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Lottery expenses and charitable contributions – Taiwan's experience

Eric S. Lin & Shih-Ying Wu

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Notes

¹ Prior to this charitable lottery, there was a monthly game over the period 1950 to 1987 in which the prize depended on how many digits the ticket number matched the draw number from the last digit and a charitable scratch game in 1990. However, both were small-scale games with much fewer revenues and the revenue from the former game was not designated for charitable causes.

² A matching game whose prizes depend on how many digits the ticket number matched the draw number and a scratch game were also issued along with the 6/42 game in 2002. Their combined revenues comprised only a small ratio of the total revenues in 2002 and were lumped with the revenue from 6/42 game for the lottery funds.

³ As in most lotteries, the prize rolls over to the next game if no one wins the prize.

⁴ <http://v>

⁵ For example, the effect of a change in the probability of winning on the demand for a charitable lottery ticket is ambiguous. On the one hand, a higher probability of winning increases the expected utility and thus the demand for the ticket. On the other hand, a higher probability of winning also increases the probability of winning the prize, which increases the utility of the prize and thus the utility of the ticket. The net effect is ambiguous.

⁶ Clotfelter and Phillips (1992) show that the demand for a charitable lottery ticket is consistently higher than the demand for a non-charitable lottery ticket. This is because the utility function of a charitable lottery ticket is more concave than the utility function of a non-charitable lottery ticket. The concavity of the utility function reflects the diminishing marginal utility of income. The concavity of the utility function of a charitable lottery ticket reflects the fact that the utility of the prize is higher than the utility of the ticket. The concavity of the utility function of a non-charitable lottery ticket reflects the fact that the utility of the prize is lower than the utility of the ticket.

⁷ The expected utility of a charitable lottery ticket is greater than the expected utility of a non-charitable lottery ticket. This is because the utility function of a charitable lottery ticket is more concave than the utility function of a non-charitable lottery ticket. The concavity of the utility function reflects the diminishing marginal utility of income. The concavity of the utility function of a charitable lottery ticket reflects the fact that the utility of the prize is higher than the utility of the ticket. The concavity of the utility function of a non-charitable lottery ticket reflects the fact that the utility of the prize is lower than the utility of the ticket.

⁸ Alternatively, one can show that the demand for a charitable lottery ticket is consistently higher than the demand for a non-charitable lottery ticket. This is because the utility function of a charitable lottery ticket is more concave than the utility function of a non-charitable lottery ticket. The concavity of the utility function reflects the diminishing marginal utility of income. The concavity of the utility function of a charitable lottery ticket reflects the fact that the utility of the prize is higher than the utility of the ticket. The concavity of the utility function of a non-charitable lottery ticket reflects the fact that the utility of the prize is lower than the utility of the ticket.

'because of the steepness of the logarithmic function in the vicinity of one.' Boskin and

Feldstein ([1977](#)) demonstrate that the difference between the estimates from these two practices does not appear to be large.

⁹ All married couples are required to file jointly in Taiwan. However, they can choose to use a joint calculation or a separate calculation. In general, the income tax for a separate calculation is less than that of a joint calculation if the couple has similar amounts of income.

¹⁰ If taxpayers make a standard deduction in filing tax returns, then the amount of charitable giving does not affect their taxable incomes and taxes and thus the price of charitable giving is equal to one.

¹¹ Depending on the recipients of charitable giving, the total amount of deductible charitable giving may be restricted to be less than 20% of adjusted gross income.

¹² Statistics from the Ministry of Finance report that the mean value of charitable giving among taxpayers in 1998 equals NT\$3501 in current dollars. Since nonitemizers cannot deduct their charitable contributions, the statistic based on tax files is likely to underestimate the actual amount of charitable giving. Therefore, the amount reported in the survey should be close to the actual charitable contributions.

¹³ For example, if each household reports only one-sixth of their lottery expenses, then the coefficient estimates in the regression are biased. If the regressions are in logarithmic form, the bias is approximately one-sixth of the true coefficient.

¹⁴ The probability of winning the grand prize is approximately 1 in 100 million. The expected prize equals 0.00000001 times the grand prize.

¹⁵ As shown in Figure 1, the regression coefficients are significantly positive. The unobservable errors show a positive bias, which suggests that lottery expenses are underreported.

¹⁶ For example, the regression coefficients are significantly positive. The unobservable errors show a positive bias, which suggests that lottery expenses are underreported.

¹⁷ A concave



¹⁸ Although it is theoretically possible to include the local governments' budgets on charities to control for their effect, government statistics do not make a clear distinction between charitable spending and other expenditures.

¹⁹ The marginal effect on an observable charitable contribution is $\frac{1}{26.37}$, where (Maddala, [1983](#), p. 160). The marginal effect, 0.53, is derived from the statistics in Tables 1 and 3.

²⁰ Alternatively, it suggests that an increase of NT\$5.43 ($=143.1/26.37$) in lottery expenses will induce one more NT dollar in charitable giving.

²¹ The results are not reported in the article, but are available upon request.

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