

An empirical investigation of past financial outcomes and monthly expenditure among VLT gamblers



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Do past financial outcomes affect gambling behavior?



● Empirical Findings

- Naryanan and Manchanda (2012)
 - ✦ Bet to bet behavior among casino gamblers
- Ma, Kim and Kim (2014)
 - ✦ Past-week outcome and current-week expenditure

● Theoretical considerations

- Prospect theory (Kahnemann and Tversky, 1979)
 - ✦ Outcomes and gambling behavior
- Thaler and Johnson (1990)
 - ✦ Prior outcomes and gambling behavior

Current study



- Examine the relationship between past-month financial outcomes and current-month expenditure among VLT gamblers
 - Financial outcomes may have a different influence on short-term and long-term gambling behavior
 - ✦ Access to funds
 - ✦ Predetermined individual gambling criteria

Method



- Account-based player gambling data

- Norsk-Tipp

- ✦ *Multix* (

- Dependence

- Individual

- ✦ Control

Illustration of the time series analysis.

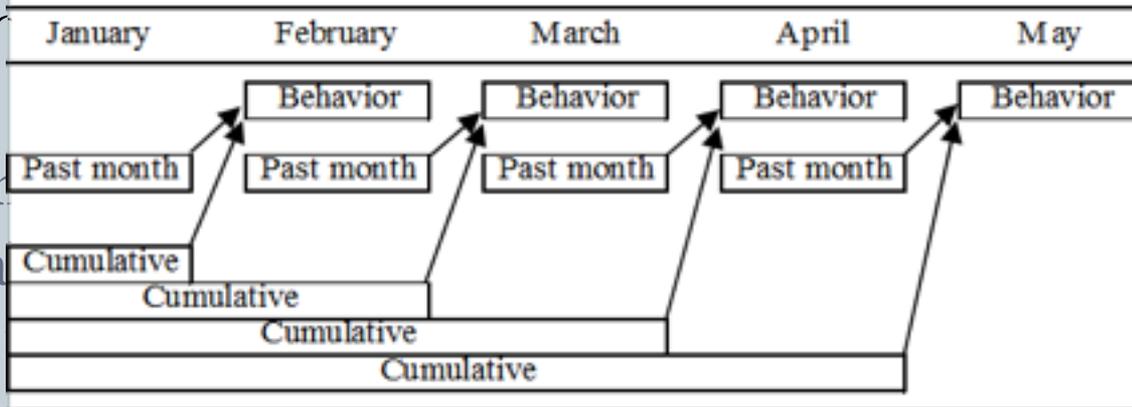


Figure 1. Behavior = Current-month expenditure. Past month = past month net balance. Cumulative = monthly net balance from the first month of gambling until the end of the preceding month. Control variables are excluded.

- Linear Mi

- Expenditure was nested within the individual



month
month

Findings



A LMM of the relationship between $\ln(\text{expenditure})$, past outcomes and control variables

Parameter	Null model	Model 1	Model 5
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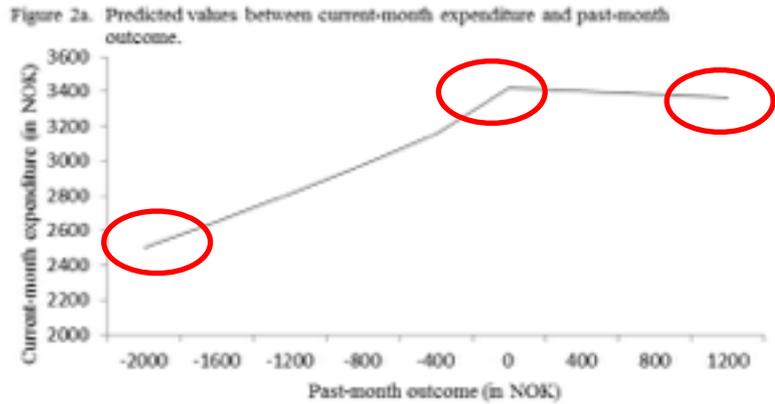


Figure 2a. log transformation has been transformed by exponentiating the predicted values.

Fixed effect
7.378 (.009) 5

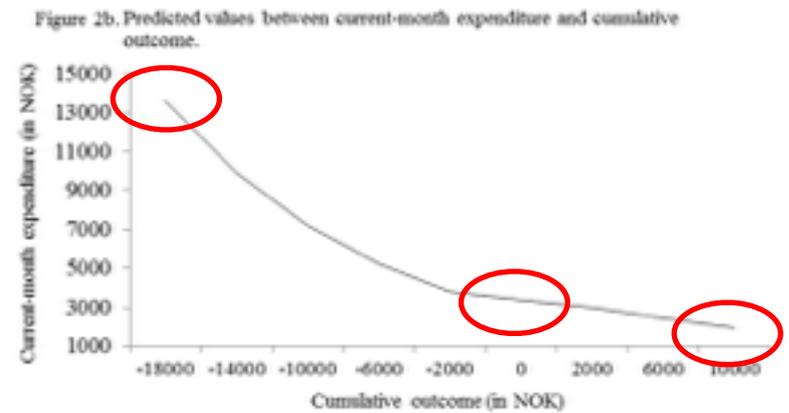


Figure 2b. log transformation has been transformed by exponentiating the predicted values.

in
Win
e

Random parameter

1.230 (.002) 1

Level 2 intercept	3.495 (.007)	1.876 (.006)	1.313 (.008)
Deviance	-964,086.97	-936 865.03	-927,313.85
AIC	964,094.97	936,925.03	927,387.85
BIC	964,137.18	937,241.61	927,778.30
Pseudo ΔR^2	0 %	34.06 %	1.78 %

Discussion and Conclusion



- Do financial outcomes influence long-term expenditure?
 - Yes, but seem to have a minor effect on long-term expenditure
 - The results suggest that long-term expenditure is
 - ✦ Relatively stable within the individual over time
 - ✦ Associated with individual and contextual factors

Implications



- **Responsible gaming**
 - Marker of gambling behavior
 - Long-term gambling behavior changes gradually?
 - Deviations from past-gaming behavior

