THE INCOME GRADIENT OF GAMBLING IN SPAIN: EVIDENCE FROM THE FAMILY BUDGET SURVEY (EPF) USING MICRODATA.

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Introduction

In 2020 the gambling sector accounted for 0.6% of GDP and employed 85.361 people. Generating 6.771 Mill. Eur. (GGR), becoming the 4th European Country with the highest GGR and the 6th if computed as a share of GDP.

Do to it's importance in the country's economy, a propper taxation that maximizes the government's revenue and minimizes the problems associated with it, is required.

Objectives

-It represents the first attempt to test the determinants of gambling spending in Spain, putting a special emphasis on the household's income effects (and its elasticity).

-It differentiates the determinants of what induces a household to gamble and the amount they devote.

-Relevant information for both the tax collector and the gambling companies will be obtained.

Methodology

The study uses the Family Budget Survey (EPF) to get a representative sample of the Spanish Population.
It is comprised between the 2016 and 2020, having a total of 104.739 entries, giving information of both the household and its main breadwinner.

For the sake of this study two models have been run, an Ordinary Least Square and a Tobit model. Both models having the same independent variables, but differing on the dependent one.

Those variables are divided in three stages:
1) A simple model with the years, autonomous communities and income.
2) Addition of some household and main breadwinner socioeconomic variables.
3) Addition of variables related to the place where the household is located.

OLS Model

Uses a dummy variable as dependent, that differentiates if a household spends money on gambling or not.
The aim of this model is to find the determinants that increase the probability that a household gambles.

Tobit Model

Uses the (log) of the net household yearly gambling spending as dependent.
The aim of this model is to find the determinants that increase the amount spend by a household on this goods.
This is done by censuring the households that do not spend anything on it.

Results

OLS Model

Table 2: Results of the OLS models (summary)

	Dependent variable:		
	Gambler		
	(1)	(2)	(3)
Income (log)	0.370***	0.270***	0.250***
	(0.044)	(0.045)	(0.048)
Quadratic income (log)	−0.012***	−0.014***	−0.013***
	(0.002)	(0.002)	(0.002)
Observations	104,739	104,173	91,374
R^2	0.057	0.110	0.110
Main breadwinner socioeconomic data		Yes	Yes
Household socioeconomic data		Yes	Yes
Macro data of the area of residence			Yes

Tobit Model

Table 3: Results of the Tobit models (summary)

	Dependent variable:		
	Gambling spending (log)		
	(1)	(2)	(3)
Income (log)	12.000***	8.800***	8.400***
	(0.770)	(0.780)	(0.850)
Quadratic income (log)	−0.510***	−0.440***	−0.420***
	(0.039)	(0.039)	(0.042)
Observations	104,739	104,173	91,374
Main breadwinner socioeconomic data		Yes	Yes
Household socioeconomic data		Yes	Yes
Macro data of the area of residence			Yes

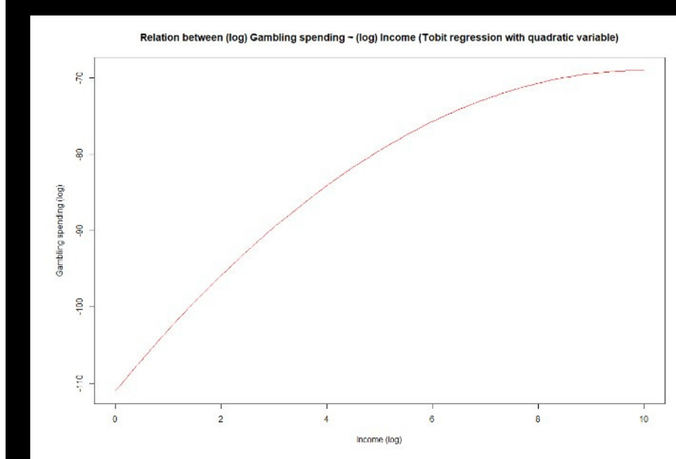
Profile of the head whose household devote money on gamblling

-Spanish citizenship
-Married but without childreen
-Medium level of education
-Employed by someone else
-Live in a highly populated area

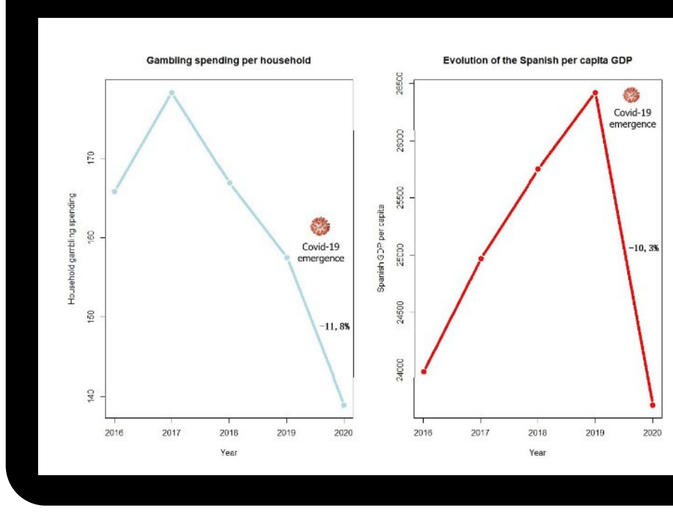
Profile of the head whose household maximizes the amount devoted

-Men
-Spanish citizenship
-Married but without childreen
-Low level of education
-Employed by someone else
-Live in a highly populated area

Quadratic function of the (log) income



Gambling spending and Per capita GDP relation in the Covid crises



Conclusion

-Income increases both the probability that a household gambles and the amount devoted.
-Gender of the head, affects the amount spent but not the probability of a household to gamble.
-In order to reduce the amount of households that gamble, governments should focus on education.
-An income elasticity of 12 (1st stage), 8,6 (2nd stage) and 8,4 (3rd stage) was found (the highest in the literature). This categorizes gambling as a luxury good, with a progressive tax.
-At early stages, spending has a sharp increase with small changes in income. Up to a certain amount, an increase causes the curve to flatten and the changes on spending to be less significant.
-In recession periods when GDP decreases, the amount of households that gamble will remain unchanged (or may change insignificantly), but the quantity spent is the one that plunge.