June of 2008.⁴²

Once the model was estimated, it was simulated to examine alternative views or forecasts of AGR. In other words, as the econometric model controls for the most important influences on AGR, it can be used to see what *would* have happened if that variable were to have taken a different value than it actually did by changing it on a "what-if" basis. To reiterate, our main goal is to better understand what would have happened to regional AGR in St. Louis if the Lumiere casino had not opened in December, 2007.⁴³

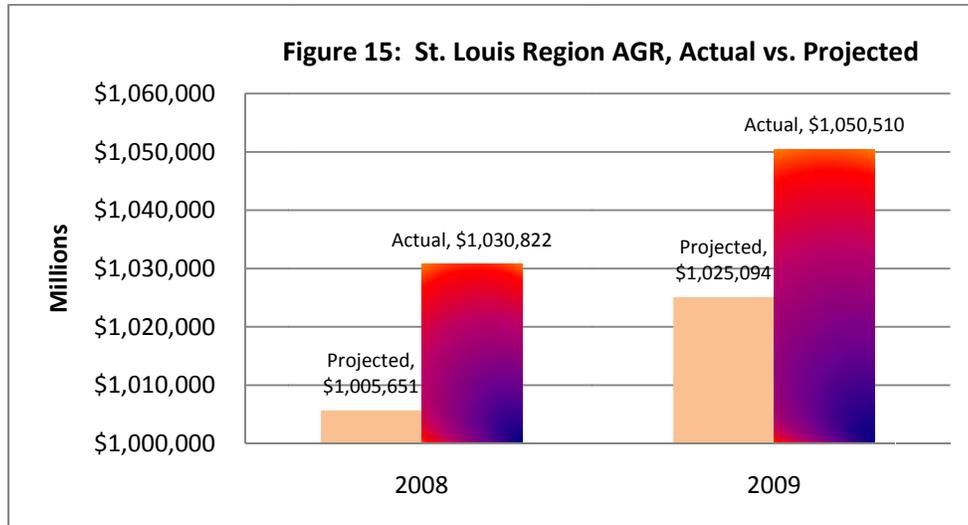
⁴⁰ As discussed more fully below, models such as these are able to simulate conditions that did not actually occur in a "what-if" sense.

⁴¹ All alternative model specifications involved AGR as the target variable, but different explanatory variables were tested. The one of greatest interest were the number of stations at each region or various computations of that (e.g., stations per casino, lagged values of stations, etc.). None of these proved efficacious to the question at hand.

⁴² See, for example, <http://www.nytimes.com/2008/06/21/us/21floodcnd.html> or <http://thevitalvoice.com/node/541>.

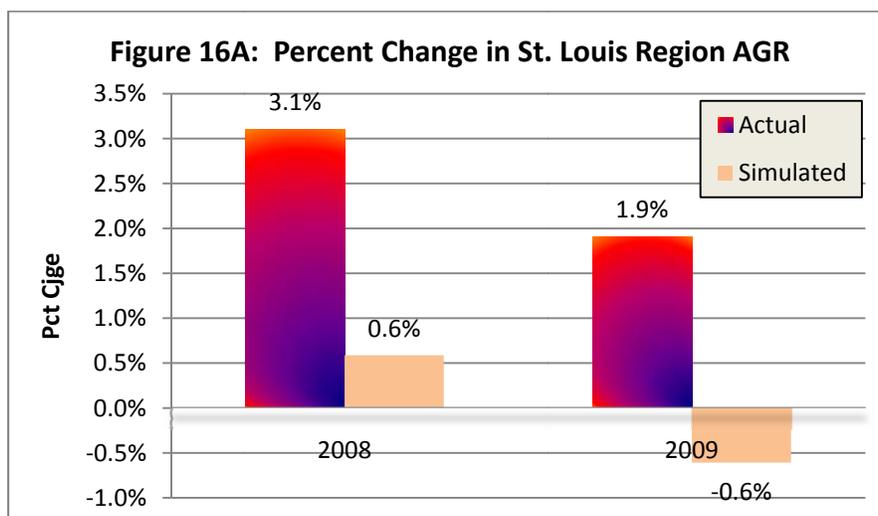
⁴³ Using this forecast of 2008 and 2009, we can then "add" the predictions from A-K to this forecast and compare this to the observed data for 2008 and 2009. In this way, we arrive at an "under- or over-forecast" for A-K.

When the estimated model is simulated by reducing the casino count in 2008 and 2009 by one unit, it calculates that both 2008 and 2009 AGR would've have been about 2.5% lower (while controlling for these other influences) had the Lumiere Casino **not** come into operation. The results of the simulation are graphically presented below in Figure 15.



An alternative way to examine the actual increases relative to these predicted results is presented in Figure 16A. Figure 16A shows the actual results in percentage terms for 2008-09 in St. Louis as compared to simulations of the model under the assumption that the Lumiere casino did not enter.

This alternative view shows that the observed increase in the St. Louis regional market would have been far less positive had the casino not enter. The model depicts a 0.6% increase in AGR in 2008 followed by a 0.6% decrease in 2009. That is, the incremental impact in percentage terms was roughly 2.5% with respect to total regional AGR.⁴⁴

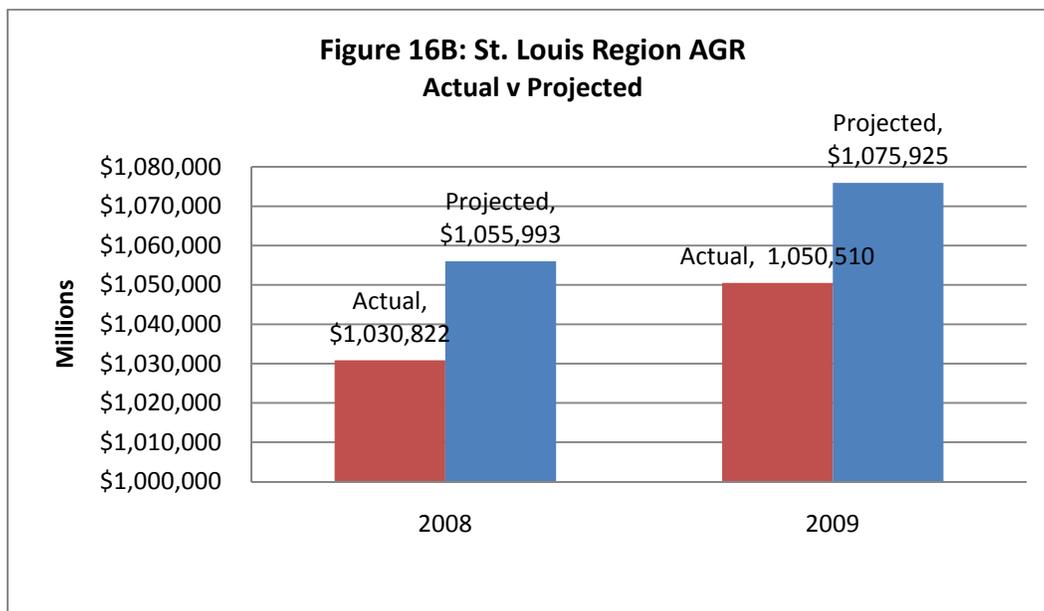


⁴⁴ Other specifications indicated that the impact may range as high as 5.5% or as low as 1.9%. The selected specification of the econometric model indicates that the calculated impact (of Lumiere not opening) is -2.5%.

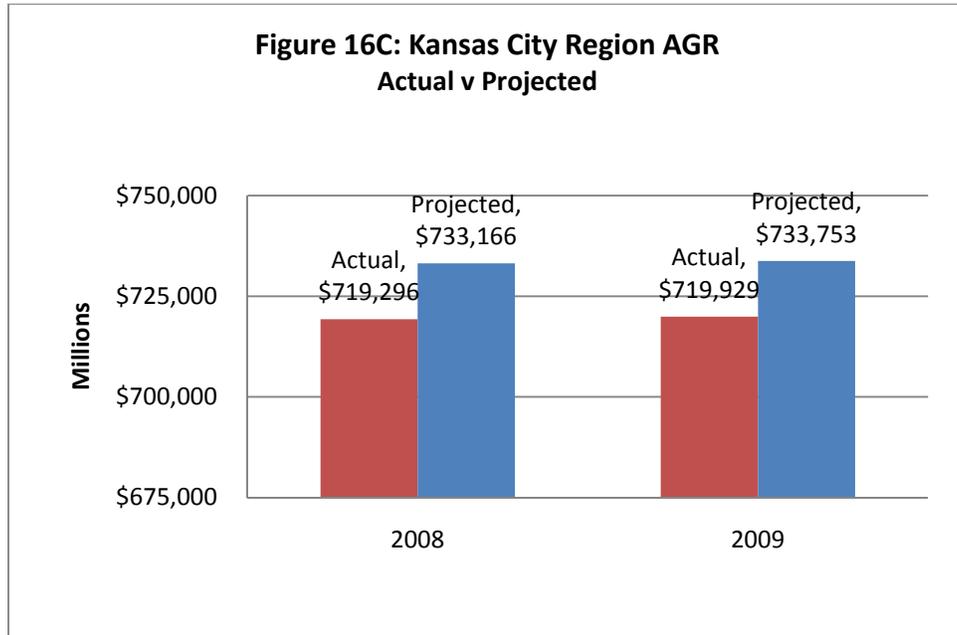
Additional Casino Revenue

This econometric model can also be used to evaluate the impact of additional casino installations in the proposed regions. The model will predict the increase in revenues under the assumption that an additional casino is added to the 'market area'. In effect, we simply "add" one casino to the casino count *variable* (Figure 14a-14c) for each market area and recalculate the regional revenues for the market area.

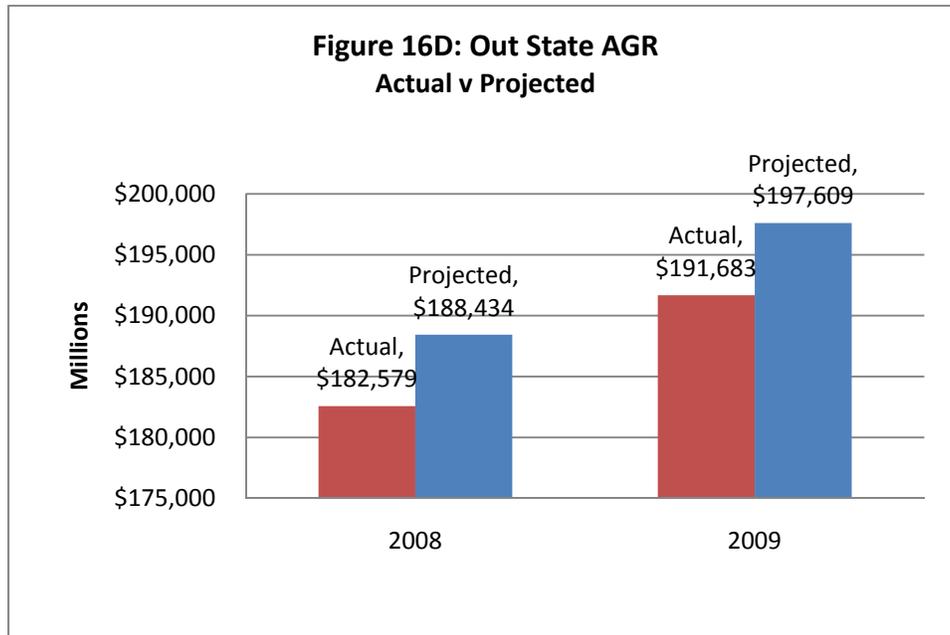
The market area revenues estimates are presented in Figure 16b-16d below. Figure 16b shows the AGR for 2008-09 in St. Louis market area which includes the two Illinois casinos in that market. As Figure 16A indicated, the actual percentage change in AGR for St. Louis in 2008 and 2009 was 3.1% and 1.9%, respectively. Applying the assumption of an increased casino count is projected by the econometric model. Had there been an additional casino the market area revenues would have increased by roughly 2.5% over the level actually observed. For the 2-year period, the revenues would potentially have been more than \$50 million higher.



The same exercise for the Kansas City market area is performed. Figure 16c presents the AGR for 2008-09 in Kansas City market area. The additional casino is projected to increase revenues by 2% (above what would have been observed). For the 2-year period, the revenues are predicted to have been almost \$28 million higher.



As above, the model can be simulated for out-state areas. Since the operating casinos in the St. Louis and Kansas City urban areas form a contiguous region, the exercise is relevant and appropriate. The model can also be straightforwardly exercised to calculate a potential impact to AGR for the out-state market in a manner similar to the urban markets, but the model may not actually capture the impact of the introduction of a new casino in the out-state area since each one of these casinos operate at relatively long distances from other sites. Hence, we regard the impacts presented in Figure 16d as a (very) lower-bound estimate of the actual impact.⁴⁵



As Figure 17c shows, the projected out state AGR figures would have increased for the comparison period. In the case of 2008-09, the increase would be 3.4% and 3.2%, respectively. The total amount for the time period would be nearly \$12 million in additional AGR.

Since this econometric model is designed to predict the incremental AGR among casinos who compete within some fixed geography, it is reasonable to consider this model outcome as too low. Consequently, a benchmark approach will be considered and utilized for the remainder of the document.

⁴⁵ This point was also noted in footnote 17 for in Section 1 (A-K Review).

Benchmark Approach: Out-State Market (Isle of Capri in Cape Girardeau)

Rather than using the econometric model to estimate the impact to total AGR, we now construct an estimate for the out state market via a comparative benchmark (or analogous) approach.

The projection relies on information from the existing out-state casinos along with information compiled from applicant filings.⁴⁶

Table 3A below details contemporary measures for AGR, gaming positions and admissions for the out-state casinos. Also presents calculated AGR per position and AGR per admission for the Out-State casinos. The final row in the table provides averages for these key metrics along with the total AGR projected by the applicant for this market.

Table 3A shows how Isle of Capri is projected by the applicant to generate the annual AGR of \$79MM annually. While exact source of the AGR prediction is not known, the prediction could be generated from using AGR-per-position (and the number of positions) or AGR-per-admission (and the number of admissions).

Casino	AGR (\$MM)	Positions	Admissions	AGR/ Position	AGR/ Admission
<i>Terrible's (St. Joseph)</i>	\$ 38.0	616	1.30	\$ 61.7	\$ 34.2
<i>Terrible's (Mark Twain)</i>	\$ 37.0	734	1.20	\$ 50.4	\$ 32.4
<i>Isle of Capri (Boonville)</i>	\$ 81.0	1,105	2.30	\$ 73.3	\$ 28.4
<i>Lady Luck (Caruthersville)</i>	\$ 33.0	742	0.98	\$ 44.5	\$ 29.8
Average	\$ 47.0	799	1.5	\$ 57.5	\$ 31.2
<i>Isle of Capri (Cape Girardeau)⁴⁷</i>	\$ 79.0	1,200	1.9	\$ 65.9	\$ 42.0

The applicant-provided prediction for Cape AGR (\$79M) seems very optimistic as it implies a wins-per-admission (AGR-per-admission) that is one-third higher (\$42 vs. \$31.2) than that observed ratio in the average out-state casino. Indeed, the AGR-per-admission is a full 50% higher (\$42 vs. \$28.4) than that observed in Boonville (a casino of seemingly “similar” size).

⁴⁶ Isle Of Capri Missouri Gaming Commission Application Public Disclosures, September 1, 2010

⁴⁷ Isle Of Capri Missouri Gaming Commission Application Public Disclosures, September 1, 2010

If the Out-State “benchmarks” are used instead, reasonable AGR projections can be derived. Table 3B below presents several estimates of AGR for the Isle of Capri casino in Cape Girardeau.

<i>Table 3B: Cape Revenue Predictions (\$ Millions)</i>					
	<i>Average</i>	<i>Method 1</i>	<i>Method 2</i>	<i>Method 3</i>	<i>Range</i>
<i>Cape Casino</i>	\$47	\$59	\$68	\$47	\$59 - \$68

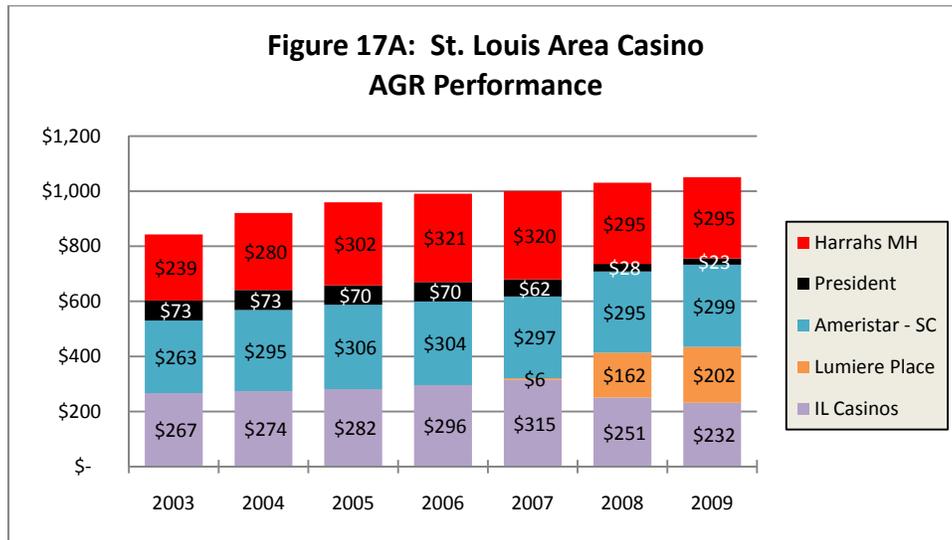
The columns provided above are as follows:

- **Average:** is simply the average of AGR for all existing out-state casinos;
- **Method 1:** using the anticipated admissions (from the Cape filing) and the average AGR per admission for the outstate market (\$31.20), the predicted AGR for the Cape Girardeau casino would be nearly \$59M.
- **Method 2 and 3:** Utilizes Table 3C and the Boonville casino as a benchmark;
 - **Method 2** utilizes population (85%)
 - **Method 3:** utilizes the combined proportion of income and population (79%)

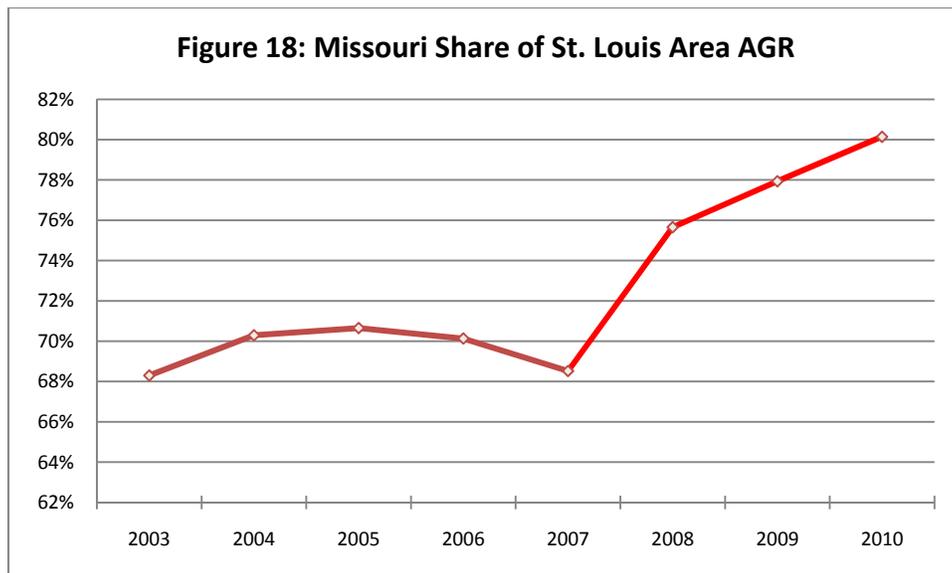
Eliminating the lowest revenue projection, we establish the range (\$59M - \$68M) from the remaining benchmark estimates.

Market Share

The previous section addresses the issue of "new" revenue; the question of market share cannot be directly addressed via this econometric model as not enough "variation" is present. Nonetheless, when viewing Figure 17A, it seems clear that as discussed in the previous section, Lumiere Place was more effective at taking market share from the Illinois casinos than from the other Missouri casinos (except for the "next-door" President's Casino).



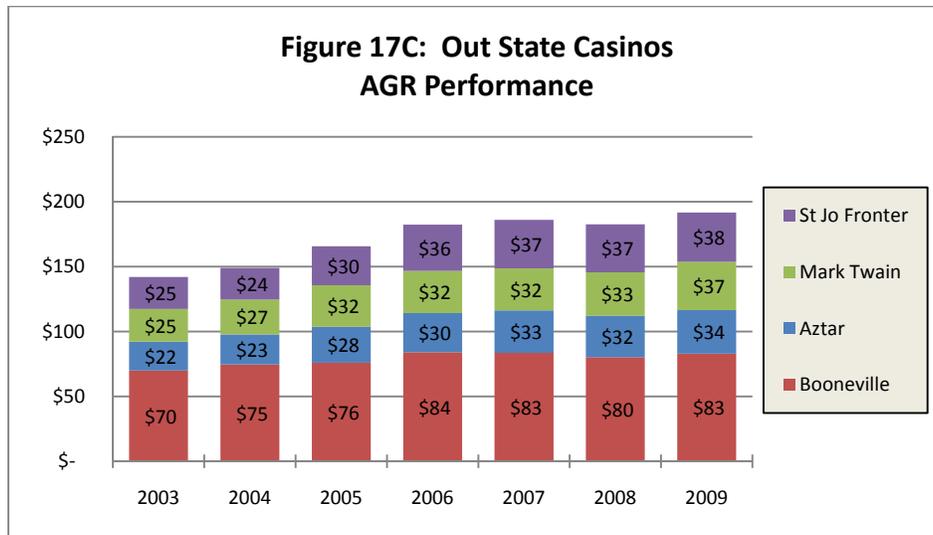
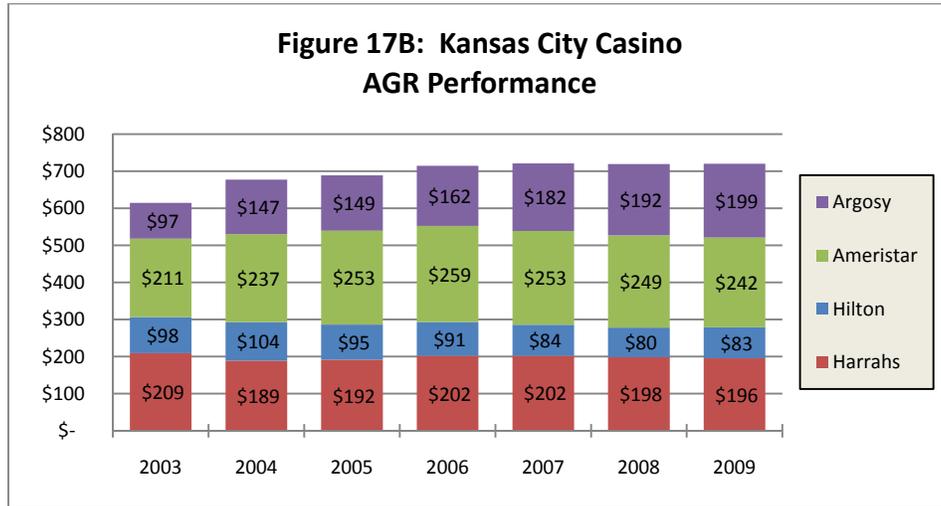
To further demonstrate this fact, Figure 18 displays the percentage of St. Louis area AGR that is from the Missouri casinos.⁴⁸



⁴⁸ Note the figure includes first 6 months of June; and hence contains the first few months of the Lemay casino.

Clearly, the importance of Illinois-based casinos has fallen since the opening of Lumiere. This is consistent with analysis of market shares from the previous section. The data analysis tends to confirm what the IIA section described; that is, the impact on "closer" casinos will be larger than was predicted by the analysis in A-K.

For completeness and comparisons to St. Louis, Figures 17B and 17C display the relative casino performance in Kansas City and out-state since 2003.



Interim Summary

The forecasting model indicates new revenues of 2.5% for the opening of Lumiere; compared to an A-K prediction of 0.8% to 1.6%; this indicates an under-prediction of between 2/3 and 1/2 which is broadly consistent with the results provided in Section 1. Further the trends, presented in Figure 17 and (especially) Figure 18, suggests that A-K under-predicts the loss in share from Illinois casinos.

Table IS1-1 summarizes the revenue predictions for this analysis presented in this section.

Table IS2-1: New Revenue Predictions		
	Econometric Results	
Casino	Percent	\$Millions
Chain of Rocks	2.5%	\$25M
Sugar Creek	2.0%	\$14M
Cape Girardeau	3.3%	\$6M, \$64.5M ⁴⁹

⁴⁹ \$6M from the econometric analysis; \$64.5M is the mid-point of the “benchmark” analysis based on existing out-state casinos.

III. Conclusions

In this section we summarize the findings from the previous sections for each of the three casino applications.

Chain of Rocks

The forecasting results (as presented in Figures 15 and 16) are consistent with the analysis of the A-K study in Section 1; this result further reinforces the view that the Lumiere casino added incremental gaming revenues to the St. Louis regional market *beyond that predicted in A-K*.

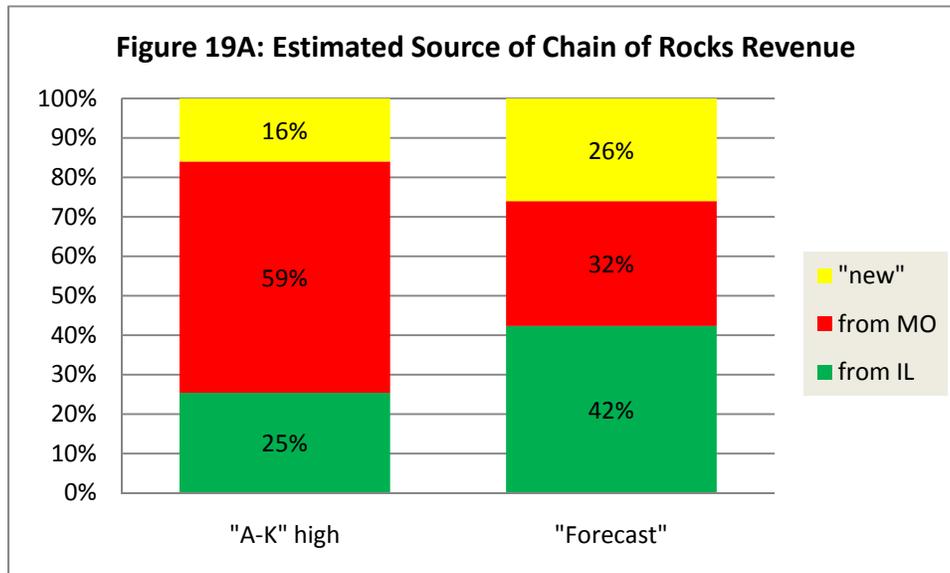
The forecasting model indicates new revenues of 2.5% for the opening of Lumiere; compared to an A-K prediction of 0.8% to 1.6% (Figure 1); this indicates an even larger under-prediction.⁵⁰ Table 4 summarizes these predictions for the Chain of Rocks casino.

Table 4: Chain of Rocks New Revenue Predictions	
A-K-based Analysis (Section 1)	Econometric Analysis (Section 2)
2% - 3.5%	2.5%

Utilizing observed growth for Kansas City and Out-state regions, Section 1 indicated a "new revenue" under-estimate of about 1/2; this lead to prediction for Chain of Rocks of 2% to 3.5%. Using observed data with this analysis yielded the 3.1% new revenue prediction utilized for projections (upper quartile of the adjusted A-K projections).

⁵⁰ Using lower bound of A-K the under-prediction is slightly about 2/3 (0.8 vs. 2.5); using the upper-bound, the under-prediction is just over 1/2 (1.6% vs. 2.5%).

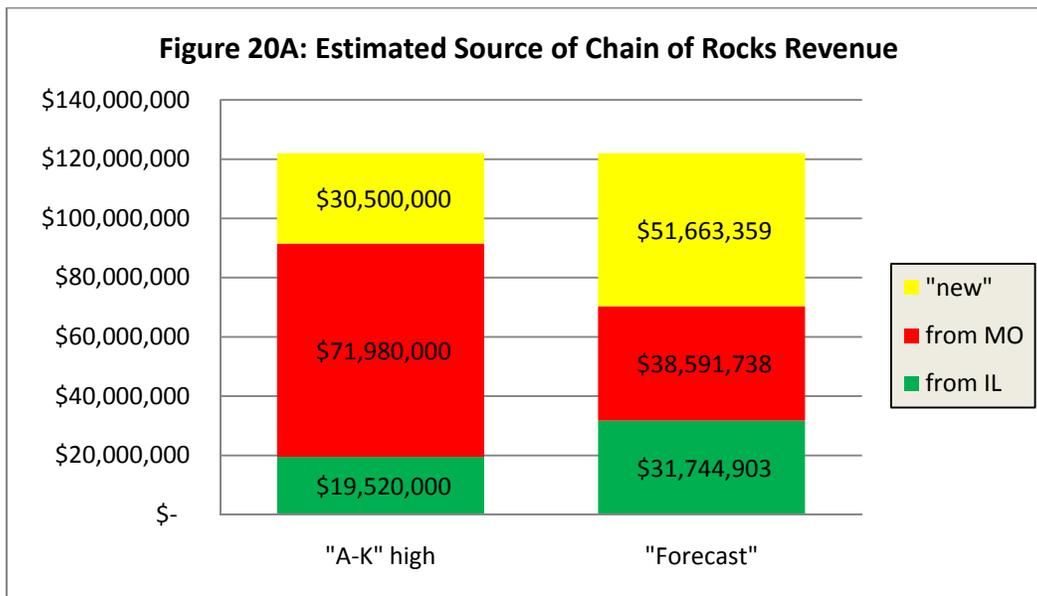
Likewise, the Lumiere results to date suggest that the Chain of Rocks will be particularly effective in "stealing market share" from Illinois-based casinos (especially from the near-by Alton Belle casino). Figure 19A summarizes the predicted source of revenues for an approved Chain of Rocks casino. Two predictions are provided: a base prediction from A-K (based on the high new revenue estimate and Lumiere market share predictions) and a "Forecast" (based on the analysis in the two previous sections). From the perspective of gaming receipts for the state of Missouri, Figure 19A suggests that Chain of Rocks would be the ideal location for the new casino in Missouri--as St. Louis is the regional market with a sizable "cross-border" potential.⁵¹



While we have seen that A-K is generally predictive (especially for such a difficult prediction problem), we find that Chain of Rocks will be more successful than predicted by A-K, both in terms of "net new" revenue and more importantly in terms of "new to Missouri" revenue (share taken from Illinois casinos).

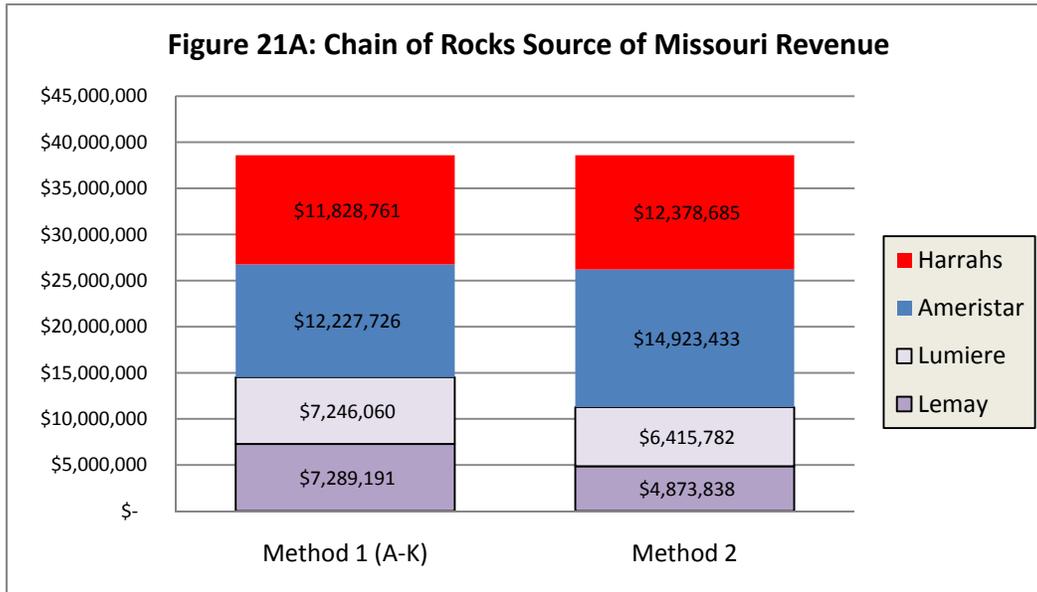
⁵¹ Illinois presents a significant source of potential revenue (well over \$200M in 2009); note there is no such source of potential cross-border revenue in the Kansas City or Cape areas.

With a prediction for Chain of Rocks market share, Figure 19 can be used to assess how much of the overall Chain of Rocks casino revenue will lead to additional gaming receipts for Missouri. Based on the projections in A-K and interpretations of Section 2, a market share projection for Chain of Rocks to be in the 10% - 13% range seems reasonable. Using the midpoint of this range, we arrive at revenue estimate of \$122M (based on FY2010 St. Louis area revenues of \$1.07B). Figure ES-2 displays estimates of the revenue amounts by originating source (using ES-1 and this \$122M revenue estimate for Chain of Rocks,). It is estimated that approximately \$83M (of the \$122M total Chain of Rocks revenue) are “newly taxable” from the point of view of Missouri. The other \$39M is purely “casino substitution” from the state’s perspective; that is, the collection source “changes” from existing Missouri-based casinos to the new Chain of Rocks casino.



Clearly, the loss of revenue will be noticed by the existing casinos (and will almost certainly lead these casinos to lobby for a casino outside of St. Louis), it is quite unlikely that such a small loss in revenue will have noticeable effect on the existing casinos. Given the proximity (in terms of drive time) and relative sizes, the majority of this \$36M could reasonably be expected to come from Harrah’s and Ameristar. In any case, the Chain or Rocks casino provides a large fiscal opportunity to the state of Missouri with little risk to the incumbent casinos. Indeed, the \$36M “flow” (from the current incumbents to Chain of Rocks) accounts for only about 4% of FY 2010 revenues of \$848M.

Figure 21A provides two estimates (based on A-K and previous analysis) of the originating source of Missouri revenue.⁵² Method 1 relies purely on A-K MNL approach which implies that each casino is equally harmed in percentage terms (-4.2%); Method 2 provides an adjusted estimate based on the observed differences in predicted and actual values for Lumiere. In this case, the percentage revenue impacts are: -4.5% for Harrah's, -5.2% for Ameristar, -3.8% for Lumiere, and -2.8% for Lemay..



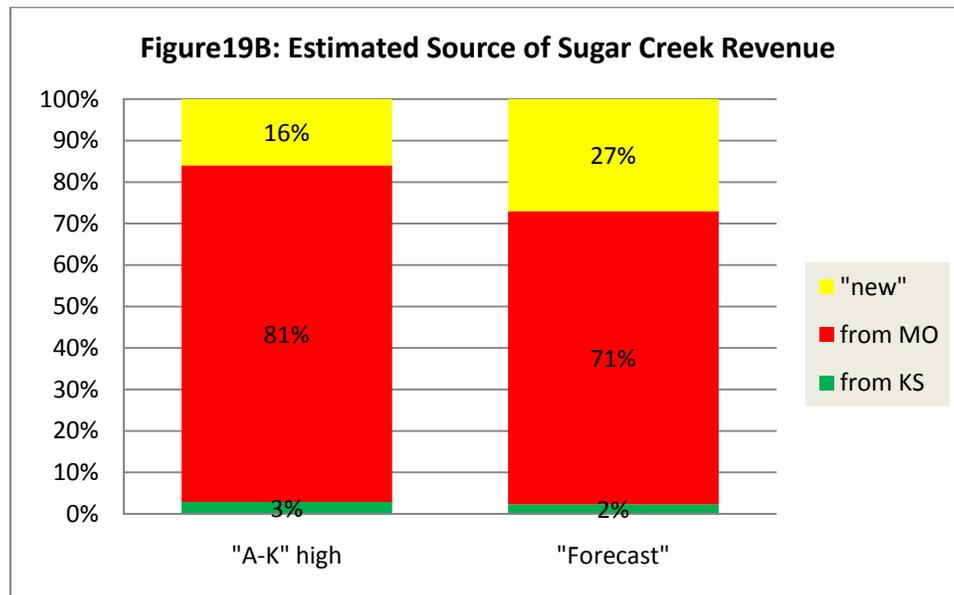
⁵² Estimates based on FY 2010 actual revenues with market shares adjusted to reflect Lemay being open for the entire year.

Sugar Creek

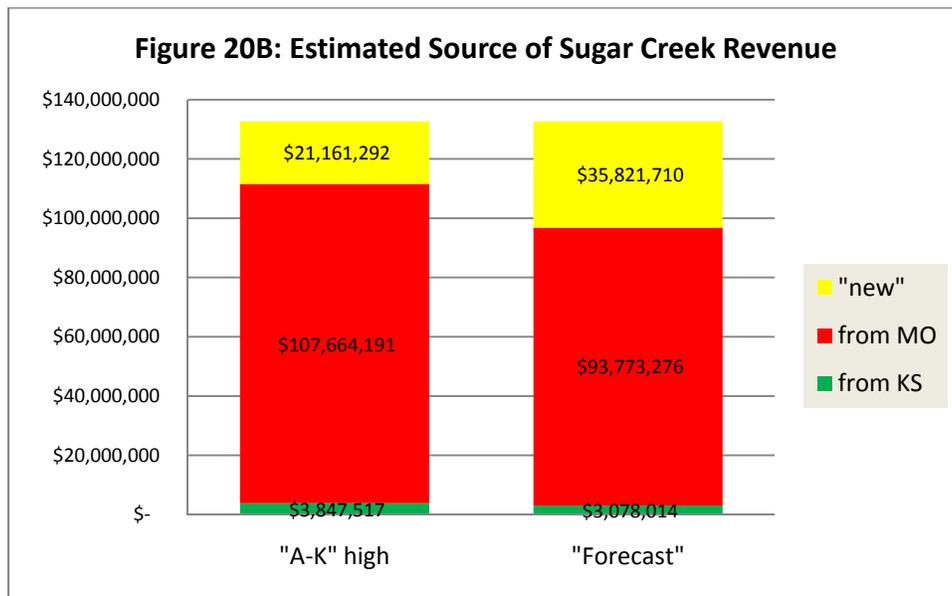
Table 5 summarizes these predictions for the Sugar Creek casino. (To reiterate, these estimates were not used; rather the more-reasonable benchmark estimates were utilized to size the Cape casino.)

Table 5: Sugar Creek New Revenue Predictions	
A-K-based Analysis (Section 1)	Econometric Analysis (Section 2)
3.6% - 6.4%	2.0%

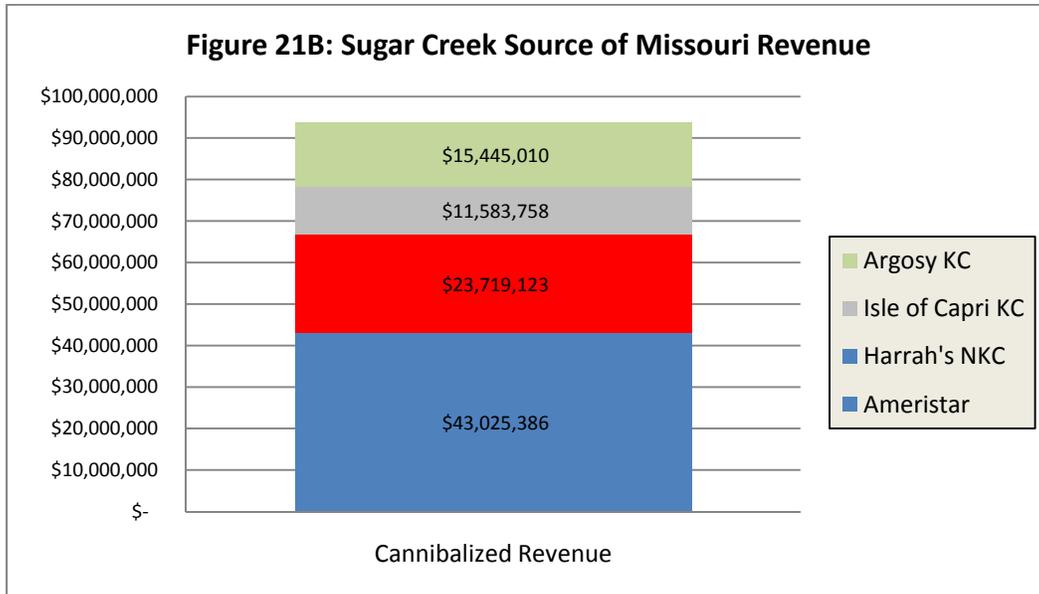
Figure 19B summarizes the predicted source of revenues for an approved Sugar Creek casino. Two predictions are provided: a base prediction from A-K (based on the high revenue estimate) and a "Forecast" (based on the analysis in the two previous sections). From the perspective of gaming receipts for the state of Missouri, Figure 19B suggests that Sugar Creek would not be a particularly good source of new gaming revenues as much of the casino's revenue is expected to be cannibalized from existing Missouri casinos in Kansas City.



With a prediction of market share Sugar Creek, Figure 19B can be utilized to assess the source of revenues for Sugar Creek. Based on the projections in A-K (Table 2B) and actual revenue data presented in Section 2, a market share projection for Sugar Creek in the range of 17% - 19.2% is projected. Using the midpoint of this range (18.1%), we arrive at revenue estimate of \$133M (based on FY2010 Kansas City area revenues of \$733M). Using the "Forecast" column from Figure 19B and this revenue estimate for Sugar Creek, Figure 20B displays the revenue amounts by originating source. The present analysis (the "Forecast" bar in the Figure 20B) suggests that approximately \$39M (of the \$133M total revenue) are "newly taxable" from the point of view of Missouri. The other \$93M is purely "casino substitution" from the state's perspective; that is, the collection source "changes" from existing Missouri-based casinos to the new Sugar Creek casino and so has no impact on gaming receipts in Missouri.



Employing MNL-type projections, Figure 21B provides an estimate of the originating source of Missouri revenue. In this case, the percentage revenue impacts (based on fiscal-year 2010 revenues) are approximately: -12.1% for Harrah's, -18% for Ameristar, -14.2% for Isle of Capri, and -8% for Argosy.

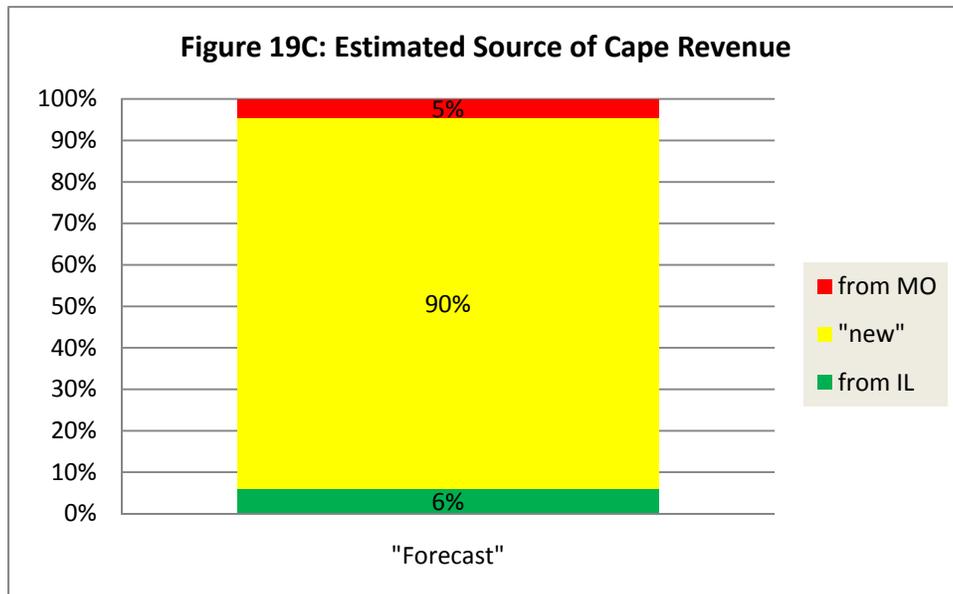


Cape Girardeau

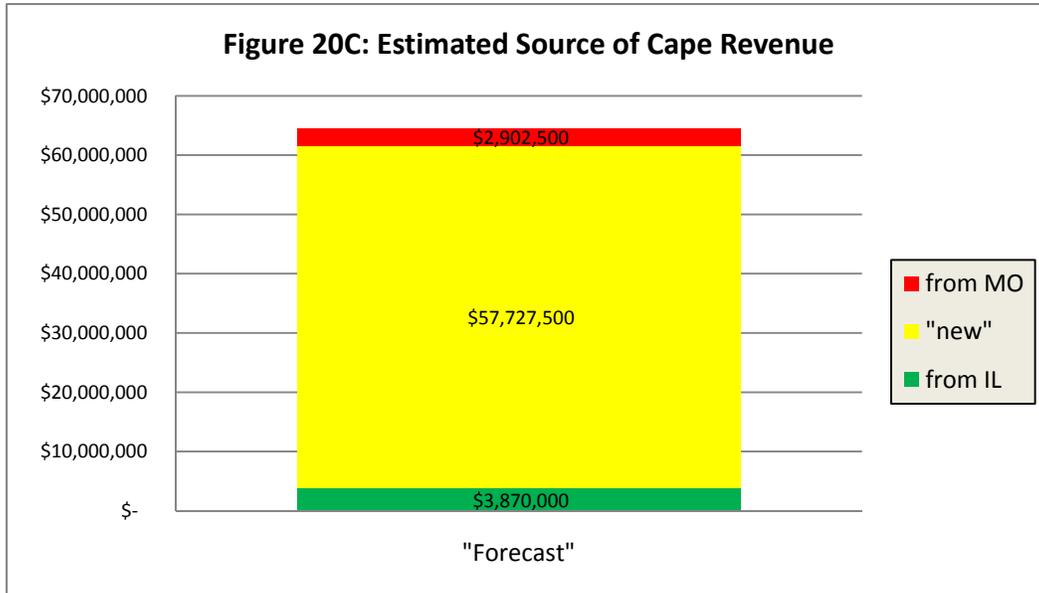
Table 6 summarizes these predictions for the Sugar Creek casino. As noted in Section 2, these projections will understate the impact of an out-state casino as the notion of a market area is not satisfied.

Table 6: Cape New Revenue Predictions	
A-K-based Analysis (Section 1)	Econometric Analysis (Section 2)
4.2% – 6.4%%	3.3%

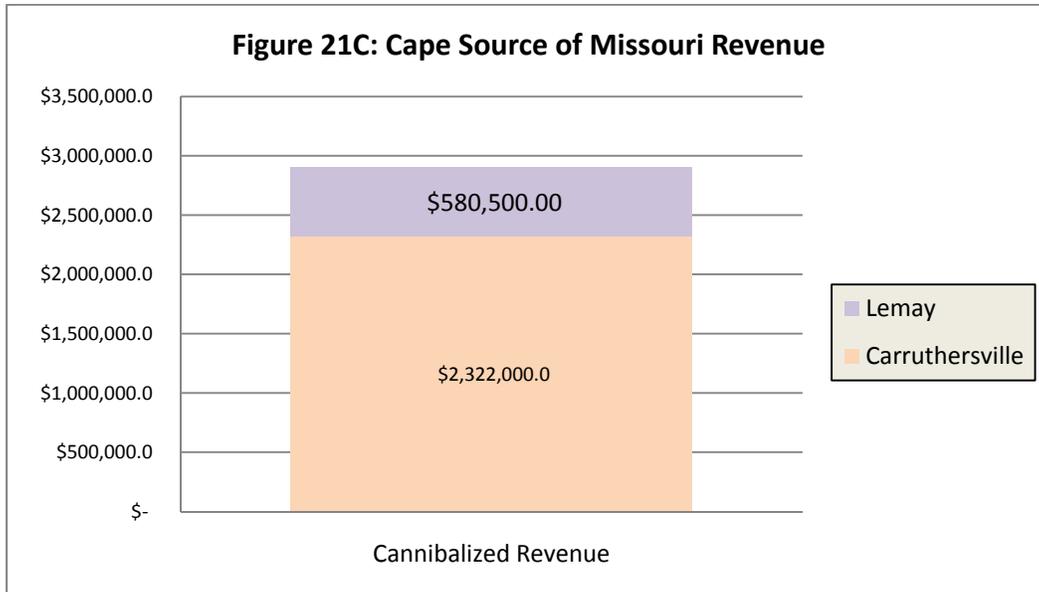
As a result, using the “benchmark” casino analysis in the previous section coupled with the market share projections in A-K yields Figures 19C.



Given that Cape will essentially be its own market, and part of the larger Out State market, we utilized the benchmarking analysis, which analyzes future revenue projections from 4 separate methods, from Section 2 along with Figure 19C yields revenue predictions by source; these predictions are represented in Figure 20C, with a base total revenue projection of \$64.5M. The present analysis suggest that approximately \$61.6M (of the \$64.5M total revenue) are “newly taxable” from the point of view of Missouri. The remaining \$2.9M is purely “casino substitution” from the state’s perspective, as stated before would have no impact on gaming receipts in Missouri.



Once again using MNL-type predictions (based primarily on distance), Figure 21C provides an estimate of the originating source of Missouri revenue. In this case, the percentage revenue impacts (based on fiscal-year 2010 revenues) are approximately: -7% for Caruthersville and -0.3% for Lemay.⁵³



⁵³ These projections are best used cautiously; as noted there are no projections in A-K for out-state market shares so these are based largely on presented urban simulations and assumption.

Overall

Table 7 summarizes the "new to Missouri revenue" predictions for the three candidate casino sites. By "new to Missouri", we mean new taxable revenue (new + cannibalized from nearby states); as a result, this clearly indicates that Chain of Rocks would yield the largest increase in Missouri gaming receipts.

Table 7: New Taxable Revenues in Missouri	
Casino	New to MO Revenue (\$M)
Chain of Rocks	\$83.4
Sugar Creek	\$38.9
Cape	\$61.6

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