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The demand for slot machine and pari-mutuel horse race wagering at a racetrack-casino

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important policy implications if stakeholder shares of table game revenue are different

than their corresponding slot machines shares. Those with lower table game shares may lose net gaming revenue if table games do not produce enough revenue to offset the expected loss of slot machine revenue.

Notes

- ¹ Association of Racing Commissioners, International, Inc., Pari-mutuel Racing, A Statistical Summary. Handle is adjusted for inflation using the CPI-U (1982 to 1984 = 100), US Department of Labor, Bureau of Labor Statistics.
- ² With the exception of pari-mutuel wagering in states where it is permitted, internet wagering on other forms of gaming is illegal in the United States under federal law. Internet and telephone wagering are conducted through a system called Advance Deposit Wagering (ADW).
- ³ For a discussion of the effects of competition on horse race wagering see Thalheimer and Ali ([2008a](#)).
- ⁴ Slot machine VLT gaming was permitted in 1990 at Mountaineer Park a pari-mutuel horse racing track in West Virginia.
- ⁵ The 15 states that have permitted VLT gaming are: Arkansas, Delaware, Illinois, Iowa, Kansas, Michigan, Minnesota, Missouri, Montana, Nevada, New Mexico, Oklahoma, South Dakota, and Wisconsin. These states are all landlocked and none have a coastline on the Gulf of Mexico, the Atlantic Ocean, or the Pacific Ocean. All but one of these states (Iowa) have a land border with at least one other state. Iowa is the only state that has a land border with only one other state (Illinois).
- ⁶ See [Meyer and Smith \(2008\)](#) for a discussion of the effects of competition on horse race wagering.
- ⁷ See Meyer and Smith (2008) for a discussion of the effects of competition on horse race wagering.
- ⁸ American Gaming Association (AGA) (2008) Gaming Revenue by State, 2007.
- ⁹ Angst (2008) The Impact of the Internet on the Gaming Industry.
- ¹⁰ Iowa Racing and Wagering Board (IRWB) (2008) Iowa Gaming Revenue by State, 2007.

²³ A race given data over a

²⁴ Import simulcasts figures disaggregated by race horse breed were not available.

²⁵ See for example, Ali and Thalheimer ([1997](#), [2002](#)), Thalheimer ([1998](#), [2008](#)) and DeGennaro ([2009](#)).

²⁶ Festival of Racing source: Prairie Meadows Racetrack and Casino (1993–2006). Quarter Horse racing source: Iowa Quarter Horse Racing Association.

²⁷ Iowa Racing and Gaming Commission, 2000 Annual Report.

²⁸ Ibid.

²⁹ LM is distributed as $\chi^2(p)$, where p is the number of lagged residuals.

³⁰ LM is distributed as $\chi^2(z)$, where z is the number of regressors.

³¹ To determine long-run effects of individual variables in the slot machine demand model, the coefficient of interest in Equation [1](#) is divided by $(1 - \alpha_1)$, where α_1 is the coefficient of the stochastic trend variable, $\ln(\text{RSLOTHAND}(-1))$, in Equation [1](#) with corresponding value in [Table 1](#).

³² % impact of table games = $[\exp\{(\alpha_{14}/(1 - \alpha_1))(57 - 0)\} - 1]100$, where α_1 and α_{14} , are the coefficients of $\ln(\text{RSLOTHAND}(-1))$ and TABLES, in Equation [1](#) with corresponding values in [Table 1](#).

³³ ϵ_{SLOTV}

³⁴ SLOTV

³⁵ % impact of table games = $[\exp\{(\alpha_{14}/(1 - \alpha_1))(57 - 0)\} - 1]100$, where α_1 and α_{14} , are the coefficients of $\ln(\text{RSLOTHAND}(-1))$ and TABLES, in Equation [1](#) with corresponding values in [Table 1](#).

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³⁸ % impact of import simulcast horse race programmes = $\exp\{(\alpha_{17}/(1 - \alpha_1))(15 - 4)\} + (\alpha_{18}/(1 - \alpha_1))(15^2 - 4^2)\} - 1$, where α_1 is the coefficient of $\ln(\text{RSLOTHAND}(-1))$ in Equation [1](#) and α_{17} and α_{18} are the coefficients of SIMHORSE_DAY and SIMHORSE_DAY^2 in Equation [1](#) with corresponding values in [Table 1](#).

³⁹ The QUALITYRACES effect also reflects a JULY effect since the two variables were highly correlated. % impact of high quality races = $[\exp\{(\alpha_{15}/(1 - \alpha_1))(1 - 0)\} - 1]100$, where α_1 and α_{20} , are the coefficients of $\ln(\text{RSLOTHAND}(-1))$ and QUALITYRACES, in Equation [1](#) with corresponding values in [Table 1](#).

⁴⁰ To determine long-run effects of individual variables in the slot machine demand model, the coefficient of interest in Equation [2](#) is divided by $(1 - \beta_1)$, where β_1 is the coefficient of the stochastic trend variable, $\ln(\text{RPARIHAND}(-1))$, in Equation [2](#) with corresponding value in [Table 2](#).

⁴¹ % impact of one live gallop horse day = $[\exp\{(\beta_{14}/(1 - \beta_1))(1 - 0)\} + (\beta_{15}/(1 - \beta_1))(1^2 - 0^2)\} - 1]100$, where β_1 is the coefficient of $\ln(\text{RPARIHAND}(-1))$ in Equation [2](#) and β_{14} and β_{15} are the coefficients of DAYSGALLOP and DAYSGALLOP^2 in Equation [2](#) with corresponding values in [Table 2](#). % impact of one harness horse race day = $[\exp\{(\beta_{16}/(1 - \beta_1))(1 - 0)\} - 1]100$, where β_1 and β_{16} , are the coefficients of $\ln(\text{RPARIHAND}(-1))$ and DAYSHARNESS , in Equation [2](#) with corresponding values in [Table 2](#).

⁴² % impact of one harness horse race day = $[\exp\{(\beta_{17}/(1 - \beta_1))(1 - 0)\} - 1]100$, where β_1 and β_{17} , are the coefficients of $\ln(\text{RPARIHAND}(-1))$ and DAYSHARNESS , in Equation [2](#) with corresponding values in [Table 2](#).

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⁴⁴ % impact of one live gallop horse day = $[\exp\{(\beta_{14}/(1 - \beta_1))(1 - 0)\} + (\beta_{15}/(1 - \beta_1))(1^2 - 0^2)\} - 1]100$, where β_1 is the coefficient of $\ln(\text{RPARIHAND}(-1))$ in Equation [2](#) and β_{14} and β_{15} are the coefficients of DAYSGALLOP and DAYSGALLOP^2 in Equation [2](#) with corresponding values in [Table 2](#).

⁴⁵ % impact of one harness horse race day = $[\exp\{(\beta_{16}/(1 - \beta_1))(1 - 0)\} - 1]100$, where β_1 and β_{16} , are the coefficients of $\ln(\text{RPARIHAND}(-1))$ and DAYSHARNESS , in Equation [2](#) with corresponding values in [Table 2](#).

⁴⁷ % combined impact slot machines and table games = $\{(1 + g_{\text{slots}})(1 + g_{\text{tables}}) - 1\}100$, where g = growth rate, $g_{\text{slots}} = -0.22$ and $g_{\text{tables}} = -0.16$.

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