

Online Appendix to:
When Saving is Gambling

by J. Anthony Cookson

Table A.1: Summary Statistics for Cash Withdrawal Data

Note: This table presents summary statistics of the proprietary cash withdrawal data set for casino transactions by patrons whose home ZIP codes are in Nebraska or counties in adjacent states within 20 miles of Nebraska counties. In addition to the counties within Nebraska that do not have access to Save-to-Win accounts through participating credit unions, these adjacent counties are used in the empirical analysis as control counties.

	Nebraska	Adjacent to Nebraska
Casino Gambling Characteristics		
# of Transactions	26,312	28,053
# of Casino Patrons	5722	6033
Dollar Amount Withdrawn		
... Total (\$ millions)	19.73	21.66
... Average per Patron (\$)	3448.73	3590.95
... Median Patron (\$)	799.75	876.65
... Average per Transaction (\$)	750.99	772.26
... Median Transaction (\$)	252.50	216.99
% Male	58.57	56.72
% Not Sufficient Funds	12.53	12.03
% Use Credit Card for Cash	52.34	34.06
% Weekend Transactions	47.73	49.21
% Daytime Transactions	48.47	35.76
Characteristics of Covered Counties (BEA)		
2010 Population (1000s)	1484.38	833.42
Average Per Capita Income (\$1000s)	37.61	37.19

Table A.2: Summary of County-Level Data by Treated and Non-Treated Counties, Disaggregated by Type of Control County

Note: This table reports averages of key variables in the pre-treatment period, based on cash withdrawal data using counties in which a participating Save-to-Win (STW) credit union operates to separate treated counties from non-treated counties in Nebraska, as well as the difference and conditional difference. The comparisons in this table are based entirely on within-state differences between treatment and control counties. The conditional difference is computed as the coefficient on a treatment indicator in a regression that also controls for whether the county has population greater than 100,000. Standard errors are two-way clustered by county and month-year. ***, **, and * denote statistical significant differences at the one, five, and ten percent levels.

	<u>Treated</u>	<u>Not Treated</u>	<u>Difference</u>	<u>Conditional Difference</u>
Adjacent-State Control Counties				
# of Counties	10	26		
# of Months	26	26		
# of Observations	207	671		
... Before	159	515		
... After	48	156		
Within-Nebraska Control Counties				
# of Counties	10	18		
# of Months	26	26		
# of Observations	207	512		
... Before	159	392		
... After	48	120		
Pre-Treatment Characteristics (Adjacent-State Control Counties)				
Mean Transaction Amount (\$)	537.40	436.99	100.51*	92.54*
Mean # of Transactions	63.85	34.60	29.25	-10.78
% Male	58.44	59.47	-0.93	-0.79
% Insufficient Funds	14.45	13.19	0.65	0.39
% Use Credit Card for Cash	54.96	29.58	15.37***	15.39***
% Daytime Transactions	34.22	34.82	-0.61	-0.39
% Weekend Transactions	46.41	47.36	-0.94	-1.39
Per Capita Personal Income (\$1000s)	41.54	39.88	1.66	2.41
Population (1000s)	122.25	32.41	89.82*	-
% with Population > 100,000	30.15	7.77	22.38	-
Pre-Treatment Characteristics (Within-Nebraska Control Counties)				
Mean Transaction Amount (\$)	537.40	478.81	58.68	44.78
Mean # of Transactions	63.85	11.61	52.24*	-0.63
% Male	58.44	48.41	10.14	9.06
% Insufficient Funds	14.45	9.10	4.74**	3.965**
% Use Credit Card for Cash	54.96	41.90	13.90***	12.43***
% Daytime Transactions	34.22	37.49	-3.28*	-2.64
% Weekend Transactions	46.41	50.28	-3.86***	-4.12***
Per Capita Personal Income (\$1000s)	41.54	39.96	1.58	1.28
Population (1000s)	122.25	15.32	106.91**	-
% with Population > 100,000	30.15	0.00	30.15**	-

Table A.3: Availability of Prize-Linked Savings and Gambling Demand (Robustness to Different Control Groups)

Note: This table presents results from estimating the difference-in-difference specification:

$$\log(\text{cashwithdrawn}_{it}) = \gamma_s + \gamma_t + \beta_1 \text{CU_treated}_i + \beta_2 \text{post}_t + \beta_3 \text{CU_treated}_i \times \text{post}_t + \gamma X + \epsilon_i$$

where $\text{cashwithdrawn}_{it}$ is the total amount of cash withdrawn at casinos by individuals in county i during month-year t , post_t is an indicator that equals one for dates after the introduction of Save-to-Win in January 2012, CU_treated_i is the number of credit unions that offer STW deposits and accounts. The vector of control variables \mathbf{X} includes logged population and per capita income measures at the county-year level from the Bureau of Economic Analysis. The variable $\text{cashwithdrawn}_{it}$ is winsorized at the 99th percentile to reduce sensitivities to extreme observations. Standard errors are clustered by county, and ***, **, and * indicate statistical significance at the one, five, and ten percent levels. † indicates p-value less than 0.15.

	Unaffected Counties within Nebraska		Adjacent Counties in Neighboring States	
	(1)	(2)	(3)	(4)
post × # of participating CUs	-0.220*** (0.056)	-0.135** (0.062)	-0.153*** (0.054)	-0.185*** (0.055)
# of participating CUs	0.134 (0.134)		-0.208** (0.096)	
Month-Year FE	x	x	x	x
County FE		x		x
R^2	0.527	0.689	0.538	0.722
# of Counties	28	28	36	36
# of Months	26	26	26	26
N	719	719	930	930

Table A.4: The Effect of the Availability of Prize-Linked Savings on Gambling Demand (Timing of Treatment)

Note: This table presents results from estimating the difference-in-difference specification:

$$\log(\text{cashwithdrawn}_{it}) = \gamma_s + \gamma_t + \beta_1 \text{CU}_{treated_i} + \beta_2 \text{post}_i + \beta_3 \text{pre}_i + \beta_4 \text{CU}_{treated_i} \times \text{post}_i + \beta_4 \text{CU}_{treated_i} \times \text{pre}_i + \gamma X + \epsilon_i$$

where $\text{cashwithdrawn}_{it}$ is the total amount of cash withdrawn at casinos by individuals in county i during month-year t , $\text{CU}_{treated_i}$ is the number of credit unions that offer STW deposits and accounts, or in some specifications, an indicator variable for whether there is a credit union in county i that offers STW, post_i is an indicator that equals one after January 2012, pre_i is an indicator that equals one for the year prior to January 2012 to capture anticipation of the effect. For reference, columns 1 and 3 present the estimate from the analogous specification from Table 3. The vector of control variables \mathbf{X} includes logged population and per capita income measures at the county-year level from the Bureau of Economic Analysis. The variable $\text{cashwithdrawn}_{it}$ is winsorized at the 99th percentile to reduce sensitivities to extreme observations. Standard errors are clustered by county, and ***, **, and * indicate statistical significance at the one, five, and ten percent levels.

	(1)	(2)	(3)	(4)
post × # of participating CUs	-0.188*** (0.047)	-0.332*** (0.064)	-0.197*** (0.049)	-0.353*** (0.064)
pre × # of participating CUs		-0.241*** (0.050)		-0.249*** (0.050)
Difference Between Post and Pre				
... Coefficient	—	-0.091**	—	-0.104**
... P-value	—	0.0349	—	0.0325
Month-Year FE	x	x	x	x
County FE			x	x
R^2	0.488	0.493	0.675	0.680
# of Counties	54	54	54	54
# of Months	26	26	26	26
N	1390	1390	1390	1390

Table A.5: The Effect of the Availability of Prize-Linked Savings on Gambling Demand (Robustness to Differential Pre-Trends)

Note: This table presents results from estimating the difference-in-difference specification:

$$\log(\text{cashwithdrawn}_{it}) = \gamma_s + \gamma_t + \beta_1 \text{CU_treated}_i + \beta_2 \text{post}_t + \beta_3 \text{CU_treated}_i \times \text{post}_t + \beta_4 \text{year}_t \times \text{characteristic}_i + \gamma X + \epsilon_i$$

where $\text{cashwithdrawn}_{it}$ is the total amount of cash withdrawn at casinos by individuals in county i during month-year t , post_t is an indicator that equals one for dates after the introduction of Save-to-Win in January 2012, CU_treated_i is the number of credit unions that offer STW deposits and accounts, or in some specifications, an indicator variable for whether there is a credit union in county i that offers STW. The variable $\text{cashwithdrawn}_{it}$ is winsorized at the 99th percentile to reduce sensitivities to extreme observations. The new variable characteristic_i is either large_pop_i is either an indicator that equals one if the 2010 population in the county is greater than 50,000 (100,000 in some specifications), or an indicator that equals one if the 2010 average unemployment rate is above the median (above the 90th percentile in some specifications). For specifications without month-year and FIPS fixed effects, the appropriate main effects for this interaction are also included. The vector of control variables X includes logged population and per capita income measures at the county-year level from the Bureau of Economic Analysis. Standard errors are clustered by county, and ***, **, and * indicate statistical significance at the one, five, and ten percent levels.

	50,000 residents			100,000 residents		
	(1)	(2)	(3)	(4)	(5)	(6)
post × # of participating CUs	-0.120** (0.054)	-0.120** (0.055)	-0.133** (0.058)	-0.154** (0.060)	-0.153** (0.061)	-0.164** (0.064)
Month-Year FE		x	x		x	x
County FE			x			x
R^2	0.472	0.500	0.678	0.491	0.519	0.676
# of Counties	54	54	54	54	54	54
# of Months	26	26	26	26	26	26
N	1390	1390	1390	1390	1390	1390

(a) Differential Pre-Trends by High and Low County Population (different cutoffs)

	Median Unemployment			90th Percentile Unemployment		
	(1)	(2)	(3)	(4)	(5)	(6)
post × # of participating CUs	-0.189** (0.053)	-0.190** (0.054)	-0.195** (0.058)	-0.175** (0.047)	-0.190** (0.047)	-0.176** (0.050)
Month-Year FE		x	x		x	x
County FE			x			x
R^2	0.479	0.508	0.675	0.466	0.508	0.677
# of Counties	54	54	54	54	54	54
# of Months	26	26	26	26	26	26
N	1390	1390	1390	1390	1390	1390

(b) Differential Pre-Trends by High and Low Unemployment (different cutoffs)

Table A.6: Availability of Prize-Linked Savings and Gambling Demand (Seasonality)

Note: This table presents results from estimating the difference-in-difference specification:

$$\log(\text{cashwd}_{it}) = \gamma_s + \gamma_t + \beta_1 \text{CU_treated}_i + \beta_2 \text{post}_t + \beta_3 \text{CU_treated}_i \times \text{post}_t + \gamma X + \epsilon_i$$

where cashwd_{it} is the total amount of cash withdrawn at casinos by individuals in county i during month-year t , post_t is an indicator that equals one for dates after the introduction of Save-to-Win in January 2012, CU_treated_i is the number of credit unions that offer STW deposits and accounts. The vector of control variables \mathbf{X} includes logged population and per capita income measures at the county-year level from the Bureau of Economic Analysis. The variable cashwd_{it} is winsorized at the 99th percentile to reduce sensitivities to extreme observations. Standard errors are clustered by county, and ***, **, and * indicate statistical significance at the one, five, and ten percent levels. † indicates p-value less than 0.15.

	All Control Counties	Within-State Counties	Adjacent-State Counties
post × # of participating CUs	-0.137*** (0.049)	-0.093† (0.062)	-0.128** (0.056)
Month-Year FE	x	x	x
County FE	x	x	x
R^2	0.495	0.527	0.689
# of Counties	54	28	36
# of Months	14	14	14
N	775	391	504

Table A.7: The Effect of Prize-Linked Savings, Controlling for Jackpot Lottery Sales

Note: This table presents results from estimating the difference-in-difference specification:

$$\begin{aligned} \log(\text{cashwd}_{it}) = & \gamma_s + \gamma_t + \beta_1 \text{CU_treated}_i + \beta_2 \text{post}_t + \beta_3 \text{CU_treated}_i \times \text{post}_t \\ & + \beta_4 \log(1 + \text{jackpot_sales}_{it}) + \gamma X + \epsilon_i \end{aligned}$$

where cashwd_{it} is one plus the total amount of cash withdrawn at casinos by individuals in county i during month-year t (but focusing on sub-samples of transactions that occur early or late in the month), post_t is an indicator that equals one for dates after the introduction of Save-to-Win in January 2012, CU_treated_i is the number of credit unions that offer STW deposits and accounts, or in some specifications, an indicator variable for whether there is a credit union in county i that offers STW. For each specification, the cashwd_{it} variable is constructed for the sub-sample desired, and then winsorized at the 99th percentile to reduce sensitivities to extreme observations. For the construction of sub-samples, close is the sample of transactions by patrons within 120 miles of their home ZIP code, while far is the sample of transactions where the patron is more than 120 from his home ZIP code. The vector of control variables \mathbf{X} includes logged population and per capita income measures at the county-year level from the Bureau of Economic Analysis. Standard errors are clustered by county, and ***, **, and * indicate statistical significance at the one, five, and ten percent levels.

	Full Sample		Within-Nebraska Sample	
	(1)	(2)	(3)	(4)
post × # of participating CUs	-0.197*** (0.049)	-0.204*** (0.048)	-0.129* (0.067)	-0.137* (0.074)
$\log(\text{jackpot_sales})$		-0.373 (0.312)		-1.041 (1.554)
Month-Year FE	x	x	x	x
County FE	x	x	x	x
Dummy for Missing		x		
R^2	0.675	0.676	0.662	0.663
# of Counties	54	54	26	26
# of Months	26	26	26	26
N	1390	1390	629	629

Table A.8: Heterogeneity in the Effect of Prize-Linked Savings on Gambling Demand

Note: Panel (a) presents results from estimating the difference-in-difference specification using quantile regression while panel (b) presents estimates from the same specification using OLS, but measuring the dependent variable using varying within-county percentiles ($p \in \{0.2, 0.4, 0.5, 0.6, 0.8\}$):

$$\log(\text{cashwd}_{it}) = \gamma_s + \gamma_t + \beta_1 \text{CU_treated}_i + \beta_2 \text{post}_t + \beta_3 \text{CU_treated}_i \times \text{post}_t + \gamma X + \epsilon_i$$

where cashwd_{it} is one plus the total amount of cash withdrawn at casinos by individuals in county i during month-year t (but focusing on sub-samples of transactions that occur early or late in the month), post_t is an indicator that equals one for dates after the introduction of Save-to-Win in January 2012, CU_treated_i is the number of credit unions that offer STW deposits and accounts, or in some specifications, an indicator variable for whether there is a credit union in county i that offers STW. In the table, τ denotes the quantile at which the regression is estimated. The vector of control variables \mathbf{X} includes logged population and per capita income measures at the county-year level from the Bureau of Economic Analysis. ***, **, and * indicate statistical significance at the one, five, and ten percent levels.

	$\tau = 0.2$	$\tau = 0.3$	$\tau = 0.4$	$\tau = 0.5$	$\tau = 0.6$	$\tau = 0.7$	$\tau = 0.8$
post \times # of participating CUs	-0.097** (0.045)	-0.172*** (0.045)	-0.239*** (0.040)	-0.257*** (0.049)	-0.275*** (0.073)	-0.276*** (0.044)	-0.273*** (0.048)
Month-Year FE	x	x	x	x	x	x	x
# of Counties	54	54	54	54	54	54	54
# of Months	26	26	26	26	26	26	26
N	1390	1390	1390	1390	1390	1390	1390

(a) Quantile Regression on County-Month Aggregates

	$\tau = 0.2$	$\tau = 0.3$	$\tau = 0.4$	$\tau = 0.5$	$\tau = 0.6$	$\tau = 0.7$	$\tau = 0.8$
post \times # of participating CUs	-0.148*** (0.032)	-0.159*** (0.028)	-0.176*** (0.025)	-0.195*** (0.030)	-0.202*** (0.028)	-0.209*** (0.033)	-0.187*** (0.034)
N	7262	7262	7262	7262	7262	7262	7262

(b) Quantile Regression on Patron-Treatment-Level Aggregates

Table A.9: Participating Credit Unions Per Capita as an Alternative Measure of Treatment

Note: This table presents results from estimating the difference-in-difference specification:

$$\log(\text{cashwd}_{it}) = \gamma_s + \gamma_t + \beta_1 \text{CU_percap}_i + \beta_2 \text{post}_t + \beta_3 \text{CU_percap}_i \times \text{post}_t + \gamma \mathbf{X} + \epsilon_i$$

where cashwd_{it} is the total amount of cash withdrawn at casinos by individuals in county i during month-year t , post_t is an indicator that equals one for dates after the introduction of Save-to-Win in January 2012, CU_percap_i is the number of credit unions that offer STW deposits and accounts divided by the population in the county. The vector of control variables \mathbf{X} includes logged population and per capita income measures at the county-year level from the Bureau of Economic Analysis. The variable cashwd_{it} is winsorized at the 99th percentile to reduce sensitivities to extreme observations. Standard errors are clustered by county, and ***, **, and * indicate statistical significance at the one, five, and ten percent levels. (Z) indicates that the variable has been standardized to have a mean of zero and standard deviation of one for ease of interpretation.

	(1)	(2)	(3)
post × credit unions per capita (Z)	-0.101** (0.049)	-0.102** (0.050)	-0.143*** (0.053)
Month-Year FE		x	x
County FE			x
R^2	0.464	0.495	0.675
# of Counties	54	54	54
# of Months	26	26	26
N	1390	1390	1390

Table A.10: Patron-Level Evidence using Distance to Participating Credit Unions as Measure of Treatment

Note: Each observation in this table is a patron \times (before, after) treatment. This table presents results from estimating the difference-in-difference specification:

$$\log(\text{gambling_outcome}_{kt}) = \gamma_z + \beta_1 \text{post}_t + \beta_2 \log(\text{distance}_z) \times \text{post}_t + \gamma X + \epsilon_{kt}$$

where $\text{gambling_outcome}_{it}$ is either one plus the total amount of cash withdrawn at casinos by the patron k during treatment period t (transactions are aggregated before versus after treatment) or an indicator for whether the patron had any withdrawals during the treatment period t , γ_z are ZIP code fixed effects, post_t equals one post-treatment observations that were aggregated for transactions after the introduction of Save-to-Win in January 2012, distance_z is the distance between the centroid of patron k 's home ZIP code and either (a) the nearest branch of a participating credit union, (b) the nearest headquarters of a participating credit union, or (c) the average distance of the five closest participating credit union branches. For each specification, the cashwithdrawn_k variable is winsorized at the 99th percentile to reduce sensitivity to extreme observations. The estimates for logged withdrawal amount are constructed using the persistent sub-sample, which contains only patron \times treatment for which we observe pre and post observations. The estimates for the indicator for no withdrawals are constructed using a sample of patron transactions for which the patron was observed in the pre-period. The vector of control variables X includes logged population and per capita income measures at the county-year level from the Bureau of Economic Analysis interacted with the post-period. Standard errors are clustered by county, and ***, **, and * indicate statistical significance at the one, five, and ten percent levels.

	Logged Withdrawal Amount			Indicator for No Withdrawals		
	(1)	(2)	(3)	(4)	(5)	(6)
post \times log(distance)	0.148**			-0.036***		
...nearest branch	(0.051)			(0.006)		
post \times log(distance)		0.141*			-0.043***	
...nearest five branches		(0.071)			(0.008)	
post \times log(distance)			0.149**			-0.040***
...nearest headquarters			(0.063)			(0.009)
ZIP Code FE	x	x	x	x	x	x
R^2	0.149	0.147	0.148	0.480	0.480	0.480
# of ZIP Codes	482	482	482	653	653	653
N	7262	7262	7262	18728	18728	18728

Table A.11: The Effect of Prize-Linked Savings on Local and Non-Local Gambling Demand (Trends in Post-Period Effects)

Note: This table presents results from estimating the difference-in-difference specification:

$$\log(\text{cashwd}_{it}) = \gamma_s + \gamma_t + \beta_1 \text{CU_treated}_i + \beta_2 \text{post}_t + \beta_3 \text{CU_treated}_i \times \text{post}_t + \gamma X + \epsilon_i$$

where cashwd_{it} is one plus the total amount of cash withdrawn at casinos by individuals in county i during month-year t (but focusing on sub-samples of transactions that occur early or late in the month), post_t is an indicator that equals one for dates after the introduction of Save-to-Win in January 2012, CU_treated_i is the number of credit unions that offer STW deposits and accounts, or in some specifications, an indicator variable for whether there is a credit union in county i that offers STW. For each specification, the cashwd_{it} variable is constructed for the sub-sample desired, and then winsorized at the 99th percentile to reduce sensitivities to extreme observations. For the construction of sub-samples, close is the sample of transactions by patrons within 120 miles of their home ZIP code, while far is the sample of transactions where the patron is more than 120 from his home ZIP code. The vector of control variables X includes logged population and per capita income measures at the county-year level from the Bureau of Economic Analysis. Standard errors are clustered by county, and ***, **, and * indicate statistical significance at the one, five, and ten percent levels.

	<u>All Transactions</u>		<u>Close Transactions</u>		<u>Far Transactions</u>	
	(1)	(2)	(3)	(4)	(5)	(6)
# of participating CUs						
... × post (Jan - Mar)	-0.200*** (0.051)		-0.228** (0.089)		-0.082 (0.120)	
... × post (Apr - June)	-0.194*** (0.056)		-0.216* (0.124)		-0.044 (0.078)	
STW Accounts Available						
... × post (Jan - Mar)		-0.625*** (0.169)		-0.712** (0.282)		-0.400 (-0.428)
... × post (Apr - June)		-0.564** (0.225)		-0.814* (0.440)		0.038 (0.293)
Month-Year FE	x	x	x	x	x	x
County FE	x	x	x	x	x	x
R^2	0.676	0.676	0.831	0.831	0.553	0.553
# of Counties	54	54	54	54	54	54
# of Months	26	26	26	26	26	26
N	1390	1390	1390	1390	1390	1390

Table A.12: The Effect of the Availability of Prize-Linked Savings on Number of Transactions and Average Transaction Size

Note: This table presents OLS and instrumental variables results for the difference-in-difference specification:

$$\log(\text{gambling_activity}_{it}) = \gamma_s + \gamma_t + \beta_1 \text{CU_treated}_i + \beta_2 \text{post}_t + \beta_3 \text{CU_treated}_i \times \text{post}_t + \gamma X + \epsilon_i$$

where $\text{gambling_activity}_{it}$ is either one plus the number of cash withdrawal transactions (extensive margin) or one plus the average transaction amount (intensive margin, winsorizing at the 99th percentile) in county i during month-year t , post_t is an indicator that equals one for dates after the introduction of Save-to-Win in January 2012, CU_treated_i is the number of credit unions that offer STW deposits and accounts. The vector of control variables X includes logged population and per capita income measures at the county-year level from the Bureau of Economic Analysis. Standard errors are clustered by county, and ***, **, and * indicate statistical significance at the one, five, and ten percent levels.

	<u># of Transactions</u>		<u>Average Amount Withdrawn</u>	
	(1)	(2)	(3)	(4)
post × # of participating CUs	-0.084*** (0.023)	-0.089*** (0.024)	-0.095 (0.069)	-0.117 (0.072)
# of participating CUs	-0.104 (0.100)		-0.000 (0.027)	
Month-Year FE	x	x	x	x
County FE		x		x
R^2	0.533	0.836	0.248	0.352
# of Counties	54	54	54	54
# of Months	26	26	26	26
N	1390	1390	1390	1390

Table A.13: Differential Effects by Self-Control, Economic Conditions, and Education

Note: This table presents results from estimating the triple-difference specification:

$$\log(\text{cashwd}_{it}) = \gamma_s + \gamma_t + \beta_1 \text{CU_treated}_i \times \text{post}_t + \beta_2 \text{CU_treated}_i \times \text{post}_t \times \text{characteristic}_i + \gamma X + \epsilon_i$$

where cashwd_{it} is one plus the total amount of cash withdrawn at casinos by individuals in county i during month-year t , or the fraction of transactions where the patron used a credit card for cash in county i and month-year t , post_t is an indicator that equals one for dates after the introduction of Save-to-Win in January 2012, CU_treated_i is the number of credit unions that offer STW deposits and accounts, and characteristic_i is one of two indicators of self-control: (1) fraction of credit card transactions in the county-month, and (2) fraction of insufficient funds transactions. The vector of control variables X includes logged population and per capita income measures at the county-year level from the Bureau of Economic Analysis. (Z) indicates that the variable has been standardized to have a mean of zero and a standard deviation of one for ease of interpretation. Standard errors are clustered by county, and ***, **, and * indicate statistical significance at the one, five, and ten percent levels.

	(1)	(2)	(3)	(4)
post × # of participating CUs	-0.173*** (0.061)	-0.059 (0.052)	-0.196*** (0.047)	-0.055 (0.044)
... × % Credit Card (Z)	0.156** (0.070)	0.133** (0.064)		
... × % Insufficient Funds (Z)			0.157** (0.047)	0.119** (0.064)
... × % Emp-Pop Ratio (Z)		-0.206*** (0.065)		-0.281*** (0.064)
Month-Year FE	x	x	x	x
County FE	x	x	x	x
R^2	0.687	0.689	0.682	0.686
# of Counties	54	54	54	54
# of Months	26	26	26	26
N	1390	1390	1390	1390

(a) Differential Effects by Self-Control and Economic Conditions

	(1)	(2)	(3)	(4)
post × # of participating CUs	-0.198*** (0.045)	-0.061 (0.052)	-0.170* (0.088)	-0.151** (0.074)
... × % Attended College (Z)	0.012 (0.068)	-0.007 (0.054)		
... × % High School Graduates (Z)			0.000 (0.051)	-0.116** (0.058)
... × % Emp-Pop Ratio (Z)		-0.269*** (0.075)		-0.215*** (0.073)
Month-Year FE	x	x	x	x
County FE	x	x	x	x
R^2	0.676	0.680	0.676	0.680
# of Counties	54	54	54	54
# of Months	26	26	26	26
N	1390	1390	1390	1390

(b) Differential Effects by Education and Economic Conditions

Table A.14: The Effect of Prize-Linked Savings on Local and Non-Local Gambling Demand

Note: This table presents results from estimating the difference-in-difference specification:

$$\log(\text{cashwd}_{it}) = \gamma_s + \gamma_t + \beta_1 \text{CU_treated}_i + \beta_2 \text{post}_t + \beta_3 \text{CU_treated}_i \times \text{post}_t + \gamma X + \epsilon_i$$

where cashwd_{it} is one plus the total amount of cash withdrawn at casinos by individuals in county i during month-year t (but focusing on sub-samples of transactions that occur close versus far from the patron's home ZIP code), post_t is an indicator that equals one for dates after the introduction of Save-to-Win in January 2012, CU_treated_i is the number of credit unions that offer STW deposits and accounts, or in some specifications, an indicator variable for whether there is a credit union in county i that offers STW. For each specification, the cashwd_{it} variable is constructed for the sub-sample desired, and then winsorized at the 99th percentile to reduce sensitivities to extreme observations. For the construction of sub-samples, close is the sample of transactions by patrons within 120 miles of their home ZIP code, while far is the sample of transactions where the patron is more than 120 from his home ZIP code. The vector of control variables X includes logged population and per capita income measures at the county-year level from the Bureau of Economic Analysis. Standard errors are clustered by county, and ***, **, and * indicate statistical significance at the one, five, and ten percent levels.

	<u>Close Transactions</u>		<u>Far Transactions</u>	
	(1)	(2)	(3)	(4)
post × # of participating CUs	-0.222** (0.101)		-0.063 (0.086)	
post × STW Accounts Available		-0.763** (0.349)		-0.219 (0.315)
Month-Year FE	x	x	x	x
County FE	x	x	x	x
R^2	0.831	0.831	0.553	0.553
# of Counties	54	54	54	54
# of Months	26	26	26	26
N	1390	1390	1390	1390

Table A.15: The Effect of Prize-Linked Savings on Demand at Differentiated and Undifferentiated Casinos

Note: This table presents results from estimating the difference-in-difference specification:

$$\log(\text{cashwd}_{it}) = \gamma_s + \gamma_t + \beta_1 \text{CU_treated}_i + \beta_2 \text{post}_t + \beta_3 \text{CU_treated}_i \times \text{post}_t + \gamma X + \epsilon_i$$

where cashwd_{it} is one plus the total amount of cash withdrawn at casinos by individuals in county i during month-year t (but focusing on sub-samples of transactions that occur at casinos with/without nightlife), post_t is an indicator that equals one for dates after the introduction of Save-to-Win in January 2012, CU_treated_i is the number of credit unions that offer STW deposits and accounts, or in some specifications, an indicator variable for whether there is a credit union in county i that offers STW. For each specification, the cashwd_{it} variable is constructed for the sub-sample desired, and then winsorized at the 99th percentile to reduce sensitivities to extreme observations. For the construction of sub-samples, transactions are split on the basis of whether the casino has or does not have nightlife. The vector of control variables \mathbf{X} includes logged population and per capita income measures at the county-year level from the Bureau of Economic Analysis. Standard errors are clustered by county, and ***, **, and * indicate statistical significance at the one, five, and ten percent levels.

	Casinos without Nightlife		Casinos with Nightlife	
	(1)	(2)	(3)	(4)
post × # of participating CUs	-0.291** (0.098)		0.044 (0.098)	
post × STW Accounts Available		-0.855** (0.324)		0.335 (0.281)
Month-Year FE	x	x	x	x
County FE	x	x	x	x
R^2	0.526	0.526	0.528	0.528
# of Counties	54	54	54	54
# of Months	26	26	26	26
N	1390	1390	1390	1390

Table A.16: Calendar Timing of the Effect of Prize-Linked Savings on Gambling Demand

Note: This table presents results from estimating the difference-in-difference specification:

$$\log(\text{cashwd}_{it}) = \gamma_s + \gamma_t + \beta_1 \text{CU_treated}_i + \beta_2 \text{post}_t + \beta_3 \text{CU_treated}_i \times \text{post}_t + \gamma \mathbf{X} + \epsilon_i$$

where cashwd_{it} is one plus the total amount of cash withdrawn at casinos by individuals in county i during month-year t (but focusing on sub-samples of transactions that occur early or late in the month), post_t is an indicator that equals one for dates after the introduction of Save-to-Win in January 2012, CU_treated_i is the number of credit unions that offer STW deposits and accounts, or in some specifications, an indicator variable for whether there is a credit union in county i that offers STW. For each specification, the cashwd_{it} variable is constructed for the sub-sample desired, and then winsorized at the 99th percentile to reduce sensitivities to extreme observations. For the construction of sub-samples, week 1 is days 1 through 7, first half is days 1 through 15, second half is days 16 through the end of the month, and Week 4 is days 22 through the end of the month. The vector of control variables \mathbf{X} includes logged population and per capita income measures at the county-year level from the Bureau of Economic Analysis. Standard errors are clustered by county, and ***, **, and * indicate statistical significance at the one, five, and ten percent levels.

	Week 1	First Half	Second Half	Week 4
post × # of participating CUs	-0.157 (0.113)	-0.150* (0.081)	-0.223*** (0.071)	-0.239*** (0.083)
Month-Year FE	x	x	x	x
County FE	x	x	x	x
R^2	0.401	0.453	0.480	0.439
# of Counties	54	54	54	54
# of Months	26	26	26	26
N	1390	1390	1390	1390