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The Effects of Gaming Taxation on Capital Investment in Gaming Businesses

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THE EFFECTS OF GAMING TAXATION ON CAPITAL INVESTMENT IN GAMING BUSINESSES

by

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Abstract

Microeconomic theory generally supports the idea of an inverse relationship between taxes and capital investment. The gaming industry however does not operate on a free market equilibrium of supply and demand. Regulation and taxation of this industry can distort competitive forces and, as a result, investment decisions. Forces are described herein which either strengthen or weaken this inverse relationship, as well as how they affect the value of the limited number of casino operating licenses which states grant. Higher tax rates are generally shown to result in small-scale properties, which cater to a narrow base of consumers. In contrast, low tax rates are shown to allow operators the flexibility to grow their consumer base, and create broader economic benefits.

Part 1:Introduction

Casino saturation has become one of the paramount issues facing the gaming industry. As an article in the New Yorker recently noted:

> Atlantic City once had the densely populated Northeast all to itself, but now nearly every state in the region is home to casinos. And with both New York and Massachusetts poised to open massive new gambling resorts, the competition for the fixed number of gamblers there will only get tougher (Wolfson, 2014).

As a result, only eight casinos remain open in Atlantic City where there once were twelve, and together they earn half the gaming revenue of the Atlantic City casinos ten years ago. The city now urgently faces a need to diversify, as being a site of legal gambling is no longer a distinction of its own (Wolfson, 2014).

Any new investment in Atlantic City is now for the purpose of diversifying its array of attractions. Harrah's is constructing a new conference center, which it expects to attract groups that may otherwise host their events in other Northeastern markets (Kramer, 2015). The Atlantic City Convention Center, meanwhile is renovating its fixtures, and opening a new ballroom (Wittkowski, 2015).

Casino corporations with flagship resorts on the Las Vegas Strip, such as Wynn, MGM, and Sands, are realizing the limits of their growth in this traditional market. While they see revenues there recovering as the recession has abated, Macau has offered access to a much larger market of gamblers with increasing disposable income. While, in the U.S., these companies have aggressively bid for licenses in the high net worth metropolitan markets of Boston and Washington, D.C. These new jurisdictions are the last frontier for the long taken for-granted growth of resort style gambling (*Forbes*, 2015).

This paper considers the possibility of improved partnerships between state governments and their casinos to lower tax rates and reform those regulations, which make taxes more impactful on any potential returns. If structured properly, this would encourage the necessary capital investment to help gaming reach a broader market. The report will examine the impacts of gaming tax rates, but will also analyze them in the context of broader regulation and competitive pressures. For example, if low tax rates are helpful, then Atlantic City, with the second-lowest rate in the U.S., should be doing better in its economic performance. Reno is hurting from competition, but Las Vegas, in the same state, shares the same low tax rate, and continues to prosper.

If cannibalization is a concern, then do high tax rates discourage investment by limiting the size of markets, as well as by lowering the returns on investment? Could there be greater competition along with a growing market if there were more capital left to appeal to a wider base of customers?

Policy goals shape regulation from the outset. If increased investment is the goal, then tax rates would necessarily be pressured to be lowered, thereby encouraging investment, which in turn leads to the results of increased employment and tourism, as well as other potential public policy benefits.

If the policy goal is to capture tax revenue directly from gaming (a scenario in which policymakers view gaming as a pain-free source of tax revenue), then those taxes are likely to be above the optimal rate, and result in smaller-scale properties (Pollock, 2010). However, this second goal becomes increasingly counterproductive as competition intensifies across markets, necessitating greater spending on promotional marketing as well as on transportation infrastructure.

These dilemmas, resulting from both market and regulatory pressures, require operators to consider the following factors when deciding on capital investment decisions:

- Internal rate of return
- Competitive pressures from within the market
- Opportunities to expand demographically or geographically
- Regulatory stability
- Limitations on number of licenses

Operators will also have to consider the following questions:

- What role does the tax on gross gaming revenue (GGR) play in investment decisions?
- Does the tax on GGR determine and/or limit the type of business model that an operator is likely to develop?
- What is the effect of the casino tax rate on capital investment decisions?

In order to isolate for the effects of taxation, this paper only examines markets, which have either opened legal casinos or meaningfully changed their gaming tax rates within the past ten years. Competition between jurisdictions to capture legal gambling activity, and the economic benefits, which generally ensue is only a recent phenomenon. Therefore, the two oldest gaming jurisdictions, New Jersey and Nevada, are less relevant to this discussion in how they had developed their current laws, but rather in whether their low tax rates can be leveraged going forward to sustain their industries in the face of increased competition from newer jurisdictions. The literature review reflects the limited scope of research on this industry, with most jurisdictions having only legalized casino gambling within the past few decades, and with a few notable academics having gained credibility in this field.

Part 2: Literature Review

As gaming markets face greater competition, both the competition between markets for new investment, as well as the need to grow consumer demand, become more urgent. Governments historically have placed great demands on casino operators, since it was assumed that such potential operators would tolerate any regulation, with legal casinos being both uncommon and potentially profitable, which would grant operators nearly exclusive access to a new consumer market wherever they operated.

Governments expected management to concede to whatever demands they deemed necessary to protect the fabric of society and collect the maximum possible revenue. However, with limited supply and government-mandated market protection, this meant that casinos acceded to these demands so that these licensed operators could provide gaming to a then greatly underserved population (Christiansen, 1998).

Still, today, casinos remain likely to accede to greater tax rates if they are guaranteed an oligopoly privilege in return (Benar & Jenkins, 2008). These premium rates in effect afford casinos insulation from competition they would not otherwise have. This privilege can in fact be magnified if the approved site is located next to a densely populated metropolitan area. Cities in general can in fact demand greater taxes than their rural counterparts, since such locations offer concentrated local consumer demand, and greater economic activity to be captured (Kächelein, 2014).

Consumers will more likely take part in legal gambling closer to home with all else being equal. If there are only a few legal options within driving range, these repeat-visit market casinos may only offer the bare minimum of amenities. Therefore, these sorts of establishments will attract only the most heavily involved of gamblers (Eadington & Christiansen, 2007).

If these establishments wish to draw from a broader market of entertainment seekers, they will then have to invest in a broader range of amenities. Furthermore, they will have to invest more in marketing and promotions to attract less-involved gamblers, as well as those travelling from a greater distance. The tax rate governments choose will additionally determine just how well companies can invest in capacity. If the goal of legalizing casinos is to gain greater tax revenue, then having few casinos, which only meet the demands of the most heavily involved of gamblers will not yield meaningful results. Tax revenue at lower rates may exceed that at higher rates as casino revenue grows (Spectrum Gaming Group, 2014), when tax revenue from all sources – not just the tax on GGR – is considered.

Also, when markets open in close competition with each other, the market with the higher tax rate will likely lose out to the others, which are more accommodating of management goals. The market with the higher rate will likely attract casinos that only meet the demands of a convenience market. The market with the lower rate will be better positioned to host destination resorts, which draw from a greater geographic area and therefore draw greater economic activity as well as tax revenue. Of course, this dynamic is most relevant in the US where gaming is regulated and licensed at the state level, meaning that neighboring states determine their own rules regarding casinos.

Tax Rate and Capital Investment

Research into the relationship between taxes, investment, and consumption is hardly a new endeavor. Although tax rate decisions by governments and investment decisions by corporations, each with their own rivals, is a more current and directly relevant topic. The increasing ease with which firms can reach consumers worldwide, who make rational cost-based decisions, has created the current dynamic in which governments see the results of their policies, and realize each other's externalities, social and otherwise, more immediately (Klick & Parisi, 2005). Tax rates do determine market activity, and hence decisions to allocate capital, however much in proportion to other economic variables including consumer demand, as is explained in the following sections.

Relevance of jurisdiction size

As the following studies show, a jurisdiction's natural advantages as far as size, population, and retention of production factors, can offer it greater discretion in setting tax rates. These studies have all lead to similar conclusions about tax rates imposed by large jurisdictions exploiting consumer demand, while supply is drawn to more investment-hungry small jurisdictions (Leal et al., 2010). The relatively recent surge in globalization, along with liberalizing of trade and mobility of capital, has since the 1990s made a state's power to tax a more compelling topic of study.

In a survey of studies, Bartik (1992) found that smaller, less populated jurisdictions can capture more economic benefits, per capita, from low corporate taxes. This is assuming, however, that there is a large enough gap to account for any inbuilt advantages or difference in an area's per-capita income.

Bartik (1992) also cautions that the lowering of corporate taxes shouldn't come at the expense of spending on public infrastructure, since there is a correlation between sound infrastructure, especially that used for transportation, and new investment. Also, there has to be easy substitutability between potential investment sites, for this effect to be relevant (Bartik, 1992).

Modeling for tax competition, with supply and demand being respectively sought after as they were, Kanbur and Keen (1993) found that small and large countries in competition with each other are often left desiring the other's attributes. While the large country has a geographically captive market on which to set higher rates, it also may have residents wealthy enough to tolerate those rates, while being protected by the high transaction costs of crossing into the low-tax jurisdiction. The smaller country however, has a smaller base from which to capture tax revenue, even while it may draw consumer traffic from its larger neighbor. The small country advantage can be maintained only though a difference in rates. Rate cuts by the larger jurisdiction would leave both governments lacking sufficient funds. Equality in rates would greatly harm the small jurisdiction, as its competitive advantage would be lost (Kanbur & Keen, 1993).

Modeling for geographic variables, Kächelein (2014) found that large jurisdictions, as well as those where all the necessary inputs for investment are located, can charge higher tax rates. While labor today is mobile, market, legal, and geographic conditions, those necessary for investment when specific inputs are needed, are not easily transferable or substitutable (Kächelein, 2014). Therefore, firms subject to such rigid geographic conditions must have a greater tolerance for high tax rates.

In modeling for elasticity of a taxable activity, Klick and Parisi (2005) found that a tax authority with broad jurisdiction can more easily set rates that fund the optimal amount of public services, while allowing for desired business activity. In contrast, they found that jurisdictions competing under a federal or state government may tax above optimal rates in order to capture scarce revenue. The externalities of such behavior may then not even be realized within that jurisdiction, affecting employment and investment more broadly, potentially a moral hazard

(Klick & Parisi, 2005). Therefore, federal jurisdictions require firms to account for greater risk of rising tax rates.

Negotiating differences in tax rates

Firms generally can be expected to consider any differences in tax rates between competing jurisdictions while managing their operations, which allow for the greatest retention of profits, as long as they can maintain access to their respective markets. Likewise, consumers will traverse jurisdictions in order to pay lower sales taxes.

Leal, López-Laborda, and Rodrigo (2010) found, in a survey of literature, that theories of cross-border shopping only hold for as much as the greater transaction costs involved don't outweigh the tax savings. Furthermore, they found that small jurisdictions benefit from lower taxes, as these lead to more business activity overall, benefitting a smaller population. They also found that businesses located just across the border from a high-tax jurisdiction benefit most from the rational behavior of that jurisdiction's consumers.

Strategic reactions between rival jurisdictions have to be accounted for as the small jurisdiction only captures economic rent from low taxes as long as there remains a gap. Still, with the large number taxing authorities, this arbitrage becomes more complicated and less useful for raising tax revenues (Leal et al., 2010).

An industry as scrutinized as casino gaming values the social legitimacy it gains through compliance with rules meant to ensure the public good. This therefore limits its ability to artificially reduce its tax burden. Loretz and Moore (2013) found, modeling for a relation between tax sheltering and reputation loss, that large firms within the same jurisdiction are interdependent as far as planning for and abiding by the same tax rate.

These firms value their reputations as being law-abiding corporate citizens as long as that is the norm within their respective industries. The largest of these firms set the norm for compliance, and are more influential in relevant political debates (Loretz & Moore, 2013). The largest corporations in the gaming industry feel constant pressure to conduct corporate responsibility initiatives including community service sponsorships, as well as to publicize their sizable tax contributions in order to generate good will.

Economic Theory of Casino Operations

Casinos do in fact seem to be restrained by the same economic laws, which govern more generally (Prum & Bybee, 1999). Therefore, the historic exploitation of this industry for immediate sources of tax revenue is becoming less feasible as more jurisdictions liberalize their gaming laws, thus adding more supply to the overall market. Individual operators may stand to benefit from high barriers to entry in a market, as long as the privilege they're paying for grants them exclusive rights to a market with a sufficiently large consumer demand to offer the return they desire.

Chistiansen (1998) described an American gambling market, which was reaching maturity, and overcoming many classic social stigmas. He also described its acceptance as an economically productive industry, fulfilling a market demand for entertainment, while stimulating construction and employment. While most Americans were located within a reasonable distance of legal gambling, whether these were casinos or racetracks, market demand was yet to be fully met. Therefore, the tax revenue resulting from casinos was still being lauded as a boon to society without fear, as of yet, of markets growing into closer competition (Christiansen, 1998).

Tax rates' impact on market growth

Tax rates can either severely limit growth of a gaming market, or allow for the flourishing of a tourist economy. Low rates may generally lead to economic growth in a region. High rates may concentrate negative externalities such as problem gambling, while garnering tax revenue more regressively than otherwise.

Pollock (2010), in his report for the National Tax Association found through his own regression analysis and survey of other research, that gaming taxes are the key determinant of what type of property will get built in a jurisdiction. Pollock observed gaming tax rates to generally have an inverse relationship with the level of capital investment in a market, along with employment, tourism, and related factors (Pollock, 2010).

Philander (2012), through a fixed-effects model, further confirmed this inverse relationship with the dependent variable being employment levels. Nevertheless, broader economic cycles and market conditions can have a mediating impact. If consumer spending is low in the broader economy, then so may casino investment and therefore employment, as an indirect result of overall market demand (Philander, 2012).

Tax rates have to be predictable and stable as well as commensurate to regional demand in order to attract investment. Prum and Bybee (1999), through their survey of U.S. gaming jurisdictions, suggested that changing rates appears to be as risky as setting them too high as they factor into forecasting, and therefore decisions on new projects. Simplicity of tax formulas is also important, as fees charged for auxiliary site functions like parking can distort the amenity mix, and property scale, while increasing the cost of compliance. The scope of competition from within a market as well as from neighboring states should also limit rates (Prum & Bybee, 1999).

Thompson and Stream (2005) observed legislative developments and economic outcomes in different jurisdictions. They first posited that taxation of Native American casinos is unconstitutional on its face, however much the taxes are justified as fees or revenue sharing agreements. Still, the pressure to be in compliance with their state compacts, as well as the reward of exclusive rights within the state to operate gaming, make such concessions more compelling for tribes. Furthermore, while taxes on gaming revenue have been relied upon to cover state spending deficits, or for specific programs, they are not the primary revenue streams in any state. Even in Nevada, sales taxes are the largest revenue source (Thompson & Stream, 2005). Gaming taxes however, should not be conceived of as such a fungible source of funds, as out-of-state competition can increase, while market demand fluctuates, requiring casinos to periodically spend capital on modifying their scale and product mix in order to remain viable.

In South Dakota, where the video lottery gaming tax is 50%, storefront video poker predominates with relatively high house advantages, and a poorer clientele. Note however that the tax rate for commercial casinos in that state is nine percent (American Gaming Association, 2014). This 50% tax rate incentivizes the state to regulate video lottery terminals laxly, and to tolerate social consequences like problem gambling along with a lack of economic development.

In contrast, Las Vegas casinos benefit from the lowest gaming tax rate in the US, which incentivizes a highly competitive environment where casino resorts benefit from a tourist economy. Predominant features of this competition include nongaming amenities and architectural grandeur. This creates an agglomeration effect, which further enhances the appeal of Las Vegas as a resort destination (Thompson & Stream, 2005). Still, because of the difference between video lottery and commercial casinos, this makes for a faulty comparison, even if the observed effects of tax rates in each case appear valid.

Eadington and Christiansen (2007), through their qualitative observation of different markets, found that low tax rates facilitate the development of large-scale casino resorts. These resorts withstand increasing out-of-state competition by having a differentiated appeal. They also offer a broader array of amenities, making them wider attractions. They may lead to increased tourism, and capture more of a region's entertainment budget. In contrast, higher rates lead mainly to locals-friendly slot and video poker outlets, providing little more than additional tax revenue, while concentrating social consequences of compulsive gambling closer to home. Full-scale resorts require great capital investment to build, regular maintenance every five or ten years to maintain, and broad marketing campaigns in order to remain viable. The $8 billion construction cost of MGM's City Center resort in 2007 was only possible with Nevada's effectively less than eight percent tax rate. This sort of property only has to compete with other similarly scaled resorts offering a wide mix of amenities. The store-front model, however, relies to a large degree on the inelastic demand of gamblers, providing regressive sources of tax revenue to the state (Eadington & Christiansen, 2007). This model is increasingly dated as legal gambling in its simplest form is now available in most states.

Broader societal impact of rates

Philander and Bernhard (2013), in their survey of current research on commercial casinos' economic impacts, confirmed that gaming taxes are generally regressive, meaning that there is no difference in tax rates based on income or other factors. However, this effect can be mitigated if the tax revenue is used for such benefits as social welfare spending or public transportation. They found that the tax revenue accrues more progressively when customers are encouraged to travel to a resort casino, which would be more likely to offer a wider choice of offerings, including high-denomination slots and table games. Lottery games are sold in uniform denominations, and are more aspirational, so lower income people more often consume them, making lottery revenue more regressive as well (Philander & Bernhard, 2013).

Walker and Jackson (2010) found that casino legalization could have the effect of a net decline in government revenues, if it causes consumers to substitute spending at commercial casinos for other more tax-lucrative spending such as on lotteries or horse racing. This indirect impact on taxable consumption in a state introducing casino gambling is mostly relevant if it already offers these highly taxed products. This results from a model testing revenue from a variety of gaming products against averages state revenues and average demographic traits of all 50 states (Walker & Jackson, 2010).

Philander, Bernhard, Wimmer, Singh, & Eadington (2015) found that gaming tax rates affect employment, only to the point of increasing scale to meet market demand. They concluded that beyond an optimal point, lowering the tax affords operators greater profitability while only marginally affecting employment. They formed a linear regression, using maximum gaming tax rates, employment, and gross revenue in US jurisdictions, with the alcohol tax as a control variable, as it is most similar in its intent and application (Philander et al., 2015).

Rationale behind rates

Even as is taught in introductory college economics, Mankiw (2012) described how excessive deadweight loss, unrealized productivity, can occur when tax rates are set beyond a point at which there is any incentive to produce. Politicians therefore have to be concerned with maintaining rates at which firms will still be able to sell goods and services above their cost. Taxes already may drive up prices to a point that only few consumers will pay. Deadweight loss, unrealized productivity, occurs exponentially as rising prices also push supply downwards. Taxes are effective in raising revenue as long as they do not shrink the size of a market through deadweight loss, which prevents any benefit to society (Mankiw, 2012). The following studies offer perspective on how general theories of taxation and social impacts of the gaming industry have taken shape over the past few decades.

Calcagno, Walker, and Jackson (2010) found in their modeling of socio-economic and political variables that casino legalization is most highly correlated with long-term debt concerns, lack of funding for new initiatives, and competition from neighboring states. States that already prominently feature legal gambling as with racetracks, lotteries, or Indian casinos, are less likely to approve commercial casinos, as they likely perceive consumer demand and fiscal needs as already being met. The most likely condition for commercial casino legalization is when Indian casinos operate in a neighboring state. Residents would rather capture economic benefits in their home jurisdiction. Another favorable factor is a higher income population, which may desire a new attraction, also resulting in less fear of preying on lower income groups. Furthermore, river borders afford a perception of traditional riverboat gambling, along with that of isolating any possible externalities on the river (Calcagno et al., 2010).

Anderson (2005) found, while examining the relationship between gaming taxes and gaming supply, that gaming taxes are increasingly relied upon for funding social services or economic development. Policy makers view theses taxes as essential to funding programs, which may otherwise not be self-sustaining as part of the social safety-net, in addition to protecting against externalities like problem gambling. Therefore, it seems these taxes are increasingly essential to budget planning, being a less controversial source of taxation (Anderson, 2005).

Eadington (1999) described casino gambling, in his historic account, as an exportable commodity. It allows jurisdictions without natural economic advantages to capture the entertainment budgets of consumers in neighboring markets. Regulations designed to protect social welfare, and confiscatory tax rates can therefore be tolerated as long as the feeder markets don't eventually establish their own casinos (Eadington, 1999).

Benar and Jenkins (2008) found, modeling for efficiency of tax rates, that taxing of casinos' fixed assets nets more revenue for governments than does taxing of revenue. They also found it more efficient for small jurisdictions to set higher rates on a limited number of operators than a lower rate on an unlimited number (Benar & Jenkins, 2008).

Ozurumba and Kim (2009) observed the relationship between economic and demographic indicators, and gaming taxes along with gaming revenues. They concluded that states formulate gaming tax rates according to competitive pressures from other states, the per capita income of their own residents, and consumer demand overall in the region. Most US jurisdictions are subject to these pressures according to the degree to which legal gambling is available nearby.

If markets are isolated and contain a wealthy population with growing consumer demand, their governments will set rates, which reach the peak of the umbrella-shaped Laffer Curve, which represents the relation between tax rates and tax revenue. Passing that point means tax costs will be passed on to consumers and employees, compromising the appeal of a property, and generating less revenue overall (Ozurumba &Kim, 2009). This will ultimately limit the possible return on any further investment.

Cases of Specific Jurisdictions

Freeman (2014), as president of the American Gaming Association, discussed in an op-ed how the greater competition casinos face today, even from those in other jurisdictions, requires reform of rules formed when supply was more limited. He argues that governments should view casinos as only one component of an economy's potential growth. The best example in his view is that of Nevada, which is now also attracting technology and energy companies (Freeman, 2014).

The following studies illustrate how the growing availability of gaming products is affecting the competitive environment in different markets, and how appropriately current tax rates serve fiscal and economic goals in this context. While casinos in China and in the United States vary greatly in the types of gaming consumers they serve, and the regulations they abide by, the same principles of market competition apply in both cases (*Economist* 2013). Macau's gaming tax rate of 38% also falls within the range of rates for most US states.

The United States

Ahlgren (2012), running a linear regression, found that the stepped increase in Illinois' gaming tax led to distortions, which benefitted neighboring states. Illinois casinos absorbed the new tax costs by decreasing marketing expenditures. This cost cutting was further incentivized by increased rates as casinos reached new levels of revenue, leading them rationally to not reinvest in marketing. Neighboring states likely captured spurned customers who thereafter did not receive the same promotions as before the cost cutting. Value therefore has to be conveyed in a uniform manner. Customers could sense cost cutting through the drop-off in promotion, and then became worried of having to incur greater costs themselves, such as through parking fees. Illinois proved particularly vulnerable to its residents driving to more promotion-friendly casinos across state lines, as the riverboat model is in fact relegated to rivers serving as state borders (Ahlgren, 2012).

In Spectrum Gaming Group's (2014) report presented to the Indiana Legislature, it found through observed trends and similar case studies that the varied taxes and fees applied flatly to various casino functions distort development planning, and hinder growth in amenities. For example, the admission fees, which casinos must pay, may discourage them from building attractions along the perimeter of the casino, which would encourage people to leave and re-enter. More importantly, the taxing of free play, which allows consumers to make wagers without having to pay for them, would discourage a primary marketing tool Indiana casinos use to the retain the loyalty of regional customers, where most surrounding states would not have the same obstacle. New York's casinos, for example, were able to draw from New Jersey and Pennsylvania's markets, once free play was untaxed (Spectrum Gaming Group, 2014).

Walker and Nesbit (2014) found, through observing property growth and gaming mix of casinos, during the overall growth of the Missouri market that increased competition lead to a larger consumer market. Nevertheless, Missouri casinos are not concentrated enough to cause an agglomeration effect, which would make a group of them an attraction in itself. Also, the growing proportion of slot machines, with their high substitution effect, is reflective of the more competitive market. Newer and less discerning players are more likely drawn to them as they enter the gaming market. (Walker & Nesbit, 2014).

Garrett and Marsh (2002) found, through models of spatial dependence, in a survey of cross-border lottery sales, that while the magnitude of jackpots overall may determine the popularity of any particular draw, retail shopping patterns more broadly determine where consumers will buy their lottery tickets. In the case of Kansas, the state benefitted from Oklahoma residents without a state lottery of their own. However, Kansas's residents have been purchasing tickets over state lines in Nebraska and Missouri where Kansas's residents go to work or shop in more densely populated areas. This is despite the general similarity in products between those states. (Garrett & Marsh, 2002)

China

The *Economist* (2013) reported that Macau's market was beginning to face similar legal and competitive pressures as in the US, where most operators are based and must account for their conduct in all markets. With concerns of money laundering and junkets tied to organized crime, casinos now must attract more casual gamblers as well as feature more non-gaming amenities. This urgency grows as Macau grows into greater competition with Singapore, while other Asian countries also consider legalizing their own casinos (*Economist* 2013).

Siu (2006) found in his historic account that Macau's protected status as the only legal site for casino gambling in China meant that it could continue to attract capital investment, as it could expect visitation from the rest of China (Siu, 2006).

Gu and Tam (2011) observed gaming activity and visitation patterns along with overall GDP growth in Macau. They found in their analysis of Macau's growth that it has depended largely on its exclusive access to the mainland Chinese market. Additionally, the limited competition within that region has allowed it to benefit from the inelastic demand of Chinese consumers. Furthermore, investment in full-scale resorts attracted foreign tourists as well, while many social externalities are born outside of Macau. Gu and Tam also suggested Macau's tax rate should remain the same in order to allow the government to invest further in infrastructure. The geographic site, itself needs this spending on infrastructure, especially if operators decide to build a greater array of attractions (Gu & Tam, 2011).

Part 3: Conclusion

There are many variables which factor into casino capital investment decisions. Gaming tax rates however seems to be the one factor which most influences the scale of any casino property. Mitigating factors can include neighboring competition, as well as oligopoly privilege. The fewer the casino operation licenses are granted, the more valuable they become. Macau benefits most from this dynamic with its exclusive access to Mainland China, and it's few regional competitors. Meanwhile, Delaware (DE), Maryland (MD), and Pennsylvania (PA), examined later in this section, border each other while offering similar products.

High tax rates can affect investment decisions, while serving as barriers to competition. Therefore, they can result in lucrative slot parlors, which offer few social benefits, but are effective in generating tax revenue. This is particularly true of racecourse casinos, which request government protection along with a liberalized product offering, as horseracing, alone, loses market appeal. Slot machines offer them incremental revenue.

Low rates offer a significant first mover advantage. They allow for construction of resorts able to withstand competition from basic gambling products in neighboring markets. Furthermore, broader market activity can affect consumer demand, determining the overall regional entertainment budget to be captured.

Large corporations also have to account for their operations in several markets, deciding where is best to allocate capital. Market factors affect how well tax rates can be tolerated, both by affecting the size of possible returns as well as by affecting the scale of competition within a market. A more competitive neighboring jurisdiction may negate any natural advantages of a market. Gaming markets in MD, PA, and DE, opened contemporaneously while only marketing to regional customers. Scale could only be achieved through any benefits afforded by location and protection from competition.

Such locations include major cities and resort areas. In the US, the last remaining jurisdictions where governments can use such an advantage as leverage are metropolitan areas where few licenses are granted, and other licenses are dispersed throughout the state.

Proposed projects for Center City Philadelphia and for across the Potomac River from Washington DC, in the graph, serve this point. If a more competitive market allows consumers to be more liberally marketed to, while freeing up more capital for building a grander scale property, then this market will receive more investment as long as there remains a reasonable proximity to a consumer market. Agglomeration, however, results from an accommodating public policy, so this advantage would erode if governments were to compromise existing capital investment, though more regulation and taxes.

Tax rates can be the single most important determining factor, but other variables can affect market conditions more broadly, affecting the viability of the market, rather than just what capital is left over for reinvestment, the possibility of returns, or the scope of competition.

The graph only accounts for taxes as an influencing factor in the markets taken as examples, but also considers the states' populations and median household incomes to be mediating factors. These are, respectively, the most basic indicators of market size and consumer demand.

This graph only accounts for the most basic variables that correlate with development of resort style properties since those are known to have the widest economic impacts, and are best able to withstand competition from convenience gaming markets (Eadington & Christiansen, 2007). These resorts draw from a wider market of entertainment and leisure seekers. The most typical of resort amenities are hotel rooms and fine dining restaurants.

Maryland, Pennsylvania, and Delaware are the three states compared, because of their mutual borders, and their opening of gaming markets within a few years of each other. The Northeast, while relatively prosperous and populated, is a competitive region for gaming. Atlantic City, a summer resort, is the oldest regional market, and had traditionally drawn from these states year-round. Maryland allowed for all types of games in 2010. Delaware only allowed for slot machines in 1994, as did Pennsylvania in 2006. Both of these states also legalized table games in 2010.

The numbers of hotel rooms and fine dining outlets were collected from property websites and calls to front desk agents. The gaming tax rates are publicly available through state regulatory agencies. The states' demographic data are 2014 estimates from the US census bureau.

Table 1

Tax Rates and Amenities in Selected States

Pennsylvania	**Hotel Rooms**	**Fine Dining**	**Effective Gaming Tax Rate**
Harrah's Philadelphia	0	1	Slots:55% Tables:14%
Nemacolin Woodlands Resort	343	3	**Population**
The Meadows	0	1	12,787,209
Mohegan Sun	476	2	**Median Household Income**
Mt. Airy	187	1	$53,046
Parx	0	1	
Hollywood	0	1	
Presque Isle Downs	0	1	
Rivers Casino	0	1	
Sands Bethlehem	302	3	
Sugar House	0	1	
Valley Forge	486	2	
Total	*1794*	*18*	
PA (Planned)			
Philadelphia Live	220	6 total restaurants	
Maryland	**Hotel Rooms**	**Fine Dining**	**Effective Gaming Tax Rate**
Rocky Gap Casino Resort	198	1	Slots:67% Tables:20%
Horseshoe Baltimore	0	1	**Population**
Hollywood Casino	0	0	5,976,406
Maryland Live	0	1	**Median Household Income**
Ocean Downs	0	0	$73,537
Total	*198*	*3*	
MD (Planned)			
MGM National Harbor	308	12 total restaurants	
Delaware	**Hotel Rooms**	**Fine Dining**	**Effective Gaming Tax Rate**
Delaware Park	0	1	Slots:56% Tables:33.9%
Dover Downs	500	2	**Population**
Harrington Raceway	0	1	935,613
Total	*500*	*4*	**Median Household Income**
			$59,877

Note: Data drawn from commonly available public sources

References

Ahlgren, M. B. (2012). Impact of the 2003 Illinois gaming tax rate increase on marketing spending and cross-state substitution (Doctoral dissertation). Retrieved from UNLV Theses/Dissertations/Professional Papers/Capstones

American Gaming Association. (2014). *South Dakota Taxation*. (n.d.). Get to Know Gaming, Washington, D.C. Retrieved from http://www.gettoknowgaming.org/by-the-book#&state=US-SD

Anderson, J. E. (2005). Casino taxation in the United States. *National Tax Journal*, 58(2), 303-324.

Bartik, T. J. (1992). The effects of state and local taxes on economic development: A review of recent research. *Economic Development Quarterly*, 6(1), 102-111. doi:10.1177/089124249200600110

Benar, H., & Jenkins, G. P. (2008). The economics of casino taxation. *Applied Economics*, 40(1/3), 63-73. doi:10.1080/00036840600749656

Calcagno, P. T., Walker, D. M., & Jackson, J. D. (2010). Determinants of the probability and timing of commercial casino legalization in the United States. *Public Choice*, 142(1/2), 69-90. doi:10.1007/s11127-009-9475-2

Christiansen, E. M. (1998). Gambling and the American economy. *Annals of the American Academy of Political and Social Science*, 556(1), 36-52. doi:10.1177/0002716298556001004

Eadington, W. R. (1999). The economics of casino gambling. *The Journal of Economic Perspectives*, 13(3), 173-192. doi:10.1257/jep.13.3.173

Eadington, W. R., & Christiansen, E. M. (2007). Tourist destination resorts, market structures, and tax environments for casino industries: An examination of the global experience of casino resort development. National Tax Association - Tax Institute of America. *Proceedings of the Annual Conference on Taxation*, 225.

Freeman, G. (2014, September 26). Basic economics apply to casinos. *Usa Today*, pp. A.10.

Garrett, T. A., & Marsh, T. L. (2002). The revenue impacts of cross-border lottery shopping in the presence of spatial autocorrelation. *Regional Science & Urban Economics*, 32(4), 501-519. doi:10.1016/S0166-0462(01)00089-8

Gu, X., & Tam, P. S. (2011). Casino taxation in Macao: An economic perspective. *Journal of Gambling Studies*, 27(4), 587-605. doi:10.1007/s10899-010-9235-8

Kächelein, H. (2014). Asymmetric capital tax competition and choice of tax rate. *International Tax and Public Finance*, 21(1), 50-65.

Kanbur, S. M. R. (1993). Jeux sans frontières: Tax competition and tax coordination when countries differ in size. *The American Economic Review*, 83(4), 877-892.

Klick, J., & Parisi, F. (2005). Intra-jurisdictional tax competition. *Constitutional Political Economy*, 16(4), 387-395. doi:10.1007/s10602-005-4319-7

Kramer, R. (2015, March 26). Caesars shows off new conference center at Harrah's. *The Press of Atlantic City*. Retrieved from http://www.pressofatlanticcity.com/business/caesars-shows-off-new-conference-center-at-harrah-s/article_073398b6-d35d-11e4-a636-238f47a4ec15.html

Leal, A., López-Laborda, J., & Rodrigo, F. (2010). Cross-border shopping: A survey. *International Advances in Economic Research*, 16(2), 135-148. doi:10.1007/s11294-010-9258-z

Loretz, S., & Moore, P. J. (2013). Corporate tax competition between firms. *International Tax* *and Public Finance*, 20(5), 725-752. doi:10.1007/s10797-012-9248-6

Mankiw, G. *Principles of microeconomics, 6th ed* (2012) Portland: Ringgold Inc.

Ozurumba, C., & Kim, Y. (2009). Determining the revenue-maximization tax rate for states with legalized corporate casino gambling. *Journal of Public Budgeting, Accounting & Financial Management*, 21(2), 18.

Philander, K. S. (2012). The impact of casino tax policy on short-run gaming development (Doctoral dissertation). Retrieved from UNLV Theses/Dissertations/Professional Papers/Capstones

Philander, K. S., Bernhard, B. J. (2013, January). Informing the Public Debate: Economic Impacts of Casinos. Retrieved from http://www.unlv.edu/sites/default/files/24/InformingThePublicDebate-EconomicImpacts.pdf

Philander, K. S., Bernhard, B. J., Wimmer, B. S., Singh, A. K., & Eadington, W. R. (2015). U.S. casino revenue taxes and short-run labor outcomes. *Journal of Policy Modeling*, 37(1), 35. doi:10.1016/j.jpolmod.2015.01.008

Pollock, M. (2010). Casino Tax Policy: Identifying the issues that will determine the optimal rate. *National Tax Association 103rd Annual Conference on Taxation*. Retrieved from http://spectrumgaming.com/dl/SpectrumNationalTaxAssociation.pdf

Prum, D. A., & Bybee, S (1999). Commercial casino gaming in the United States: A jurisdictional analysis of gaming taxes, licenses, and fees. *UNLV Gaming Research and Review* Journal. 4(1), 17-41.

Siu, R. C. S. (2006). Evolution of Macao's casino industry from monopoly to oligopoly: Social and economic reconsideration. *Journal of Economic Issues*, 40(4), 967-990.

Spectrum Gaming Group. (2014). *Responding to competition, new challenges: regulatory, tax reform in Indiana.* Paper presented to the Casino Association of Indiana, Indianapolis, IN. Retrieved from http://spectrumgaming.com/dl/b78788_dd9f02a2de9e410499d5eec30d8bf46a.pdf

The rise of the low-rollers; casinos in Asia. (2013, Sep 07). *The Economist*, 408(63) Retrieved from http://www.economist.com/news/business/21584995-although-it-has-growing-number-rivals-macau-worlds-casino-capital-set-new

Thompson, W., & Stream, C. (2005). Casino taxation and revenue sharing: A budget game, or a game for economic development. *Thomas M. Cooley Law Review*, 22(3), 515.

Trends In The Casino Industry - A Shift From The Las Vegas Strip To East Asia. (2015, Jan 07). *Forbes.* Retrieved from http://www.forbes.com/sites/greatspeculations/2015/01/07/trends-in-the-casino-industry-a-shift-from-the-las-vegas-strip-to-east-asia/2/

Walker, D. M., & Jackson, J. D. (2011). The effect of legalized gambling on state government revenue. *Contemporary Economic Policy*, 29(1), 101-114. doi:10.1111/j.1465-7287.2010.00198.x

Walker, D. M., & Nesbit, T. M. (2014). Casino revenue sensitivity to competing casinos: A spatial analysis of Missouri. *Growth and Change*, 45(1), 21-40. doi:10.1111/grow.12035

Wittkowski, D. (2015, April 13). New ballroom tops list of A.C. convention center upgrades. *The Press of Atlantic City*. Retrieved from http://www.pressofatlanticcity.com/business/caesars-shows-off-new-conference-center-at-harrah-s/article_073398b6-d35d-11e4-a636-238f47a4ec15.html

Wolfson, J. (2014, November 18). America's Casino-Saturation Problem. *The New Yorker*. Retrieved from http://www.newyorker.com/business/currency/americas-casino-saturation-problem