



## Pennsylvania Gaming Revenue: Interesting Patterns

In earlier *Policy Briefs* we analyzed the growth in gross terminal revenues (GTR) for slot machines in Pennsylvania and how it has fluctuated from year to year. Within the Commonwealth there are twelve casinos including the so called racinos where horse racing also occurs. The first casino, Mohegan Sun, debuted in the fall of 2006, and the last, the Nemacolin resort casino, opened in the summer of 2013. From 2009, the year that the Rivers Casino opened in Pittsburgh, through 2015, slots play statewide GTR climbed from \$1.96 billion to \$2.37 billion—a 20.4 percent increase. Some of the early growth was due to more casinos opening and later because of a recovery in the state’s economy. With the advent of table games in 2010 slots GTR gains slowed a bit.

By way of background, starting in 2009 there were an average of 21,455 slot machines per month. The number of machines rose to a monthly average of 26,550 in 2012, before declining slightly to 26,300 in 2015.

In addition to the early growth and then flattening of slots GTR, a seasonal pattern in slots play has become apparent over the period 2009 through 2015. This is especially pronounced for GTR per slot machine.

The average monthly GTR per slot machine in Pennsylvania was \$7,749 in 2009; it has been as high as \$7,753 (2012) and stood at \$7,497 in 2015. The figure has fluctuated in a fairly tight range of \$7,753 to \$7,302.

When slot revenues are calculated on a per machine basis, the seasonality becomes more readily visible because per machine revenue eliminates the complications created by new casino openings on total slots revenue that occurred several times over the 2009 to 2015 period. On a per machine basis, the months with the highest revenues are March (2009, 2012, 2013, and 2014) and July (2010, 2011, and 2015). On average the four years of March peak revenue was \$8,721 and 16.6 percent higher than the other eleven months for those years. Similarly, the July peak average \$8,253 was eleven percent above the other eleven months for those three years. Clearly, for the peak months (March and July) per machine revenues are significantly above the rest of the year.

For the same period, the months with the lowest GTR on a per machine basis are January (2011, 2014, and 2015), December (2009, 2010, and 2013) and October (2012). The October anomaly was caused by the massive impact of Hurricane Sandy on the eastern seaboard. Absent the hurricane, January would have been the lowest monthly GTR for 2012 (it was only \$78 higher than October). For those three years for which January had the lowest monthly revenues, the

average GTR was \$6,643 and 11.8 percent below the other eleven months and the average for the three December lows was \$6,455 and 15.8 percent below the other eleven months for those three years. Again, like the highs, these lows are significantly different from the other months' average.

Meantime, table games have been in Pennsylvania casinos since 2010 with their first full year of operation in 2011. As with slots, in determining whether there is a seasonal pattern to table games revenue we began by calculating the per table revenue in order to remove the impact of new casinos beginning operations over the period as well as the replacing of slots with tables in some casinos.

On a per table basis the highest revenue months are March (2011-2014) which averaged \$62,638 for the four years and 10.4 percent higher than the other eleven months for those years. December recorded the highest monthly per table revenue for 2015 (\$63,645)—7.4 percent higher than the average of the other months that year. The lowest revenue months are the deep winter months of January (2011 at \$51,499) and February (2013-2015, average of \$54,000). In something of an outlier, May, for no obvious reason, registered the lowest in per table revenues for 2012 (\$53,564). Even with this outlier, four of the five lowest months for revenues per table occur in the dead of winter.

Literature on seasonality in gaming is sparse. One theory is that March is typically a high revenue month because it is the month when the most Federal income tax refunds are issued. Thus armed with a boost in discretionary income, more gamblers, with more to money to play, visit the casinos. On its face this theory seems entirely credible. However, we offer a supplement to this theory. Perhaps this pattern happens because Pennsylvania is a relatively hard winter state with numerous episodes of very inclement weather. Adverse weather conditions likely deter gamblers, especially slots players who are older, from venturing out to the casinos. But when March arrives and the weather is less threatening, casino patrons may be more likely to venture out to their favorite casinos.

An addendum to this would be that many folks travel to sunnier climes in the winter to avoid the cold altogether and are not in Pennsylvania. Moreover, most cruise ships offer gaming for the winter traveler who likes to gamble. Then too, Christmas and the NFL playoffs are in full swing in late December through early February. A lot of betting on those games could be a factor in slower slots play as well.

Whatever the reasons, the seasonal pattern is well established.

No doubt casino operators are well aware of the somewhat seasonal patterns of gambling activity and have positioned their marketing efforts accordingly.

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