Demographic Survey of Texas Lottery Players 2013





November 2013

TABLE OF CONTENTS

List of Figures	ii
List of Tables	iv
Executive Summary	1
I. Introduction and Method of Analysis	6
II. Sample Characteristics	8
III. Game Findings	14
a. Any Game Results b. Pick 3 Day Results	20
c. Cash 5 Results d. Lotto Texas Results e. Extra! Feature with Lotto Texas Results	31
f.Texas Lottery Scratch-Off Tickets Results g. Texas Two Step Results	40
h. Mega Millions Results i. Megaplier Feature with Mega Millions Results	50
j. Powerball Results k. Power Play Feature with Powerball Results	60
I. All or Nothing Results	
IV. Summary	74
Appendix	75
Notes	78



LIST OF FIGURES

Figure 1	Percentage of Respondents Playing Any Lottery Game	14
Figure 2	Percentage of Past-Year Players Playing Pick 3 Day	20
Figure 3	Frequency of Purchasing Pick 3 Day Tickets	21
Figure 4	Years Playing Pick 3 Day	25
Figure 5	Percentage of Past-Year Players Playing Cash 5	26
Figure 6	Frequency of Purchasing Cash 5 Tickets	27
Figure 7	Years Playing Cash 5	30
Figure 8	Percentage of Past-Year Players Playing Lotto Texas	31
Figure 9	Frequency of Purchasing Lotto Texas Tickets	32
Figure 10	Years Playing Lotto Texas	35
Figure 11	Frequency of Purchasing Extra! Feature with Lotto Texas	36
Figure 12	Percentage of Past-Year Players Playing Texas Lottery Scratch-Off	
	Tickets	40
Figure 13	Frequency of Purchasing Texas Lottery Scratch-Off Tickets	41
Figure 14	Years Playing Texas Lottery Scratch-Off Games	44
Figure 15	Percentage of Past-Year Players Playing Texas Two Step	45
Figure 16	Frequency of Purchasing Texas Two Step Tickets	46
Figure 17	Years Playing Texas Two Step	49
Figure 18	Percentage of Past-Year Players Playing Mega Millions	50
Figure 19	Frequency of Purchasing Mega Millions Tickets	51
Figure 20	Years Playing Mega Millions	54
Figure 21	Percentage of Past-Year Players Purchasing Megaplier Feature with	
	Mega Millions Tickets	55
Figure 22	Frequency of Purchasing Megaplier Feature with Mega Millions Tickets	56
Figure 23	Years Purchasing Megaplier Feature with Mega Millions Tickets	59
Figure 24	Frequency of Purchasing Powerball Tickets	60
Figure 25	Years Playing Powerball	64



LIST OF FIGURES (CONTINUED)

Figure 26	Frequency of Purchasing Power Play Feature with Powerball Tickets	65
Figure 27	Years Purchasing Power Play Feature with Powerball Tickets	69
Figure 28	Frequency of Purchasing All or Nothing Tickets	70



LIST OF TABLES

Table 1	Demographic Survey – Highlights of Key Findings	4
Table 2	Demographics	9
Table 3	Any Game: Past-Year Lottery Play and Median Dollars Spent per Month by Demographics	ר 15
Table 4	Participation and Dollars Spent by Lottery Sales District	17
Table 5	Number and Percentage of Respondents Playing by Game/Feature	19
Table 6	Average Number of Times Played Pick 3 Day	21
Table 7	Dollars Spent on Pick 3 Day	22
Table 8	Pick 3 Day: Lottery Play and Median Dollars Spent per Month by Past-Year Player Demographics	23
Table 9	Average Number of Times Played Cash 5	27
Table 10	Dollars Spent on Cash 5	28
Table 11	Cash 5: Lottery Play and Median Dollars Spent per Month by Past-Year Player Demographics	29
Table 12	Average Number of Times Played Lotto Texas	32
Table 13	Dollars Spent on Lotto Texas	33
Table 14	Lotto Texas: Lottery Play and Median Dollars Spent per Month by Past-Year Player Demographics	34
Table 15	Average Number of Times Purchased Extra! Feature with Lotto Texas	37
Table 16	Dollars Spent on Extra! Feature with Lotto Texas	37
Table 17	Extra! Feature with Lotto Texas: Lottery Play and Median Dollars Spent per Month by Past-Year Player Demographics	38
Table 18	Average Number of Times Played Texas Lottery Scratch-Off Tickets	41
Table 19	Dollars Spent on Texas Lottery Scratch-Off Tickets	42
Table 20	Texas Lottery Scratch-Off Tickets: Lottery Play and Median Dollars Spent per Month by Past-Year Player Demographics	43
Table 21	Average Number of Times Played Texas Two Step	46
Table 22	Dollars Spent on Texas Two Step	47
Table 23	Texas Two Step: Lottery Play and Median Dollars Spent per Month by Past-Year Player Demographics	48
Table 24 Table 25	Average Number of Times Played Mega Millions Dollars Spent on Mega Millions	51 52



LIST OF TABLES (CONTINUED)

Table 26	Mega Millions: Lottery Play and Median Dollars Spent per Month by Past-Year Player Demographics	53
Table 27	Average Number of Times Purchased Megaplier Feature with Mega Millions	56
Table 28 Table 29	Dollars Spent on Megaplier Feature with Mega Millions Megaplier Feature with Mega Millions: Lottery Play and Median Dollars Spent per Month by Past-Year Player Demographics	57 58
Table 30	Average Number of Times Played Powerball	61
Table 31	Dollars Spent on Powerball	61
Table 32	Powerball: Lottery Play and Median Dollars Spent per Month by Past-Year Player Demographics	63
Table 33	Average Number of Times Purchased Power Play Feature with Powerball	66
Table 34 Table 35	Dollars Spent on Power Play Feature with Powerball Power Play Feature with Powerball: Lottery Play and Median Dollars	66
	Spent per Month by Past-Year Player Demographics	68
Table 36	Average Number of Times Played All or Nothing	71
Table 37	Dollars Spent on All or Nothing	71
Table 38	All or Nothing: Lottery Play and Median Dollars Spent per Month by Past-Year Player Demographics	73
Table A	Sample Population by Texas County	75
Table B	Counties by Lottery Sales District	77



EXECUTIVE SUMMARY

The Texas Lottery Commission 2013 Demographic Study of Texas Lottery Players surveyed a total of 1,695 Texas citizens aged 18 years and older between June and August of 2013. The survey respondents included both past-year players (who had played any Texas Lottery game in the past year) and non-players (who had not played any Texas Lottery game in the past year.) The percentage of respondents playing any Texas Lottery game (the participation rate) for 2013 was 36.5 percent, which was almost the same as the participation rate reported in 2012 (36.2 percent). This small difference between 2012 and 2013 was statistically not significant.¹ The 2013 participation rate was consistent with the findings in recent years of the low percentages of the respondents playing any Texas Lottery game. In fact, five out of the seven survey reports since 2007 recorded participation rates of lower than 40 percent. There were statistically significant differences between the past-year players and the non-players in 2013 with regard to employment status, gender and Hispanic origin. Among the past-year players in 2013, the differences in the percent playing any game with regard to demographics were found to be statistically significant by income, gender and employment status. Compared to 2012, lottery games of Pick 3 Day, Cash Five, Texas Two Step, and Mega Millions and its add-on feature Megaplier recorded a decline in their respective participation rate this year. On the other hand, Lotto Texas, Scratch-Off tickets, and Powerball and its add-on feature Power Play reported an increase in the percent of the respondents playing the game or feature. A new game, All or Nothing, and a new add-on feature to Lotto Texas, called Extral, were also included in this year's report. Of all the Texas Lottery games, Lotto Texas remained the most popular choice among the past-year players in 2013. The lottery sales district with the highest participation rate in any Texas Lottery game in 2013 was El Paso (48.9 percent), while Tyler sales district recorded the lowest participation rate of 30.6 percent.

Highlights

The following are some key findings of the 2013 survey on participation rates and personal expenditures in any Texas Lottery games/features (see Table 1):

- Lotto Texas remained the most popular Texas Lottery game in 2013: as many as 73.0 percent of past-year players had played the game.
- Powerball recorded the largest increase in participation rate between 2012 and 2013 among all Texas Lottery games/features of 19.0 percentage points.
- The new Extra! Feature with Lotto Texas proved to be highly popular too: 45.16 percent of the weekly past-year players selected it at least once a week; 54.84 percent of the monthly past-year players chose it at least once a month.
- Texas Two Step recorded the highest average number of times played per week (3.83 times) among all games/features by past-year players. Scratch-Off tickets, on the other hand, had the highest average number of times played per month (6.01 times) by past-year players.
- Among all the Texas Lottery games/features in 2013, Extra! Feature with Lotto Texas recorded the highest average spent per play of \$10.55 by past-year players.

¹ All statistical tests reported in this report yield a margin of error of +/- 2.4 percent at the 95 percent confidence level.



A brief summary of participation rates by game and add-on feature is given below.

Note: Some games and add-on features had recorded very low participation rates (between 0.5 percent and 3.0 percent). We did not include statistical analyses for these games and features because their sample sizes were too small to give any statistically meaningful information. Games and features that had an insufficient sample size include: Pick 3 Night, Sum It Up Feature with Pick 3 Day, Sum It Up Feature with Pick 3 Night, Daily 4 Day, Sum It Up Feature with Daily 4 Day, Daily 4 Night, and Sum It Up Feature with Daily 4 Night. Data for these games and features can be made available upon written request to the Texas Lottery Commission.

Pick 3 Day: Approximately eighteen percent (17.8) of the past-year lottery players (n=618) had played Pick 3 Day in 2013. This was six percentage points (6.2) lower than the previous year. Nearly thirty percent (29.09) of the respondents who purchased Pick 3 Day tickets purchased them at least once a week, and more than half (51.82 percent) of the respondents purchased them a few times a year. Pick 3 Day players spent an average of \$7.62 per play.

<u>Cash 5</u>: Slightly more than twenty percent (21.2) of the past-year lottery players had played Cash 5. Among these past-year players, one-quarter (25.95 percent) purchased Cash 5 tickets at least once a week. Another 20.61 percent purchased tickets at least once a month. Cash 5 players spent an average of \$5.79 per play.

Lotto Texas: Consistent with the results of the previous year, Lotto Texas was the most popular Texas Lottery game in 2013: 73.0 percent of past-year players had played Lotto Texas. Among them, thirty percent (30.38) of respondents that purchased Lotto Texas tickets purchased them at least once a week. About half (48.56 percent) of Lotto Texas players indicated having purchased the tickets a few times a year. Lotto Texas players spent an average of \$6.01 per play.

Extra! Feature with Lotto Texas: This is a new add-on feature to Lotto Texas introduced in 2013, with five percent (5.0) of past-year lottery players indicating that they had selected Extra! feature.

<u>Texas Lottery Scratch-Off Tickets</u>: This was the second most popular Texas Lottery product among past-year players, with 61.0 percent of the respondents reporting that they had played Texas Lottery Scratch-Off games. Thirty percent (29.18) of respondents who bought Scratch-Offs tickets reported that they purchased them at least once a week. Another 26.79 percent purchased the tickets at least once a month. On average, Texas Lottery Scratch-Off games players spent \$7.88 per play.

<u>Texas Two Step</u>: Twelve percent (12.1) of past-year lottery players had played Texas Two Step in 2013. A total of 37.33 percent of Texas Two Step players purchased tickets for the game at least once a week. Players of Texas Two Step spent an average of \$4.09 per play.

Mega Millions: About sixty percent (58.7) of past-year lottery players had played Mega Millions. It was the third most popular Texas Lottery game among the players in 2013. A total of 18.73 percent of the respondents reported that they purchased Mega Millions tickets at least once a week. Exactly the same proportion of the respondents purchased the tickets at least once a month. On average, Mega Millions players spent \$6.11 per play.



<u>Megaplier Feature with Mega Millions</u>: About sixteen percent (15.7) of past-year lottery players had included Megaplier in their Mega Millions play. Among them, 20.62 percent reported having purchased the add-on feature at least once a week. Megaplier players spent an average of \$6.40 per play.

Powerball: Over half (53.9) of past-year lottery players indicated that they played Powerball, a drastic increase of nineteen percentage points (19.0) over the previous year. Seventeen percent (17.42) of the respondents who purchased Powerball tickets purchased them at least once a week. About two-thirds (65.47 percent) of the respondents indicated having purchased Powerball tickets a few times a year. Powerball players spent an average of \$6.27 per play.

Power Play Feature with Powerball: Twelve percent (12.0) of past-year lottery players indicated that they included Power Play with their Powerball ticket purchases. This rate was five percentage points (5.3) higher than in 2012. Twenty percent (20.27) of the respondents that purchased Power Play purchased it at least once a week. Power Play players spent an average of \$5.92 per play.

<u>All or Nothing</u>: This is a new Texas Lottery game in 2013. Slightly more than nine percent (9.2) of past-year lottery players indicated that they had played All or Nothing.



Table 1 Demographic Survey – Highlights of Key Findings

			Frequency of Purchase		Average Number of Times Played (Past-year Players)			
Game/Feature ¹	2013 Participation Rate	Change in Rate from 2012	At Least Once a Week	At Least Once a Month	Per Week	Per Month	Average Spent Per Play	Page Results Begin
Pick 3 Day	17.8%	-6.2	29.09%	19.09%	2.12	5.76	\$7.62	20
Cash 5	21.2%	-2.3	25.95%	20.61%	1.84	4.55	\$5.79	26
Lotto Texas	73.0%^	1.1	30.38%	21.06%	1.50	5.69	\$6.01	31
Extra! Feature with Lotto Texas	5.0%	N.A.	45.16%^	54.84%^	1.67	3.27	\$10.55^	36
Scratch-Offs	61.0%	2.6	29.18%	26.79%	2.04	6.01^	\$7.88	40
Texas Two Step	12.1%	-2.2	37.33%	17.33%	3.83^	4.90	\$4.09	45
Mega Millions	58.7%	-3.5	18.73%	18.73%	1.33	3.09	\$6.11	50
Megaplier Feature with Mega Millions	15.7%	-3.1	20.62%	14.43%	1.75	2.95	\$6.40	55
Powerball	53.9%	19.0^	17.42%	17.12%	1.41	3.75	\$6.27	60
Power Play Feature with Powerball	12.0%	5.3	20.27%	14.86%	1.91	3.64	\$5.92	65
All or Nothing	9.2%	N.A.	26.32%	10.53%	1.82	5.89	\$4.71	70

Add-on features with participation rates of 1.0 percent or below are excluded from the table. The highest value in the column among all the games and features.



Testing differences in lottery participation and expenditure from 2012 to 2013

In addition to the basic results that ensured continuity of information and presentation of prior studies, the 2013 study provides statistical tests of *differences in lottery participation and individual expenditures from 2012 to 2013*. The report highlights these differences for general participation rates and for the individual lottery games separately. Comparing 2013 survey results with those from 2012, we found that there were statistically significant differences in the percent playing any game between 2012 and 2013 for the following individual games: Pick 3 Day, Powerball, and the Power Play Feature with Powerball.¹



I. INTRODUCTION AND METHOD OF ANALYSIS

A random survey of adult Texas residents aged 18 and older was conducted during June to August of 2013. The objectives were to measure the citizen participation rates, the distribution and frequency of play, and the demographic profiles of past-year lottery players and non-players.

On behalf of the Texas Lottery Commission, the data collection and analysis was prepared under the auspices of the Hobby Center for Public Policy (HCPP) (<u>http://www.uh.edu/class/hcpp/index.php</u>). The individuals who worked on this study are listed in alphabetical order:

Diana Benitez Renée Cross Veronica Caro Gonzalez Jim Granato Cong Huang Chris Mainka Lauren Neely Kwok-Wai Wan Ching-Hsing Wang

The random digit dialing sampling method (RDD) was used in the survey because it provides the best coverage of active telephone numbers and reduces sample bias.

The RDD method ensures the following:

- The conceptual frame and sampling frame match;
- The sample includes unlisted telephone numbers;
- The sampling frame is current, thus maximizing the probability that new residents are included; and
- There is comparability between land line surveys and surveys of cell phone users.

Research The Hobby Center for Public Policy's Survey Institute (SRI) (http://www.uh.edu/class/hcpp/research/polling/index.php) fielded 1,701 telephone interviews. Of these, two (2) respondents answered "don't know," and another four (4) refused to answer, to the first question, "Have you played any of the Texas Lottery games in the past year?" These respondents, per the survey instrument design, were not asked any further questions on lottery play and were only read questions about their demographic status. Accordingly, these six (6) individuals were not used for the analyses we report below. This process resulted in a total of 1,695 usable interviews of self-reported players and non-players. They yielded a margin of error of +/- 2.4 percent at the 95 percent confidence level. The data for the survey were collected between June 10th and August 5th, 2013. Note that in some cases, the subset samples will be small and this can create high volatility in some results in those categories. The subset proportions are an approximation of the overall population; however, the relatively small size of subsets can allow outliers to "bias" results when using the mean. We alert the reader to the influence of outliers throughout the report.



The standard SRI survey administration and management protocols include:

- Trained telephone interviewers are used to conduct the survey.
- Each interviewer completes intensive general training. The purposes of general training are to ensure that interviewers understand and practice all of the basic skills needed to conduct interviews and that they are knowledgeable about standard interviewing conventions.
- Following the usual administration and management protocols, the interviewers also participate in a specific training session for the project.
- Interviewers practice administering the survey to become familiar with the questions.

The Texas Lottery Commission provided a survey instrument designed to collect demographic data on adult Texans. The survey included past-year players and non-players and measured lottery participation rates, the frequency of lottery participation, and lottery spending patterns. The survey instrument used by the HCPP was consistent with those used in previous years.

The major change from surveys prior to 2007 is the addition of cell phone users as part of the overall sample. Previous annual studies of lottery players and non-players in Texas have utilized the standard methodology for conducting random digit dial (RDD) surveys. This method entails calling residential telephone numbers (landlines) randomly selected from a list of working numbers in homes that are not business lines. Because RDD sampling includes *unlisted* residential numbers, it is considered superior to methods that rely on published telephone numbers in generating samples. However, with the rapid increase in cell phone usage, traditional RDD sampling has been increasingly questioned because more and more individuals are exclusive users of cellular phones and therefore are excluded from RDD surveys that rely on traditional methods. With estimates of non-landline phone users now ranging up to almost 30 percent, sample bias in standard RDD polling is a major issue in the field.

To address this potential problem, Survey Sampling Inc., the largest RDD sample vendor in the United States, began selling cell phone samples to supplement traditional sets of numbers. The SRI took advantage of this capacity and bought a cell phone sub-sample of numbers for the 2013 Texas Lottery Study in addition to the standard statewide RDD sample. The data included in this report are based on 902 (53.25 percent) completed interviews on standard landlines and 792 (46.75 percent) completed interviews from the cell phone sample.² This combination, in our judgment, improves the quality of the overall data by including individuals who might be excluded using traditional sampling methods.³



II. SAMPLE CHARACTERISTICS⁴

Selected questions for each lottery game were cross-tabulated with the following seven demographic categories:

- Income
- Employment status
- Years of education
- Age of respondent
- Gender of respondent
- Race/ethnicity of respondent
- Hispanic origin

In the social sciences, the distribution of outcomes often varies in terms of the categories of analysis of interest. Throughout this analysis, we will test to determine whether changes or differences between categories or groups are due to random chance. Traditional tests for statistical "significance" are used to test for differences between past-year players and non-players or for differences among past-year players (by demographic category). Specifically, we use standard *t* tests on the "equality of means." Note also that discussions of statistical "significance" reflect a classical statistical (or "frequentist") tradition. "Level" of statistical significance (denoted by a p value) has to do with the probability that what is observed differs from the null hypothesis (of no relation or no difference). In the classical tradition a p value of 0.05 indicates that in, say, 100 repeated samples, the value realized would fall within a given interval 95 out of 100 samples. Extending this relation, a p value of .01 means that the result would fall within a pre-specified interval in over 99 out of 100 samples. The closer the p value is to zero the stronger the finding.



Table 2Demographics: Summary for Income, Employment, Home Ownership, and Age

	Number and Percentage Responding			
Demographic Factors	All (n=1,695)	Past-Year Players (n=618)	Non-Players (n=1,077)	
Year ⁵				
2013	1,695 (100%)	618 (36.46%)	1,077 (63.54%)	
2012	1,702 (100%)	616 (36.19%)	1,086 (63.81%)	
2011	1,697 (100%)	687 (40.48%)	1,010 (59.52%)	
Income	n=919 (100%)	n=371 (100%)	n=548 (100%)	
Less than \$12,000	72 (7.83%)	22 (5.93%)	50 (9.12%)	
Between \$12,000 and \$19,999	90 (9.79%)	33 (8.89%)	57 (10.40%)	
Between \$20,000 and \$29,999	96 (10.45%)	41 (11.05%)	55 (10.04%)	
Between \$30,000 and \$39,999	70 (7.62%)	28 (7.55%)	42 (7.66%)	
Between \$40,000 and \$49,999	67 (7.29%)	35 (9.43%)	32 (5.84%)	
Between \$50,000 and \$59,999	82 (8.92%)	38 (10.24%)	44 (8.03%)	
Between \$60,000 and \$74,999	78 (8.49%)	31 (8.36%)	47 (8.58%)	
Between \$75,000 and \$100,000	126 (13.71%)	56 (15.09%)	70 (12.77%)	
More than \$100,000	238 (25.90%)	87 (23.45%)	151 (27.55%)	
Employment Status**	n=1,673 (100%)	n=614 (100%)	n=1,059 (100%)	
Employed Full-time	731 (43.69%)	300 (48.86%)	431 (40.70%)	
Employed Part-time	82 (4.90%)	27 (4.40%)	55 (5.19%)	
Unemployed/Looking for Work	89 (5.32%)	24 (3.91%)	65 (6.14%)	
Not in Labor Force	105 (6.28%)	35 (5.70%)	70 (6.61%)	
Retired	666 (39.81%)	228 (37.13%)	438 (41.36%)	
Own or Rent Home	n=1,657 (100%)	n=607 (100%)	n=1,050 (100%)	
Own	1,330 (80.27%)	486 (80.07%)	844 (80.38%)	
Rent	269 (16.23%)	100 (16.47%)	169 (16.10%)	
Occupied without Payment	58 (3.50%)	21 (3.46%)	37 (3.52%)	
Age of Respondent	n=1,531 (100%)	n=578 (100%)	n=953 (100%)	
18 to 24	90 (5.88%)	19 (3.29%)	71 (7.45%)	
25 to 34	135 (8.82%)	43 (7.44%)	92 (9.65%)	
35 to 44	153 (9.99%)	63 (10.90%)	90 (9.44%)	
45 to 54	247 (16.13%)	103 (17.82.%)	144 (15.11%)	
55 to 64	324 (21.16%)	148 (25.61.%)	176 (18.47%)	
65 and over	582 (38.01%)	202 (34.95%)	380 (39.87%)	

Note: ** p < 0.01, two-tailed test. There was statistically significant difference between players and non-players regarding the distribution by employment status (p < 0.01) of the respondents.



Table 2 (continued) Demographics: Summary for Marital Status, Children, Gender, and Race/Ethnicity

Number and Percentage Respo			sponding
Demographic Factors	All (n=1,695)	Past-Year Players (n=618)	Non-Players (n=1,077)
Marital Status	n=1,667 (100%)	n=613 (100%)	n=1,054 (100%)
Married	1028 (61.67%)	378 (61.66%)	650 (61.67%)
Widowed	200 (12.00%)	67 (10.93%)	133 (12.62%)
Divorced	174 (10.44%)	82 (13.38%)	92 (8.73%)
Separated	20 (1.20%)	7 (1.14%)	13 (1.23%)
Never Married	245 (14.70%)	79 (12.89%)	166 (15.75%)
Children under 18 Living in Household	n=1,631 (100%)	n=604(100%)	n=1,027 (100%)
Yes	408 (25.02%)	143 (23.68%)	265 (25.80%)
No	1,223 (74.98%)	461 (76.32%)	762 (74.20%)
Number of Children under 18 Living in Household	n=409 (100%)	n=143 (100%)	n=266 (100%)
1	173 (42.30%)	61 (42.66%)	112 (42.11%)
2	133 (33.25%)	50 (34.97%)	86 (32.33%)
3	60 (14.67%)	18 (12.59%)	42 (15.79%)
4 or more	39 (9.54%)	14 (9.79%)	25 (9.40%)
Gender of Respondent ***	n=1,686(100%)	n=615 (100%)	n=1,071 (100%)
Male	764 (45.31%)	315 (51.22%)	449 (41.92%)
Female	922 (54.69%)	300 (48.78%)	622 (58.08%)
Race	n=1,633 (100%)	n=601 (100%)	n=1,032 (100%)
White	1,081 (66.20%)	396 (65.89%)	685 (66.38%)
Black	221 (13.53%)	76 (12.65%)	145 (14.05%)
Hispanic	252 (15.43%)	105 (17.47%)	147 (14.24%)
Asian	37 (2.27%)	11 (1.83%)	26 (2.52%)
Native American Indian	15 (0.92%)	6 (1.00%)	9 (0.87%)
Other	27 (1.65%)	7 (1.16%)	20 (1.94%)
Hispanic Origin*	n=1,652 (100%)	n=606 (100%)	n=1,046 (100%)
Yes	277 (16.77%)	116 (19.14%)	161 (15.39%)
No	1,375 (83.23%)	490 (80.86%)	885 (84.61%)

Note: * p < 0.05, *** p < 0.001, two-tailed test. There were statistically significant differences between players and non-players regarding the distribution by gender (p < 0.001) and Hispanic Origin (p < 0.05) of the respondents.



Table 2 (continued)Demographics: Summary for Education and Occupation

	Number and Percentage Responding			
Demographic Factors	All (n=1,695)	Past-Year Players (n=618)	Non-Players (n=1,077)	
Education	n=1,672 (100%)	n=611 (100%)	n=1,061 (100%)	
Less than High School	99 (5.92%)	24 (3.93%)	75 (7.07%)	
High School Graduate/GED	405 (24.22%)	158 (25.86%)	247 (23.28%)	
Some College, no degree	383 (22.91%)	151 (24.71%)	232 (21.87%)	
College Degree	467 (27.93%)	179 (29.30%)	288 (27.14%)	
Graduate/Professional Degree	318 (19.02%)	99 (16.20%)	219 (20.64%)	
Occupation	n=1,541 (100%)	n=578 (100%)	n=963 (100%)	
Executive, Administrative, and Managerial	195 (12.65%)	77 (13.32%)	118 (12.25%)	
Professional Specialty	585 (37.96%)	212 (36.68%)	373 (38.73%)	
Technicians and Related Support	170 (11.03%)	63 (10.90%)	107 (11.11%)	
Sales	158 (10.25%)	56 (9.69%)	102 (10.59%)	
Administrative Support, Clerical	86 (5.58%)	36 (6.23%)	50 (5.19%)	
Private Household	74 (4.80%)	23 (3.98%)	51 (5.30%)	
Protective Service	30 (1.95%)	9 (1.56%)	21 (2.18%)	
Service	132 (8.57%)	46 (7.96%)	86 (8.93%)	
Precision Productions, Craft, and Repair	9 (0.58%)	4 (0.69%)	5 (0.52%)	
Machine Operators, Assemblers, and Inspectors	32 (2.08%)	16 (2.77%)	16 (1.66%)	
Transportation and Material Moving	26 (1.69%)	14 (2.42%)	12 (1.25%)	
Equipment Handlers, Cleaners, Helpers, and Laborers	13 (0.84%)	8 (1.38%)	5 (0.52%)	
Farming, Forestry, Fishing	14 (0.91%)	6 (1.04%)	8 (0.83%)	
Armed Forces	17 (1.10%)	8 (1.38%)	9 (0.93%)	

• Table 2 indicates that thirty-six percent (36.46) of all survey respondents reported that they participated in any of the Texas Lottery games in 2013. This slight increase in the participation rate over the previous year's 36.19 percent was statistically not significant.

Among the demographic factors, there was a statistically significant difference between past-year players and non-players with respect to employment status in 2013, as there was in 2012. Slightly below half (48.86 percent) of the past-year players were employed full-time, as compared to the larger proportion (52.87 percent) recorded last year (a decrease of 4.01 percentage points). The next-largest group was retirees, who constituted 37.13 percent of the past-year players, which was 10.36 percentage points higher than in 2012 (26.77 percent). As in the previous year, the employment status of past-year players who were unemployed or looking for work was the lowest proportion, four percent (3.91).



- In contrast to 2012, the difference in participation by gender was statistically significant in the 2013 survey. More female respondents than male respondents were surveyed in 2013: 54.69 percent and 45.31 percent, respectively. As shown in Table 3, among the past-year players in 2013, 48.78 percent were female; while a higher proportion (51.22 percent) were male. The distribution was very similar to 2012 (48.38 percent and 51.62 percent, respectively).
- The difference between past-year players and non-players by Hispanic origin was also statistically significant in the 2013 report. Among the past-year players, 19.14 percent was of Hispanic origin, which was a decrease of 4.75 percentage points from the previous year. Although not shown in Table 2, among the respondents who were of Hispanic origin, a greater percentage was non-players (58.12 percent) than past-year players (41.88 percent).
- The demographic factors of income, own or rent home, age, marital status, children under 18 living in household, number of children under 18 living in household, race, education and occupation were statistically not significant in the 2013 survey.
- Unlike 2012, the difference between past-year players and non-players by income status was statistically not significant in 2013. The general income distributions of the respondents in 2013 were similar to those reported in 2012. Among the past-year players, 23.45 percent had a household annual income of more than \$100,000, while those with a household annual income of less than \$12,000 constituted only 5.93 percent of the total. (The corresponding proportions for 2012 were 24.32 percent and 3.51 percent, respectively.)
- The home-ownership rate of all respondents in 2013 was 80.27 percent, higher than the rate of last year (77.17 percent). On the other hand, a lower percentage of the respondents rented homes in 2013 than in 2012 (16.23 percent and 20.07 percent, respectively). Among the past-year players, eighty percent (80.07) owned their home, as compared to the 76.58 percent a year ago.
- More than seventy-five percent (75.30) of all respondents were 45 years old and over, as compared to the 67.74 percent of the previous year. A total of 38.01 percent of the respondents were 65 and over, or 11.34 percentage points more than the previous year. Among the past-year players, the largest proportion (34.95 percent) was of age 65 and over. Those respondents between the ages of 18 and 24 constituted the smallest proportion of 3.29 percent. The average age for all respondents was 56.9 years, which was about 5 years older than the average age (52.2 years) reported in the 2012 survey. The average ages among players and non-players were 56.9 years and 57.0 years, respectively. (Note: average age is not shown in Table 2).
- Over sixty percent (61.66) of the past-year players were married, which was similar to the 59.93 percent recorded in the previous year. Among those who were married, about thirtyseven percent (36.77) reported playing any lottery game in 2013. Thirteen percent (13.38) of those who participated in any game were divorced, while another thirteen percent (12.89) of the past-year players were never married.
- About one out of four (23.68 percent) past-year players had children under age 18 living in their households, which was a decrease of 4.37 percentage points from 2012. Among them,



76.90 percent had two or fewer children under 18, as compared to the higher percentage (82.94) reported in the previous year.

- Consistent with the previous survey, Whites constituted the largest proportion—66.20 percent—of respondents from all racial groups in 2013, as compared to 62.02 percent in 2012. The second- and third-largest racial groups were Hispanics (15.43 percent) and Blacks (13.53 percent), respectively. Among Whites, 36.63 percent indicated having played any lottery game/feature in 2013, which was similar to the 35.37 percent from a year ago.
- A total of forty-seven percent (46.95) of all respondents had a college degree (27.93 percent) or a graduate/professional degree (19.02 percent). (In comparison, only 41.36 percent of the respondents had a college degree or above in 2012.) Similar to the previous year, a slightly higher percentage of the respondents who were high school graduates or had a GED were past-year players than non-players (25.86 percent and 23.28 percent, respectively). Likewise, a higher proportion of the respondents who had some college education were past-year players than non-players (24.71 percent and 21.87 percent, respectively).
- The four largest occupational categories in the 2013 survey were the same as those in 2012. They were: "professional specialty" (37.96 percent), "executive, administrative, and managerial occupations" (12.65 percent), "technicians and related support" (11.03 percent), and "sales" (10.25 percent). Together, they constituted seventy-two percent (71.89) of all the respondents by occupation. The occupational category of "professional specialty" constituted 36.68 percent of the past-year players, while the category of "executive, administrative, and managerial occupations" made up another 13.32 percent. Both frequencies were similar to those recorded in the 2012 survey.

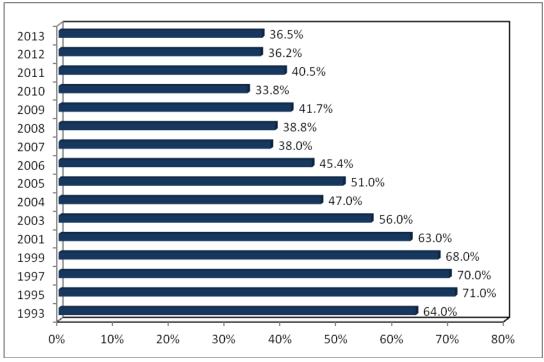


III. GAME FINDINGS

IIIa. ANY GAME RESULTS

Figure 1

Percentage of Respondents Playing Any Lottery Game



Sources: 2007, 2008, 2009, 2010, 2011, 2012, and 2013 HCPP survey data, 2006 UNT survey reports and survey reports from 1993-2005.

Figure 1 illustrates past-year Texas Lottery participation rates over time for those playing any Texas Lottery game since the agency's first survey conducted in 1993. The Texas Lottery participation rate in 2013 was thirty-seven percent (36.5), which was slightly higher (0.3 percentage point) than the previous year. Compared to the previous increase in participation rate between 2010 and 2011 (6.7 percentage points), the increase for this year was of a much smaller magnitude. The 2013 participation rate was consistent with the overall pattern of the participation rates in recent years, where approximately 40 percent or fewer of the respondents reported playing any lottery game. The average monthly dollar amount spent on any lottery game in 2012 was \$44.38. Following the projection formula used in previous lottery studies, we applied a "weighted" average monthly dollar amount spent and extrapolated it to the Texas population aged 18 and older to compare with actual revenue.⁶ Our survey data provided for estimated annual sales in Texas to be approximately \$3.70 billion. When applying the margin of error (+/- 2.4 percent) calculation for this subset of the sample, the expected forecast of actual lottery sales ranged between \$3.61 billion and \$3.79 billion. This range is lower than the actual lottery ticket sales for fiscal year 2012 (\$4.19 billion).



As shown in Table 3, there were significant differences among demographic groups of income, gender and employment status regarding the percentage that played any games. The percentage of past-year players was higher for the income group of \$40,000 to \$49,999 (52.2 percent) than other income groups. The percentage of past-year players was higher for men (41.2 percent) compared to women (32.5 percent). The participation rate was higher among respondents employed full-time and part-time (40.2 percent) compared to the unemployed and retired respondents.

On the other hand, participation findings for the demographic groups of education, race, Hispanic origin, and age were statistically not significant.

Table 3

Year	Percentage Played	Median Dollars Spent
2013 ⁷	36.5 (n=618)	\$12.00
2012	36.2 (n=616)	16.00
2011	40.5 (n=687)	13.00
Demographic Factors 2013		
Education		
Less than high school diploma	24.2 (n=24)	69.00
High school diploma	39.0 (n=158)	18.50
Some college	39.4 (n=151)	12.00
College degree	38.3 (n=179)	10.00
Graduate degree	31.1 (n=99)	9.00
Income*		
Under \$12,000	30.6 (n=22)	17.50
\$12,000 to \$19,999	36.7 (n=33)	19.00
\$20,000 to \$29,999	42.7 (n=41)	20.00
\$30,000 to \$39,999	40.0 (n=28)	18.00
\$40,000 to \$49,999	52.2 (n=35)	10.00
\$50,000 to \$59,999	46.3 (n=38)	11.00
\$60,000 to \$74,999	39.7 (n=31)	8.00
\$75,000 to \$100,000	44.4 (n=56)	15.50
More than \$100,000	36.6 (n=87)	10.00



Table 3 (continued)

Demographic Factors 2013	Percentage Played	Median Dollars Spent
Race		
White	36.6 (n=396)	10.00
Black	34.4 (n=76)	31.50
Hispanic	41.7 (n=105)	20.00
Asian	29.7 (n=11)	17.00
Native American Indian	40.0 (n=6)	43.00
Other	25.9 (n=7)	15.00
Hispanic Origin		
Yes	41.9 (n=116)	20.00
No	35.6 (n=490)	12.00
Gender***		
Female	32.5 (n=300)	10.50
Male	41.2 (n=315)	16.00
Age		
18 to 24	21.1 (n=19)	6.00
25 to 34	31.9 (n=43)	15.00
35 to 44	41.2 (n=63)	20.00
45 to 54	41.7 (n=103)	11.00
55 to 64	45.7 (n=148)	14.50
65 or older	34.7 (n=202)	12.00
Employment Status**		
Employed full/part time	40.2 (n=327)	12.00
Unemployed	27.0 (n=24)	11.00
Retired	34.2 (n=228)	13.00

Note: * p < 0.05, *** p < 0.001. The significance notations refer only to the "percentage played" column. In some categories, the number of respondents contributing to cell percentages is small. This has the effect of making generalizations from these figures more tenuous. Due to greater uncertainty, small sample size also requires larger discrepancies among categories to attain acceptable levels of statistical significance. We note in the discussion of individual lottery games those instances where subsamples are especially small.



Table 4Participation and Dollars Spent by Lottery Sales District

Lottery Sales District	2012 Percent Playing Any Game	2013 Percent Playing Any Game	Percentage Change from 2012 ¹	2013 Average Amount Spent Per Month among Past- Year Players	2013 Median Amount Spent Per Month among Past-Year Players
Austin	33.1 (n=47)	33.3 (n=44)	0.2	\$8.95	\$9.00
Dallas North	32.5 (n=49)	33.3 (n=62)	0.8	10.76	9.50
Dallas South	36.1 (n=35)	31.3 (n=26)	-4.8	15.61	37.50
El Paso	40.5 (n=15)	48.9 (n=22)	8.4	21.96	10.50
Fort Worth	30.2 (n=35)	37.5 (n=42)	7.3	10.13	10.50
Houston East	35.9 (n=56)	35.7 (n=50)	-0.2	11.09	15.00
Houston Northwest	41.7 (n=53)	36.2 (n=46)	-5.5	15.82	7.00
Houston Southwest	25.2 (n=38)	39.8 (n=64)	14.6	13.95	20.50
Lubbock	39.5 (n=45)	34.7 (n=41)	-4.8	13.69	20.00
McAllen	46.0 (n=29)	40.0 (n=40)	-6.0	39.24	40.00
San Antonio	44.2 (n=68)	44.1 (n=67)	-0.1	20.58	16.00
Tyler	41.8 (n=56)	30.6 (n=44)	-11.2	17.60	5.00
Waco	33.0 (n=30)	46.0 (n=52)	13.0	13.40	15.50

Note: The letter "n" denotes the number of respondents who played any Texas Lottery games.

¹ Since the numbers of lottery sales district were not the same between 2012 and 2013, the reader is cautioned that the change in the percentage of participation between the two years was not an exact comparison of the same set of districts. For the similar reason, we did not provide the test for statistical significance of the differences in participation rates between 2012 and 2013 by lottery sales districts.

As a result of the elimination of the Victoria sales district, the number of lottery sales districts was reduced from 14 to 13 in the 2013 report. Table 4 shows that the lottery sales district with the highest participation rate in any Texas Lottery game in 2013 was El Paso (48.9 percent). The sales districts of Waco and San Antonio recorded the second- and third-highest participation rates of 46.0 percent and 44.1 percent, respectively, in 2013. The lottery



sales districts with the lowest participation rates were Tyler (30.6 percent), Dallas South (31.3 percent), Austin and Dallas North (both at 33.3 percent).

- Compared to the previous year, two lottery sales districts recorded a two-digit percentage point increase in the participation rate: Houston Southwest (14.6 percentage points) and Waco (13.0 percentage points). In contrast, sales district Tyler suffered the largest decline in the participation rate (11.2 percentage points). Sales district McAllen also recorded a sizeable drop in the participation rate (a decrease of 6.0 percentage points).
- The lottery sales districts demonstrating the highest average monthly amount spent per player were McAllen (\$39.24), El Paso (\$21.96), and San Antonio (\$20.58). The lowest average monthly amounts spent per player were found in Austin (\$8.95) and Fort Worth (\$10.13).
- The lottery sales districts with the highest median monthly amount spent per player were McAllen (\$40.00) and Dallas South (\$37.50). On the other hand, four lottery sales districts recorded a single-digit median monthly amount spent per player: Tyler (\$5.00), Houston Northwest (\$7.00), Austin (\$9.00), and Dallas North (\$9.50).



Table 5Number and Percentage of Respondents Playing by Game/Feature

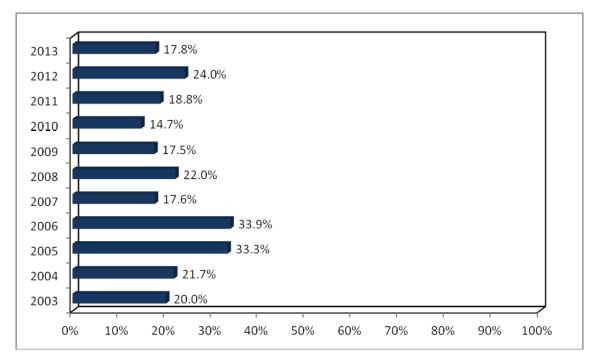
Texas Lottery Game/Feature	2012 Number and Percent Playing the Game (n=616)	2013 Number and Percent Playing the Game (n=618)	Change in Percentage from 2012
Pick 3 Day	148 (24.0%)	110 (17.8%)	-6.2%
Sum It Up Feature with Pick 3 Day	25 (4.1%)	17 (2.8%)	-1.3%
Pick 3 Night	15 (2.4%)	7 (1.1%)	-1.3%
Sum It Up Feature with Pick 3 Night	9 (1.5%)	6 (1.0%)	-0.5%
Cash 5	145 (23.5%)	131 (21.2%)	-2.3%
Lotto Texas	443 (71.9%)	451 (73.0%)	1.1%
Texas Lottery Scratch-Off Tickets	360 (58.4%)	377 (61.0%)	2.6%
Texas Two Step	88 (14.3%)	75 (12.1%)	-2.2%
Mega Millions	383 (62.2%)	363 (58.7%)	-3.5%
Megaplier Feature with Mega Millions	116 (18.8%)	97 (15.7%)	-3.1%
Daily 4 Day	19 (3.1%)	17 (2.8%)	-0.3%
Sum It Up Feature with Daily 4 Day	3 (0.5%)	5 (0.8%)	0.3%
Daily 4 Night	7 (1.1%)	8 (1.3%)	0.2%
Sum It Up Feature with Daily 4 Night	3 (0.5%)	2 (0.3%)	-0.2%
Powerball	215 (34.9%)	333 (53.9%)	19.0%
Power Play Feature with Powerball	41 (6.7%)	74 (12.0%)	5.3%
Extra! Feature with Lotto Texas	N.A	31 (5.0%)	N.A.
All or Nothing	N.A.	57 (9.2%)	N.A.

Lotto Texas was the most popular Texas Lottery game in 2013: seventy-three percent (73.0) of past-year lottery players had played this most popular game, as shown in Table 5. The second-most popular choice among lottery players was Texas Lottery Scratch-Off Tickets, at 61.0 percent. Mega Millions and Powerball were also popular, with over half of past-year lottery players playing each of these two games (58.7 percent and 53.9 percent, respectively). As compared to the previous year, the Texas Lottery game/feature that recorded the greatest increase in participation rate was Powerball (19.0 percentage point increase) and its add-on feature Power Play (5.3 percentage points). On the other hand, Pick 3 Day suffered the largest decline in participation rate between 2012 and 2013 (6.2 percentage points lower), followed by Mega Millions and its add-on feature Megaplier (a decrease of 3.5 percentage points and 3.1 percentage points, respectively). The new game and the new feature introduced this year—All or Nothing and the Extra! Feature with Lotto Texas—made a good start by recording a 5.0 percent and 9.2 percent, respectively, participation rate.



IIIb. PICK 3 DAY RESULTS

Figure 2



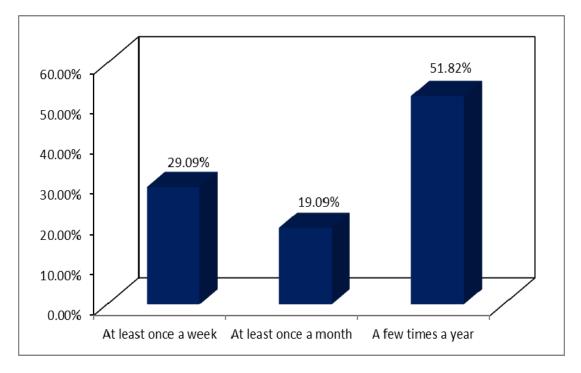


Sources: Hobby Center for Public Policy 2007, 2008, 2009, 2010, 2011, 2012 and 2013 survey data and additional survey reports 2003-2006.

As shown in Figure 2, eighteen percent (17.8) of past-year players played Pick 3 Day, a decrease of 6.2 percentage points compared to 2012. The participation rates for Pick 3 Day among lottery players had experienced a decline after two consecutive years' increase, from the lowest recorded rate in 2010.



Figure 3 Frequency of Purchasing Pick 3 Day Tickets (n=110)



About thirty percent (29.09) of the past-year players that bought Pick 3 Day tickets purchased them at least once a week and about twenty percent (19.09) purchased tickets at least once a month (Figure 3). The frequencies were similar to those recorded in the previous year (32.43 percent and 21.62 percent, respectively). Another fifty-two percent (51.82) of the respondents purchased the tickets only a few times a year, which was 5.87 percentage points higher than the frequency recorded in 2012.

Table 6Average Number of Times Played Pick 3 Day

Played Pick 3 Day	Average Number of Times Played	
Per week for weekly past-year players	2.12	
Per month for monthly past-year players	5.76	
Per year for yearly past-year players ⁸	15.77	

The weekly players of Pick 3 Day played this game an average number of 2.12 times per week, and monthly players at an average number of 5.76 times per month. These averages were not much different from the previous year (1.95 times and 5.70 times, respectively). The yearly



players played the game at an average number of 15.77 times per year, which was an increase of 3.59 times as compared to the 2012 report.

Note that weekly, monthly, and yearly rates are distinct from each other. These responses were recorded as follows: respondents that claimed to play weekly were not asked if they played monthly or yearly and respondents that claimed to play monthly were not asked if they played weekly or yearly. Finally, respondents that claimed to play yearly were not asked if they played weekly or monthly.⁹

Table 7 Dollars Spent on Pick 3 Day

Pick 3 Day	Dollars Spent	
Average spent per play ¹⁰	\$7.62	
Average spent per month (mean)	18.77	
Average spent per month (median)	4.00	

As shown in Table 7, Pick 3 Day players spent an average of \$7.62 per play, which was \$2.07 more than the previous year. Those who reported playing the game on a monthly basis spent an average of \$18.77 per month, or \$5.57 higher than in 2012. Half of the respondents were likely to spend \$4.00 or more a month on playing Pick 3 Day (compared to the \$5.00 in 2012). The per-month figures were for those respondents who reported playing the game on a monthly or more frequent (i.e., weekly) basis.



Table 8

Pick 3 Day: Lottery Play and Median Dollars Spent per Month by Past-Year Player Demographics

Pick 3 Day	Percentage Played Game Among Past Year Players	Median Dollars Spent
Year**		
2013	17.8 (n=110)	\$3.00
2012	24.0 (n=148)	\$4.00
2013 Demographics		
Education		
Less than high school diploma	29.2 (n=7)	¹¹
High school diploma	19.1 (n=30)	5.00
Some college	18.1 (n=27)	5.00
College degree	14.5 (n=26)	1.50
Graduate degree	16.2 (n=16)	3.50
Income*		
Less than \$12,000	33.3 (n=7)	5.00
\$12,000 to \$19,999	26.5 (n=9)	
\$20,000 to \$29,999	¹²	
\$30,000 to \$39,999	25.9 (n=7)	16.00
\$40,000 to \$49,999	31.4 (n=11)	3.00
\$50,000 to \$50,999		
\$60,000 to \$74,999		
\$75,000 to \$100,000	16.1 (n=9)	3.00
More than \$100,000	15.1 (n=13)	2.00
Race***		
White	9.1 (n=36)	2.00
Black	41.3 (n=31)	6.00
Hispanic	27.9 (n=29)	3.00
Asian		
Native American Indian		
Other		
Hispanic Origin*		
Yes	26.1 (n=30)	3.50
No	15.6 (n=76)	3.50
Gender		
Female	19.5 (n=58)	3.50
Male	15.6 (n=49)	3.00



Table 8 (continued)

Age		
18 to 24		
25 to 34	16.3 (n=7)	2.00
35 to 44	19.0 (n=12)	3.00
45 to 54	10.9 (n=11)	2.00
55 to 64	17.7 (n=26)	3.50
65 or older	18.8 (n=38)	4.50
Employment Status		
Employed full/part time	16.4 (n=53)	3.00
Unemployed		
Retired	18.8 (n=43)	3.00

Note: * p < 0.05, ** p < 0.01, *** p < 0.001. There were statistically significant differences between past-year players and non-players by income, race, and Hispanic origin.

As shown in Table 8, there was a 6.2 percentage point decline among past-year players reporting playing Pick 3 Day in 2013 as compared to 2012 (17.8 percent and 24.0 percent, respectively). The difference was statistically significant.

- The differences in income between past-year players who played Pick 3 Day in 2013 and those who did not were statistically significant. Pick 3 Day past-year players whose income was less than \$12,000 reported the highest participation rate (33.3 percent). Respondents from the income category of \$40,000 to \$49,999 had the second-highest participation rate of 31.4 percent. Consistent with previous year's findings, the highest income categories had the lowest participation rates: 15.1 percent for income category of more than \$100,000, and 16.1 percent for those earned between \$75,000 and \$100,000.
- Similar to 2012, the difference between past-year players who played Pick 3 Day and those who did not was statistically significant by race. The highest participation rate was for Blacks (41.3 percent) and the lowest for Whites (9.1 percent). These results were consistent with the 2012 findings. Both racial groups also recorded a decline in participation rate from the previous year: 8.7 percentage points for Whites, and 6.1 percentage points for Blacks. On the other hand, there was an increase in the participation rate for Hispanics, from 23.0 percent last year to 27.9 percent this year. The sample sizes of Asian and Native American Indian respondents were too small to be included in the analysis.
- The differences in Hispanic origin between past-year players who purchased Pick 3 Day tickets and those who did not were statistically significant this year. Consistent with last year's pattern, the 2013 participation rate of past-year players of Hispanic origin was higher than (by 10.5 percentage points) the rate of those past-year players who were not of Hispanic origin (26.1 percent and 15.6 percent, respectively).
- There were no significant differences between past-year players who played Pick 3 Day in 2013 and those who did not by education, gender, age, and employment status.



Figure 4 Years Playing Pick 3 Day (n=110)

