Betting the Minimum

Gaming in the U.S. and State Revenues

Gaming is a very discretionary form of spending. In the wake of the Great Recession and lackluster recovery, gaming expenditures remain subdued. Competition is increasing with new entrants in previously untapped markets driving overall industry growth. Much of these gains come at the expense of already existing establishments and locations. This is particularly pronounced in the Northeast. However, demand for gaming is considerably lower even in mature gaming markets with little new competition. These trends have important implications for state and local governments that reply upon tax revenues from such operations to fund public services. Barring a stronger economy or change in consumer preferences the outlook for the industry is far from robust.

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Executive Summary

Atlantic City, New Jersey has been in the headlines for their troubled casinos, with 4 closures and a bankruptcy over the past year. The gaming industry's troubles are not isolated to Atlantic City alone. Across the country, gaming firms are under pressure from increased competition and weak sales growth following the Great Recession.

What sales growth firms have seen has largely come at the expense of other gaming venues. New casinos or games in previously untapped cities and states are driving overall growth, masking the underlying industry trends. This is particularly pronounced in the Northeast. Mature gaming destinations, of which Atlantic City is an extreme example, continue to suffer declines or exhibit no growth. Regional sales have shifted to newer venues in Maryland, Pennsylvania and New York. Even in locations with minimal competition, sales have increased more along the lines of population growth than economic measures like jobs or income.

These trends are not only issues for the casinos and businesses that operate gaming facilities, but also for the state and local governments that reply upon tax revenues from such operations. Unlike gaming revenues, most government tax instruments, including personal income and sales taxes, have rebounded along with the economy. Without sales growth, programs and agencies tied to gaming revenues have faced continued budgetary pressures.

The outlook for the gaming industry and associated tax collections in established markets is not exactly robust, barring a major change to consumer behavior or a significant improvement in economic conditions. As in the recent past, new gaming establishments are likely to fare well in the near term. However, as the novelty wears off and competition continues to increase, sales will slow.

Gaming Trends

Spending on gaming across the U.S. declined during the Great Recession, but has stabilized as a share of income in recent years.

These overall increases in sales are largely due to more establishments and increased market saturation. This is particularly pronounced in the Northeast where mature gaming destinations are suffering at the hands of new entrants in neighboring states.

However, underlying demand has fallen too, leading to little or no growth in established markets with little competition.

Public sector budgets have increasingly relied upon gaming revenues. Slow to no growth straining budgets even as economy improves.

Three broad factors influence the outlook for spending on gaming: real income growth, population growth and consumer tastes. Even if tastes remain unchanged, and younger generations gamble to the same extent as did the Baby Boomers before them, demographics will weigh on sales going forward. Most Baby Boomers are currently in their peak gaming years, and will spend less going forward. This decline in sales will be offset to some degree, but not entirely, by additional spending on the part of the Millennial population cohort. To the extent that Millennials choose to pursue other entertainment or recreational activities as they enter their peak earning years, demand for gaming will erode further.

Many of the challenges facing the industry will occur over the extended time horizon. Near-term trends are more positive. Demographics remain in the industry's favor for at least the next few years. Also, a stronger economy bodes well for consumer spending more broadly, including discretionary items.

The good news for the industry is that entertainment spending, and gaming expenditures, have stabilized as a share of household budgets, albeit at lower levels than in the past. While fundamental demand for gaming appears to be more in line with population gains than broader economic indicators, such an outlook brings with it sizable upside risks. A pickup in near-term sales growth is not out of the question, with the driver likely to be a stronger economy with more broad-based income gains or a shift in consumer preferences in gaming's favor.

About the Report

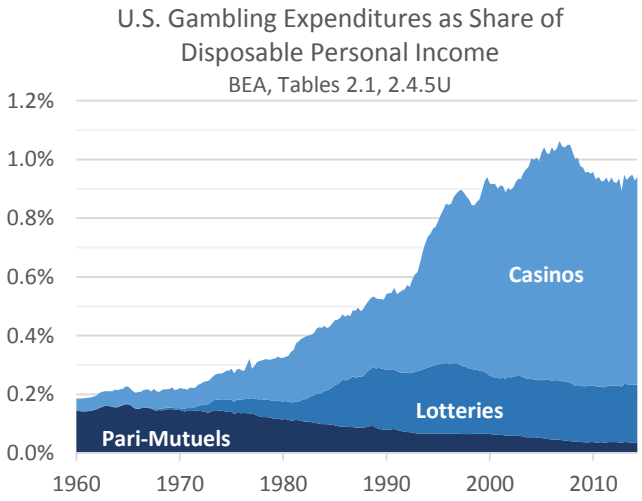
The Oregon Office of Economic Analysis is responsible for the Oregon Lottery forecasts. Somewhat unique among states, Oregon offers line games on its video lottery terminals, effectively making the state's VLTs the equivalent of slot machines. The state has approximately 12,000 VLTs spread throughout the state in 2,000 – 3,000 bars and restaurants. In the wake of the Great Recession, Oregon video lottery sales declined more than 20 percent and have only grown slowly in recent years. Our office's research efforts have expanded beyond Oregon to examine gaming trends and tax revenues across the country to better understand both the industry and to inform the outlook.

This report focuses primarily on slot machine, or video lottery terminal, revenues across select U.S. regions and states. All data used in the report is publically available. These figures represent an undercount of total gaming sales, some of which occur in casinos that are not subject to disclosure, such as some tribal casinos. Table games are excluded to provide as close of a comparison as possible. In many locations, table games have exhibited fewer losses and/or stronger gains than slot machines, possibly indicating shifting consumer patterns. Additionally, not all states or jurisdictions authorize table games.

The Gaming Dollar

Following the Great Recession, consumer budgets were in need of repair. Much improvement has been seen since. Household debt has declined and savings rates, while still low, have increased from the housing bubble era. Households have remained cautious with their disposable income, curbing some of their discretionary spending.

Broadly, U.S. consumer spending on entertainment[1] has stabilized across the country in recent years, remaining flat as a share of personal income. Spending growth can be seen in activities like sporting event attendance, increased tourism and eating out. Tracking real-time entertainment and recreational spending can be challenging, however. Employment at leisure and hosptiality firms across the country are at all-time highs. Even as these job counts and other measures indicate consumers are spending more money on entertainment, the level of expenditures remains far below pre-recession peaks.



Gambling is a very discretionary form of spending, with swings even more pronounced than for entertainment as a whole. While more volatile, trends in gaming expenditures largely match those of broader entertainment spending. After sharp declines, spending on gaming has stabilized as a share of income in recent years. Following the proliferation of gaming establishments, consumer spending on gambling expanded greatly during the 1990s and throughout the housing boom. Over this time, household spending patterns changed. Much of this adjustment has come in the form of more casino spending as a share of income. Casino spending has effectively retained 40 percent of its housing boom gains. Pari-mutuel betting has seen steady declines in recent decades, while lottery spending as a share of income has remained effectively unchanged for the past 15 years.

Gaming Trends across Select U.S. States

The stabilization of gaming expenditures as a share of disposable income in recent years masks considerable weakness in sales among established gaming venues. Overall spending has risen as the number of gaming outlets has expanded, but this has been offset to a large degree by less spending on

[1] Entertainment consists of feeds and admissions for sporting events, movies, concerts; health club memberships, social organizations, recreational lessons, movie rentals and recreation expenses on trips. Also included are TV, radio and sound equipment, pets, toys, hobbies and other entertainment equipment such as exercise equipment, bicycles, boats and the like.

traditional gaming products and at existing venues. Increased competition in the industry, particularly in the Northeast, has so far resulted in higher sales, matching the gains in personal income. However, in established gaming markets with little new competition, revenues have shown little to no gains. Even in some of the relatively new gaming establishments, after the novelty wears off and more competitors enter the market, sales are declining.

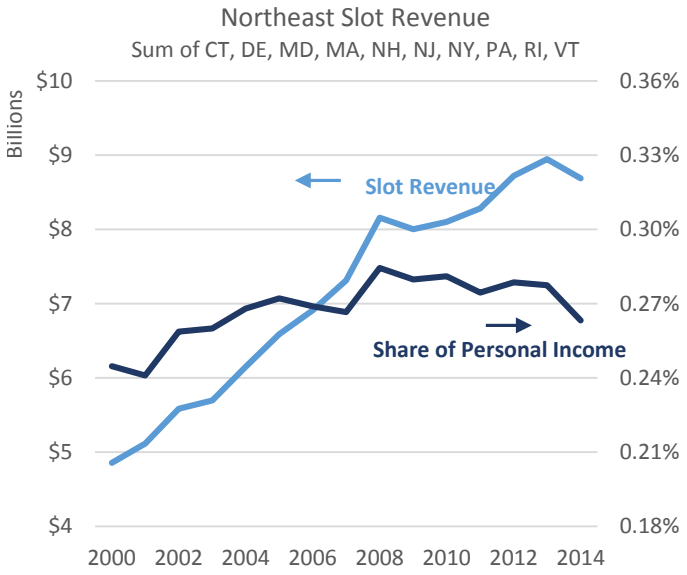
Increased Competition

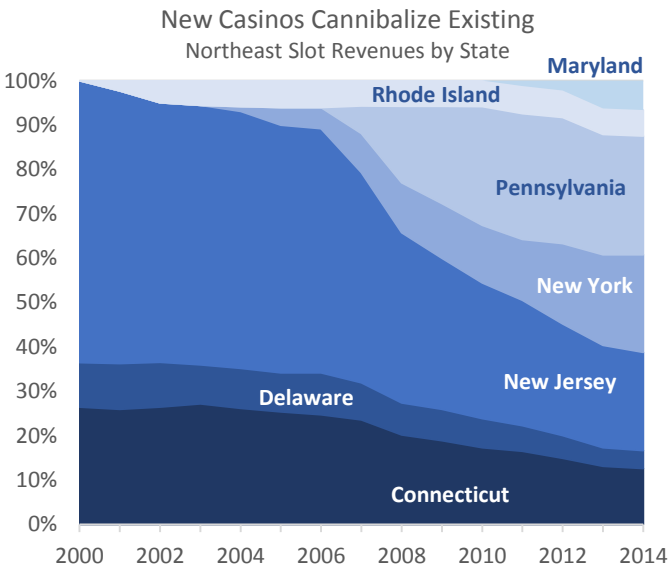
Industry revenues can increase through adding more customers or by increasing spending among existing customers. New establishments in previously untapped or underdeveloped markets may drive sales in aggregate, however, some cannibalization does occur to existing facilities.

Northeast

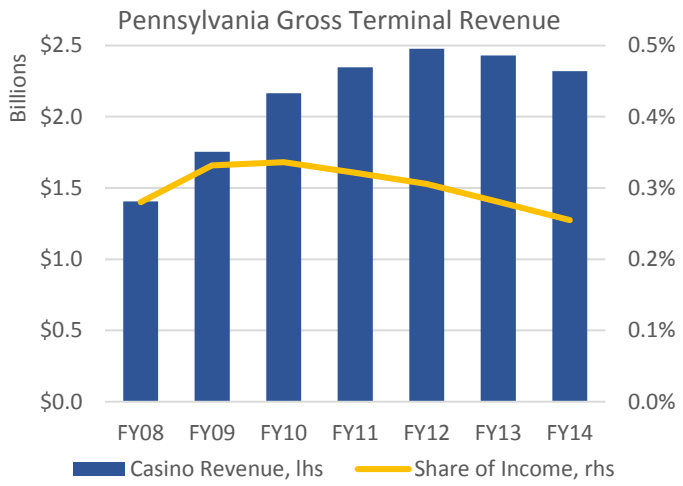
Slot machine revenues across the various gaming outlets in the Northeast have effectively matched the gains in personal income in the past decade. At face value, these are encouraging numbers for the industry, as a steady share of household budgets is being spent on gaming. However, much of these gains are likely due to the increased number of gaming establishments in the region. In particular the increases in New York, Pennsylvania and more recently in Maryland, have provided a boost to revenues. Much of these gains have come at the expense of mature gaming destinations like Atlantic City, the Connecticut casinos and Delaware race tracks. Revenues have declined in these locations for each of the past 7 or 8 years with no apparent end in sight. Although revenues will not decline forever, where exactly the gaming dollar will eventually land across jurisdictions in the Northeast is still unknown.

Massachusetts is set to enter the gaming industry with three casinos in the state. A state law, passed in 2011, allows for one casino in each of three sections of the state and the gaming commission is currently awarding licenses. Massachusetts accounts for approximately 12 percent of the Northeast region's pesonal income and population. New entrants into such a large market, particularly in a state with no





State	Peak Year	Peak Slot Revenues (Net)	2014 Sales	% Change
Connecticut	2007	$1.722 b	$1.096 b	-36%
Delaware	2006	$0.652 b	$0.354 b	-46%
New Jersey	2006	$3.804 b	$1.921 b	-50%



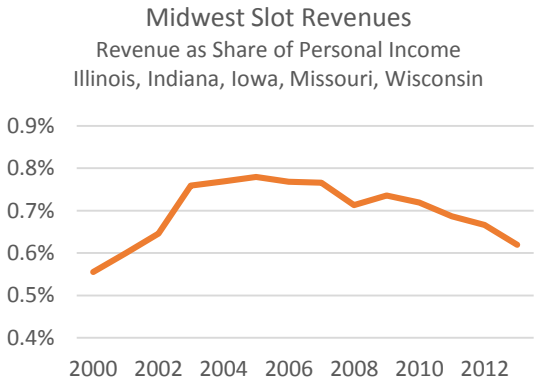
existing competition, will impact regional sales substantially. Currently, many competing gaming venues are only a short drive from Massachusetts. Rhode Island commissioned a study[2] of the impact that the new Massachussets casinos will have on Rhode Island's gaming revenues. The report estimated that in FY 2017, gaming revenues would be 30 to 42 percent lower than the baseline under different scenarios, based on the geographical location of the casinos in Massachusetts. Rhode Island will likely be the hardest hit with this particular increase in competition, however other gaming outlets in the region will feel the impact as well.

Even among the relatively new gaming outlets, after the initial novelty wears off and the full build out of casinos is complete, sales begin to decline. In Pennsylvania, which accounts for over a quarter of the Northeast gaming revenues and only began allowing casinos in fiscal year 2007, sales have fallen over 6 percent in the past two years. These declines are greatest among the initial casinos, which have lost marketshare to the newer casinos and likely have seen less player demand as well.

Midwest

States in America's heartland are facing similar circumstances, albeit to a lesser degree than in the Northeast. Sales in Indiana, Missouri and Wisconsin are largely flat, while declines have been seen in Illinois gaming establishments. These trends – slow to no growth – result in slot machine revenues eroding as a share of regional personal income.

Increased competition has been one factor within these states, however, relatively new casinos and racinos in Ohio have had the biggest regional influence. Voters approved casinos in 2009 and operations began in 2012. In fiscal year 2014, net slot revenues from Ohio casinos totaled approximately $1 billion. This amounts to 0.2 percent of the state's personal income, and based on gaming trends across the country, both of these figures are

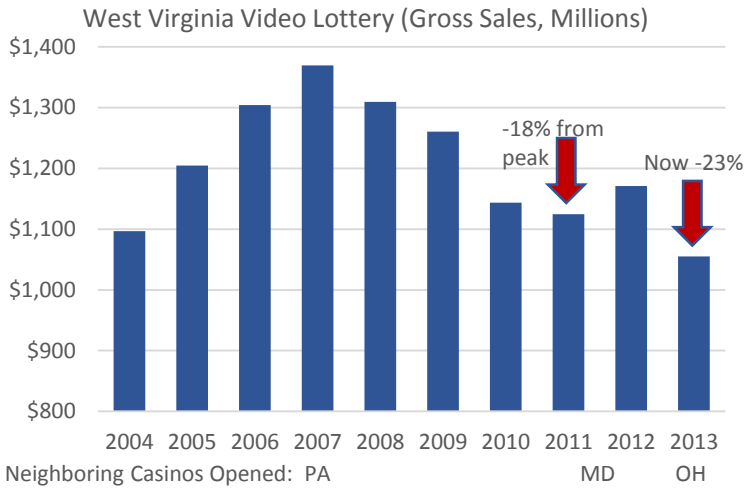


[2] http://www.dor.ri.gov/Reports/Special%20Reports/RI%20Gaming%20Study%202012.pdf

likely to increase further in the coming years. Some of these gains reflect new customers, however, they also represent cannibalization from other gaming locations in neighboring states.

West Virginia Squeezed

One established gaming state that is feeling the impact of increased regional completion from nearly all sides is West Virginia. The state has both an extensive network of video lottery terminals throughout the state and 5 casinos that are strategically placed near neighboring states and population bases. With Pennsylvania (2007), Ohio (2011) and Maryland (2013) authorizing casinos, West Virginia revenues are in decline. The state saw an 18% decline in video lottery sales during the immediate aftermath of the Great Recession . More recently, since casinos opened in Maryland and Ohio, sales have fallen further and are now 23 percent below pre-recession peak levels.

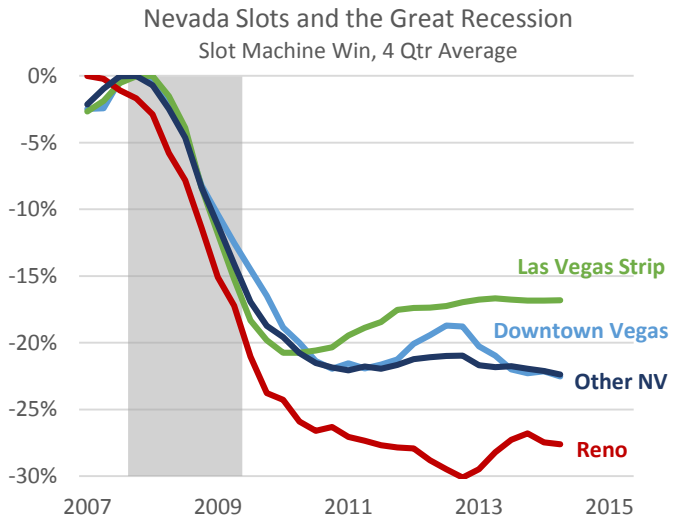


Falling Demand

Even in regions and gaming locations with little or no new competition, revenues have experienced little growth since suffering considerable declines during the recession. These trends likely follow the fundamental demand for gaming across the country, which can be masked by new outlets and games over a short time period. Slow job growth and relatively stagnant incomes for much of the population have resulted in slow to zero gains in these established markets. Increases in sales, where they do occur, are much closer to gains in population than to many macroeconomic variables like jobs or personal income.

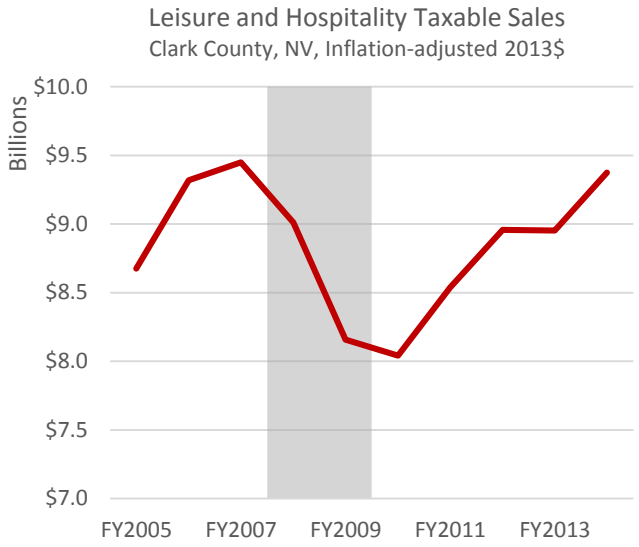
Vegas. Maybe?

As a top destination for both gaming and vacations more broadly, Las Vegas and Nevada overall rely much more on out-of-state tourists to drive sales than does the typical state. During the Great Recession, losses in slot machine revenues totaled 20-30 percent across the state, depending upon the location. Revenue from table games declined less and is actually back to pre-recession levels, making the overall gaming picture in Nevada and Las Vegas not as dire. However, slot



machine revenues remain considerably lower than before the Great Recession and exhibit very little growth, if any.

As the economy has rebounded in recent years, so too has the number of tourists in Nevada and Las Vegas. In fact, the number of visitors to Las Vegas is back to pre-recession levels and 2014 is on pace to set a new record[3]. Real sales tax collections for leisure and hospitality in Clark County, Nevada – home of Las Vegas – are back to peak levels. Similarly, leisure and hospitality employment in Clark County is effectively back to pre-recession levels as well. These broader measures of tourism indicate that consumers are back, however their spending patterns and/or preferences have changed. One positive aspect of these changes for the operators of gaming establishments, is the diversification of their revenue away from gaming alone. The proliferation of concerts, dining, shopping stores, shows and other tourist attractions in Nevada has been beneficial overall for the area. Tourists are back and they are spending again, however less on gaming and more on other, local activities.



Oregon

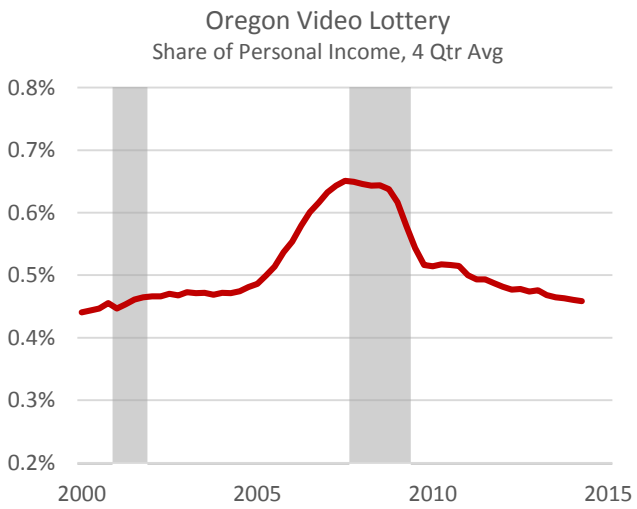
Another established gaming market with relatively little direct competition is Oregon. The state is home to nine tribal casinos in mostly rural or semi-rural communities and an extensive network of state-run video lottery terminals. The Oregon Lottery's VLTs are spread throughout the state in 2,000-3,000 bars and restaurants and number approximately 12,000 in total. While the tribal casinos and state lottery do compete overall, these relationships have been relatively long standing. No major changes in the gaming market have occurred since 2005 when the state added line games (similar to slot machines) to their VLTs.

[3] http://www.lvcva.com/stats-and-facts/visitor-statistics/

Broader regional competition is relatively tame at present, but expansion plans have been proposed in neighboring states and among tribal and potential private casinos in Oregon.

Nevertheless, Oregon's video lottery sales experienced substantial declines in the wake of the Great Recession which coincided with the enactment of a statewide smoking ban in bars and restaurants. The drop in sales came following a period of rampant growth during the height of the housing boom, after line games were added to the video lottery system. On net, video lottery sales as a share of personal income in Oregon has fallen back down to the levels last seen prior to when line games were introduced.

Forecasts for the Oregon Lottery in recent years have called for a modest acceleration in sales, as economic conditions improved. Economic acceleration in the state has occurred, with job and income growth nearly reaching pre-recession growth rates. However, video lottery sales have not shown any significant pick-up in growth rates. In recent years, video lottery growth has been steady, averaging 1.2 percent per year. Before line games in the early 2000's, growth averaged approximately 5 percent.



Other Locales

These broader revenue trends are apparent in most other locations across the U.S. for which data on gaming, and slot machine revenue in particular, are available. Gaming revenues along the Gulf Coast in Louisiana and Mississippi have slowly eroded as a share of income since 2002. Some regional competition was added when Florida began allowing racinos in FY 2007, however the relative declines began earlier. Colorado's mining-town casinos have similarly eroded in terms of revenue as a share of income over the same period.

Tribal gaming revenues in Arizona followed the same boom and bust pattern as did the local economy. To a lesser degree, New Mexico has followed suit. Even states that have performed relatively well economically over the Great Recession have seen outright declines and slow growth. Revenue from video gambling machines in Montana is still 11 percent below peak, even as statewide employment is at an all-time high. Slot machine revenue in South Dakota is currently as large as ever, however has exhibited effectively no growth since 2008.

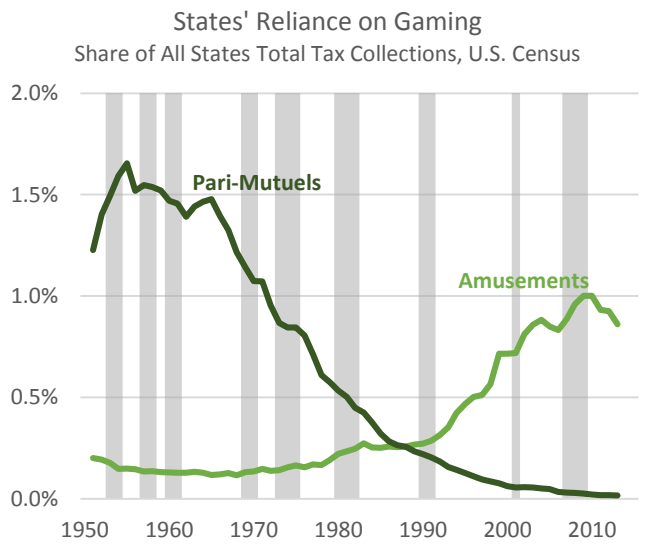
State Revenues

Just as consumers increased their share of income spent on gaming during the 1990s and up through the housing boom, so too has the public sector relied upon tax collections from gaming activities. As the

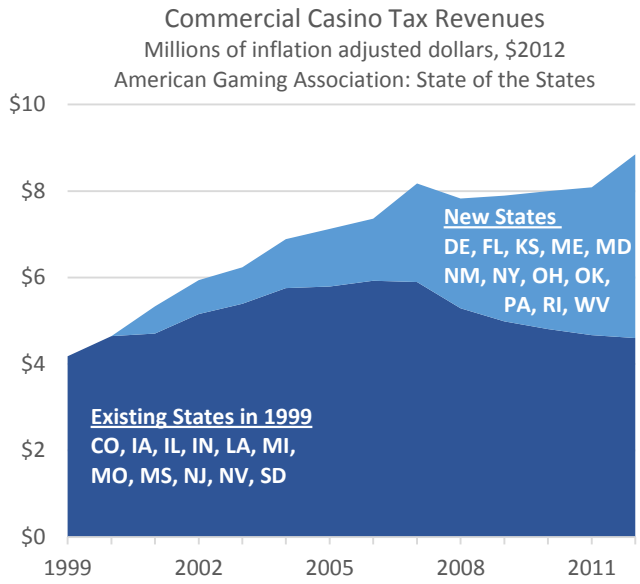
economy has rebounded in recent years, so too has the public sector's major tax revenue streams like personal income, property and sales taxes. However, gaming revenues have not recovered much, due to slow growth or outright declines in sales. Public sector programs and agencies for which funding is specifically tied to gaming revenue streams face continued budgetary challenges moving forward.

Getting a handle on the overall sum of state and local gaming revenues and their impact on public sector budgets is challenging, however a number of measures are available.

State tax collections from the U.S. Census Bureau[4] show that revenues from pari-mutuels and amusements account for approximately one percent of state tax collections in recent years. These revenues are an incomplete count in that they are state level only and do not include local jurisdictions, and both include some revenues from businesses that are not gaming establishments and exlude lotteries and some other types of gaming. Nevertheless, the longer-term trends are indicative of both consumer spending patterns on gaming, and public sector tax collections.

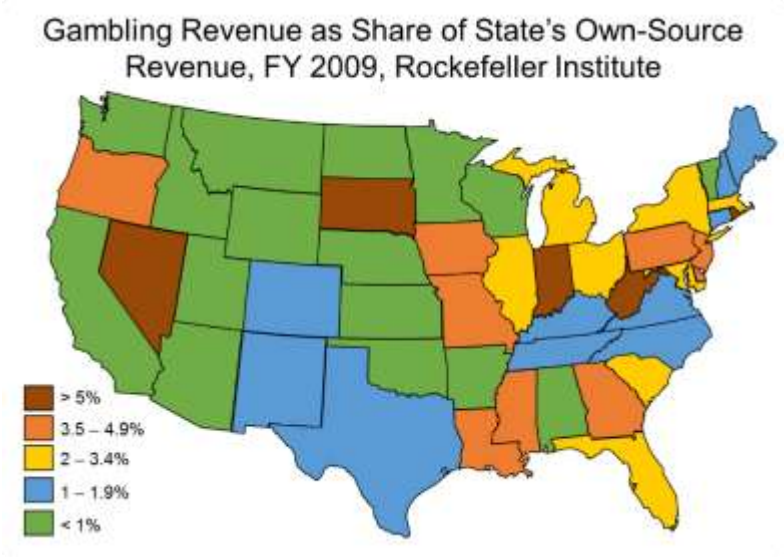


Alternatively, one can examine tax revenues from commercial casinos across the country. These figures, from the American Gaming Association[5], include state and local taxes, however focus solely on private casinos and exlcude other forms of gaming, including lotteries. However, these revenue trends still illustrate the relative decline in gaming in established markets, with all the growth occuring in newer gaming markets. Even with these new casinos, inflation-adjusted revenues – which track actual sales – are growing relatively slowly in recent years.



[4] http://www.census.gov/govs/state/
[5] http://www.americangaming.org/industry-resources/research/state-states

A more complete look at gaming revenues on state budgets comes from a report from the Rockefeller Institute of Government[6]. In FY 2009, gaming revenues – both casinos and lotteries – accounted for 2.4 percent of state's own-source revenue.

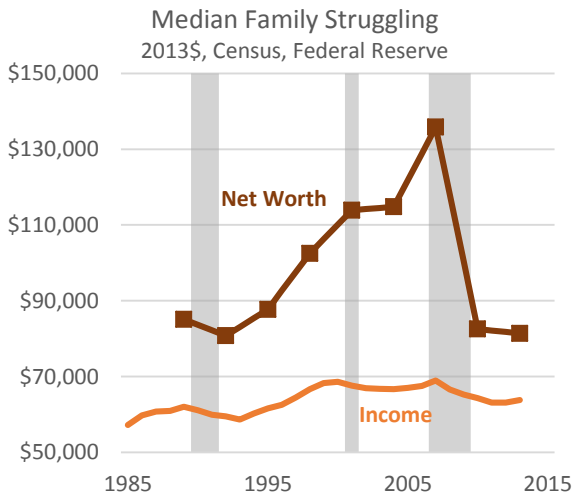


Nearly two-fifths of all states were relatively average in their reliance on gaming revenues (blue and yellow states on the map). However, 14 states had a significantly higher share of revenues coming from gaming, including Nevada, with the highest share at 12.5 percent.

Given both the increased number of gaming establishments in some states, and the sales decline seen in mature markets, these relative shares across states are in flux. Nevertheless, the public sector remains reliant upon gaming for revenue, particularly as some programs or agencies are explicity tied to these revenue steams. For example, in Oregon, approximately 60 percent of lottery proceeds are either constitutionally or operationally dedicated to education, parks, debt service for bonds used for capital projects across the state, or other programs like county fairs, economic development, problem gambling, and the like. The remainder is appropriated at the discretion of the legislature, however much is used for the state school fund. Similar patterns are seen in other states.

Outlook

Given the ongoing sluggish economic recovery, the outlook for the gaming industry and associated tax collections is far from robust. New gaming establishments are likely to fare well in the near term. However, as the novelty wears off and competition continues to increase, sales growth will likely slow. Fundamentally, demand for gaming, particularly in mature markets, is weak.



Recent figures from the U.S. Census Bureau[7] show that in 2013, the median household income across the country still remained 8 percent below the 2007 level in inflation-

[6] http://www.rockinst.org/pdf/government_finance/2011-06-23-Back_in_the_Black.pdf
[7] https://www.census.gov/content/dam/Census/library/publications/2014/demo/p60-249.pdf

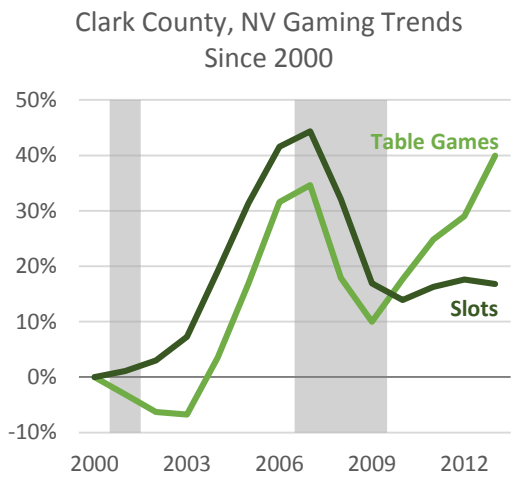
adjusted terms. Average household incomes have fared slightly better. Even as the overall economy has improved in terms of jobs and aggregate income and production, the typical household has seen no real growth in either current income or in net wealth, looking at the latest figures from the Federal Reserve's Survey of Consumer Finance[8].

Given that gaming is a very discretionary form of spending, a stronger, more broad-based economic recovery would be the largest, and most significant driver for any future gaming revenue growth. Conversely, should a stronger economy not materialize, lackluster growth or outright declines in gaming is a likely outcome.

Consumer Preferences and Options

Beyond a stronger economy, gaming revenues may fare better or worse for a number of reasons. These reasons include, but are not limited to: changes in consumer preferences to favor gaming over other entertainment options, gaming businesses and establishments diversifying their offerings to attract a broader customer base, or the emergence of new gaming opportunities such as new casinos or online gambling. These options present both upside and downside risk to the industry.

This report focuses largely upon slot machines, and their equivalents, and has left to the side other gaming revenues. Table games have generally fared better during and after the Great Recession than slot machines, but still comprise a minority of casino revenues, at least in Nevada. Should gamblers continue to spend a relatively larger share of their gaming dollar on table, or non-slot games, then casinos and gaming outlets can reallocate the games and floor space to accommodate this demand. However, some gaming establishments, or state programs, do not offer table games and rely solely upon slot revenues, possibly in addition to pari-mutuels.



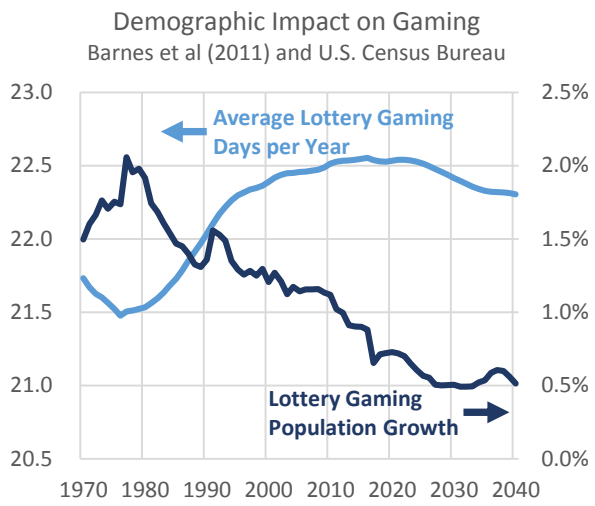
One new and not fully-formed avenue of growth for the industry and state coffers is online gambling. According to Center for Gaming Research at the University of Nevada, Las Vegas, online gaming in the U.S. is about a $12 million per month business so far[9]. While certainly expected to grow in the coming years, these amounts are still small from a national perspective and have been disappointing relative to prior expectations. To help place the figure in perspective, it is less than 10 percent of current Atlantic City revenues each month, or about 5 percent of the Las Vegas strip slot machine revenue each month.

[8] http://www.federalreserve.gov/econresdata/scf/scfindex.htm
[9] http://gaming.unlv.edu/reports/US_online_gaming.pdf

Demographics

Baby Boomers are currently in their peak earning years to early retirement years. This also coincides with peak gaming years as well. Just as the Baby Boomers provided a fundamental, demographically driven boost to many types of spending and overall economic growth, as they age out of their working years and into retirement, a demographic drag is likely.

A study from Barnes et al (2011)[10] examined the demographic breakdown of lottery players and the average number of days in which they played, among other aspects. The graph on the right takes these estimates and applies them to the U.S. population at large, both historically and the most recent projections from the U.S. Census Bureau. This provides a high level look at what the demographics alone do to gaming revenues and demand. These results are not fundamentally different than they would be for many other industries, however slower growth is expected to be the norm moving forward.



After seeing above-average growth for much of the 1970s through today, the gaming population is expected to grow slower than the overall population in the coming decade. Gaming intensity, as measured by the average number of gaming days per year, is expected to remain relatively flat in the decade ahead, before tailing off in the out years. Using a demographic player profile from the Oregon Lottery yields nearly identical results for the gaming population growth rates.

It can be argued that these figures represent more of an upper bound to the gaming population, given these estimates implicitly assume that members of Generation X and the Millennials will choose to gamble just as much as the Baby Boomers did when they came of age. To the extent that younger generations pursue other entertainment or recreational activities, demand for gaming will be even weaker. The question remains whether or not lower levels of gambling among younger generations is a true, generational trend or more a factor of their age and earnings. If it is the later, than gaming may pick up as these generations become older and earn more income later in their careers. However, if these trends are a generational shift in preferences, it will place further downward pressure on the gaming industry and associated tax collections.

[10] http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4103646/

Near-Term Outlook

With many of the challenges facing the industry coming over the extended time horizon, near-term trends are more positive. Demographics remain in the industry's favor for at least the next few years. A stronger economy, along with a growing population, should result in higher sales. In particular, as the labor market becomes tighter and wages paid to workers improve, so too will consumer spending, particularly spending on discretionary items. As such, three possible scenarios appear likely:

Scenario 1: Optimistic

A stronger economy provides more broad-based gains, resulting in considerable support for consumer spending. With higher disposable income, household balance sheets repaired, and net worth improving, consumers sharply increase their discretionary spending. Gaming expenditures accelerate and return to their previously higher share of income.

Scenario 2: Some Improvement

Economic growth does improve somewhat, bringing slightly faster job and income gains. Consumers feel more confident in their economic situation as rising home values increase household net worth. With household balance sheets in better position, consumers spend more on entertainment and discretionary activities. Fundamental demand for gaming, excluding the new casinos and markets, accelerates modestly from today's one percent growth up to three or four percent per year. However, these rates of growth are just under the gains seen in overall personal income. Even as gaming expenditures pick up, as a share of income, gaming erodes slowly over the years ahead.

Scenario 3: Slow Growth

The lackluster economic growth seen so far in recovery continues with no clear improvement. Households remain cautious with their discretionary spending, and while entertainment and gaming sales have stabilized, stronger gains are unlikely. Overall gaming growth continues to be driven by new entrants or markets, with fundamental demand following growth in the adult population, rather than economic measures like job and income gains.

The good news for the industry is that entertainment spending, and gaming expenditures, have stabilized as a share of household budgets, albeit at lower levels. While fundamental demand for gaming in recent years appears to be more in-line with population gains than broader economic indicators, such an outlook has sizable upside risks. A pickup in near-term growth rates is not out of the question. The likely driver would be a stronger economy with more broad-based gains or a shift in consumer preferences in gaming's favor.

About the Oregon Office of Economic Analysis

The Oregon Office of Economic Analysis provides objective forecasts of the state's economy, revenue, population, corrections population and youth authority population. These forecasts are used by the Governor, the Legislature, state agencies and the public to achieve their goals. Among these responsibilities is the forecast for the Oregon Lottery, including their video lottery sales.

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Supplementary materials, including slides, underlying data and sources are available on our website.

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