DOI: 10.20472/IAC.2016.025.025

BOJAN GEORGIEVSKI

College of Business Administration, American University of Middle East, Kuwait

JACQUES MOSTERT

College of Business Administration, American University of Middle East, Kuwait

THE PREVALENCE OF SUICIDALITY DURING THE ECONOMIC CRISIS IN PORTUGAL, ITALY, IRELAND, GREECE AND SPAIN.

Abstract:

Stressful life experience are one of the causative factors in suicide among men between the ages of 35 and 55. The financial crisis in Portugal, Italy, Ireland Greece and Spain has shown a pattern of contraction in GDP followed by rising unemployment numbers. Financial crisis represents a crash of the financial system and a collapse of the prices of assets including bankruptcy of a bank or other financial institutions which enables people and companies to obtain credit in order to pay their obligations. A descriptive multiple-case study design in established a deeper understanding of the impact of the prevalence of suicide during the financial crisis shows a correlation between increased suicides recorded by the world Health Organization and rising unemployment in these countries. Suggestions to negate increased suicides include free and easily accessible financial support and advice lines, national mental health services should train and implement support services to assist families who have been impacted policy makers consider positive psychology and resilience campaigns with a progressive message during financial crises.

Keywords:

Suicides, Financial crisis. European Economic Crisis, PIIGS countries, Portugal, Greece, Ireland, Spain, Italy

JEL Classification: A14, I10, I15

1. Introduction

Suicide is a complex and multi-faceted phenomenon. A mixture of biological and psychological contributing factors influenced by social and economic risk factors contribute to an average of 1.4% of all deaths worldwide (World Health Organazation, 2015). Albeit, individuals with psychiatric disorders, predominantly depressive disorders, are at a much greater risk of suicide, recent studies have shown that stressful life experiences such as economic crises and natural disasters may contribute to a spike in suicide prevalence. An important finding by Kendler, Karkowski and Prescott found that "stressful life events were more strongly associated with the onset of depression" (Kendler, Karkowski, & Prescott, 1999). In addition, in cases where natural disasters such as Hurricane Katrina contributed to increased risk of deleterious mental health (Edmondson D, 2013) as well as the impact of stressful life events in veterans (Zavin, et al., 2007).In the same way, economic stressors have an impact on metal health. Current literature provides strong correlation between economic crises and increased prevalence of suicide.

Financial crisis represents a crash of the financial system which enables people and companies not to pay their obligations, also it's harder to obtain a credit (Shwartz et al 1998). Kindleberger (1996) says that financial crisis represents a collapse of the prices of the assets or bankruptcy of a bank or other financial institutions.

The impact that financial crisis have on the overall economy is devastating. They are lowering the overall economic activity which leads to rise of unemployment and an increase of number of companies that are bankrupt. This also impacts people who stay employed because companies in order to continue operating are lowering salaries and costs.

The latest financial crisis, uncovered all the problems of the European Union and adoption of the Euro as a currency. What started as a real-estate financial crisis was transferred as a confidence crisis in the European Union, creating a sovereign debt to the members of the EU. This created the first financial crisis of the European Union.

Pre-crisis numbers were in large favour of development of the European Union. In the period before the financial crisis (2003-2008) the European Union grew at the same pace as advanced economies at the rate of 2.7 annual growth of GDP. But, as the European Union developed and improved so did its growth numbers. In the last 2 years before the crisis European Union grew at an average 3.3 % per year, which is over 20 % higher than the growth of the advanced economies (International Monetary Fund, World Economic … October, 2012, a.g.e., p. 190).

As a result of the financial crisis the GDP fell by 4 % in the European Union, by 20 % more than the GDP in the Advanced Economies. This was the largest decline in the history of the EU. The financial crisis, revealed the flows of the creation of the European Union. Credit ratings of smaller and undeveloped countries were improved as a result of the membership in the EU loans were given. It is noted that some countries deliberately borrowed more because of the expectation that EU member states would pay for the costs of their borrowing.

In a study that explored the possible correlation of suicide rates with business cycles within the years of 1928 to 2007 (Lou, Florence, Quispe-AgnoliM, Ouyang, & Crosby, 2011) found correlation results concordant with raised suicide rates during times of economic recession. Their findings indicate that among economically active age ranges (25 to 64 years of age) the prevalence of suicide is higher during economically unstable cycles. Similarly, (Barr, Taylor-Robinson, Scott-Samuel, McKee, & Stuckler, 2012) have found a link between increased suicides in England and rising unemployment during the 2008 – 2010 economic crisis. Correspondingly a link between unemployment and increased suicide rate is supported by the vulnerability model, according to which a lack of access to social support mechanism contribute to exasperated stress “that may lead to events precipitating suicide” (Lou, Florence, Quispe-AgnoliM, Ouyang, & Crosby, 2011). Moreover, a study conducted into the emotional impact of the economic crises found that “the foreclosure crisis has likely contributed to increased suicides” (Houle & Light., 2014) between 2005 and 2010. Further research indicated that housing loss “can precipitate suicide” (Fowler, Gladden, Vagi, Barnes, & Frazier, 2015)

In our study we looked at the non-causal link between the 2008 economic crisis in Europe, specifically in Portugal, Ireland, Italy, Greece and Spain, and the suicide rates prior to and after the onset of the economic crisis. We compared the suicide rates before and after the 2008 housing market crash. Considering the findings of similar studies, as detailed above, we expected to find a correlation between the beginnings of the economic crises followed by increased suicide in PIIGS economic zone.

Thus, the research aims to establish how the 2008 financial crisis in the PIIGS countries impacted the suicide rates in these countries.

2. Method

Through a phenomenological enquiry we used a descriptive multiple-case study design in order to establish a deeper understanding of the impact of phenomena in the financial sectors on society. We compared the impact of the financial crisis in each of the PIIGS countries by conducting a meta-analysis of data gathered from the World Health Organisation and World Bank was made to establish correlation between the phenomena of suicides during the 2008 financial crisis.

We established three units of analysis to compare: firstly we compared the rate of Gross Domestic Product (GDP) with unemployment rates (UR) during the period of 2008 to 2011. For each of the countries we included a third unit of analysis to establish correlation between GDP and UR levels with the numbers of suicide recorded during the same time. We decided on the countries that were most severely hit by the financial crisis in 2008.

We compared the suicide rates of men between the ages of 35 to 55 between the years of 2007 to 2010 for each of the PIIGS countries. Albeit the WHO statistics are comparatively reliable, we found that gaps in reporting of suicides for the period of 2004 and 2005 for Italy and Portugal made the reliability of the data more difficult.

Findings

In the following section we provide an analysis of the overall suicide rates of the PIIGS economic zone as well as an individual analysis of the impact of the financial crisis according to each of the PIIGS countries. It is noteworthy that there is a significant difference between the number of reported suicides between males and females in all three categories across the PIIGS economic zone. Both Table 1 and Table 2, shows that by far the largest number of reported suicides is recorded for the growth phase of independent economic activity across the PIIGS economic zone. This is seen for both the period prior to and after the 2008 economic crisis.

3. Portugal

Pre-crisis data show a small but steady economic growth of Portugal. Average growth rate was 1.5% .The financial crisis triggered the largest decline of almost 2.6 % in 2009. Although the country went out of recession in 2010, this was only temporary, making a negative growth in GDP again in 2011. The stagnation effect in the country's economy affected the unemployment levels. In the period of 2008-2010 unemployment level increased from 7.7 % to 10.7%.

As a result of the decreasing of the aggregate demand which resulted in decrease of GDP by 2.6 % in 2009 and rise of unemployment by 39%. Additionally, debt to GDP ratios went high. The country started borrowing money from European Banks in order to consolidate the imbalances in the economy. As a result, what was a pre-crisis debt/GDP ratio of 68% in 2007, increased to over 100 % in the beginning of 2011 leaving the Portuguese economy with a -0.05 GDP in relation to the previous year. The declining GDP correlates with a rise in unemployment rates of 10.8 % (Figure 1).

Figure 1: Portugal GDP growth rate and Unemployment rate

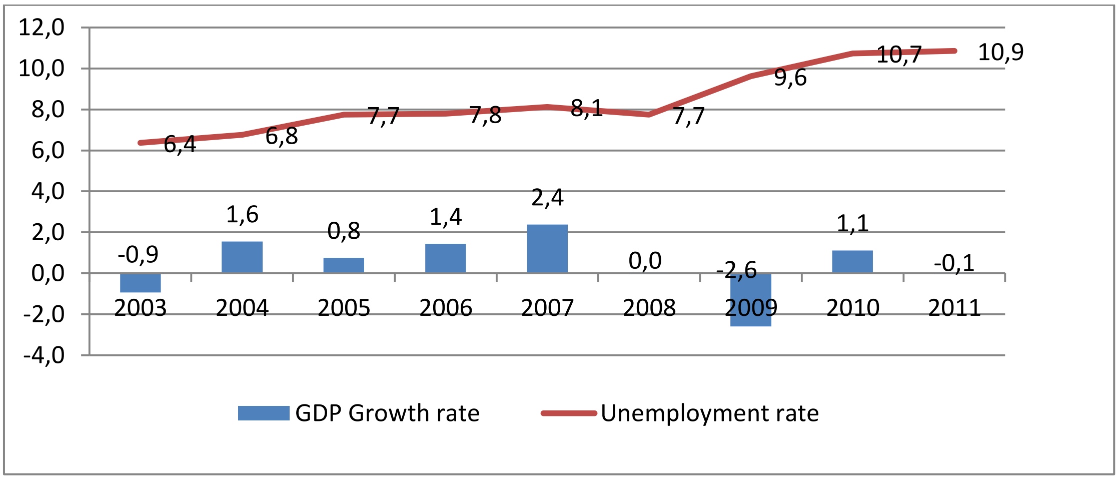


Figure 1: Source: IMF worlda data bank

During the period prior to the 2008 onset of the financial crisis a steady rise of suicides is recorded. However, during the crisis period there is a significant rise in suicides (Figure 2). They increased by 25% in the period of 2007 to 2010. Additionally Portugal witnessed an increase in suicides of females aged 25 to 34.

Figure 2: Total male suicides and Male suicides aged 35-54

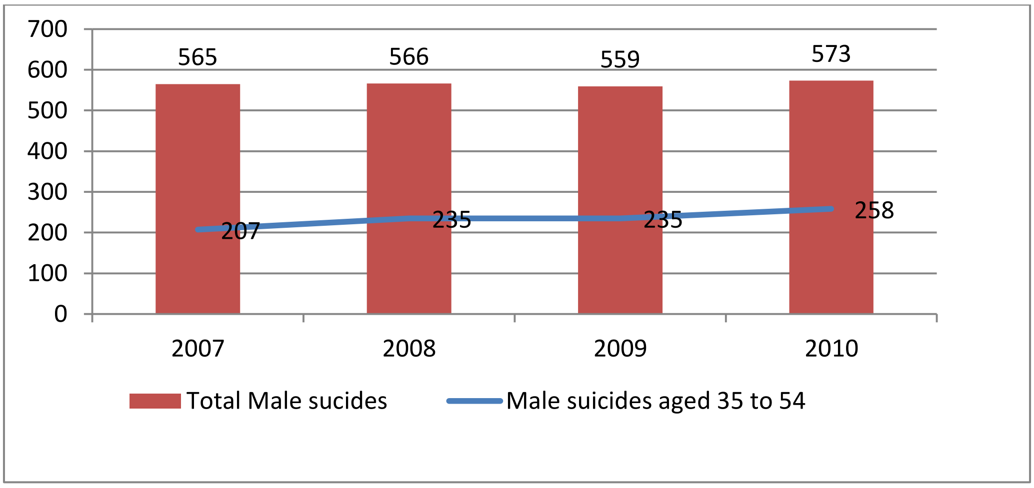


Figure 2: WHO 2015

Italy

Italy is the fourth largest European economy. It had a similar economic growth as Portugal, which reached its peak in 2006 as a GDP rise of 2%. The economy is facing a decline after the financial crisis. Largest problem is the low growth rate of the country. Additionally besides high portion of debt, Italy is affected with bad government policies, structural problems.

The greatest decline in GDP was recorded with a contraction of -5.0% in 2009. The residual impact of the contraction resulted in a rise of UR of 8.7 by the end of 2010. In the period between 2007 to 2010 unemployment rates rose by 40%, as a result of the crisis Italy's level of debt went to 118 % of GDP in 2010 (Figure 3).

Figure 3: Italy GDP growth rate and Unemployment rate

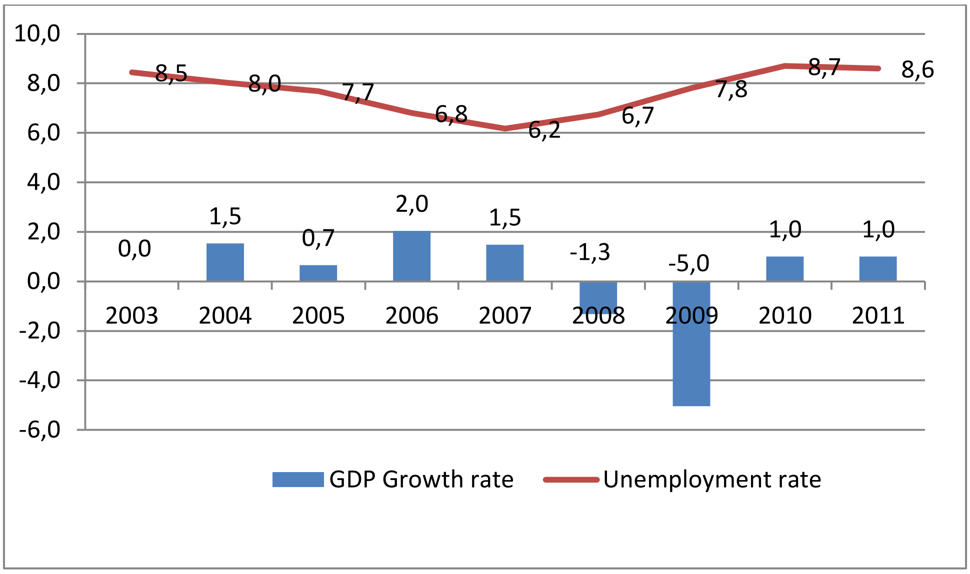


Figure 3:Source: IMF worlda data bank

A clear correlation between the onset of the financial crisis and increased number of suicides can be established. Suicides increased by 7% in a period of 1 year (from 2007-2008). Number of suicides in total increased by 10% from 2007, coming to a total of 3051 suicides compared to 2775 suicides before the financial crisis (Figure 4).

Figure 4- Total number of suicides, male suicides aged 35-54 and female suicides aged 55-74 in Italy

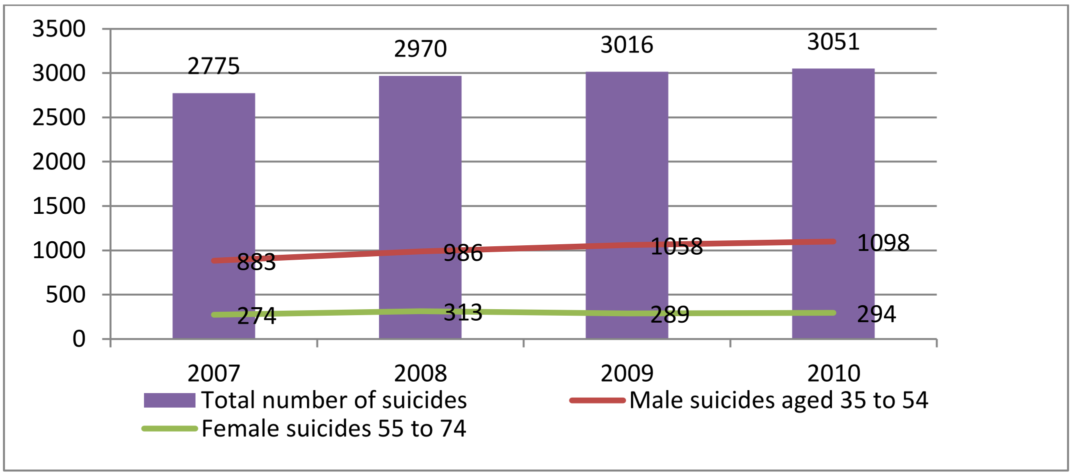


Figure 4: WHO 2015

As in the case of Portugal, most vulnerable category are Male aged from 35- 54. This category increased the number of suicides in total by 24 % in the period of 2007-2010. In the first year they increased by 12 % from 883 suicides in 2007 to 986 in 2008 (12%). Female suicides also increased in Italy. In the category above 55 years the number of suicides increased in the first year after the financial crisis by 14%.

4. Ireland

Ireland was the first Euro zone country that faced the financial crisis, and went in to recession. In the period the pre-ceded the financial crisis Irish economy blossomed. The country GDP rose at an average of 5.2 % annually, hitting its highest growth in 2005 when the GDP growth was 6%. The Irish economy had an extreme economic contraction and negative economic growth in 2008 was followed by the largest decline in the Irish economy in recent history. The GDP fell by 7,6 % in 2009. As a result of the financial crisis unemployment grew by 200 % to over 13,5 % in 2010 (Figure 5).

Figure 5- GDP growth rate and Unemployment rate in Republic of Ireland

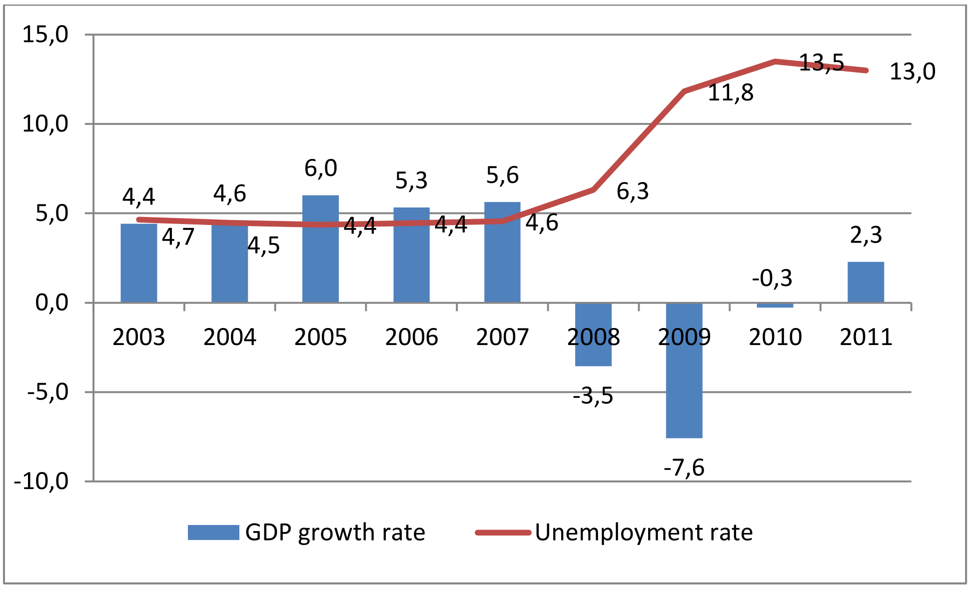


Figure 5: Source: IMF world data bank

The most significant problem is that the Irish economy is largely influenced by the financial sector, which increased the impact of the crisis. Also, layoffs accompanied with austerity measures contributed to the depth of the crisis.

Following the contraction of GDP and subsequent rise in unemployment rates, suicides in Ireland increased by 22.7 % in the second year of the crisis. Total number went from 348 suicides in 2007 to 427 in 2009. Following the same pattern as with Portugal and Italy, the most vulnerable category is male people aged 35 to 54 years. Number of suicides, in this category of people increased by almost 40% in the period 2007-2010 (Figure 6).

Figure 6- Total number of suicides, male suicides aged 35-54 and in Ireland

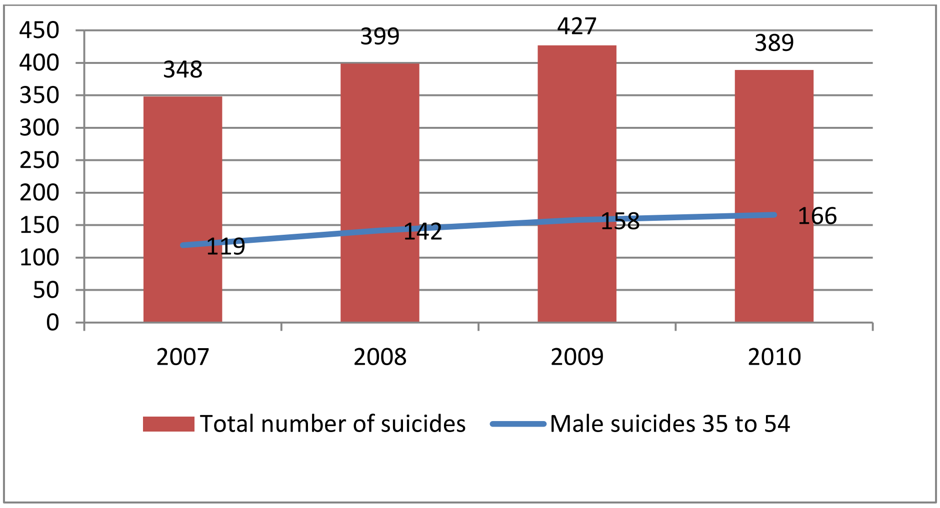


Figure 6: WHO 2015

5. Greece

Greece was the country that was hardest hit by the European financial crisis and has the highest public debt of all PIIGS countries. But the factors that impacted the Greek financial crisis are bad budget policies, accompanied with bad financial discipline. Expansionary monetary policy which was pursued for long period resulted in monetary and macroeconomic imbalances. Pre-crisis GDP numbers were very good for Greece. In period 2003-2007 Greece had an average GDP growth of 4.4%, which resulted in the lowest unemployment numbers in its history when it was only 7.7 %. Financial crisis resulted in to almost 50 % increase in unemployment and almost 4% shrinking of GDP in 2010. The debt to GDP ratio excelled from 109 % in 2007 to 133 % in 2010. Greece suicides increased by 18 % in the period between 2007 and 2009 (Figure 7).

Figure 7- GDP growth rate and Unemployment rate in Greece

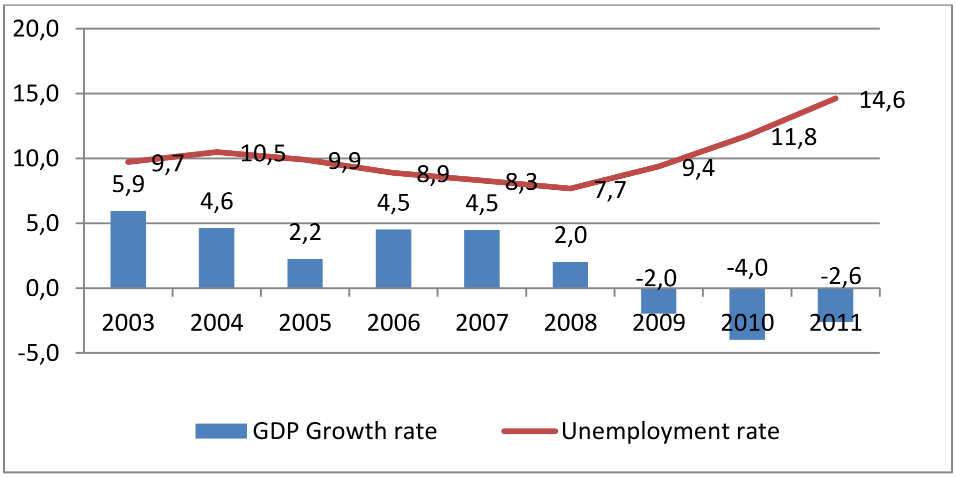


Figure 7: IMF worlda data bank

Figure 8- Total number of suicides, male suicides aged 35-54 in Greece

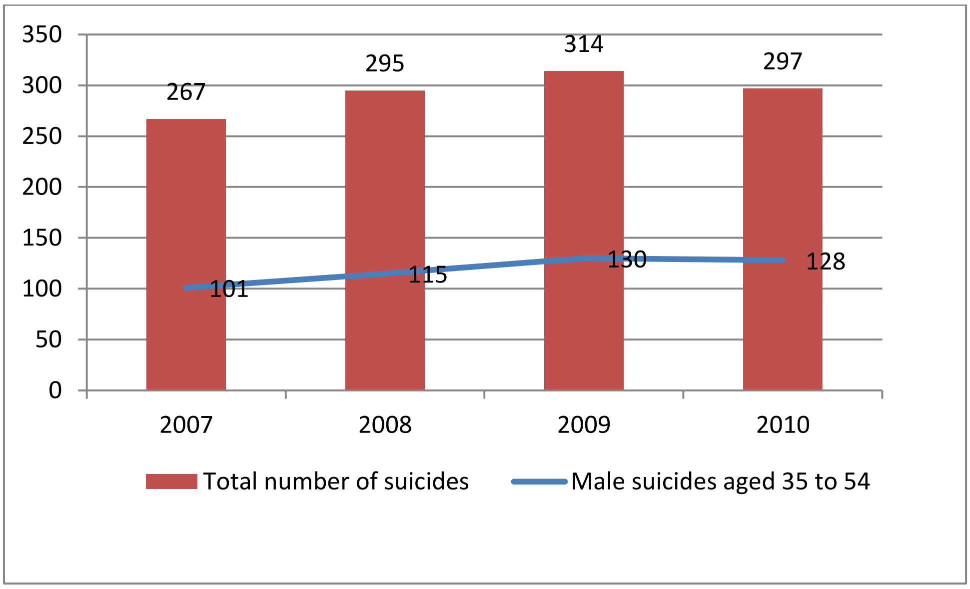


Figure 8: WHO 2015

The number of total suicides went from 267 to 314 in 2009. The largest influence is again in the category of male suicides in the age range between 35 and 54 years had an increase of 28.7% in 2009. A phenomenon worth highlighting is that female suicides peaked in 2008 in the same age range. In just one year the number of suicides went from 20 to 35. An increase of 75%.

6. Spain

Spain economy was all improving in the years before financial crisis. It had an average rise of 3.5%. This resulted in a decline of almost 30 % in the unemployment level. Unemployment reached its peak in 2007 when the unemployment level was at it low 8.2%. As a result of the financial crisis, the economy shrink by 4 % in 2009, but the biggest hit was on the unemployment level. Unemployment level rise by 143%, from 8.2 to 19.9%. An economic contraction of -3.722 in 2009 was followed by a rise in unemployment that peaked in 2010 at 19.9 (Figure 9).

Figure 9- GDP growth rate and Unemployment rate in Spain

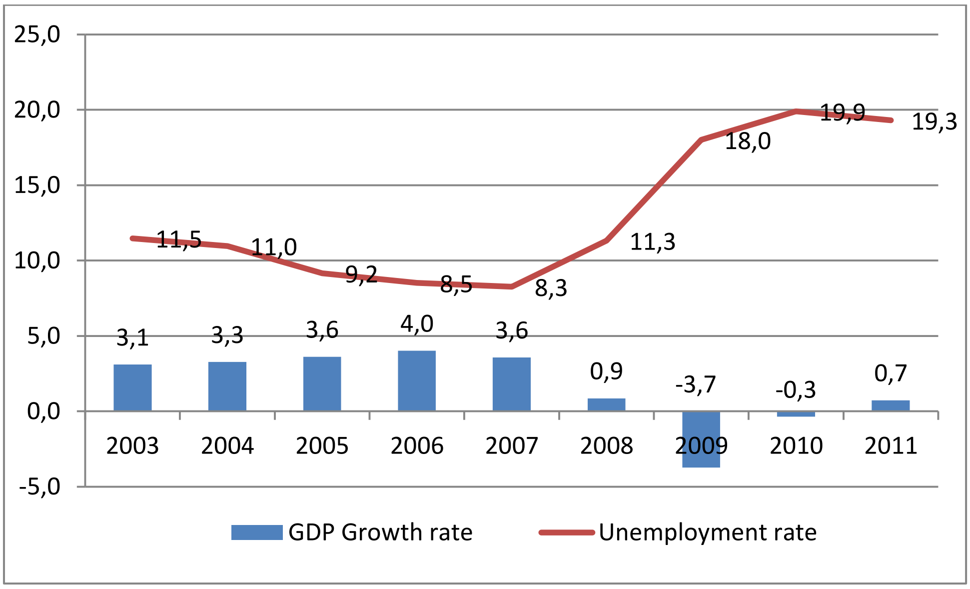
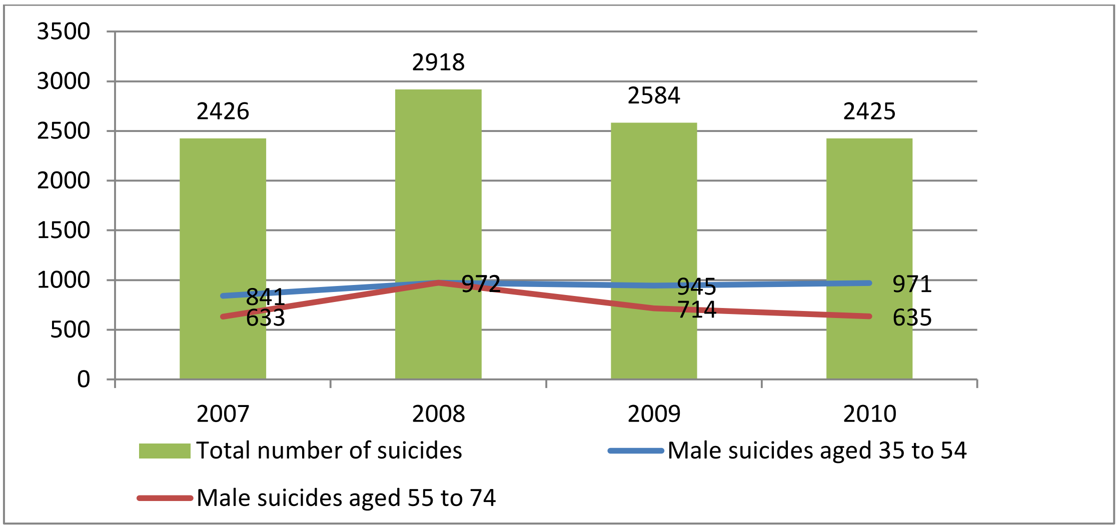


Figure 9: IMF worlda data bank

Suicides in Spain increased by 20.3 % in the first year of the financial crisis. The number of suicides, increased by almost 500 additional suicides since before crisis period.

The impact of the crisis in the first year is in a different category. In the first year the category of male suicides aged 55 to 74 increased by an alarming 339 suicides. This is an increase of 53.6 % compared to the previous year. In the category of male suicides age 35-54 the increase is 15.5 %. The number of suicides went from 841 in 2007 to 972 to 2008 (Figure 10).

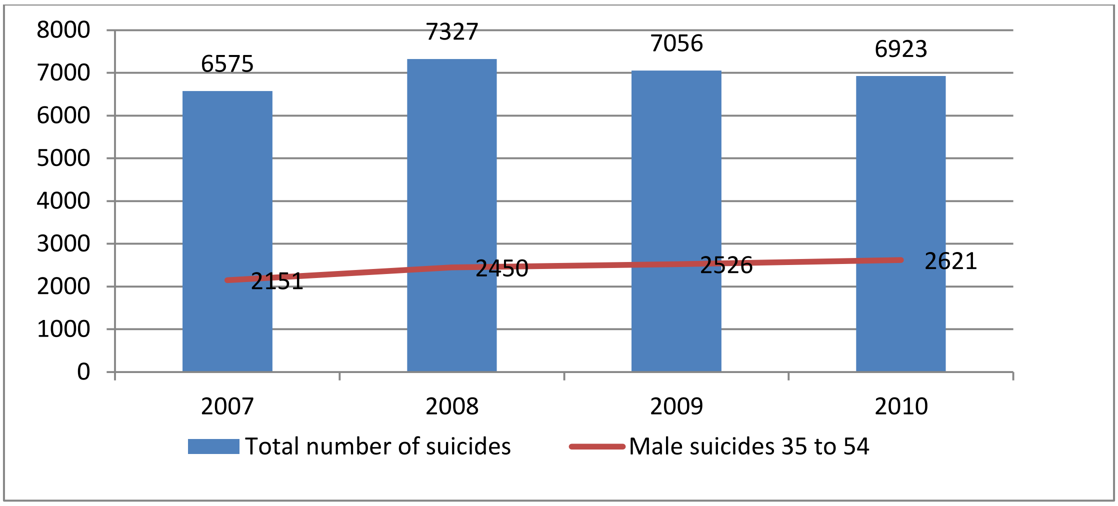
Figure 10- Total number of suicides, male suicides aged 35-54, male suicides 55-74 in Spain



7. Discussion

A clear correlation can be established between a decline in GDP, a rise in unemployment rates and prevalence of suicide of males between the ages of 35 and 54. A pattern of contraction in GPD followed by an increase unemployment can be correlated with a subsequent rise in suicides. The socio-economic effect of an economic crisis has far reaching impact on social policy. It is suggested that public health interventions should be increased during the time of adverse economic conditions. The most vulnerable category is the male population aged between 35 and 54. In the first year after the financial crisis, number of suicides increased by 11.4%. Total number of suicides in just one year in all five countries increased in total by 752 suicides.

Figure 11: WHO 2015



While the total number of suicides is declining in the period after the financial crisis, the age range of 35 to 54 of male suicides continued to increase. In the period of 2007 this category was 32.7% of all suicides. After the financial crisis, this category is making 37.9% of all suicides in all 5 counties showing 5.2% overall increase in suicides. From the findings a clear patter emerged. Albeit no causative correlation can be established, it is suggested that suicide rates show an increase following first a contraction in GDP which is followed by an inflation of unemployment figures. The age group of most impacted by the increase in suicides in 35 to 55 years, which is also the time most men are at a growth phase in their careers. Employment stability is an essential part of emotional social stability and where an unstable employment market is prevalent, the age group most affected are those who have not been able to build enough reserves to withstand the crisis.

Suggestions for national mental health services in countries afflicted by economic crises may include increasing free and easily accessible financial support and advice lines to negate the emotional impact of suicide among men aged 35 to 55. In addition, in the wake of suicide many families are left without a potential breadwinner and face an additional set of economic circumstances that adversely impact economic recovery. It is suggested that national mental health services train and implement support services to assist families who have been impacted by the suicide of breadwinners in the family. Finally, it is suggested that policy makers consider positive psychology and resilience campaigns with a progressive message during financial crises. An example could be taken from the campaigns during the two world wars where public information was filled with positive propaganda of victory over adversity. Creating a national atmosphere of unity may alleviate the emotional anxiety felt during the economic crisis resulting in smaller number of suicides.

Limitations of the study include a dearth of completed data from the WHO organisation. In addition, the study could have benefitted from individual cases in each of the PIIGS countries to provide a deeper understanding of the contributing factors that may have influenced individuals who committed suicide.

Table 1 WHO PIIGS Reported Suicides 2003 to 2007

2007	Portugal	Italy	Ireland	Greece	Spain
Men 25 to 34	71	354	91	47	332
Men 35 to 54	207	883	119	101	841
Men 55 to 74	287	885	61	75	633
Women 25 to 34	18	84	19	12	97
Women 35 to 54	75	295	45	20	275
Women 55 to 74	101	274	13	12	248

Table 2 WHO PIIGS Reported Suicides 2008 to 2010

2010	Portugal	Italy	Ireland	Greece	Spain
Men 25 to 34	58	341	75	53	272
Men 35 to 54	258	1098	166	128	971
Men 55 to 74	257	944	66	85	635
Women 25 to 34	27	82	19	6	59
Women 35 to 54	72	292	38	14	281
Women 55 to 74	89	294	25	11	207
2009	Portugal	Italy	Ireland	Greece	Spain
Men 25 to 34	74	332	112	56	344
Men 35 to 54	235	1058	158	130	945
Men 55 to 74	250	938	74	81	714
Women 25 to 34	16	70	27	11	80
Women 35 to 54	66	329	33	20	274
Women 55 to 74	74	289	23	16	227

2008	**Portugal**	**Italy**	**Ireland**	**Greece**	**Spain**
Men 25 to 34	75	362	100	52	379
Men 35 to 54	235	986	142	115	972
Men 55 to 74	256	917	66	71	972
Women 25 to 34	17	97	18	8	87
Women 35 to 54	64	295	46	35	261
Women 55 to 74	98	313	27	14	247

References

(2015). (W. H. Organazation, Producer) Retrieved November 2, 2015, from World Health Organazation: http://www.who.int/gho/publications/world_health_statistics/2015/en/

Barr, B., Taylor-Robinson, D., Scott-Samuel, A., McKee, M., & Stuckler, D. (2012). Suicides associated with the 2008-10 economic recession in England: time trend analysis. *British Medical Journal*. doi:http://dx.doi.org/10.1136/bmj.e5142

Edmondson D, G. C. (2013). Association of posttraumatic stress disorder and depression with all-cause and cardiovascular disease mortality and hospitalization among Hurricane Katrina survivors with end-stage renal disease. *American Journal of Public Health, 103*(4), 130-137.

Fowler, K., Gladden, M. R., Vagi, K., Barnes, J., & Frazier, L. (2015, February). Increase in Suicides Associated With Home Eviction and Foreclosure During the US Housing Crisis: Findings From 16 National Violent Death Reporting System States, 2005–2010. *American Journal of Public Health, 105*(2), 311-316. doi:10.2105/AJPH.2014.301945

Houle , J., & Light., M. (2014). The Home Foreclosure Crisis and Rising Suicide Rates, 2005 to 2010. *American Journal of Public Health, 104*(6), 1073-1079. doi:10.2105/AJPH.2013.301774

Kendler, K. S., Karkowski, L. M., & Prescott, C. A. (1999). Causal relationship between stressful life events and the onset of major depression. *American Journal of Psychiatry., 156*(6), 837-841.

Kindleberger, C. P. (1996). *Manias, Panics and Crashes.* New York: John Wiley and sons.

Lou, F., Florence, C. S., Quispe-AgnoliM, Ouyang, L., & Crosby, A. E. (2011). Impact of business cycles on US suicide rates, 1928-2007. *American Journal of Public Health, 101*(6), 1139-1146.

Swartz, A. J., Kaminsky, G. L., & Reinhart, C. M. (1998). *Bank Failures In The Major Trading Countries Of The World: Causes and Remedies.* London: Quorum Books.

Zavin, K., Kim, M. H., McCarthy , J. F., Austin`, K. L., Hoggartt, K. J., Walters, H., & Valenstein, M. (2007). Suicide Mortality Among Individuals Receiving Treatment for Depression in the Veterans Affairs Health System: Associations with Patient and Treatment Setting Characteristics. *American Journal of Public Health, 97*(12), 2193-2198.