

Gambling as a Restraint to the Italian Economy

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ABSTRACT

The Italian economy is undergoing a period of economic recession, which is expressed in a contraction in domestic demand and a reduction in investment. Notwithstanding a decrease in the per-capita spending on durable and non-durable goods, for some years, there has been an increase in spending on gambling. The market for legal gambling is a large, broad market, strongly influenced by changes in consumer preferences and by technological innovation. This market, in continuous evolution, does not seem to be affected by the crisis, because the possibility of an easy income exerts a significant attraction.

The aim of this work is to demonstrate that gambling does not contribute to economic growth in spite of the increase of the gambling spending.

Keywords: Economic crisis, Gambling; Household Economics; Consumption; Economic Growth

1. Introduction

The economic crisis seems to be beginning to give way to recovery. In the fourth quarter of 2014, after a negative trend over the period 2012 to 2013, in fact, Italian GDP saw an rise of +0.2% (ISTAT, 2015). This slight increase is due to a recovery in consumption, with investments still lagging behind. Referring to the survey of the labour force, on average, in 2014, the number of people in employment grew year-on-year by 0.4%, although on a regional basis

employment rate in the North is about twenty percentage points higher than that in southern Italy.

These scant data show the need to adopt policies that trigger a recovery to provide a positive rate of growth in employment and GDP.

Travelling the arduous road to create welfare for the entire community, we need to know how to combine freedom and control, profitability, and ethics in measured doses and, therefore, it does not seem possible to speak of growth in an economic system that has to be healed for various reasons. including via the reduction of the presence of illegal markets.

Among these, the one that always exhibits growth in supply and demand is gambling and this work aims at showing just how dangerous the nature of the effects that even the legal gambling exerts on the economy.

While several aspects of gambling have been investigated by sociologist, psychologist for the pathological gambling problem (Lesieur and Rosenthal, 1991; Walker and Dickerson, 1996; Nower and Blaszczynski, 2006; Clarke, 2008; Lavanco and Varveri, 2006) and for the social costs of gambling (Douglas et al., 1999; Thompson et al., 2000; Walker, 2007; Talamo and Manuguerra, 2016), the literature on relations between gambling and economic growth is scarce (Li et al. 2010). Particularly few studies investigate how legal gambling activities are influenced by the economic crisis (Horvath and Paap, 2012; Sabatino, 2016). Horvath and Paap, 2012) examine how some legal gambling activity such as Casino gambling, lottery and pari-mutuel wagering influence the US business cycles during the period 1959-2010. Sabatino (2016) studies the relationships between the Italian socio-economic conditions and the propensity to spend in gambling during the economic crises.

At the light of these consideration, using time series analysis (1991-2012), we consider how in Italy the legal gambling does not contribute to economic growth in spite of the increase of the gambling spending.

Italy in fact occupies first place in the European market of online gaming, having seen a turnover of 15.4 billion Euros in 2012, followed by France with 9.408 billion Euros. As a result of the broadening of the offer, from online slot machines to the soon-to-be-introduced Betting Exchange, up to and including virtual betting (Online Game Observatory 2013) Italy has even ousted the United Kingdom and occupies 22% of the world market. In 2012 the legal market for online games also took first place in e-commerce, a first place which was attributed to the travel sector in 2011 for the highest volume of business. But the leading position that, Italy holds in gambling at an international level cannot be recognized as something to be proud of in economic terms.

The paper is organized as follow. In section 2 we give a brief overview of the economic downturn in Italy as well as of consumption, investment and the development dynamics of the gambling sector while section 3 presents the empirical results and section 4 sets out the conclusions.

2. The Financial Crisis, Consumption, Investment and Gambling in Italy

Financial crises triggered at the beginning of 2007 from the sale of derivatives linked to subprime mortgages by some financial American companies, it spread, beginning to shake the real economy at the beginning of 2008.

Italian citizens, however, did not perceive the seriousness of it, not noticing the leap in raw material prices except that of crude oil, which, in turn, affected the price of fuel. This is, at least in part, explicable, because the companies still had credit and economic activity still appeared very well supported, with large

markets especially foreign ones, even as demand was declining within the country.

In an attempt to remedy the negative impact that the financial crisis brought to the real economy, monetary and fiscal policy measures were applied. In order to parry the blows inflicted by the speculation against the Italian economy it proved necessary to reduce public spending with a robust rise in the tax burden, and a slight drop in expenditure. This has negatively affected the progress of the Italian economy, which, for a long time, had exhibited a modest performance below the EU average. At this point the actors on the national (and in some respects the international) political and economic scene played the role of supporters of a reduction in the tax burden, which ought to revitalize demand, and a quantitative reduction in government spending, even if a qualitative change might have been better to trigger the recovery.

Despite all of the measures taken, the GDP of Italy, even for the current year, will record negative growth, attributable both to the decline in internal global demand and to the weakness of the foreign one.

The average of the first eleven months of 2013, compared to the same period in 2012, showed industrial production down by 3.1% and that of the construction sector by 11.4%.

If in a period of recession, the market for goods and services demand shrinks, within the gambling market, there are fewer clouds and the possibility of easy income still exerts a considerable attraction, inasmuch as many are victims of the flattery of real or virtual green tables. A crises in fact, causes uncertainty, anxiety and stress in society which are positively correlated to gambling behaviour and the effect of a recession on gambling is positive (Mikesell, 1994).

The incomes resulting from legal gambling in 2012 increased to about 84 billion Euros as against 79 for 2011, up +4.5%.

The market for public (legal) gaming in Italy is divided into two segments, one managed by the Autonomous Administration of State Monopolies (AAMS) and the one represented by the casinos, formed into a joint-stock company held by the licensees, i.e. the municipalities, regions and provinces . The first market segment has an offer consisting of:

- *Lotto*, a fixed odds numbers game, with active participation of the player who knows the amount of the payout which is based on the bet placed;
- *Superenalotto*, a tote numbers game, for which, even if based like the previous one, on the extraction of numbers, the player does not know in advance the amount of the prize which depends on the number of games played;
- the National Lottery and Scratch-cards, for which the player does not participate actively, merely buying the ticket, in the first case, gives rise to a deferred win and in the second an instant payout;
- sports betting and horse racing, for which the player provides the results of several races, based on their assessment;
- Bingo, for which the player does not know *a priori* the size of the win and, moreover, may not obtain it on his or her own, given that it takes place in specially-equipped halls;
- electronic devices, such as video poker, which, if they win, deliver money or electromechanical devices, or “fishing” type skills, which provide objects, which shall also include entertainment games such as pinball, video games, billiards etc.

The offer of the second sector currently consists of the 4 casinos at Campione d'Italia, Saint Vincent, Sanremo and Venice. The betting market is a market of wide consumption strongly influenced by changes in consumer preferences and by technological innovation. Each of the companies that go to make up the offer, is, therefore, induced to innovate the product continuously in order to obtain higher profits that come from being able to meet consumer demand better than its competitors. This market continues to evolve, and it is strongly supported by the media and by advertising campaigns that, even when they invite *to play sensibly* favour a behaviour which, in this particular category of consumers is expressed, even in the event of repeated negative outcomes, in further purchases, unlike that which usually happens for other categories of goods. It should not be understated that the distribution network for the product is universal and is further supported by the possibility of access to the market with a simple click of the mouse. And it is precisely online gambling that is easily accessible to the family, that appeals to the youngest and women that avoids control and within which organised crime finds a niche.

If some of the companies have been established using entirely Italian capital and adopt regular and transparent behaviours, for others, it is difficult to clearly identify the owner, often hidden in corporate entanglements in a system of "Chinese boxes" serving just one master, organized crime, which obtains higher profits than those arising from the legal game.

The turnover they make, however, does not result in an increase in goods and services produced and does not set into motion the beneficial mechanism of a Keynesian multiplier, because it does not represent an investment that results in an increase in employment but, at best, one of subjugation. The resources are allocated in a distorted manner and they lead to a further worsening of the economic situation in the country. Through the demand for goods and services

the illegal economy takes resources from the legal one, accumulating them through the activities of extortion, whose profits are then recycled. In this way, a mixed legal-criminal system develops in which legal operators take part in the production and redistribution of goods and services produced by the illegal economy which, in turn, may also invest and, therefore, participate in the production of the legal economy. We can assume that the equilibrium value of legal income is therefore higher in an economy composed of legal and criminal operators where the action to contrast this illicit activity, aimed at defeating crime and reducing money laundering, is lower.

In addition, within labour markets the situation is not improved as, in the long term, the displacement of workers from legal markets to illegal ones brings about a decrease in production and employment. The fact is that the demand for illegal goods and services carried out by legal operators is a subtraction of net resources from the legal economy. In fact, we should consider that if some entrepreneurs are victims of crime, others are a part of it and others still are colluding with it. The interdependence between legal and illegal business is expressed in an increase in transaction costs, which forms a barrier to market entry and, therefore, exerts a depressive effect on investments.

Gambling is a part of this system of legal and illegal entrepreneurship and operates in an even more insidious manner by feeding the hopes of easy money and, therefore distorting still further the resources which could be allocated to spending that supports lawful productive activities.

In order to verify if, at least, lawful gambling had a beneficial effect on the evolution of the Italian economy in the years 1991-2012, we compared the previous rate of gross gaming revenues (GGR), the trends in expenditure in terms of resident families' final consumption (%), the trends in investment (%) and that of the GDP, the incidence of GGR on Italian families' consumption,

the structure of consumption by families before finally estimating a linear regression using the OLS method.

3.The Empirical Analysis

3.1 The methodology and the Data-set

As anticipated we have sought to estimate how gambling, consumption and investment impacted on Italian economic growth during the period 1991-2012. To do so, we use a data-set constructed from two different data sources: the National Economic accounts or ISTAT data and the AAMS data.

We began by describing the variables used (Table 1), comparing the rate of gross gaming revenues (GGR), the trends in expenditure in terms of resident families' final consumption (%), the trends in investment (%) and that of the GDP as well as the incidence of GGR on Italian families' consumption, the structure of consumption by families before presenting some correlations and descriptive statistics concerning the variables used (Table 3). Finally, using the STATA program, we estimated the following linear regression using the OLS method:

$$(1) \text{GDP}_t = \beta_0 + \beta_1 \text{GAME}_t + \beta_2 \text{CONST}_t + \beta_3 \text{INV}_t + \varepsilon_t$$

where:

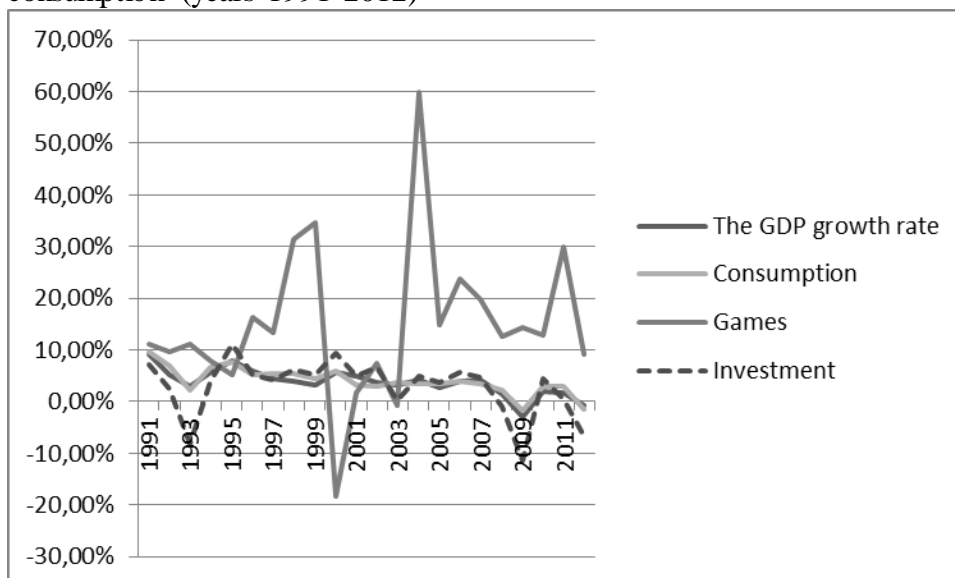
- GDP_t is the Italian economic growth in the period 1991-2012;
- GAME_t represents the rising trend in gaming in Italy in the period 1991-2012;
- CONST_t represents the trend in expenditure for resident families' final consumption in the period 1991-2012;
- INV_t is the trends in Italian investment in the period 1991-2012.

Table 1 - Variables used in the empirical models

VARIABLE	DESCRIPTION
DEPENDENT VARIABLE	
GDP	Trends of the GDP (%)
INDEPENDENT VARIABLES	
GAME	Trends of the raising of games in Italy (%)
CONS.	Trends of the expenditure for the resident families' final consumption (%)
INV.	Trends of the Italian investments (%)
MC	Marketing Capabilities of firm <i>i</i> in period <i>t</i>

Considering the rate of gross gaming revenues (GGR), the trends in expenditure for resident families' final consumption (%), the trends of investment (%) and that of the GDP (Fig.1), the result is that the first (GGR) has a positive value even when the second (GDP) is negative. In other words, this type of market, in the considered period, is little affected by the crisis and by the economic difficulties that have affected the entire country. In fact, it can be noted, for example, that between 2008 and 2009 there are a decrease in the rate of change of the GDP (-3%), a decrease in the rate of consumption (-1.68%) and in the rate of investment (-11.46), while spending on gambling increases by 14.4%. All this is confirmed by considering both the correlation coefficient between the rate of change in the income from legal gambling and that of GDP is that between the change in the income from gambling and the change in final consumption of resident households. Both of the coefficients are not only very low, but also substantially equal negative and equal to -0.02 and -0.01 respectively, as shown in Table 2, while, as expected, the percentage change in GDP, the percentage change in the final consumption of resident households and the percentage change in investment are interdependent and highly correlated (0.94; 0.81 and 0.78).

Figure 1: Trends in % terms of Italian GDP, of the Investment and GGR in Italy and that of the expenditure in terms of resident families' final consumption (years 1991-2012)



Sources: our AAMS and ISTAT Data Processing

Table 2: Correlation between the growth rate of Italian GDP, the growth rate of income from gaming, the percentage change in spending on final consumption of residents' households and of investments (years 1991-2012)

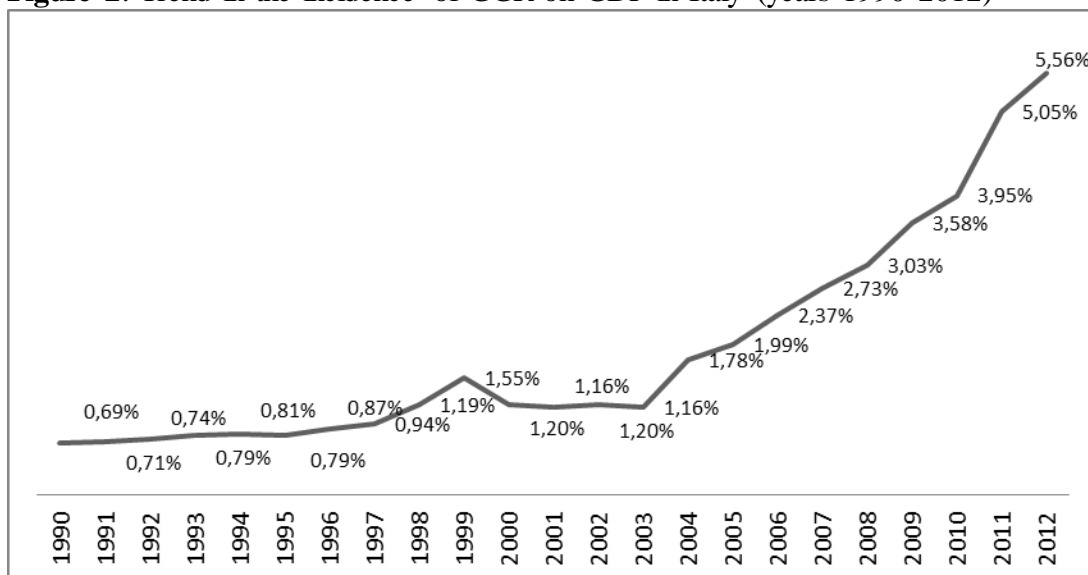
Variables	GDP	GAME	CONS	INV.
GDP	1.00			
GAME	-0.02	1.00		
CONS	0.94	-0.01	1.00	
INV.	0.81	0.04	0.78	1.00

Sources: our AAMS and ISTAT Data Processing

Even more worrying is the incidence of GGR on GDP (Fig. 2) that grows throughout the period of time considered with a substantial increase in the worst period of the economic crisis, reaching about 3% in 2008, approximately 5% in 2011 and 5.6% in 2012.

Such an increase shows that as individuals reduce their expenditure on goods and services they do not do so for gambling, which in fact increases, in the absurd hope of improving their social and economic condition following a win.

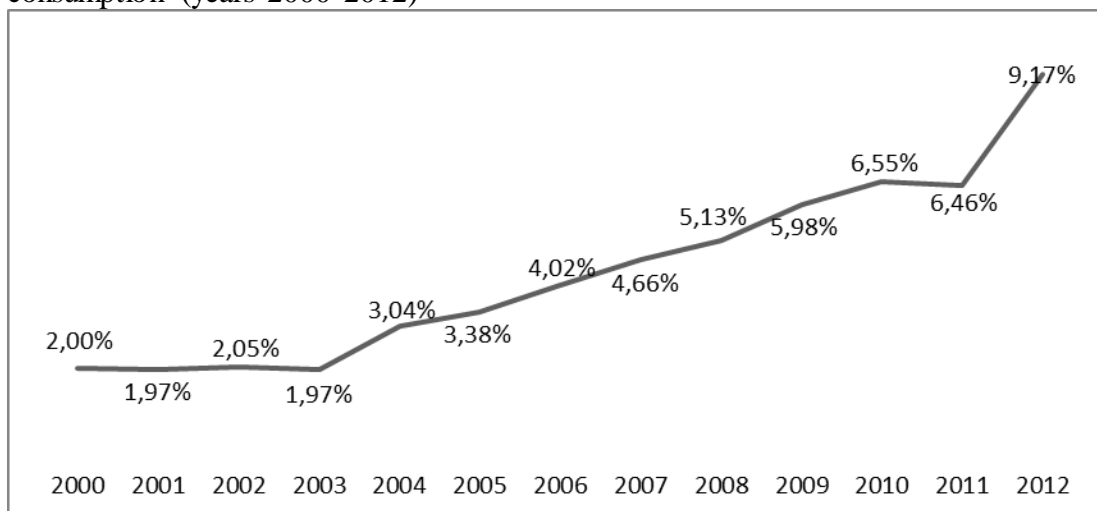
Figure 2: Trend in the incidence of GGR on GDP in Italy (years 1990-2012)



Sources: our AAMS and ISTAT Data Processing

Between 2000 and 2003 GGR underwent a period of strong retrenchment but after 2004 in particular, the incidence of GGR on Italian families' consumption increased, when it reached about 3%, exceeding 6.5% in 2010 (Fig.3).

Figure 3: Trend in the incidence of GGR in Italy on Italian families' consumption (years 2000-2012)



Sources: our AAMS and ISTAT Data Processing

During the period of the crisis new legal gambling games were introduced in Italy such as the Bingo in 2001 and the segment of "entertainment" devices in 2002. 2004 was the year of the great revival in the legal gambling, helped by the fight against illegal or irregular gambling (Gandolfo and De Bonis 2011) as well as the introduction of the above-mentioned new games, which continued

to show its effects until 2008. In 2008, skill games or skill-based games were also introduced, allowing the player to rely not only on luck, but also on their skills and abilities such as their knowledge of the horse-racing and sports world. In 2012 the on-line gambling and entertainment devices reached their highest market shares, equal to 16% 55.8% respectively of the entire gaming turnover. The expenditure of 366 Euros for adult players in 2000 increased to 1092 Euros in 2009. This can be explained, in part by studying the gambler's behaviour that, especially when the worry of the economic crisis is strongest, stimulates areas of the brain that, being rich in dopamine receptors, on the one hand provide pleasure and on the other hand make it difficult to perceive the relationship between risk and return correctly (Mottetlini 2007). Although the data relate only to the sector of legal gambling, one can easily deduce that the illegal one is also on the rise and, together with it, organised crime is thriving and able to infiltrate the legal economy more easily. In this way gambling has become an expression of consumption and is linked to changes in consumer preferences. On the other hand, the offer of the gaming market is in continuous evolution with a high level of differentiation, from traditional games to new ones, from those in which the luck component prevails to those in which the player's ability is more important (Gandolfo and De Bonis 2013).

It is also important to emphasize that Italian families' expenditure on consumption, directed to durable and non-durable goods and/or to services declined in 2012, while it rose for all the online games managed by the State, since the overall spending, the difference between the sums raised and those paid out in winnings, amounted to Euros 749 million an increase of 1.9% compared to 2011.

3.2 Empirical Results

Our empirical results are presented in Table 4 and the descriptive statistics in Table 3. The estimates are carried out adopting a ‘robust’ estimator for the OLS model to solve the issue of heteroskedasticity. The results show some interesting evidence with regard to the impact that the selected variables have on Italian economic growth with a high value of R^2 . In fact it can be seen that the gambling variable is not significant and has negative effect on Italian economic growth. In fact the elasticity coefficient is negative and therefore the relationship between the two quantities is reversed. In other words, there is a weak tendency to increase gambling in periods of economic downturn. As expected, however, the CONS variable is very significant, it being a direct function of income. The INV variable, however, is significant only at 10% because during the period examined and particularly during the crisis, investment, not supported by positive expectations of profit, decreases and consequently the GDP drops in a multiplier fashion.

Table 3 – Descriptive statistics

Variables	N. Obs.	Mean	Std. Dev.	Min	Max
GDP	23	3.500	2.823	-2.99	9.18
GAME	23	14.161	15.296	-18.3	60.00
CONS	23	3.794	2.832	-1.68	9.73
INV	23	2.590	5.583	-11.46	11.23

Table 4 – Linear regression estimates

Estimation Method	OLS			
Dependent variables	GDP			
	Coefficient β	t	P>z	Robust Std. Err.
GAME	-0.005	-0.40	0.693	0.012
CONS	0.794	6.91	0.000	0.115
INV	0.096	1.31	0.207	0.073
cons	0.310	0.82	0.422	0.377
N. of obs.	23			
R^2	0.9094			
Prob >chi2	0.0005			

The only positive link between gambling and economic growth can be found in the revenue allocation that the exchequer/revenue receives, but these are difficult to select with precision. In this regard, it should be pointed out that some economists include the type of taxation in this sector within the so-called “excise duties” that are typical of goods with inelastic demands with regard to price, with a strong reactivity to income, and are therefore included in the luxury goods sector, are predominantly public offerings and goods of demerit. This last feature was often invoked to justify a taxation that should discourage consumption, but this contradicts with the advertisement of the games themselves carried out on public TV. Indeed the justification of the taxation is found in the access to a sure revenue with a limited distorting effect arising from the fact that in most cases the player does not know that part of the bet goes straight into the state coffers. The amount of revenue, of which, on the basis of law 662/1996 a part is for the restoration of cultural heritage, has increased over time, not as a result of the increase of taxation which has been progressively reduced, but an increase in the number of players. This means, in other words, that the tax burden has been reduced over time with an average rate of 21.7% in 2009 against the 35.3% in force in 2003. In fact, since 2005, the inflow to treasury coffers has risen markedly less than the sums gambled. The reduction of the rate determines, on one side, a substitution effect for which, with the same bet, one expects a greater return and, therefore, one plays more and on the other hand, an income effect for which one would play less since the same expectation of winning is connected to a bet of a smaller stake. The increase in the total staked is not only attributable to the prevalence of the substitution effect on the income one, but also to the increase in winnings. This is a datum that to some extent has allowed us to better protect the consumer, as it makes the public offer more competitive with the illegal or irregular one.

This, however, does change the fact that the increase in revenue from the online games, in particular from online poker, and equal to Euros 70 million in 2009 translates into GDP growth only when it is denominated as production of goods and services. From 2008 to 2011, in fact, the existing legislation, that since 2004 has made slot machine dealers tax collectors on behalf of the State, had been enriched with the proceeds of article 30 Bis of the D. L. 185/2008 with different scaled rates from 12.6% to 8% depending on the stakes placed. In addition, the law 88 /2009, adapting the Italian legislation to EU law, sets some regulations on online gambling, while the decree 39/2009 established new games are, such as lotteries and the daily draw (*Win for life*), roulette, dice, and poker played individually and not in a tournament. The profits coming from these are intended to be used to finance the reconstruction of earthquake-hit areas in Abruzzi. In 2011 the stability law increased the availability of games, but it also strengthened the actions to counteract illegal ones, to protect consumers and recover tax revenues from tax evasion and circumvention implemented by providing checks by the AAMS in collaboration with the SIAE and the *Guardia di Finanza* (an Italian military corps that works to prevent the tax evasion). D. L. 138/2011 converted into L. 148/2011 enriched the availability of games still further, changing both the size of the levy and the percentage of compensation for managers at the points of sale, in the hope of increasing the revenue that would be attributed entirely to the State budget for the end of 2012.

It is relevant to note that most of the revenue for the State now derives from the less popular games, while it is lower for those online, involving more players. In fact, with the decree law n. 39 of 2009, a tax of 20% on the stake has been introduced, net of winnings, resulting from cash poker and casino games, while the tax relative to games of skill is always 3%. This model of taxation makes

the legal offer of these games more competitive than the irregular ones in terms of payout,. A different model of taxation would be reflected in the payouts, reducing them, leading players to access unauthorized sites, although legitimate in other jurisdictions.

4.Conclusions

The legal gambling in Italy is a very important industry managed by State, municipalities, regions and provinces and Italy occupies the leading position in gambling at an international level.

The leading position that, Italy holds in gambling at an international level cannot be recognized as something to be proud of in economic terms, but it can be considered a restraint on economic growth.

Consequently, it cannot be argued that the social benefits, arising from tax revenues offsets the social cost connected to gambling.

Although the broadening of the offer does, to a certain extent, protect the consumer, as it makes the public gaming offer more competitive with the illegal or irregular ones, it does not reduce the social cost, which, in addition to its pathological components, exhibits other symptoms including a reduction in productivity, insolvency, bankruptcy and the corruption that is rampant in the institutions. These have a decisive role in the growth or otherwise of an economic system since they can correct negative externalities both in the field of education and in terms of credit, as well as providing for the coordination of the different sectors of the economy and, in particular, in the area of research. By reducing uncertainty, the pre-eminent role of the institutions is to create, a stable structure of social relations and, without mentioning the damage that the corruption brings, it can be considered that an institution, which encourages gambling, even if its offer contrasts the illegal one to some extent, does not contribute to the growth of the economy, nor to a reduction in poverty.

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