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Analytics Brief 2018-03

Modeling the Determinants of Handle: Standardbred Racing at Woodbine and Mohawk

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Using data for 2,742 races over 241 race days from the 2009 Standardbred racing season at the Woodbine and Mohawk Racetracks, all sources single-leg handle (win, place, show, exacta, trifecta, superfecta) per race was modeled with explanatory variables controlling for field size, field quality and race conditions, and seasonality. A few robust and actionable insights persisted:

- Field size remains the leading determinant of handle per race. While there were slight diminishing returns per entry, it was not as pronounced as found in Thoroughbred racing.
- Race entries limited to Ontario-Sired eligible runners had a positive yet limited impact on handle. This finding departs from the related Thoroughbred wagering models where restricted race conditions harm handle outside of field size effects. Aside from purse enhancements, the Standardbred restricted races appeared quite similar to races not restricted to Ontario-Sired runners in terms of field size and handle per race.
- Handle had positive and slightly increasing returns to race quality. Control variables were also used in the model to account for major stakes races, which were positive as expected.
- Bettors preferred pacing races over trotting races.
- Not surprisingly, poor weather conditions adversely impacted handle.
- Races restricted to just fillies neither increased nor decreased per race handle.

Various econometric methods were tested and yielded a robust set of results. A multilevel mixed effects modeling approach was chosen to address, among other things, heterogeneity across race days and higher-order autocorrelation across races within each race day. Similar to Thoroughbred racing, this ‘wagering inertia’ indicated handle in nearby races (i.e., race two and race one, or race three and race two) was not surprisingly correlated but handle in more distant races was not. Over 60 percent of the variation in per race handle was explained by the model with highly statistically significant parameter estimates on not only key explanatory variables but also seasonality and other control variables. A hedonic specification is appropriate given only one race season is analyzed.

Research access to customer and track-level wagering data, horse racing performance data, and related sports betting data enables broader and deeper insights for the long-term benefit of the horse industry.

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