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Lottery Sales and Per-capita GDP: An Inverted U Relationship

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Abstract.The main purpose of this study is to test the hypothesis that the relationship between per-capita sales and per-capita GDP is given by an inverted U. The paper considers that lottery sales increase together with increases in GDP up to a point where a country has reached a level at which the GDP is high enough and lottery sales become an inferior good and as a result, start to decrease. As there are other determinants of the expenditure on lottery products, the paper introduces into the regression analysis other explanatory factors as control variables. The paper uses a cross-country regression, using 2004 data for 80 countries. The results confirm the hypothesis, in addition to yielding other interesting findings: countries with higher levels of education sell fewer lottery products; lottery sales increase together with increases in the male to female ratio.

Keywords Gambling . Per-capita GDP. Gender ratio. Religion. Education.

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I. Introduction

People are found to play lottery games in more than half of the world's countries. In the United Kingdom, for example, more than half of the adult population plays the lottery every week.

When taking account of the likelihood of winning a lottery jackpot, given the odds against such an event, we have a sense of the irrationality of buying a lottery ticket for purposes of enrichment or investment. This begs the question, why do people buy lottery products? Are they motivated by the desire to become wealthy? Do low-income earners participate with a stronger desire to win? To answer this question, the paper tests the hypothesis that per-capita sales increase simultaneously with increases in per-capita GDP up to a point and then start to decrease. As there are other determinants of the expenditure on lottery products, the paper introduces into the regression analysis other explanatory factors as control variables. Age and gender distribution and religion are some of the relevant factors examined. The paper uses a cross-country regression, using 2004 data for 80 countries, to test the hypotheses that are formulated.

The following questions will be addressed in this paper: (i) Is it possible that the wealthier a country is, the less money is spent on lottery products? (ii) Is this issue determined by culture (for example, do Latin or African countries spend more than the others)? (iii) Does religion influence the consumption of this type of product? (iv) Is gender important to an understanding of the consumer behavior in respect of lotteries? The paper provides an empirical investigation and its results suggest that cultural and religious factors are not statistically significant in the explanation of the variation of lottery expenditure. The main hypothesis that consumer demand for lottery products is positively related to per-capita GDP up to a point (a maximum) and then becomes negatively related is confirmed by the data.

The paper is organized as follows. In the next section, the literature is reviewed. The third section presents and describes the formal hypotheses. The fourth section presents the econometric model and explains the empirical findings. The final section considers the study's implications and presents the concluding remarks.

II.Review of the Theoretical Literature and Empirical Studies

Lotteries possess unusual and unique attributes that make the phenomenon attractive to researchers. Lottery participation is a combination of an investment, as stated by Selinger (1993), and entertainment according to Wagman (1986). This combination accounts for the fact that lotteries play a significant part in the lives of consumers nowadays (Miyazaki, Langerderfer, & Sprott, 1999). Lotteries are the only risk-laden products sponsored and marketed by government agencies for government gain. The rapid growth of this type of consumer product in the United States gave rise to disputes with regard to government-sponsored gambling and the rules and policy that should be imposed at state level (Clotfelter & Cook, 1989).

The fact that little research had been conducted into the purchasing behavior underlying the growing consumption of government-sponsored lotteries inspired Miyazaki, Langerderfer, & Sprott (1999) to explore people's purchase and non-purchase motivations in respect of lotteries. The study attempted to investigate the motives both for playing and for not playing lottery games.

Previous studies have sought to find a possible correlation between lottery purchasing behavior and demographic characteristics, such as age, gender, race, income and educational attainment, but with little consensus achieved among researchers. The study of Clotfelter & Cook (1989) suggested that lottery players who have relatively low incomes are motivated by the prospect of wealth, while those who have higher incomes play for entertainment; hence, low income-earners participate with a stronger desire to win.

The study of Miyazaki, Langerderfer, & Sprott (1999) found that the enjoyment, the sense of participating in government-sponsored activities, and a belief in one's own luck had no significant bearing on the lottery purchasing behavior of individuals.

Lottery games involve the concept of randomness, which simply suggests that the outcome of an event is unknown prior to the actual occurrence of the event (Draper & Lawrence, 1970). As put by Miyazaki, Brumbaugh, & Sprott (2001) in their study of consumer misconceptions about random events, if consumers hold a mistaken belief

about the random nature of lotteries, *i.e.*, that they are in control of the outcomes of random events, such a misconception will tend to influence the decision to play lottery games.

This latter assertion is in tandem with the argument of Ladouceur & Walker (1998), who state that people behave and think irrationally when gambling. Such erroneous behavior and thinking signifies that gamblers fail to consider the concept of randomness and uncertainty in the event. This universal, abiding misconception on the part of gamblers determines the development and maintenance of their gambling habit.

The study of Balabanis (2002) identified the positive correlation between lottery-ticket and scratch-card buying behavior and compulsiveness. This study was sufficiently profound to draw findings on the three types of personality that can be related with buying compulsiveness in both lottery tickets and scratch cards. Extraverts are more prone to compulsive buying of lottery tickets or scratch-cards, while intellectuals and individuals who score high with agreeableness are less prone to the said compulsive act.

Most of the studies concerning the behavioral characteristics of lottery products consumers have involved surveys conducted in the USA. Despite this, we can find some international papers that use community samples in order to explain the gambling behavior in a country or region. For example, in the UK, Croups, Haddock, & Webley (1998) used a community sample of 160 adults (101 females, 59 males) in order to understand the correlations and predictors of lottery play in that country. The most significant findings in their study relied on the positive correlations between the individual's lottery play and friends' lottery play. They also found that in the UK, lottery play is negatively correlated with education level and that misunderstanding of lottery probability and lottery play are positively correlated. Layton & Worthington (1999) examined the socio-economic determinants of gambling expenditure on lotteries, Lotto and Instant Lotto, TAB/on-course betting, poker machines and casino-type games in Australia. Using a sample of Australian households in 1993-1994, they found that ethnicity, income sources and income level influence the probability of a household's gambling. Chalmers &Willoughby (2006) examine gender-specific factors which are related to adolescent gambling behavior. Gender-role socialization may influence the interest and participation in gambling activities. Moreover, males are socialized to be

risk-takers. Gambling allows the young males to test their courage and demonstrate greater status. This can explain why the empirical studies have confirmed that males gamble more than the females. Lam (2006) studied the influence of religiosity on gambling participation and concludes that religious faith did not seem to have a significant impact on gambling.

Although much research has been done on lotteries, there has been little investigation that provides empirical analysis and comparison on lottery games around the world.

III. Hypotheses

This paper comprises the following explanatory hypotheses:

H1: *The relation between per-capita lottery sales and per-capita GDP is an inverted U.*

We expect that per-capita lottery sales increase together with increases in GDP up to a point where a country has reached a level at which the GDP is high enough and lottery sales (or expenses on the part of consumers) become an inferior good and as a result, start to decrease. In order to analyze this relation and to discover what that GDP maximum level might be, we included the variable $(PCGDP)^2$. The paper uses per-capita GDP in purchasing power parity terms in US dollars (PCGDP)

H2: *The higher the level of education, the smaller will be the per-capita lottery sales.*

The studies of scholars such as Croups, Haddock, & Webley (1998), Ghent & Grant (2006) and Giacopassi, Nichols & Stitt (2006) have revealed the existence of an inverse relationship between education and lottery consumption.

By including the variable, Education (EI), an attempt is made to infer the influence of education in the demand for lottery products. We assume that the higher a country's level of education is, the less misinformed consumers are, the better they understand the odds

of winning a prize and so, the less will they gamble. Therefore, we expect a negative relation between the education index and lottery sales.

H3: *There is a negative correlation between per-capita sales of lottery and young players aged between 15 and 29.*

According to Clotfelter & Cook (1989), the pattern of lottery participation by age is an inverted U, with the broad middle range (25-64) playing more than the young (18-24) and the old (65 and above).

According to the literature, those who play the least are the young and therefore, a country with a high percentage of young people will have smaller lottery sales. Therefore, we anticipate a negative relation between per-capita sales of lottery and young players.

H4: *The higher the male to female ratio, the higher the per-capita lottery sales.*

Lottery studies have revealed that males play more than females (Clotfelter & Cook, 1989). There are some factors that intensify gambling behavior in men. Men are more likely to be less risk-averse, in addition to being more susceptible to over-confidence (e.g., Barber & Odean, 2001).

We expect men to spend more money on lotteries than women. Consequently, we expect a positive relationship between the gender ratio and lottery sales.

H5: *The higher the percentage of Christians, the higher the per-capita lottery sales.*

Roberts, Arth, & Bush (1959) ascertain a relation between gambling and religion, pointing out the existence of a common interest in establishing a contact with the unknown, the human capacity to have faith and the hope of achieving success with the

help of a divine power. We expect that Christians play more than other religious groups. Thus, there will be a positive relationship between the percentage of Christians in a country and lottery sales.

H6: *Latin countries spend more money on lottery products than others.*

Another feature studied by various authors is the link between race, ethnicity and gambling behavior.

Clotfelter & Cook (1989) and Price & Novak (1999) defend that Hispanics are more likely to gamble than other ethnicities. We expect that Latins buy more lottery products than other ethnicities. Therefore, there will be a positive relationship between per-capita lottery sales (PCS) and Latin countries (LATIN). In order to analyze this, we include one dummy variable to obtain two categories of ethnicities: Latin = 1 if a country is Latin and 0 otherwise. Countries that are non-Latin form the base group.

H7: *African countries spend more money on lottery products than others.*

Kearney (2005) found that, in the USA, black respondents spend almost twice as much on lottery tickets as do white and Hispanic respondents.

We expect that Africans spend more money purchasing lottery products. Thus, we anticipate a positive relationship between lottery sales and African countries.

Similarly to the procedure for Latin countries, we include one dummy variable in order to obtain two categories of ethnicities: African = 1 if a country is African and 0 otherwise. Countries that are not African form the base group.

IV.Data Source and Empirical Results

In order to compare lottery sales on a national basis around the world, we used data from La Fleur's 2005 World Lottery Almanac. This almanac provides worldwide information on lottery sales by game and by continent for Africa, Asia and the Middle East, Europe, Central America, South America and the Caribbean and North America. Our dependent

variable consists of the total sales that aggregates the seven categories of games tracked in La Fleur's almanac, including lotto, numbers, keno, toto, draw, instant and others (e.g. bingo)**,** converted to US currency.

The explanatory variables were obtained from some world data bases. These include: World Bank data, which provided information on GDP and population; the US Census Bureau International Data Base, which yielded information on the age and gender distribution of a country's population; and the UN Human Development Report, which provided information concerning the educational levels of the countries considered.

IV.1.General Econometric Model

$$Yi = \beta_0 + \beta_1 Xi + \varepsilon i$$

Where Yi stands for PCS15 (per-capita sales over 15 years), X is a vector of explanatory variables in normal values or in natural logs and ε_i is a random disturbance assumed to be normal, independent and identically distributed (IID) with E (εi) =0 and Var (εi) = σ^2 > 0. It is assumed that the explanatory variables are exogenous.

We decided to select the explanatory variables in accordance with theory and other empirical studies.

Dependent Variable

PCS15 – Total per-capita sales, age over 15. Source: La Fleur's 2005 World Lottery Almanac, divided by mid-year 2004 population, with age over 15.

Explanatory Variables

PCGDP – 2004 gross domestic product (in purchasing power parity terms in US dollars) divided by mid-year population.

PCGDP^2 **–** The Square of 2004 per-capita gross domestic product.

EI – 2004 Education Index.

AGE - Population with ages between 15 and 29 as a percentage of total population.

GenderRatio – Total male population aged over 15 divided by total female population aged over 15.

CHRISTIAN – Percentage of Christian followers in a country's population. This was obtained by considering it to be the sum of the percentage of Catholics, Protestants and Orthodox Christians in each country.

LATIN – It assumes 1 if a country is Latin and 0 otherwise.

AFRICAN – It assumes 1 if a country is in Africa and 0 otherwise.

IV.2.Regression Results

In Table 1, we specified five models. In the first model (regression 1), we were particularly interested in testing Hypothesis 1, that is, the hypothesis on a possible relation between PCS15 and PCGDP that configures in an inverted U. In the other models, we will test the same hypothesis, but introducing different control variables. In the second model, we consider GenderRatio and African as control variables. In the third regression, the control variables used were Age, GenderRatio and African. In the fourth regression, the paper uses Education Index (EI), GenderRatio and Christian as control variables. Finally, in the fifth regression, EI, GenderRatio Latin are the variables used to control for other effects on per-capita sales.

Table 1 Lottery Demand Estimates (Dependent Variable: Per-Capita Sales (15 years and above)

	1	2	3	4	5
Constant	**-52.53**	**-461.26**	**-374.58**	**-248.8**	**-293.89**
	[-3.85]	[-3.58]	[-2.79]	[-1.67]	[-1.75]
PCGDP	**0.01434**	**0.0165**	**0.0143**	**0.0188**	**0.0183**
	[5.39]***	[5.99]***	[4.88]	[6.83]***	[5.88]***
$PCGDP^2$	**-0.1452E-06**	**-0.1759E-06**	**-0.1569E-06**	**-0.2088E-06**	**-0.197E-06**
	[-2.46]**	[-3.56822]***	[-3.48]***	[-5.71]***	[-4.36]***
EI				**-216.08**	**-138.06**
				[-5.26]***	[-2.18]**
AGE			**-579.43**		
			[-1.60]		
GenderRatio		**396.81**	**479.2**	**309.32**	**324.4**
		[2.97]**	[3.16]***	[-2.17]**	[2.13]**
Christian				**65.38**	
				[1.34]	
Latin					**20.52**
					[1.0]
African		**36.74**	**41.01**		
		[1.69]*	[1.95]**		
N	80	80	80	80	80
Adjusted R^2	0.503	0.513	0.513	0.532	0.518

t-statistics (heterokedasticity corrected) are in parentheses.

*, **, ***, significantly at 10%, 5% and 1% respectively.

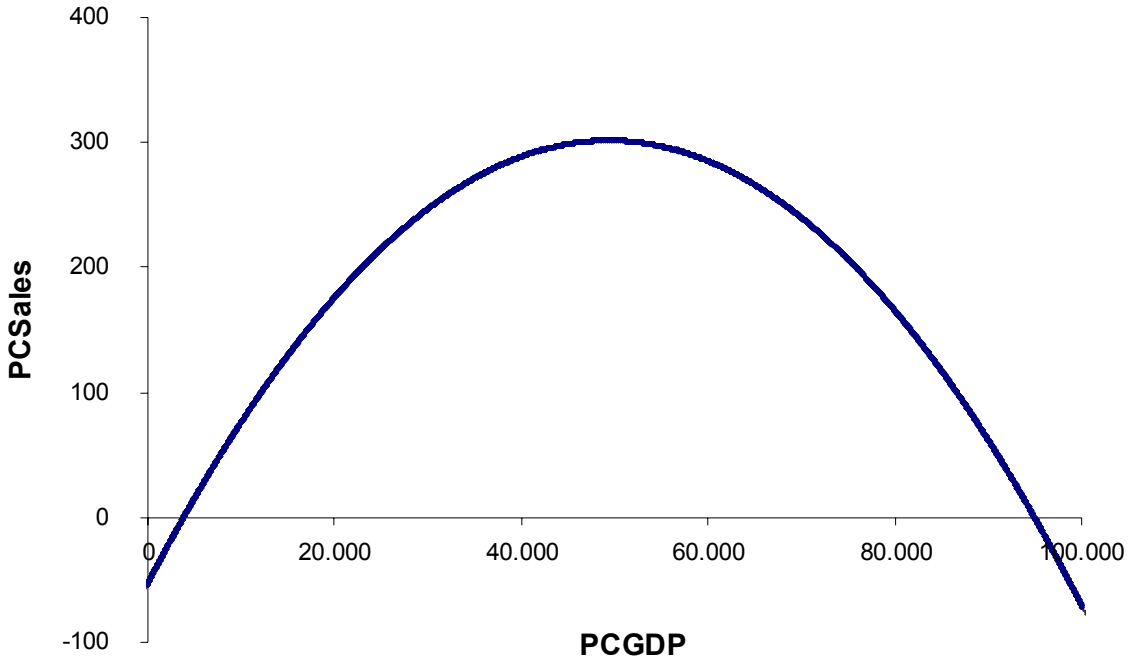
Table 1 displays the OLS estimation results. We will analyze these results, considering all regressions.

Regression 1 includes as explanatory variables the per-capita GDP and the square of per-capita GDP. The variable square of per-capita GDP was incorporated into the model in order to respond to Hypothesis 1, i.e., to find a maximum.

Per-capita GDP is statistically significant at the 1% level. The results show that an increase of 1 USD in per-capita GDP will lead to an increase of 0.01434 USD in a country's per-capita lottery sales. The increase of a country's wealth (in absolute terms) leads to more gambling. The square of per-capita GDP is also statistically significant. As expected, lottery sales increase together with an increase in GDP up to a point and then

start to decrease. The value of per-capita GDP at which per-capita lottery sales reach their maximum is 49,308.16 USD. The corresponding value of per-capita sales is 301.53 USD. This means that lottery sales increase together with increases in GDP until a country's per-capita GDP reaches 49,308.16 USD and from there starts to decrease (see Figure 1).

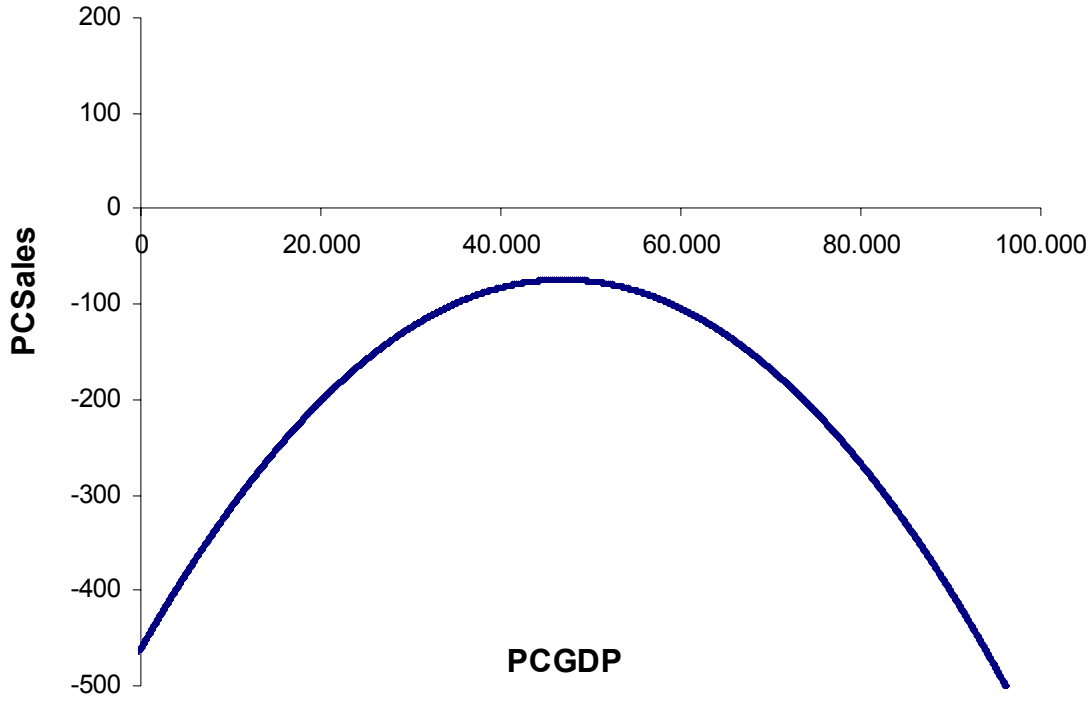
Fig.1 The inverted U relationship (equation 1)



In regression 2, we used the variables related to GDP (PCGDP and $PCGDP^2$), for the reasons mentioned above, and two control variables: African, and GenderRatio. All explanatory variables are statistically significant. The results show that the higher the country's percentage of male population relative to the female population, the higher the lottery sales. It appears that men play more than women. The coefficient on the gender ratio is positive and significant, meaning that the increase of 1% in a country's male to female ratio implies an increase of per-capita lottery sales of 396.81 USD. The coefficient of African countries is positive and significant. This positive effect is

consistent with the results that we expected. African countries spend, on average, 36.74 USD more per capita than other countries. In this regression equation, the value of per-capita GDP at which per-capita lottery sales reach their maximum is 46,901.6 USD. The corresponding value of per-capita sales is negative and equal to -74.32 USD. This means that lottery sales increase together with increases in GDP until a country's per-capita GDP reaches 46 901.6 USD and from there start to decrease, but are always negative. Since the equation regression was estimated with a constant term, we can say that there are fixed costs (461.26 USD) that are not recovered. This is not a realistic result. Therefore, we must choose a better specification (see Figure 2)

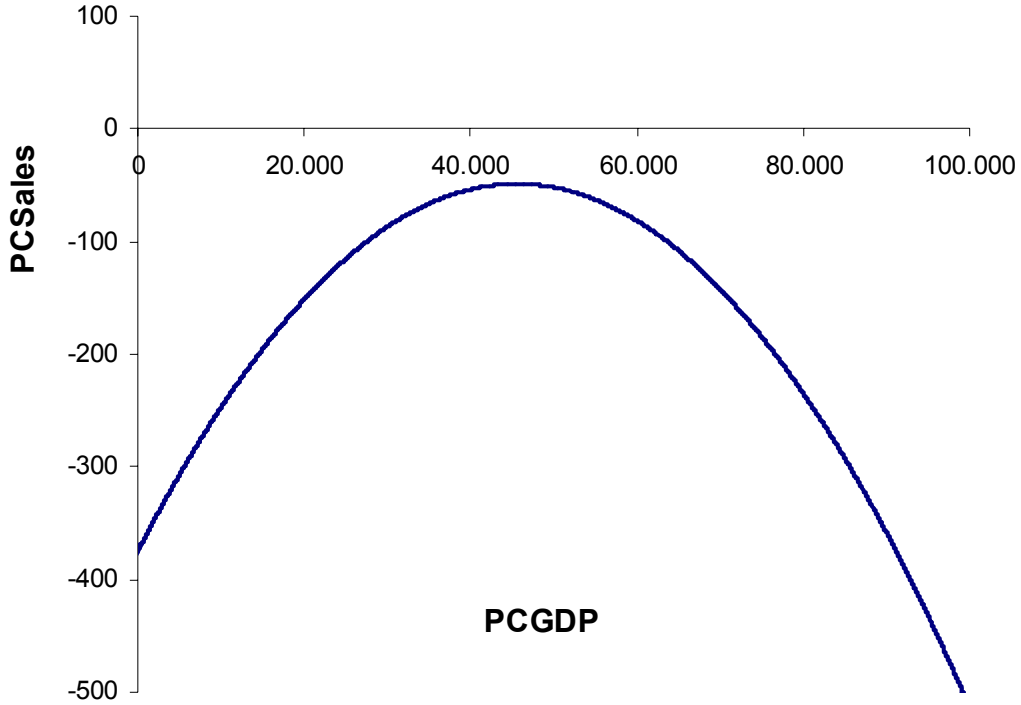
Fig.2 The inverted U relationship (equation 2)



In regression 3, we introduced AGE (the percentage of people aged between 15 and 29) as a new control variable, but it is not statistically significant at the 10% level. The other explanatory variables (PCGDP, $PCGDP^2$, GenderRatio and African are significant with

the expected coefficient sign. In this regression, the value of per-capita GDP at which per-capita lottery sales reach their maximum is 45,570.4 USD. The corresponding value of per-capita sales is negative and equal to -48.75 USD. This means that lottery sales increase together with increases in GDP until a country's per-capita GDP reaches 45,570.4 USD and from there start to decrease, but are always negative. Although the results confirm the hypothesis, this is not yet a good econometric specification (see Figure 3).

Fig.3 The inverted U relationship (equation 3)

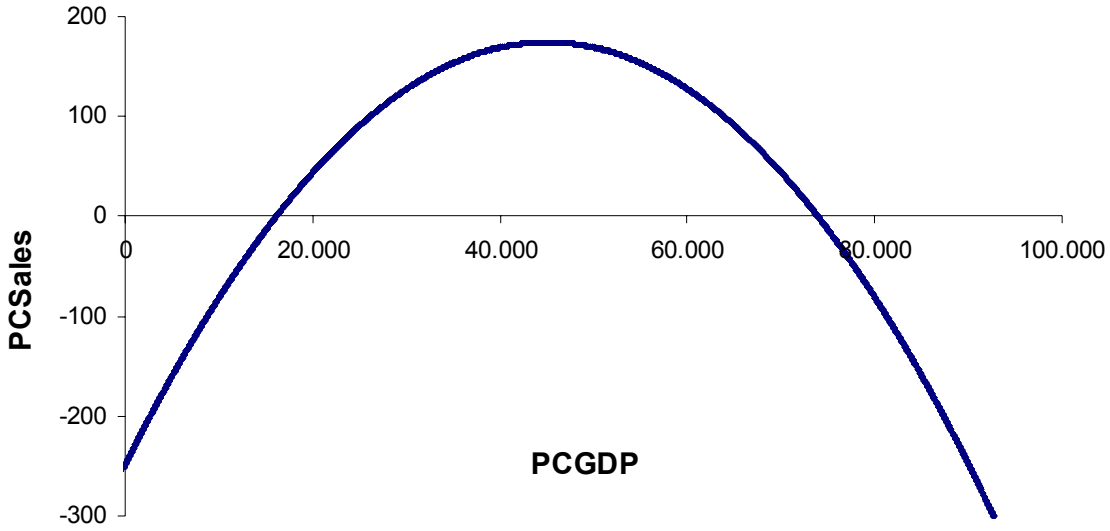


In regression 4, we have chosen the Education Index (EI), GenderRatio and Christian as the control variables. All explanatory variables are significant, except the variable Christian. Fewer lottery products are sold in countries with higher levels of education, which is as expected. The increase of 1% in the Education Index (EI) diminishes per-capita lottery sales by 216 USD. Consistent with the results obtained in regression 1, the coefficient on GenderRatio is positive and significant. The increase of 1% in a country's

male to female ratio implies an increase in per-capita lottery sales of 309.32 USD. We can also conclude that Christians, on average, purchase more lottery products than the followers of other religions (having an additional 1% of Christians in a country implies an increase of about 65.38 USD in per-capita lottery sales). However, in this regression, this variable is not significant at 10%.

As expected, lottery sales increase together with an increase in GDP per-capita up to 45,019.15 USD and then start to decrease. The corresponding value of per-capita sales (maximum) is 174.38 USD (see Figure 4).

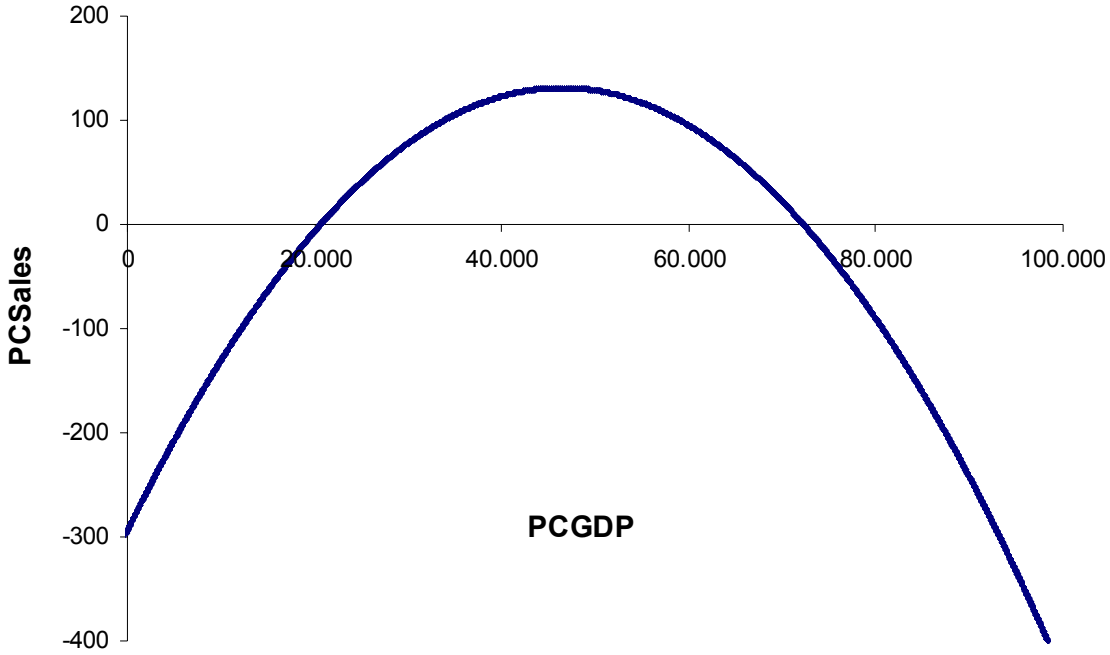
Fig.4 The inverted U relationship (equation 4)



In regression 5, the control variables used are: the Education Index (EI), GenderRatio and Latin. All explanatory variables have the expected coefficient sign and are significant, except the dummy variable Latin. However, the sign of Latin countries is also positive. The conclusion drawn from the value obtained is that, on average, Latin countries spend 20.52 USD more per-capita than other countries.

As expected, lottery sales increase together with an increase in GDP per-capita up to 46,446.7 USD and then start to decrease. The corresponding value of per-capita sales (maximum) is 131.10 USD (see Figure 5).

Fig.5 The inverted U relationship (equation 5)



V.Conclusion

Some studies have argued that lotteries are regressive, since they are a means by which States can exploit the poor. However, our results reveal this to be only partially true. The increase of a country's wealth (in absolute terms) leads to more gambling, but there is a maximum. Per-capita lottery sales increase together with an increase in GDP per-capita up to a point, i.e., maximum, and then start to decrease.

When considering the square of PCGDP, we have a quadratic function (parable) and the possibility to test this hypothesis. In this paper, a very interesting result was obtained:

in all five regressions considered, lottery sales increase together with increases in GDP up to a point and then start to decrease. Thus, the results of the paper confirm the theoretical hypothesis. However, the GDP per-capita at which lottery sales reach their maximum is different, depending on the explanatory variables used as control variables. Another interesting finding is given by equations 2 and 3: the hypothesis is confirmed, but the maximum of per-capita sales is negative. If we consider that the constant of the regressions equation gives the fixed costs, in these cases we may say that the fixed costs are higher than the variable costs. The results given by these two equations will possibly be different if we estimate the econometric model using a panel data, that is, the same countries in the sample, but considered over a time period of several years. This is a project to be considered for future research.

Other interesting results emerge from our study. Countries with higher levels of education sell fewer lottery products. From a practical point of view, it appears that the higher the level of education, the more informed a country's population is in respect of the low probabilities of winning a prize and thus, the less is the consumption of this type of product. The results show that countries in which the percentage of males is higher than that of females reveal higher lottery sales. The results of the paper suggest that Christians, on average, purchase more lottery products than the followers of other religions. The higher the percentage of the population segment aged between 15 and 29, the fewer lottery products are sold. However, these latter two variables are not statistically significant at the 10% level of significance. More lottery products are purchased in African countries than in other countries and this variable is statistically significant.

Theoretically, these results are of interest because they suggest a positive correlation between per-capita sales and per-capita GDP for the low-income classes. This leads us to assert that lottery sales diminish across income classes. Possibly, the per-capita sales increase together with the increase in income until a certain class and then decrease. Since the relation between per-capita sales and per-capita GDP is an inverted U, we can conclude that per-capita sales decrease between income classes. This calls for further research, using a new methodology that considers different income classes.

References

Balabanis, G. (2002). The relationship between lottery ticket and scratch-card buying behavior, personality and other compulsive behaviours. *Journal of Consumer Behavior*, 2(1), 7-22.

Barber, B. M., & Odean, T. (2001). Boys will be boys: Gender, overconfidence, and common stock investment. *Quarterly Journal of Economics*, 116(1), 261–292.

Blalock, G., Just, D. & Simon, D. (2007). Hitting the jackpot or hitting the skids: entertainment, poverty, and the demand for state lotteries. *American Journal of Economics and Sociology*, 66(3), 545-570.

Chalmers, H., & Willoughby, T. (2006). Do predictions of gambling involvement differ across male and female adolescents? *Journal of Gambling Studies*, 22, 373-392.

Clotfelter, C. T. & Cook, P. J. (1989). The Demand for Lottery Products, NBER Working Paper 2928.

Croups, E., Haddock G. & Webley, P. (1998). Correlates and predictors of lottery play in the United Kingdom. *Journal of Gambling Studies*, 14(3), 285-303.

Draper, N. R. & Lawrence, W. E. (1970). *Probability: An introductory course*. Chicago, Markbam.

Friedman, M., & Savage, L. J. (1948). The utility analysis of choices involving risk. *Journal of Political Economy*, 56(4), 279–304.

Ghent, L. S. & Grant, A. P (2006). Are voting and buying behavior consistent? An examination of the South Carolina education lottery. *Public Finance Review* (available on http://www.ux1.eiu.edu/~cflsg/sclottery.pdf)

Giacopassi, D., Nichols, M. & Stitt, B. (2006). Voting for a lottery, *Public Finance Review*, 34(1): 80-100.

Kearney, M. S. (2005). State lotteries and consumer behaviour. *Journal of Public Economics*, 89: 2269-2299.

La Fleur's 2005 *World Lottery Almanac*. (http://www.lafleurs.com).

Ladouceur, R. & Walker, M. (1998). Cognitive approach to understanding and treating pathological gambling. In A.S. Bellack & M. Hersen (Eds.), Comprehensive Clinical Psychology, 588-601. New York: Pergamon.

Lam, D. (2006). The influence of religiosity on gambling participation. *Journal of Gambling Studies*, 22:305-320.

Layton, A. & Worthington, A. (1999). The impact of socio-economic factors on gambling expenditure, *International Journal of Social Economics*, 26 (1/2/3): 430-440.

Miyazaki, A., Langerderfer, J. & Sprott, D. (1999). Government-sponsored lotteries: Exploring purchase and nonpurchase motivations. *Psychology & Marketing*, 16(1): 1-20.

Miyazaki, A., Brumbaugh, A. & Sprott, D. (2001). Promoting and countering consumer misconceptions of random events: The case of perceived control and state-sponsored lotteries. *Journal of Public Policy & Marketing*, 20(2): 254-267.

Price, D., & Novak, E. (1999). The tax incidence of three Texas lottery games: Regressivity, race, and education. *National Tax Journal*, 52(4): 741-751.

Roberts, J., Arth, M. & Bush, R. (1959). Games in culture. *American Anthropologist*, 61(4): 597–605.

Selinger, I. (1993). The big Llottery gamble. *Advertising Age*, 64(20): 22-28.

Shiller, R.J. (2000). Irrational exuberance. Princeton: Princeton University Press.

Wagman, R. (1986). Instant Millionaires: Cashing in on America's Lotteries. Woodbine House.