Optimization of State Revenues through the Introduction of Casino Gambling

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Optimization of State Revenues through the Introduction of Casino Gambling

By: Bryan Kang

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I. Introduction

With the prospect of increasing budget deficits, many state governments are now considering the introduction of casino gambling within their states in order to raise revenues. The amount of budget deficits is staggering. Just in the New England region, general revenues, especially those from the personal income tax, fell sharply in every New England state except New Hampshire in FY2002. All six states closed the fiscal year with deficits. According to the Boston Federal Reserve Fiscal Facts, Massachusetts collected $20.7 billion in revenues in FY2002, down by $1.2 billion from FY2001. While revenues fell, spending continued to climb, reaching $23 billion for the entire fiscal year and creating a $2.3 billion hole in the state budget. Connecticut ended FY2002 with a budget deficit of $817 million, or 6.8 percent of general fund spending. Maine closed FY2002 with a $93 million deficit in its general fund budget; an additional $150 million deficit is predicted for FY2003. The state will likely end its biennial budget cycle in June 2003 with a $243 million insufficiency in its $5.3 billion general fund budget, comprising roughly 5.5 percent of the state's general fund expenditures. Vermont's general revenues declined by 10 percent from FY2001 to FY2002 and caused a budget gap for FY2002 of $25 billion or 3 percent of general fund spending. Finally, New Hampshire will end FY2002 with a $62.6 million deficit (2.7 percent of budgeted expenditures), and Rhode Island experienced shrinking revenues for FY2002 and FY2003 by $92.9 million and $74.6 million, respectively.

It is clear that there is a tremendous potential for revenue generation in the gambling industry. It is projected that Connecticut will bring in almost 500 million

dollarsthisyear [1].(Thisisestimatedbytakingaq   uarterof2billiondollar   expectedslot machinerevenuefrom   its instatecasino s,FoxwoodsandMoheganSun.   ) Furthermore, gambling itselfisahugeindustry.In1995,gambling   income intheUnitedStates grossedover$40billion.Thesameyear,theestimatedreceiptsforamusementparks were$7billion,includingadmissionfees,s   alesoffoodandbeverages,andothersales. Theestimatedreceiptsformovietheaterswere$5.5billion.   [2]Outofthatnumber,casino gamblingaccountedfor88%ofallUSgamblinghandle   [3]and52 %ofgrossprofits [4]. Casinogamingisthelargestpartoft   hecommercialgamblingmarket.In1997,10states hadlegalizedsomeformofcommercial,non   -tribalcasinogambling ,and22stateshad allowedIndiantribalgambling . In2000,14stateshad   legalizedcommercial   casino gambling.[5] Definitiveevidenceof t hegrowthpotentialofthecasinoindustryisinthe examinationofthetrendfrom1982to1995.   In1982,Casinogamblinghadahandleof 101.4billiondollars.By1995thatamounthadrisento422billiondollars.   [6]

The increasingdeficit shave prompted manystatestoreviewtherevenuestream   s ofn earbystatestoseeiftheremight   beanychanceforinstaterevenues.Adrivingfactor intheentranceintothecasinoindustryisthesuccessofanearbystatecoupledwitha desperateneedforalargerreve   nuestream. Withinthe NewEngland region, Connecticut,havingmadeacompactwiththeIndiantribeswhohaveoperatingrightsfor

[1] http://www.osc.state.ct.us/reports/economic/2001cmprpt/financial.htm
ConnecticutStateBudgetOffice   –StateBudgetRecommendations
[2]TheUnitedStatesGross   AnnualWager, InternationalGamingandWageringBusiness   vol.17,no.8 (August1996),p.45
[3]Handlereferstothetotalamountofmoneythataplayerspendsplayingcasinotablegamesorslot machines.Sincethetotalamountincludeswinnings,itisam   uchlargernumberthanwhatplayersactually lose.
[4]Grossrevenuesorprofitsrefertotheamountofmoneythatbettorslosegambling.Itisalsoknownas consumergamblinglosses.Itistheactualnetincomeretainedbytheoperatorafterthepayment   ofprizes, butbeforedeductingtheothercostsofoperatingthegamblingestablishment.
[5]NationalConferenceofStateLegislaturessurveyofCommerceClearingHousesummaryofstatetax laws,2000
[6]ebid., InternationalGamingandWageringBusiness

Foxwoods and Mohegan Sun, received 319 million dollars from casino payments to the state in the FY2000, and that payment rat e had an annually compounded growth of 18.6% over 5 years. [7] Citing the success that Connecticut has had, a majority of the remaining New England states are now considering the introduction of casinos. Massachusetts is considering negotiating a pact to al low the Wampanoag tribe to operate casinos.

This thesis will try to determine whether any state could benefit from the introduction of casino gambling, an d if so, how much extra funds could be expected . Massachusetts residents spend an estimated $620 mi llion at Connecticut's two casinos -- Foxwoods and Mohegan Sun, and they are dropping an additional $726 million at out -of-state gambling facilities each year. [8] If this sum were to be spent in -state, Massachusetts would be able to reap a significant perce ntage of that amount for its state revenues. The same can be said for Rhode Island. West Warwick, Rhode Island is merely 45 minutes away from Foxwoods, and Mohegan Sun is about an hou r away, and for a state with a huge deficit, the profit that RI could r eap from an instate casino could make the introduction of casinos a worthwhile venture.

However, estimating profit is not just as simple as calculating a percentage of the nearby market's gross revenues. There are many different variables th at affect whet her the states could earn significant revenues from casino gambling. One point of measure is the market saturation point. A partial reason for Foxwoods' and Mohegan Sun's relative successes is their prime location in the Nor theast. If many new casinos w ere built nearby, such as in Massachusetts, Rhode Island, and New York, they would certainly

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[7] http://www.osc.state.ct.us/reports/economic/2001cmprpt/financial.htm
Connecticut State Budget Office – State Budget Recommendations
8 http://www.eagletribune.com/news/stories/19990305/FP_007.htm
Beth Quimby, Eagle Tribune, March 5, 1999, "Bay State gamblers dump millions in N.H., Connecticut"

draw away the profits from Connecticut's business and result in decreased revenues for all parties involved. Another consideration in the equation is the multiplier effect of other revenue sources. The determination of whether the introduction of casinos would result in increased tax revenues from alcohol, cigarettes, or even highway tolls from increased traffic is another factor worth considering. Also, increased visitors would surely mean increased hotel stays, increased shopping revenues, etc. Countering the multiplier effect argument is that of the substitution effect. The substitution effect states people will spend their income on casino gambling rather than spending them on eyon other goods and services. The substitution effect states that the introduction of casinos would take away money from local businesses and overall the local economy will be affected negatively, since local businesses will have lower income.

And finally, on the expenditure side, the earmarked funds for gambling problems must also be considered. These can include any factors ranging from state-run addiction programs to increased crime control to new infrastructure costs, among a variety of other aspects. The socio-economic analysis of casino gambling can play a huge factor in the valuation of a policy to legalize and institute casino gambling.

This paper will focus on the optimization of state revenues, taking into account all the factors mentioned above. In layman's terms, this paper wants to see if it would be feasible and profitable for a state to institute casinos within the states. The states that will be studied will be Rhode Island and Massachusetts, two states in the New England region that are considering the introduction of casinos. Furthermore, once the quantitative research on profit optimization has been complete, it will be supplemented by a qualitative model examining the extent of materialization for these optima learnings.

This paper contends that the introduction of casino gambling would have some positive effects on state revenues; however, it will not be the panacea that people have been expecting.

II.   BackgroundInformation

Indeterminingthesediffere ntfactors,itis   advisablefirst toevaluatetherelative successoftraditionalgamblingsourcesandhowtheyhavealleviatedthedeficitproblem byutilizingtheshareofstaterevenuesfromtheirgamblingindustries.Thenthe examinationofdifferentty pesofcasinogamblingformatswi   llfollowthatwillserveasa modelforestablishingtheoptimalrevenuescheme   .These formats willincludethe privatefirmformat,prevalentinLasVegasandAtlanticCity,Riverboatgambling,both mooredandfloating,   andIndianReservations,withConnecticut'stwolargelocation   s servingasprimaryexamples.

Legalized casino gamblingintheUnitedStatesbeganin1931,whenNevada becamethefirststatetoallowunlimitedstakescasinogamblinginLasVegas.   Inthela te 1950s,thestatefirstpermittedpublicly   -heldcompaniestoownandoperategaming facilities,whicheasedtheentranceofpubliccompaniessuchasHiltonandRamada. Currently,gaminginNevada   ,especially in LasVegas,hasbecomeamultibillion   -dolla r industrythatattractsmillionsofpeopleeachyear.   In1999 ,stategamblingrevenue exceeded9.5billiondollars,withanannualgrowthof11.2percent   ;andproportionately, visitorvolumeexceeded50millionpeople,withagrowthof10.2percent   .It   isnot surprisingtonotethatvisitorsintoClarkCounty,thecountythatincludesLasVegas, comprise85%ofthosewhovisited   Nevadainthatyear.   Infact,from2001   –2003,the ExecutiveBud getGeneralFundRevenuederived   over40%directlyfromgamin   gand casinoentertainmentttaxes,makingthosetaxation   sthelargestsourceofrevenues. Clearly,thisisamodelwhichhassucceededinreapingbenefitsfromCasinogamblingto

bolster the state budget. However, empirically it has been shown that this model is the exception, not the norm. The second state in the US to legalize gambling was New Jersey, which introduced unlimited stakes casino gambling in 1976. While Atlantic City can boast visitor volume close to that of Las Vegas, New Jersey only reaps a fraction of what Nevada gains in state revenues, with less than 5% of state revenues coming from 'gaming' revenues. While this may be attributed to the size of the state (in terms of population, geography, etc) it is important to note the improbability for another state to have the revenue resembling that which Nevada collects. However, with expected casino revenue of 360 million dollars, it is not a trivial amount. Mississippi, which started out its in state casino gambling with the riverboat format, now has more gambling square footage than Atlantic City. These three states are special in that they derive a large amount of their customer base from remote locations, and thus can be characterized as national destinations.

On a more regional level, star ting in 1989, many states have instituted legalizing smaller operations. South Dakota, in 1989, legalized limited -stakes casino gambling in Deadwood, a historic mining town, and in 1990, Colorado followed by approving limited-stakes casino gambling in thr ee former mining towns: Cripple Creek, Black Hawk, and Central City. Many states including Iowa, Illinois, Missouri and Indiana have introduced riverboat casino gaming. In 1989, Iowa and Illinois legalized riverboat casino gaming (docked) , and in April 1 991, Iowa launched the first gaming vess el in recent US history.[9] The advent of riverboat gaming was complemented by increased Indian gaming, when Indian tribes were allowed to operate the same kinds of gambling allowed within a state by the Indian Gaming Regulatory Act. Indian tribes have used their

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[9] Roger Dunstan "Gambling in California," California Res earch Bureau, California State Library.

positionassovereignentitiestodevelopanumberofgamingestablish ments.In1994

therewereapproximately150 –175casinosandbingohallsinoperation,andin1997,22

stateshadIndiancasinos. [10]

Specialregionalfocusin NewEnglands houldgotoIndiangaming,the format

utilizedbyConnecticut,withFoxwoodsandMoheganSun,runbyMashantucketPequot

andMohegantribes,respectively.RobertGoodmanquotesa$6billionfigure ashis

estimateofthegr ossrevenuesforIndiangambling,however,numbersonotherreports

varyfrom2to8billiondollars.Forstates,conflictexistsbecauseboththestateandthe

Indiantribearesovereignentities .Asitis,statescannotforcethetribestopaytaxesor

exercisejurisdictionoveractivitiesontriballands. Therightfortribestooperatecasinos

ontriballandshasdependedupondifferentlitigationovertheyears.CurrentlyIndian

gamingisenforcedbytheIndianGamingRegulatoryAct(IGRA).IGRAd ividesgaming

intothreecategories;casinogamblinglieswithinthejurisdictionofClassIII.Inorder

foratribetoofferClassIIIgaming,thestateinwhichthereservationislocatedmust

permitthesamespecificgamingactivitiesthatarepermitte d;thetribemustpassan

ordinanceauthorizingthegamingactivities;andthegamingmustbeconductedin

conformancewithacompactenteredintobythetribeandthestate.Thisthirdclause

allowsthestatetoreapsomeoftherevenuesfromthetribal gaming.Asstated,

Connecticut'scompactwithitsIndiantribesallowsforaquarteroftherevenuestobe

transferredbacktothestate.Moreover,statesgetsometaxrevenuesfromIndiangaming

intheformofincometax for employees,whoarenotIndia nnorreservationresidents.

Furthermore,stateshavealsousedtribalgamingasawaytoinfluencetheirrelationswith

neighboringstates. NewYorkthreatenedtolegalizehighstakesIndiangamblingwhich

[10]RichardL.Worsnop,"GamblingBoom," CQResearcher, 8March1994 ,p.243

wouldhavecompetedwithAtlanticCityshouldN ewJerseyluretheYankeesawayfrom

NewYork. [11] CaliforniahadconsideredtryingtoengageNevadaintoarevenuesharing

planinlieuoflegalizingcasinosinSouthernCalifornia. Asimilaofferwasextendedby

Massachusettsgovernor,MittRomney,toCo nnecticutlegislature.

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[11]RogerDunstan,GamblinginCalifornia.CaliforniaResearchBureau,pgIV -11

III.   LiteratureReview

There are a plethora of research papers devoted to the topic of casino gambling, both about Indian gaming and about the publicly-owned firm model.

A widely quoted source is Robert Goodman's "Legalized Gambling as a Strategy for Economic Development," which explores the case against the growth of exponential growth of state-sanctioned and state-sponsored gambling. In 1992, Goodman became the director of the United States Gambling Study, an organization concerned with offering economic planning advice to policymakers. His paper, published in 1994, is effective in outlining the existing infrastructure in terms of casino gambling. It also provides an adequate history of casino gambling. Goodman's main purpose is to provide fodder for his argument that legalized gambling does not make sense in terms of money because of the ancillary social costs, which undermine the increased revenues. He also provides a great foundation regarding issues of Indian gaming, gaming regulation, and economic impact of gambling.

Furthermore, in his book, *The Luck Business: The Devastating Consequences and Broken Promises of America's Gambling Explosion,* Goodman argues that governments that turn to legalized gambling in an effort to boost local economies are ignoring a multitude of hidden costs. This notion mirrors the argument presented in the above document. While his arguments are bolstered by convincing statistics in both cases, one must observe that there is a flaw in trying to take the existing literature at face value.

Many times, literature is commissioned for certain purposes. Much literature supporting casino gambling is put out by the firms that operate casinos. Also, literature

canbe biased towards theauthor'svie wpointsongambling.Thereexistsdatathatboth supportanddenytheeffectivenessofgamblinginestablishingsoundeconomiesor researchingthesocio -economicfactorsofgambling. Anyonecanskewtheexisting informationtosupporthisorherargument .Also,Goodman'spaperandbook were publishedalmost10yearsago, so eithernewinves tigationoranupdatetohisoriginal argumentmayberequired .

Anotherusefuldocumentis "IndianGamingintheUnitedStates:Apermanentor aTransitoryMethodof EconomicDevelopment"byRobertP.Morin,Departmentof PoliticalScience,UniversityofNevada publishedin 1994.Thisdocumentservesasa greatsourceforbackgroundinformation onIndiangaming.Morinputsforththe argumentthatdespiteitspopulari tyandwidespreadavailability,thefutureofIndian gamingisunsettledandcouldbecomeillegalagain. Thispossibility ,Morinargues,is duetotheconflictthatexistsbetweenstatesandIndiantribes ,coupledwiththestatusof the"newbuffalo,"at ermearnedbycasinosonIndianlandbecauseitisasinglesource capableoffeedingandclothingtheIndians.AnothergoodarticleonIndiangamblingis "EconomicImpactofNativeAmericanGaminginWisconsin"pu blishedbythe WisconsinPolicyResearch Institutein1995 writtenby WilliamThomps on. Thispaper exploresthesamepossibilityasMorin'spaper,butfocusesontheeconomic consequencesfromIndiangaminginWisconsin.Hereachestheconclusionthatbenefits tothetribesareshort -lived,and inthelong -runwillbecomemarginalized.

Anotherarticleongamblingisthepaperputoutbythe CaliforniaResearch Bureauin1997.RogerDunstan's"GamblinginCalifornia"offersacomprehensive viewpointforCaliforniainresearchingtheeffectivene ssofgambling.Thepapertriesto

analyzewhethergamblingisadvantageous   toCalifornia.In   doing so,hereviewsthe

historyofgambling,definesdifferenttypesofexistinggambling(amongthemcasino

gambling,riverboatgambling,lotteries,In   dianga ming,etc.),andanalyzes   theeconomic

andsocialimpactsofgambling.Dunstanarrivesattheconclusionthatitisdifficultto

forecastthefutureofCaliforniagambling.Inhisconclusion,heoffersresearchoptions

bywhichhe willtrytogathermore   material beforeafinaljudgmentcanbepassed.He

offersregulatoryoptions,includingthosethat   woulddealwithsocialcostssuchas

preventionofpathologicalgambling.

"TheEffectsofCasinoGamingonConsumerSpending"p   utoutbytheWEFA

Groupin 1994,analyze sconsumerspendingintownswhereacasinoispresent.   The

objectofthispaperisto   test theexistenceofthesubstitutioneffectinareaswithacasino.

Thisreporttriestoprovethatthesubstitutioneffectisnotafactorinconsideri   ngthe

revenuesthatacasinowillearn.Itstatesthatthesubstitutioneffecthasbeenassumed

erroneouslybecauseconsumerbudgetsarenotlimitedorfixedovertime.This   thesis

statesthatjustsimplybecausepeoplespendmoneyatcasinosdoesnott   ranslatetolower

spendingatotherbusinesses.Thepaperalsostatesthatthemoneyspentinacasinoisnot

sterile,andremainsanactivepartoftheeconomy.   Additionally,inareportpreparedby

Christiansen/CummingsAssociatesforthe1994GrossA   nnualWager,itwaspointedout

that"Theseconsumerexpendituresoncommercialgamespaythewagesandsalariesof

thehundredsofthousandsofemployees,providea returnontheequitycomponentofthe

tensofbillionsofdollarsinvestedincasinosand   racetracksandcompaniesthatvend

computerizedwageringsystems,servicethedebtcomponentoftheseinvestments,

supportthestockpricesofthehundredorsopubliclyownedcompaniesinvolvedwith

gambling, and, in sum, are the motivating force of an ec onomic engine that is most visible in Nevada but that less visibly drives an annually growing portion of the American leisure economy."

My research is different from these existing literatures in that I will attempt to provide a quantitative model for calc ulating the maximum revenues nearby states can reap from casino gambling. It is also unique from some of the papers listed above in that it focuses on specific states in the New England region, something that has not been explored to the depth that I hope my research will. A qualitative model afterward will try to best fit the approximation for revenue stream for some of the states in the region. It will include a nalysis of study on the interstate leaching effect as well as the multiplier effect. Market saturation and neighboring state competition will also be discussed, which I hope will objectively discuss the available funds that are available for the state. Furthermore, these models will be optimized utilizing different forms of gambling that is available to determine which will be most effective in maximizing revenues.

IV.   Methodology and Results

Thispaperisinterestedinexploringquantitativelythemaximumrevenuethat
NewEnglandstates,especiallyMassachusettsandRhodeIsland,couldexpect   ifcasinos
areintroducedineachstate.Thefirstsubsectionwillexaminewhattypeofcasinoswill
bet hemostbeneficial.Thesecondsubsectionisgoingtoanalyzethecurrent
contributionstorevenuethattheformsofgamingareprovidingtobothMa   ssachusetts
andRhodeIsland.   ThenthecontributionstothestateofConnecticutwillbeexamined,
whichwillbeusedtoanalyzefurthertheRhodeIslandandMassachusettsdata.   This
subsectionwill alsodiscussthe externalfactorsandissues   that mayi mpactthestates
fiscally.

1.   TypeofCasino

TherearethreetypesofcasinosthatareprevalentintheUnitedStates:Private
firm,Indian -run,andriverboatgambling.Itisimportanttoexaminewhattypeofcasinos
astatewantstoinstitutebecausediff   erenttypesofcasinoscanmeandifferentamountof
revenues.CasinosonIndianreservationsqualifyasasovereignentityanddonotpayany
taxes.TheonlywayastatecanrecuperateanymoneyfromanIndiancasinoisto
negotiateacompact,inwhicht   hecasinoagreestopaythestateacertainpercentageor
amount.ThisnegotiationismandatoryforanIndiantribetoestablishacasinowithinits
reservationundertherulespassedbytheIndianGamingRegulatoryAct.(IGRA)   Forthe
NewEnglandregion ,itissafetosaythatthelikeliestpercentageofcasinorevenuethat

canber ealizedbythestateis25%, the same percentagethatConnecticutreceives from thetribesthatoperateFoxwoodsandMoheganSun.However, Privatelyruncasinos mustcomplyw iththestate'staxcodesoncommercialgamb ling.Thetableonthe precedingpageshowsthecurrentrateoftaxationoncommercialgamblingfor11 differentstates. Asthe tableshows, different statescollecttaxesatdifferentrates,with therangebei ng betweenabout7to30percent.Itisimportanttonotethatthestatesthat havehighergamingrevenues generally havetaxratesthatarelower,insomecasesmuch lower.Furthermore,inadditiontothedirecttaxeson ,orcontributionsfrom ,gambling activities,casinoswillbringinfurthertaxrevenuesthroughtaxesonhotelroomrentals, meals,andshoppingsales.Thisamountcanbecollectedatboththelocalandstatelevel . Furthermore,iftheprivate -firmtypeofcasinosisintroduced,thest ateswouldneedto spendmoneyonregulatingthesecasinos. Comparedtothepotentialfortaxrevenues usingtheprivatefirmformat ,the earningsofIndiancasinos,thetribesoperatingthe endeavorsontriballand,andtheearningsofindividualtribal memberscannotbetaxed. Therefore,anystatethatisconsideringplacingnewcasinoswithi nitsbordersshould considerthevarious optionsformaximumpotentialrevenues.

Inadditiontochoosingtherightpeopletorunthecasinos,policymakerswilla lso needtoconsiderwhetherthecasinothatwouldbeintroducedisalargedestination casino,orsmallerconveniencecasinos. Nationalcasinodestinations,suchasLasVegas andAtlanticCity,offermorepossibilitiesofoutsidetouristsvisitingthear ea,whichwill resultinpositivegains. Also,largecasinosmightbenefittheregionbyrecapturingthe amountofmoneythatlocalresidentswouldotherwisespendoutsidetheregion. Convenienceorlocalizedcasinogamblingaimstocapturealimitedgeo graphicmarket

andmaynotresultinanysignificantearnings.   AccordingtotheNationalGambling ImpactsStudyCommission'sFinalReport,"Noeconomicbenefittoeitherplaceora personwasadvancedbyproponentsofconveniencegambling.Therearenon   ational statisticsthatindicatethespecificimpactsofneighborhoodgambling."   [12]Ifacasinois notadestinationdraw,thentheNGISCstudyshowsthattheconveniencecasinossimply re-circulatelocaldollars.

2.   CurrentContributions

i.   RhodeIsland

RhodeIslandisoneofthestatesthat   arecurrentlyconsideringplacingacasino withinitsborders.Inoutliningthepossiblebenefitsandcoststhatcasinogamingcould addtoRhodeIslandrevenues,itisimportanttofirstexaminethecurrentcontributions thatthestateisreceivingfromitsgamingoperations.   CurrentlyRhodeIslandreceives moneyfromitstraditionalLotterysystem,Keno,andVideoLotteryTerminals(VLTs) thatareoperationalinitstworacinos,locatedinLincolnDownsandNewportJai   Alai. TheintroductionofVLTsintoRhodeIslandinJuly1997hashadasubstantialeffectfor RhodeIsland,becausethevastmajorityofgamingrevenuethatRhodeIslandreceives comesdirectlyfromtheVLTcontributions.Thegraphonthefollowingpage   showsthe progressionfromJuly1997untilthepresentoftotalRhodeIslandgamingrevenue,as wellasitscomponentgames,VLTs,Keno,andTraditionalLottery.

Thedatathatwasusedtoformulatethisgraphaswellasthefollowingtrend analysisth atwillbediscu ssedinalatersectionconsist   ofmonthlyrevenuesreceivedby

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[12]NationalGamblingImpactStudyCommission:FinalReport

the state for all the component games that contribute to gaming revenues for the state for the period between July, 1997 and December, 2002. This includes Video, Keno, and 9 forms of Traditional Lottery (Instant tickets, PowerBall, WildMoney, RollDown, Numbers, InstantMatch, MoneyRoll, EasyWin, and DailyMillions)

It is evident from this graph, that Keno and Lottery have not had much growth for the past 5 plus years, however, t he growth of gaming revenues can be attributed mostl y to the rise in the Video revenues. There is clearly a correlation between the Video and Total Revenues.

An analysis that incorporates a trend component will determine whether the actual forecasted effect of each component on the total revenue. The general mathematical representation of the model for decomposition approach is:

$$Y_t = f(S_t, T_t, E_t)$$

where Y_t is the time series value (actual data) at period t,
S_t is the seasonal component (or index) a t period t,
T_t is the trend -cycle component at period t, and
E_t is the irregular (or remainder) component at period t.

The data for Rhode Island incorporates all three of these components; the decomposition plot for this data can be seen in the Appendi x A. Seasonal sub -series show the seasonal component plotted. For each month, the values of the seasonal component are collected togethe r to form a sub -series. For the multiplicative decomposition, the seasonally adjusted data are computed by dividing b y the seasonal component, leaving only trend -cycle and irregular components.

$$Y_t / S_t = T_t * E_t$$

The following table shows the seasonality of the Rhode Island data. It is notable that the data is surprisingly seasonal:

Seasonal Indices – Rhode Island data, July 1997 – December, 2002					
July	105.677	November	96.069	March	106.583
August	103.266	December	92.947	April	103.504
September	98.213	January	94.750	May	104.730
October	100.388	February	95.035	June	98.837

The seasonal components reveal that the warm weather months have higher indices – translated as higher revenues. In establishing a casino or promoting the current racinos, that time period is optimal because it is the time period where the majority of vacation time is spent. If an introduction of casino(s) will bear similar seasonality, then a destination casino will be an option that is worth considering.

The trend component of the data is as follows:

Equations, Trend by segment – Rhode Island data, July 1997 – December, 2002		
Total:	922,372t + 45,136,455	(t = time in months)
Video:	821,517t + 31,505,650	(t = time in months)
Lottery:	55,362t + 9,755,577	(t = time in months)
Keno:	48,147t + 3,846,858	(t = time in months)

Analyzing these equations, again, shows that the total revenue is driven by the Video component. During the period of analysis, Total gaming revenues showed an average increase of about 925,000 dollars per month, and 90% of this increase was

attributedtotheVideocomponent.   Thetrend equationsfortheLotteryandKeno

numbersfurthersupporttheviewfromChart1,thatLotteryandKenohaveshown

relativelylimitedgrowth,anddonotrepresentamajorityofthegrowthintheRhode

Islandgamingrevenue.

ItisevidentthatRhodeIslan   dcurrentlyisveryreliantontheVLTsasasourceof

revenue.Therefore,itisimperativethattheeffectoftheintroductionofcasinosonVLT

playbeconsidered.This'cannibalization'ofexistinggamingopportunitiesisamajor

factoronwhethercas   inosofferaviableoptionforgreaterrevenues.   Cannibalizationis

thedeteriorationofoneproduct'ssalesasaresultoftheintroductionofanotherproduct

or,conversely,theincreaseinsalesofoneproduct(game)attheexpenseofanother.   [13]

Currently,thestategovernmentcollects51%to57%ofEGDrevenuesatLincoln

DownsandNewportJaiAlai,with1%giventothelocaltownorcitythathoststhe

varioussites.FromTable1,itwasevidentthatnostatescurrentlybenefitatthosehigh

ratesan   dthatcasinoswillnotbeabletocompensatethestatesatthatlevel.   Ifacasino,

orcasinos,isintroducedintoRhodeIsland,thegovernmentmustconsidermanydifferent

things.

1.   Whatrateofcollectionisnecessaryformaximumrealizationofrevenues?

- Howmuchrevenueshouldbeexpectedofacasinothatisintroduced?

- Willthisrateallowthecasinooperatorafairrateofreturn?

- Whattypeofcasinoshouldbeintroduced?

2.   WhateffectwillthecasinohaveontheexistingrevenuestreamoftheVLTs?

VLTs?

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[13]McG owan,RichardA.   EvaluatingaState'sGamblingStrategy:TheRelationshipbetweenLotterySales andCasinoGambling

- Whatlevelofdeclinewillbeshownfor the VLTs?

- Willtherateofcollectionhavetobeloweredinthefutureforthe VLTs?

3. WillthesemeasureskeepRhodeIslandgamingcompetitivewith neighboringstates?

ii. Massachusetts

AnotherstateintheNewEnglandregi onthatisconsideringtheintroductionof casinosisMassachusetts.Massachusettshasthehighestabsolutedeficitprojectedata figurewellover2billiondollars.Also,itisimportanttonotethatMassachusetts residentsspendover1.3billiondolla rsatout -of-stategamblingfacilitieseachyear. [14] (ThisconsiderstheestimatedQ620millionspentatConnecticut'stwocasinos – FoxwoodsandMoheganSunandanadditionalQ726millionspentatothergambling facilities/venues.)Ithasbeenarguedbypr o-casinofactionsthatifthisamountcouldbe spentin -state,thenthestateshouldbeabletore -coupgamingrevenuesinthehundredsof millionsofdollars.

Currently,Massachusettscollectssignificantamountsofrevenuesfromdifferent formsofTradit ionalLottery. Onapercapitabasis,Massachusettsisthenationalleader amongstates,exceededonlybytheDistrictofColumbia. [15] Thebelowtableshowssome dataaboutthestate'sLotteryprogram.

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[14] http://www.eagletribune.com/news/stories/19990305/FP_007.htm
BethQuimby,EagleTribune,March5,1999,"BayStategamblersdumpmillionsinN.H.,Connecticut"
[15] Gold,Steven – CasinosareNoPanaceaforAilingStateBudgets

Table2. MassachusettsLotteryprograminformation	
YearLottery Founded:	March1972
SalesFY1997: SalesFY1998: SalesFY1999: SalesFY2000: SalesFY2001: SalesFY2002:	$3,214million $3,225million $3,365million $3,715million $3,969million $4,211million
GamesOffered:	Instantgames,3 -digitgame,4 -digitgame, TheBigGame, Keno, Cashlot to(MassCash/matrix:5/35),P ulltabs,Megabucks (matrix:6/42)&MassMillions
Beneficiaries:	Approximately25%to30%goestocities&towns,compulsive gambling,artscouncilandthestatesgeneralfu nd.
Jurisdiction:	StateofMassachusettsUSA

Source:http://www.lotteryinsider.com.au/lottery/massach.htm

Clearly,thesalesamountfortheLotteryp   rogramissignificant.Furthermore,

significantper centageoftheLotterysalesis   returnedtotheMa   ssachusettsgeneralFund.

RevenuegeneratedfromLotterysalesisusedforthreepurposes.   [16]

1.Aminimumof45%ofrevenuesstaysintheStateLotteryFundtobepaidoutin

prizes.Currently,theLottery'sprizepercentageisover69%.

2.Aportionofr   evenuesistransferredtotheCommonwealth'sGeneralFundforthe

expensesincurredinadministeringandoperatingtheLottery.Theadministrativeand

operatingexpensesoftheLotteryareappropriatedbythelegislatureaspartoftheannual

statebudget. Operatingexpensescannotexceed15%.Currently,operatingexpensesare

under8%.Theseoperatingexpensesinclude5.8%incommissionsandbonusespaidto

thesalesagentswhoselltheticketsandunder2%inadministrativeexpensesdueto

Lotteryoperati on.

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[16]MassachusettsLotteryCommission   - http://www.masslottery.com/

3. Afterprizesandexpenses,theremainingLotteryrevenues(approximately23%)is transferredtothestate'sGeneralFuns,whichcanbeusedtofinancetheLocalAidFund andreturnedtothecitiesandtownsoftheCommonwealthintheformoflocal aid.

InFY2002,Massachusettsreceivedabout$850milliondollarsfromthestate's Lotteryprogram.Thedatausedforanalysisonthecurrentcontributionsof Massachusettsgamingrevenueisthe Lotterysalesdatafrom January,1998to February, 2003.T hisincludesallthecomponentgamesoftheLotteryprogram,Instanttickets, MassMillions,Megabucks,MassCash,TheBigGame,Keno,andDailyNumbers.The chartonthefollowingpagegraphicallypresentsthedata.JustastheRhodeIslanddata, theTo talgamingrevenueisaffectedprimarilyjustbyonecomponent.In Massachusetts'scase,Instantticketsclearly constitutethevastmajorityofLottery revenue.TheothercomponentsoftheLotteryprogramremainrelativelysteadyanddo notshowanysig nificantfluctuations. Thesignificance,intermsofintroductionof casinos,ofthedominanceofinstantticketsofthetotallotterysaleswillbediscussedina followingsection.

Onceagain,thedatawillbeanalyzedusingaseasonaldecompositionand atrend analysis. ThiswillallowexistingMassachusettsrevenuestobeanalyzedatthesame manneras RhodeIsland. Thefollowingtableshowstheseasonalindicesforthe MassachusettsLotteryprogram.

SeasonalIndices –MassachusettsLotteryData ,January,1998 –February,2003					
January	108.353	May	94.409	September	90.897
February	94.882	June	97.250	October	96.227
March	105.926	July	91.440	November	101.326
April	106.921	August	90.742	December	121.627

Fromtheseasonalanalysi s,itbecomesclearthatthelotterydataisseasonal .The higherrevenuemonthsareclearly thecoldweathermonths.AsinthecasewithRhode Island,thisseasonalitypatternisfavorable.Ifacasino'sseasonalindex isgearedfor higherrevenuesin thewarmweathermonths,Massachusettsmightbeabletotake advantageofthelotteryprograminthecoldermonthsandcasinorevenuesinthewarmer months,therebygivingthestateachancetomaximizerevenuesfortheentireyear.

Thetrendcomponentof fersfurtheranalysis.Thetrendequationsareasfollows:

Equations,TrendbySegment –MassachusettsData,January,1998 –February,2003		
Total:	1,514,072.6t+ 266,000,000.00	(t=timeinmonths)
Instant:	1,402,655t+170,000,000.00	(t=timei nmonths)
AllOtherGames:	194,085.3t+ 94,860,591.00	(t=timeinmonths)

Duringtheperiodthatwasanalyzed,Massachusettsgovernmenthasseenlottery revenuesincreasebyanaveragemarginofover1.5milliondollarspermonth.Andas wasexpec tedfromthechart,instantticketgamesrevenueincreaseconstitutes about93% ofthetotalrevenueincrease.ThatisclearlyadominatingfactorindrivingtheLottery

revenue.Allothergamesremain   steady; however,thesignificanceoftheircontribut   ion

totheoverallLotteryrevenuehasdecreasedovertime.

Onceagain,thecannibalizationofexistinggamingrevenuesisaconcernwhen

consideringtheintroductionofanewavenueofgamingopportunity.   Ifcannibalization

existsbetweenlotterygames   andcasinogambling,thentheintroductionofcasinoswill

negativelyaffectexistinglotterysales.RichardMcGowan'sstudyoftherelationship

betweenlotterysalesandcasinorevenuesin5states,whichintroducednewformsof

localizedcasinogambling   ,studiestheeffectofcannibalization.Heconcludesthat"every

statethatusedinstantgamesasthebuildingblockofitslotteryexperienceddecreasesin

instantsalesasaresultofthestartofcasinogambling.Inthetwostateswithunlimited

casinogaming,theinstantlotterysufferedapermanentdecreaseinsales."   [17]

Massachusetts'slotteryprogramisclearlyonethatisinstantgamedependent.Itstands

toreasonthatwiththeintroductionofcasinos,Massachusettswillseeadecreasein

lotteryrevenues.

AsTable2andthefollowingexplanationshowed,Massachusettscurrently

collectsabout23%oftheLotteryrevenuesforthestate'scoffers.   Sincesomestates

collectmorethan23%ofcasinotaxrevenues,(includingcompactswithNativeAmeric   an

tribes)itisconceivablethatdependingonthesizeoftheexpectedcasinorevenue,that

MassachusettscanrecuperatealllostLotteryrevenueandreceivemoretaxrevenuesasa

result. However,havingbroughtinover$4billiondollarsinLotteryrev   enueintheyear

2002(withinstantgamescomprisingabout$3billiondollarsinsales)itisunlikelythat

Massachusettsgovernmentwillbeabletoreclaimalllostrevenues.   Simplyput,itwould

[17]McGowan,RichardA   EvaluatingaState'sGamblingStrategy;TheRelationshipbetweenLotterySales andCasinoGambling

belikeexchanging$850milliondollarsforthemysterybo   x. JustasRhodeIsland,

Massachusettspolicymakersshouldanswerasimilarlineofquestioningbeforethey

deemcasinosasaviableoptionforitsstate.

1. Whatrateofcollectionisnecessaryformaximumrealizationofrevenues?

- Howmuchrevenueshou   ldbeexpectedofacasinothatisintroduced?

- Willthisrateallowthecasinooperatorafairrateofreturn?

- Whattypeofcasinoshouldbeintroduced?

2. Whateffectwillthecasinohaveontheexistingrevenuestreamofthe

Lotteryprogram,especiallyi   nstantgames ?

- Whatlevelofdeclinewillbeshownfor   instantgames ?

- Willcasinosbeabletocompensateforthelossininstantgames,andif

so,byhowmuch?

3. Willthesemeasureskeep   Massachusettsgamingcompetitivewith

neighboringstates?

iii.   Connecticut

Connecticut'sforayintothegamblingindustryhasbeenphenomenal.

Since1972,thefirstyearofthestate'sLotteryprogram,Connecticutgovernmenthas

allowedtheintroductionofpari   -mutuelfacilities(1976   –1977),bothGreyhoundracing

in2 locationsandJaiAlaiin3locations,off   -trackbetting,andfinallyIndian   -runcasinos.

Foxwoodsopeneditsdoorsin1993andMoheganSunfollowedin1997.Startingin

1972,whentheLotteryprogramcontributed$8.15milliondollarstotheConnecticut

GeneralFund,thecontributionfromgaminghasexploded.IntheFiscalYear2002,

Connecticutcollectednearly$650milliondollars,withthetwocasinoscontributing

about$370milliondollarstothattotal.   Thechartontheprecedingpageshowsthe

contributionsofallthecomponentgamesforthestateofConnecticut.Itisimportantto

notethattheLotteryprogramhasdominatedtherevenuestreamforthestatecoffersuntil

theinceptionofthecasinosin1993.   Appendix1includes someofthedata   thatwere

usedfortheanalysis.AlldataarefromtheDepartmentofSpecialRevenuesin

Connecticut.

Pari-MutuelFacilities

InConnecticut,thereareGreyhoundracetracksinPlainfieldandBridgeport.

TherearealsothreeJaiAlailocationsinHartf   ord,MilfordandBridgeport.Thedatathat

Iusedtoanalyzethepari   -mutuelfacilitiesareannualdatafrom1976,theyearofthe

introductionofthesefacilitiesinthestate.(MilfordJaiAlaiopenedin1977.)   Until1987,

Pari-mutuelrevenuesteadily   increased.Sincethen,therehasbeenadeclineinthe

amountthatthestatehasbeenabletocollect.Thechartsonthenexttwopagesshowthe

salesandthecontributionstothestatefromthesevenues,andthepercentageof

collection(thecontributio nsoverthetotalsalesatthesevenues)from1976to2002.

Whilethedecreaseinoverallsalescannotbesignificantlyconnectedwiththeopeningof

Foxwoodsin1993,thedecreaseinpercentageofcollectionisveryapparent.From1993,

whenFoxwoodsop ened,thestatehascollectedbetween1   –2percentoftotalsales.

Whenonecomparesthisfiguretothepre   -casinoera,whenthestatehadbeenableto

collectover6percent,itbecomesclearthatthecompetitionthatthepari   -mutuelvenues

facedfromt hecasinoshasdrivendownitssalesandthestate'srevenues.Infact,the

stateofConnecticuthashadtosubsidizesomeofthesevenuestokeepthemfrom

closing.

Lottery

Connecticut'sLotteryProgrambeganin1972.Thedatathatwereusedtoanal   yze

thestate'sLotteryprogramisannualdatafrom1972.Therearebothsalesdataandthe

amountcontributedtothestateforallthecomponentgamesoftheprogram:Weekly

numbers,Instanttickets,DailyNumbers,Lotto,CashLottoandPowerball.   Theg raphon

thefollowingpageshowsthetotallotterysalesbycomponentgamesfrom1972to2002.

Itisimportanttonotethatuntil1993,totallotterysaleshavebeendrivenbya

combinationofLotto,dailynumbers,andinstantticketsales.Since1993th   erehasbeen

adirectcorrelationbetweenthetotallotterysalesandthesaleofinstantlotterytickets,

signifyingthattheincreaseinlotterysalesrevenueislargelyduetoinstantticketsales

growth. Thefollowi   ngtrendequationsquantifyth   isco rrelation.

TrendEquations,ConnecticutLottery,Sales1972 –2002		
TotalSales=	32,233,330t –104,000,000	(t=timeinyears)
InstantTicketSales=	$(23,783,305.89)^{(.1135t)}$	(t=timeinyears)

It's important to note that over the whole period from 1972 – 2002, Instant Ticket Sales have accounted for 60% of total sales. From 1993 on, the graphs show a greater portion of total sales being comprised of instant ticket sales. This indicates that, like Massachusetts, Connecticut's Lottery Program is mainly driven by instant ticket sales.

The published study by Richard McGowan stated that the introduction of a casino leads to a decline in instant ticket sales. This phenomenon then drives the overall lottery sales down. In Connecticut's case, this has not happened. The exponential trend equation[18] shows that the latter years, (especially 1993 on) have shown an explosion in the amount of sales. As opposed to the states explored in McGowan's study, Connecticut introduced a new approach for instant ticket sales. In this approach, Connecticut released higher priced games (up to $10 per game) and returned a greater percentage as winnings. This approach might explain the growth of instant ticket sales, even with the competition coming from the casinos.

However, it is important to note that the competition has had an effect on the state's coffers. While the total amount of Lottery sold has increased by a large margin ($552 million in 1993 to $907 million in 2002), the amount that the state has been able to get from these games have not shown significant growth. ($221 million in 1993 to $271 million in 2002) In fact, the trend for percentage of lottery collection has had a steady decline.

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[18] Exponential model is one of the possible models for explaining non-linear trend for the data. The general equation for the model is $Y_i = \exp(a + bX_i + e_i)$.
Another model that can be used is a piecewise linear model, which divides the data into two sections, depending on whether the datum is above or below the condition.

$$Y_i = \begin{cases} a_1 + b_1 X_i + e_i & \text{when } X_i \leq \text{certain condition} \\ a_2 + b_2 X_i + e_i & \text{when } X_i > \text{certain condition} \end{cases}$$

> **Trend, Percentage Collected – Connecticut Lottery, 1972 – 2002**
>
> Total = $0.481 - 4.877E-03t$ (t = time in years)
>
> (1/2% decline each year)

Casinos

No matter how much the Lottery has influenced Connecticut's revenues, since the inception of both Foxwoods and Mohegan Sun, it is very apparent that the contributions from the casino is the main factor in measuring the amount of transfers to the General Fund. Examining the annual data from 1993 quantifies this statement.

> **Trend Equations, Annual Contributions to the State, 1993 – 2002**
>
> Total = $39,301,370t + 265,000,000$ (t = time in years)
>
> Lottery = $4,556,523t + 226,000,000$ (t = time in years)
>
> Casino = $36,183,521t + 20,439,971$ (t = time in years)

These trend equations show that casino collection makes up over 92% of the total contribution growth to the state annually from 1993. Compared to this, the amount that the Lottery provides has meant very little in terms of growth.

The following charts show Connecticut's casinos' Monthly Contributions to the State. It becomes evident that there is a steady growth in these numbers. The

multiplicativeseasonaldecompositionshowsthatthedataisseasonalforwarmerweather
months.Theindicesareasfollows.

SeasonalIndices(Sales) –Foxwoods&MoheganSun –Monthly,1993 /1997 -2002	
Foxwoods	MoheganSun
January 88.505	January 88.715
February 92.191	February 95.895
March 100.108	March 101.737
April 100.526	April 100.090
May 102.174	May 103.353
June 98.788	June 99.904
July 117.391	July 111.056
August 114.829	August 110.577
September 103.126	September 98.682
October 102.119	October 102.559
November 95.327	November 94.805
December 84.915	December 92.626

Thisshowsthatthecasinoswillseemore   moneygothroughthecasinosinthewarmer
months,whic hisinlinewiththeideathatthewarmermonthswillseemorevisitor
traffic.Thenextboxshowsthetrendequationsforthedeseasonalizeddata.The
emphasisisonthegrowthofthecontributionstothestate,whichisgrowingata
combined$200,000 permonth.

TrendTotalHandle –ConnecticutCasinos

Foxwoods: $4,172,427t+399,000,000$ (t=timeinmonths)

MoheganSun: $6,280,385t+297,000,000$ (t=timeinmonths)

TrendTotalCollected –ConnecticutCasinos

Foxwoods: $77,017t+8,533,312$ (t=timeinmonths)

MoheganSun: $132,435t+5,628,013$ (t=timeinmonths)

Theanalysisoftheannualdatashowsthatcasinosareindeedcannibalizingtheother componentsofthestategamingvenues.Pari -mutuelfacilitieshaveseen steady decreases,withthevenueshavingtobesubsidizedtobekeptopen.Lottery,eventhough ithasseensomegrowthintermsofoverallsales,hasseenthecontributiontothestate shrinktomerely10%oftotalgrowth.AsitbecomesclearerthatCo nnecticutis dependentoncasinos,are -examinationofbothRhodeIslandandMassachusettsisin ordertodecidewhetheracasinowouldmeantheoptimizationofrevenuesforeachstate.

RhodeIslandConclusion

Asstatedbefore,RhodeIslandreliesheavil yontherevenuesfromtheVLTsfromitstwo racinos.Collectingat51 –57%oftheEGDrevenues,90%ofthestate'sgaming revenuescomefromthissource.TheintroductionofcasinoshasreducedConnecticut's pari-mutuelfacilities'revenuesconsiderabl y.Comparethe51 –57%collectionrateto

Connecticut's1 –2%collection,onecaneasilyseethattheracinoswillseealarge declineinrevenueswiththeintroductionofcasinosinRhodeIsland.   Theintroductionof casinoswithinRhodeIslandwould   probablydependonwhetherthelegislaturevaluesthe currentcollectionofrevenueoverthepossibleCasinorevenuecollection.

MassachusettsConclusion

Massachusettsreliesonitslotteryprogram,mostlydrivenbyinstantticketsales,for gamingreven ues.Massachusettshasasimilarpolicyintermsofinstantticketsales (largerpercentageofwinnings&moreexpensiveticketsalesforticketsalegrowth)as Connecticutdoes.IfMassachusettscouldbecomparedtoConnecticut,avalidargument couldb emadethattheLotteryPrograminMassachusettswill   seeadeclineinthe importanceforgamingrevenues.Thecasinos'contributiontoConnecticutgrowsata muchlargerratethanitsLotteryProgram.ThelegislatureinMassachusetts,then,also hasto decidebetweenexistingrevenuesfromtheLottery,whichinFY2002amountedto overabilliondollars,overthepotentialbenefitsacasinomayprovide.Intheend,itis myconclusionthatMassachusettswillnotgainmuchbyintroducingcasinosinstate.

V.   Conclusion

Sincetheearly1990s,themovementauthorizingvariousformsofcasino
gamblinghaspickedupagreatdealofmomentum.Thismovementwaspurned
possiblybytheneedforgreaterrevenues.ThesuccessofConnecticutinrealizing
positivereturnsfromitsIndiancasinos,FoxwoodsandMoheganSunhasmadeother
statesintheNewEnglandregion,RhodeIslandandMassachusettsamongthem,
consideringfollowingsuit.

Thedeterminationastothe'success'ofcasinogamingintroductionshould   be
discussedinthreedifferentmanners.Thefirstwayisthedirectimpactofcasino
developmentforpublicsectorrevenues.Thisimpactquantitativelydetermineswhether
casinoswillhaveimmediatepositiveornegativeimpactonthestate'srevenueco   llection.
Thesecondmethodistostudytheimpactofcasinosonjobsandincome.   State
government could indirectlybringinextrarevenuestothestatethroughtaxationof
incomeofcasinoworkers.Ifnewjobsarecreatedthroughcasinos,thestatemig   htstand
togainmorethanjustthedirecttaxongaming.Andfinally,thesocialcostsassociated
withcasinoscannotbeignored,becausetheymayplayakeyroleindeterminingwhether
casinosofferaviableoptionfornewrevenues.

Proponentsforcas inogamblingstatethatcasinoscanofferimmediatepositive
revenuesforthestate.Theyarguethatcasinosofferaservicemuchindemandby
consumers(evidentbytheamountofgamblingthatisdoneintheUS   -$40billionin
revenuesin1995)andthat   therearenopre -existingsuppliersoftheservice.Also,since
casinosfollowthelocationaleffect,theyaresaidtocreatedemandforlaborandland.

Opponents, on the other hand, argue that the casinos do not produce any substantial revenues for a sustained period of time, and that ancillary costs associated with casino gambling, in the long-run, may produce a negative effect on state budgets. A study by the Florida's Office of Planning and Budgeting in 1994 provides estimates that annual projection of state revenues related to casinos would cover only 8–13 percent of annual minimum projected costs. [19] While this figure factors in huge sums of social costs, it illustrates a point that some governments have decided that casinos will not become a viable source for revenue.

The quantitative study performed in the previous section shows that casinos will not be a no-strings-attached pot of gold for state treasuries. Rhode Island will surely see a cannibalization on its VLTs and Massachusetts will see a drop-off in its instant games component of its lottery sales. **The claim of this paper remains that casino gambling is not the cure-all for state budget deficits.** Casinos have remained a small part of the state's fiscal revenues (excepting Nevada) and the study on the cannibalization of existing gaming opportunities show that casinos might not provide the fiscal solution to the huge budget deficits. Even if a state can predict budgetary gains for a proposed casino, there are more factors that come into play. These factors deal with intra-state concerns. Currently, Connecticut's niche as the only state in the New England region with large casinos allows for the state to earn a significant amount of revenue. However, if large casinos are established elsewhere in the region, then policymakers must also consider the leaching effect. If Massachusetts builds a closer casino, then Foxwoods and Mohegan Sun will surely see a decrease in its revenues. There is a level at which the

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[19] Florida Office of Planning and Budgeting. 1994 Casinos in Florida: An Analysis of the Economic and Social Impacts. Tallahassee.

marketforcasinogamingreac hesamaximum,calledthesaturationpoint.Afterthis pointisreached,anymoreentriesintothemarketwillresultinloweredrevenuesforthe participants. Thiswillhinderthestatetreasuryfromcollectingtheoptimumamountof moneyfromcasinoga mbling.

Buildingcasinosarealsosaidtocreatejobsandboostincomeofpeoplewholive intheregionwherethecasinosarebuilt. Casinoshavemanypeopleworkingforthem andtheirincomesbecometaxableandeventuallystaterevenues.Ifthisisthe case,then theintroductionofcasinoswillhavepositiveeffectsagain.Themultipliereffectsays thatthetotaleconomicimpactofacasinomustincludetheindirectandinducedspending thatresultsfromtheintroductionofnewmoney.Eachnewlyspen tdollaris'multiplied' asittravelsthroughtheeconomyandcanbringmoretaxesforthestate.Studies (mentionedintheliteraturesection)haveshownthatthemultipliereffectisespecially apparentinareasthathostlarger,moreelaboratecasinos .Thisideafollowstheargument thatalargercasinowithstores,restaurants,andhotelswillinducemorespending.

Thesubstitutioneffect statestheopposite.Evenifcasinosarecreating opportunitiesforspending,theycannegativelyaffectthec ommunitybecausethemoney thatisspentoncasinos ismerelyatransferofmoneythatmightbespentelsewhereinthe community."Gamblinginvolvessimplysteriletransfersofmoneyorgoodsbetween individuals,creatingnonewmoneyorgoods." [20] Ifthe increaseinjobsincasinosis matchedbylossofjobsinthecommunity,thenthesubstitutioneffectsaysthecasinohas zerogainandtherewillbenomultipliereffect.Thebenefitforaregionisifthereis transferofmoneyfromoutsidetheregion. Grinol'sstudytestifiestothisnotion.Fewof thejobsatcasinosarefilledbyindividualswhoareunemployedatthetimeofopening;

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[20]RogerDunstan. GamblinginCalifornia

andsomejobsarefilledbyindividualsfromoutsidethelocalarea. Economic
developmentdoesnotappeartobethe primaryeconomicconsiderationrelatingtothe
introductionofacasino.

Finallythisthesis toucheduponsometop icofsocialrelevance.Onthepositive
side,economistsarguethatthelegalizationandintroductionofcasinosresultsinpositive
consumersurplus. Consumersurplusisthedifferenceinthetotalvaluethatanindividual
placesonacommodityandtheprices/hepaysthemarkettoacquireit. Theconceptof
consumersurplusisespeciallyrelevantinvaluingpublicprojects,butcanworkin the
caseofcasinos.Thebenefittopeoplewhowanttogamble isamatterofsocialfreedom,
orconsumersovereignty.Themoreprevalentfocusonthesocialsidehasbeento
examinethetangiblesocialcosts. Problemandpathologicalgamblingmaybean
invisibleorsilentdiseasebutitisnotacostlessdisease.Socialcostsincludesuchitems
asfraud,theft,badloans,badchecks,lostworktime,unemploymentandwelfare
benefits,medicalcostsandcriminaljusticesystemcosts.Moreunquantifiable costs
mightbeincreasedratesofsuicide,caraccidentsorfamilyproblems.

Withallthesefactorsinplace,thereasonthatpolicymakerswouldwantto
introducecasinosisaclassiccaseofPrisoner'sDilemma.Ifnostatehadgambling,there
wouldbe nonegativeeffectsofgamblinganywhere.However,ifoneregioncaninstitute
gambling,thenitcangainatotherstate'sexpense.Thiscreatesachanceforcertain
regionstomakelargesumsofmoney,whichinducestheintroductionofotherstates.
Furthermore,themajorityofthecostsassociatedwithcasinosdonotappearintheshort -
term,makingcasinoseemlikefreemoney.However,itisbesttorememberthatin
economicsandpolitics,'thereisnosuchthingasafreelunch.'Whileitwouldbe wiseto

remember this adage, the short nature of political cycles might be the factor in succeeding

in introducing casinos into the region.

VI.   FurtherResearch

Thispaperhastriedtomeasuretheimpactofcasinointroductioninto2statesin theNew Englandregion.Whilethispaperhasconcludedthatthecasinosmaynothavea largeimpactonstatebudgets,therearemanyareasthatcouldberesearchedfurther.

Onthequantitativeside,theinter   -stateleachingeffectcouldbemorecarefully observed.SincetherearenocasinossetupinRhodeIslandorMassachusetts,itis difficulttocalculatethedecreaseinrevenuesthatConnecticutcasinoswillface.New YorkSt atehasrecentlyapprovedlegislationallowingcertaincitiesintheCatskill Mountainstooperatelargecasinos.Futurestudiescanfocusontheimpactofnearby facilitiesandthethresholdtothesaturationpointforthecasinomarket.

Definitiveresearchonboththesubstitutioneffectandmultipliereffectcanalsobe areasofpo ssibleresearch.UtilizingthedatathatwaspresentforRhodeIslandand Massachusetts,theaimofthispaperwastoestimatethedirectcosts/benefitsofacasino; howeverthesecondaryimpactofcasinosonregionaleconomycanbesubstantial.

Anothertopicoffocusistoresearchtheresultofintroductionsofcasinosinto poorregions.Manyresearchpapershavetriedtodeterminewhetheracasinocan economicallybenefitapoorregionbyintroducingnewinfrastructure(buildings,roads, etc)andat tractingmorevisitorsandincreasingrevenues.However,thisauthorhasnot beenabletofindauthoritativeresultsonthisissue.Also,therehasbeenlittleamountof researchthatfocusesontheNewEnglandregion.However,ifthereareintroduction   sof newcasinosintotheregion,therewillclearlyhavetobefurtherresearchonhowthis regionwillrespondtothenewopportunities.

This paper has not focused on the social costs, because of the difficulty in quantifying much or even all of the costs. However, future studies can focus on the actual relationship between casinos and social factors, such as crime, addiction, unemployment among a plethora of other issues. While there have been numerous studies that have tried to quantify the socio-economic issues, definitive answers have not been forthcoming. Studies on the rate of increase of pathological gamblers or gambling addiction, rate of increase on crime relating to the region that has introduced casinos, or rate of increase of unemployment or correlation between addiction and unemployment can all be ideas that may quantify some of the social issues.

Consideration was also not given to the political aspect of casinos. Researching whether policy makers are willing to support or reject casinos based on political platforms might also be an important issue when deciding the ultimate decision to introduce casino gambling. A study that incorporates this notion should, on a larger scale, also survey the general populace to see if there is any effect that popular opinion has on deciding the fate of the casinos.

Bibliography

1.   Goodman,Robert. TheLuckBusiness .NewYork:TheFreePress.1995

2.   Makridakis,Spyros. ForecastingMethodsandApplicationsThirdEdition   .New
        York:JohnWiley&Sons,I   nc.1998

3.   Munting,Roger. AnEconomicandSocialHistoryofGamblinginBritainandthe
        USA.Manchester:ManchesterUniversityPress.1996

4.   Wyman,Nancy. TheComptroller'sReport –Connecticut'sEconomicHealth .
        January,2001

5.   TheUnitedStatesGr ossAnnualWager, InternationalGamingandWagering
        Businessvol.17,no.8.August,1996

6.   Quimby,Beth."BayStategamblersdumpmillionsinN.H.,Connecticut."Eagle
        Tribune,March5,1999

7.   Dunstan,Roger."GamblinginCalifornia."CaliforniaResea   rchBureau,
        CaliforniaStateLibrary .January,1997

8.   Worsnop,Richard L."GamblingBoom,"   CQResearcher .8March,1994

9.   Goodman,Robert."LegalizedGamblingasaStrategyforEconomic
        Development." UnitedStatesGamblingStudy .March,1994

10.   FloridaOfficeofPlanningandBudgeting."CasinosinFlorida:AnAnalysisof
        theEconomicandSocialImpacts."1994

11.   Thompson,William."TheSocialCostsofGamblinginWisconsin,"   Wisconsin
        PolicyResearchInstituteReport   .July,1996

12.   TheWEFAGroup. "TheEffectsofCasinoGamingonConsumerSpending."
        1994

13.   Gold,Steven."AreCasinosaWindfallforStateBudgets,"   StateFiscalBrief ,
        no.30.1994

14.   Morin,RobertP.   IndianGamingintheUnitedStates:APermanentora
        TransitoryMethodofEconom   icDevelopment. Reno,NV:Departmentof
        PoliticalScience,UniversityofNevada.1994

15.   McGowan,RichardA."EvaluatingaState'sGamblingStrategy:The
        RelationshipbetweenLotterySalesandCasinoGambling."   Casino Development
        1June,1995

16.   Gold, Steven. "Casinos are No Panacea for Ailing State Budgets"   <u>Casino Development</u> 1 June, 1995

17.   Grinols, Earl. "The Impact of Casino Gambling on Income and Jobs."   <u>Casino Development</u> 1 June, 1995

18.   National Gambling Impact Study Commission: <u>Final Report</u> .June, 1999