

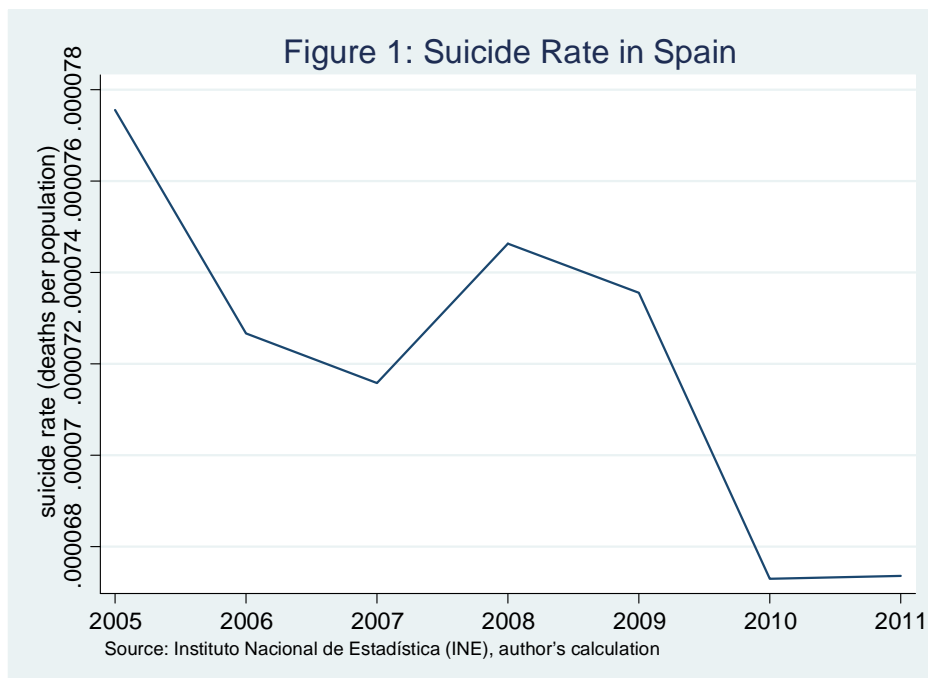
## Suicides in Spain – A Crisis Phenomenon?

In the years following the financial crisis of 2007, media reports and academic articles alike have warned of the disastrous social repercussions of the Spanish economic crisis. One issue that has received particular attention are suicides. Chan et al (2013) study suicides in several countries and conclude that suicides in Spain have increased due to the crisis. Reeves et al (2014) come to very similar conclusions. Both articles were widely cited in both Spanish and English newspapers and spurred political debate among the large Spanish political parties. In a more focused study, Bernal et al (2013) explore the suicide rate in Spain and find that:

- *In Spain, the financial crisis has been associated with a substantial increase in suicide rates over and above the underlying trend.*

Somewhere underlying this statistical association most suspect a causal relationship from, say, unemployment or household debt to the decision to commit suicide.<sup>1</sup> Yet, given the more recent data, doubts about this relationship are in order.

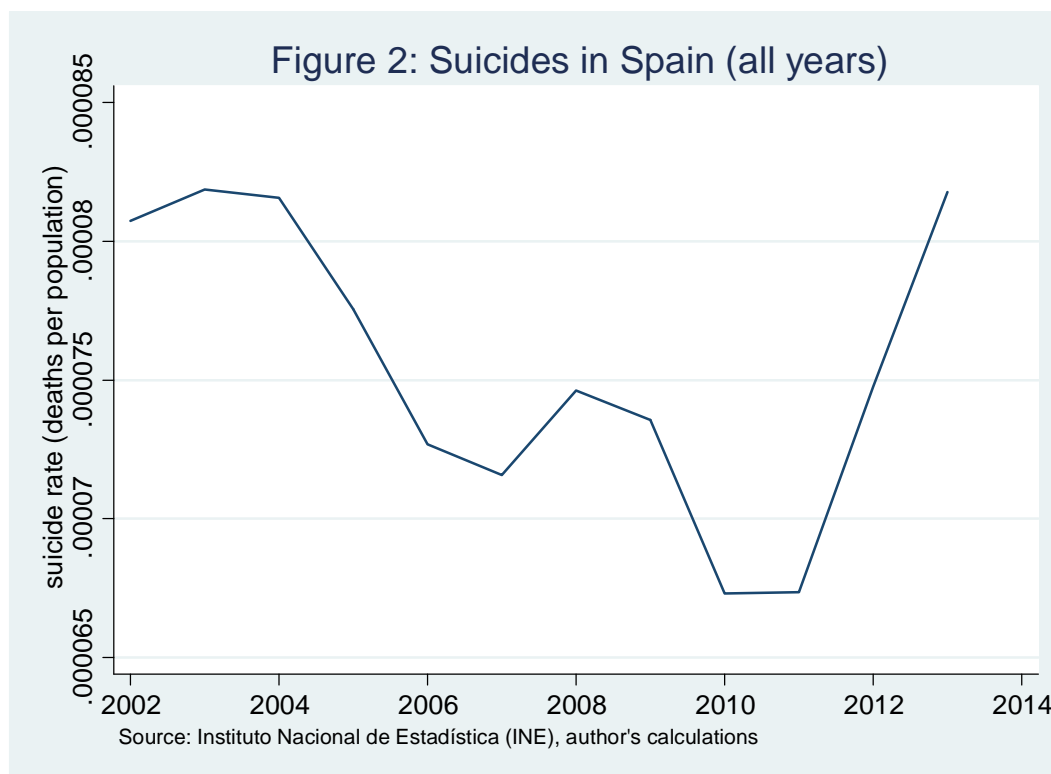
At first sight, the case for a connection between the crisis and suicides is fairly strong and straightforward. Figure 1 displays the suicide rate, i.e. the number of suicides divided by population for Spain in the years 2005-2011. This is roughly the same period analysed by Bernal et al (2013) and the curve quite clearly confirms their findings. While there is a downward trend in suicides overall they increase dramatically after 2007. This is also the time when the financial crisis hit the Spanish economy. Unemployment increased drastically in 2008 and increased further in the following years. It is possible that a dire economic situation and faltering hope for an improvement contributed to the rise in suicides. This would not explain the sharp drop in the suicide rate after 2009 but, perhaps, it is possible that the economic crisis led to suicides only when the economic shock of the crisis hit the economy.<sup>2</sup> This would suggest that the loss of employment or foreclosure have driven some individuals into suicide.



<sup>1</sup> Bernal et al (2013) suggest a causal relationship when they write: *“The effect of the financial crisis on suicides appears to be greatest amongst men and amongst those of working age; these groups may benefit most from targeted interventions.”*

<sup>2</sup> Details will differ depending on which population numbers are used to calculate the rate but this pattern of an increase in suicides is very consistent across different ways to calculate it.

However, the idea that the increase in suicides was caused by a dire economic situation is dubious if one looks at the complete time series. Figure 2 shows the same time series as Figure 1 but extends the period looked at from 2002 till 2013. Suicide rates in the period 2002 to 2004 were a lot higher than in the crisis years. In fact, they were also higher than in the period before. Yet, 2002-2004 was a period which was characterised by a large economic boom.



In addition, Spain has experienced a massive increase in suicides after 2011. Suicide rates in 2013 even exceeded rates in 2002 after rising dramatically for two consecutive years. Again, there could be a connection to economic hardship but the relationship is certainly not straightforward. The drivers of suicide need to be understood much better before the aggregate data can be used productively.

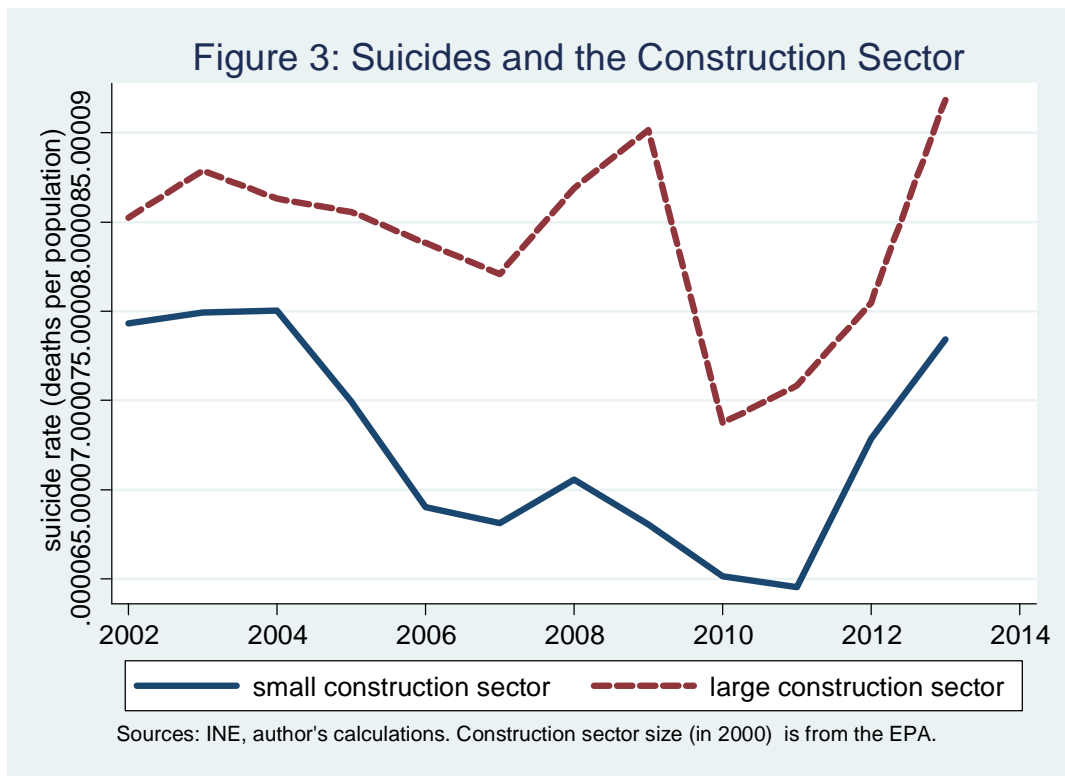
One way forward is to look at the different channels through which the crisis could have caused suicides. One possible channel is through unemployment and mental disorders. In Farré et al (2015) we look at data from the Spanish national health surveys. These surveys were conducted in 2001, 2003, 2006 and 2011 which allows us to contrast the situation before the crisis with the period thereafter. We exploit the particularities of the Spanish economy to explore this issue. In particular, we use the exposure of different groups in the labour market to the collapse of the construction sector to identify the effect of unemployment. For this purpose we distinguish between different age groups, sex and province of residence. The idea is that some individuals, due to their age, sex or residence were more exposed to the collapse of construction than others.

We find a very dramatic increase in reported mental disorders for those most exposed to the shock – men in their 40s, living in provinces with large construction sectors. These individuals suddenly faced a complete collapse of their employment opportunities. Long-term unemployment in this group increased dramatically as re-entry into the labour market was extremely difficult. Not surprisingly, we find evidence that individuals in this group report feeling useless. Many reported not being able to overcome their difficulties. Our results suggest that it might have been the hopelessness of the economic situation and not the loss of work per

se that triggered mental disorders. It is possible that in this way, the economic crisis led to an increase in suicides.

However, can this provide an explanation for the latest increase in suicides? A first impression can be gained by looking at suicide rates across the Spanish provinces. This can help us understand the relationship between economic hardship and suicides because the size of the construction sector at the province level is a good proxy for the collapse of employment opportunities after 2007. We would expect to see suicides to increase most in provinces that are hit hardest. Accordingly, we first separate provinces with the largest share of employment in the construction sector in 2000 from those with smaller construction sectors (we split provinces roughly in the middle). We then plot the suicide rate separately for provinces with large and small construction sectors.

The result of this can be seen in Figure 3. The blue line depicts the suicide rate in provinces with a small construction sector. The red line shows the suicide rate in provinces with a large construction sector.<sup>3</sup> There are three observations that can be made from this exercise. First, suicides are more common in provinces which are more dependent on the construction sector. This could have many reasons including differences in culture, climate and the level of economic well-being. The second observation is that provinces with a large construction sector had a much larger increase in the suicide rate during the first years of the crisis. Provinces with a small construction sectors display a relatively smoother downward trend between 2002 and 2011. This could be regarded as some evidence for a connection between economic factors like unemployment and suicides. The third observation is, however, that in both types of provinces the suicide rate has exploded since 2011. It has done so more in provinces with a large construction sector but the pattern is very clear across the board.



What can be concluded from this? The first conclusion should be that the link between the economic downturn and suicides in Spain is not as straightforward as suggested by much of the

<sup>3</sup> To calculate these we first added suicides and population in each of these groups and then calculated the rate.

existing literature. On the one hand, our results suggest that the peak in suicide rates around 2008 could indeed be linked to the economic shock. On the other hand, this does not help us understand the higher rates in the period 2002-2004 or the decline after 2009. It also does not necessarily explain the recent explosion in the suicide rate. What is it that drives, mostly men, into suicide 5 years after the start of the economic crisis? It is possible that the large effects on mental health found in Farré et al (2015) provide an explanation. It is not unemployment per se but desperation linked to the persistence of unemployment that triggers anxiety disorders or depression. Unemployment duration or debt levels of a small group might therefore be more relevant in explaining suicides than general unemployment levels.

## **References**

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