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Has Subjective General Health Declined with the Economic Crisis? A Comparison across European Countries

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Has subjective general health declined with the economic crisis?

A comparison across European countries

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Abstract

This note examines whether subjective general health in Europe has changed since the onset of the economic crisis. Subjective general health for Ireland, Spain and Portugal is compared before and after the onset of the recession. Two other European economies, Germany and United Kingdom, are also examined. The change in the proportion of respondents reporting good or very good health is also plotted against the change in the unemployment rate over the period 2007-2012. Subjective general health improves slightly in countries experiencing sharp recessions. Across European countries there is no link between changes in subjective general health and in unemployment: no evidence is found to suggest that the Great Recession has worsened morbidity in Europe.

Introduction

The "Great Recession" in the world economy since 2008 has renewed interest in the question of whether good health is pro-cyclical i.e. whether economic downturns are bad for health in general. Within this broad question a number of important issues occur. These include whether economic austerity is bad for public health, what are the effects on mental health, which demographic groups are more or less likely to be affected and what are the mechanisms behind any such effects?

This paper addresses this question in two ways using recently released data. Firstly, the paper asks whether the distribution of subjective general health has changed and, if so in what direction, in several European countries that have been particularly affected by the recession. Much of the macroeconomic debate in Europe in recent years has focussed on the so-called "PIIGS": Portugal, Ireland, Italy, Greece and Spain. This note looks at Portugal, Ireland and Spain using a common data source, the European Social Survey. Absence of data for the relevant years precludes analysis of Greece and Italy. To provide comparisons, I include two other countries, Germany whose economy has performed strongly over the same period and the United Kingdom, which has recorded a small decline in economic activity. Secondly, using aggregate data derived from the same data source, for all thirty one countries in the data and over all six waves of the data spanning 2002-2012, I ask whether the unemployment rate predicts the average level of subjective general health.

The question of whether economic downturns are bad for health in general might seem obvious at first. Lower levels of income could lead to lower levels of health expenditure by individuals or lower levels of health provision by governments. Job losses are likely to lead increased levels of stress, anxiety and other mental health problems. Influential early work by Brenner (1973, 1979) using US aggregate data found counter-cyclical patterns in admission to psychiatric hospitals and deaths due to, inter alia, suicide, alcohol consumption and cardiovascular disease. A recent review concludes that there is strong evidence of a positive effect of employment on mental and physical health (Waddell, Burton 2006). For example there is evidence of a psychological scarring effect of unemployment on individuals (Daly, Delaney 2013).

Ruhm (2000, 2003, 2005) used US state-level and individual level data and found that good health rose with temporary increases in unemployment. A one percentage point rise in unemployment is associated with about a 0.54 percentage point reduction in mortality. Bigger effects are generally found for those who are employed or of working age. Mortality falls in eight of ten specific causes of mortality including

motor vehicle accidents, cardiovascular disease, liver disease and influenza/pneumonia. Suicide is an exception, rising with unemployment while cancer deaths are unaffected. Analysis of individual level data showed that smoking and obesity increase when the labour market improves, whereas physical activity is reduced and diets become less healthy. Miller et al. (2009) provided further clarification of the mechanisms though which these positive effects work. They show that motor vehicle accidents and not changes in health behaviours or in stress levels explain the pro-cyclical pattern in mortality amongst working-age adults. Most of the research before the current recession is based on US data but one cannot assume these results apply to Europe where medicine is more socialised. In addition, deaths due to traffic accidents may be less significant where public transport is more heavily used.

There is evidence of instability in the health/macroeconomy relationship for the US. Ruhm (2013) finds that there is now a weak or non-existent relationship between the US economy and mortality rates while Tekin, Mekin and Millyard (2013) find little or no relationship between a range of health outcomes, health behaviours and the economy at state level. Recent analyses for Europe has focused on suicide (Chang, Stuckler, Yip, Gunnell 2013). Analysis for Ireland finds that the fall in alcohol consumption associated with the recession has moderated significantly the increase in suicide due to unemployment (Walsh, Walsh 2011). The effects on alcohol consumption may be subtle as while there is an overall decline in consumption as the economy contracts there may be an increased risk of alcohol abuse amongst the unemployed (Harhay et al 2013).

Data

The European Social Survey (ESS) is a population representative academically driven cross-national survey that has been conducted every two years across Europe since 2002. Typically data collection occurred over a period of about six months spanning two calendar years. In some cases, as noted below, the data was collected about a year later than planned.

In total thirty two countries have participated in the ESS though not all for all waves. Albania is excluded here as it only participated in the latest wave. While not focused on health it contains one instrument of interest, subjective general health. Respondents are asked to describe their general health. There are five possible answers: Excellent, Very Good, Fair, Bad and Very Bad. Since the last category, Very Bad, accounts for a very small percentage of responses (less than 2% overall) it is combined here with the Bad category. Self-rated measures of health have been found to be generally predictive of health and functioning (Idler, Benyamini 1997, Singh-Mantoux et al. 2006). There is evidence that physical

functioning is more strongly associated with self-rated health than mental health and social functioning (Maviddat et al. 2011). While there are several measures of self-rated health used in epidemiology, the evidence is that differences between them are marginal (Eriksson, Undén, Elofsson 2001). For the five countries considered here, the average sample size per country per wave is 2310. All the analysis utilizes the sampling weights provided and is conducted with *Stata*, version 12.

The results compare the distribution of the subjective general health question for wave 3 (2006/07) and wave 6 (2012/13). Wave 4 is not suitable as the data for Ireland was collected in 2009/10, a year later than other countries.

Results

Table 1 shows the distribution of subjective general health for the five countries. The p value is a test for association between the health variable and the wave of the survey. The change in the unemployment rate between 2007 and 2012 is included at the bottom of the table for illustration. In Ireland the only noticeable change is that the proportion reporting very good health rises and that reporting good health falls. In Spain there is a similar pattern except that but part of the fall in the second category ("good health") is accounted for by an increase in the "Fair" category. In Portugal both the top two categories increase with a corresponding fall in those reporting "Fair" health. In all three cases, the proportion reporting bad health is largely unchanged. In Germany, which has had a relatively buoyant economy over the period, there is some decline in health due to a small fall in the highest category. In the United Kingdom, there is no statistically significant difference between the two waves (p=.2273). Overall there is very little change in the lowest category of the distribution for any of these countries with some movement within the high to medium categories.

Following the onset of the crisis, Ireland experienced substantial net emigration (Eurostat 2013b). Since emigrants are typically of above average health this is likely to understate the improvement (or exaggerate the decline) of health there due to the recession (Kennedy et al 2006).

As a second exercise, Figure 1 shows the change in the percentage of respondents reporting good or very good health (as a share of total valid responses) is plotted against the change in the unemployment rate for the period 2007-2012 using data from Eurostat (2013a). There is no clear pattern between the two variables. The correlation between the two series is -.1405 and is not statistically significant (p=.5782).

Conclusions

Focusing on three European countries that have been amongst the most affected by the Great Recession there is no evidence of a decline in subjective general health over the period 2007-2012 and some indications of an improvement. The only country to record lower unemployment over the period, Germany, shows a slight *dis-improvement* in subjective general health. A comparison between the changes in unemployment and in subjective general health across European countries does not reveal any clear relationship. It can be speculated that, unlike mental health, physical health in Europe is more resilient to very large economic recessions. Public health services may be a contributory factor to this resilience.

Further work is necessary to systematically model the changes in health with respect to changes in the macro-economy in Europe including analysing data on morbidity and mortality. Where possible, a distinction between psychiatric and somatic conditions should be made. Consideration should also be given to differences between age groups and sexes since unemployment tends to be concentrated in certain sub-populations.

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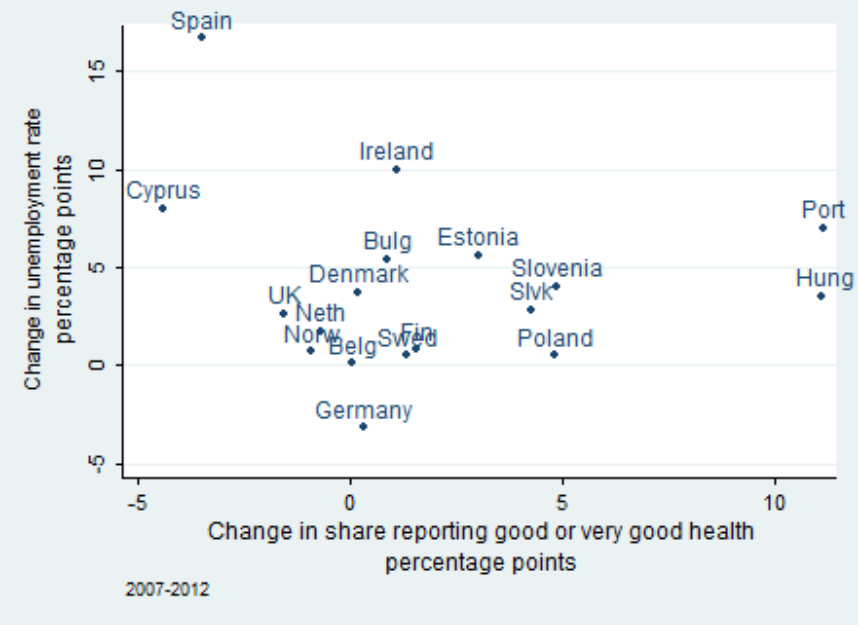
Table 1 Distribution of subjective general health before and after onset of crisis

	Ireland		Spain		Portugal		Germany		UK	
	2006/7	2012/13	2006/07	2012/13	2006/07	2012/13	2006/07	2012/13	2006/07	2012/13
Very good	.3728	.4207	.1517	.1819	.0755	.1531	.1878	.1609	.3244	.3008
Good	.4555	.4188	.4758	.4111	.3964	.4301	.4290	.4591	.4152	.4236
Fair	.1473	.1353	.2579	.2996	.3931	.2859	.2880	.2908	.1956	.1976
Bad/V bad	.0244	.0252	.1146	.1074	.1351	.1309	.0952	.0893	.0648	.0781
p	0.0313		0.0002		0.0000		0.0330		0.2273	
N	1,795	2,628	1,876	1,888	2,219	2,151	2,908	2,956	2,392	2,285
ΔU	+10		+16.7		+7		-3.2		+2.6	

Notes: The p value is for a Pearson χ^2 (3) test of association between health and time for each country. ΔU is the change in the Unemployment rate (in percentage points) based on Eurostat (2013a) between 2007 and 2012.

Figure 1 Change in unemployment vs. change in share of respondents with good or very good health



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