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Was the economic crisis of 2008 good for Icelanders? Impact on health behaviors

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ABSTRACT

This study uses the 2008 economic crisis in Iceland to identify the effects of a macroeconomic downturn on a range of health behaviors. We use longitudinal survey data that include pre- and post-reports from the same individuals on a range of health-compromising and health-promoting behaviors. We find that the crisis led to large and significant reductions in health-compromising behaviors (such as smoking, drinking alcohol or soft drinks, and eating sweets) and certain health-promoting behaviors (consumption of fruits and vegetables), but to increases in other health-promoting behaviors (consumption of fish oil and recommended sleep). The magnitudes of effects for smoking are somewhat larger than what has been found in past research in other contexts, while those for alcohol, fruits, and vegetables are in line with estimates from other studies. Changes in work hours, real income, financial assets, mortgage debt, and mental health, together, explain the effects of the crisis on some behaviors (such as consumption of sweets and fast food), while the effects of the crisis on most other behaviors appear to have operated largely through price increases.

1. Introduction

The seemingly flourishing economy of Iceland suffered a major meltdown that is often pinpointed to first days of October 2008, when the three largest banks collapsed and became nationalized. In a widely viewed televised address, Prime Minister Geir Haarde announced to the country: "(T)here is a very real danger, fellow citizens, that the Icelandic economy, in the worst case, could be sucked with the banks into the whirlpool and the result could be national bankruptcy" (Prime Minister's Office, 2008).[5] The day of this landmark speech, October 6, 2008, has widely been viewed as the beginning of the economic crisis in Iceland.[6] A period of economic and political turmoil followed, leading to uncertainty about the future prospects of the nation. During the following months, hundreds of firms in the country declared bankruptcy. Inhabitants of Iceland, a population of 320,000, who lived in one of the

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[5] See http://www.forsaetisraduneyti.is/radherra/raedurGHH/nr/3034 for a transcript of the speech.

[6] As the currency had begun to devalue in the spring of 2008, signaling a possible burst in the economic bubble, some might say that attributing the crisis to a single day is overly simplistic. Source: http://www.cb.is/exchange-rate/.

richest countries in the world, were now facing the prospects of unemployment as well as mounting private and national debt. The announcement of the crisis triggered further unforeseen consequences, including a decision by the United Kingdom to invoke anti-terrorism legislation to freeze the assets of one of the three large banks (Landsbanki), emergency funding from the International Monetary Fund, massive protests against the government, and political instability resulting in a cabinet change in February 2009. A sudden and dramatic macroeconomic shock of this magnitude and scope affects the entire population, particularly in a small open economy with its own currency and for which exchange rates and prices were suddenly and dramatically altered. Such a shock has the potential to affect multiple domains of wellbeing—financial, psychological, and physical.

A growing literature has focused on the effects of macroeconomic conditions on health in developed countries. Pioneering work by Ruhm (2000) found that although there is considerable evidence that long-term economic growth promotes population health, short-term downturns in economic activity in the United States counter-intuitively lead to reduced mortality rates. That research has spawned a wave of studies investigating the relationships between business cycles and health that has no doubt been fueled in recent years by the Great Recession in the U.S. and more general global economic decline. Ruhm (2003) found that (1) individuals are less healthy during economic expansions, with the strongest negative effects for those who are of working age, employed, and male; (2) the negative health effects of economic expansions persist or accumulate over time, are larger for acute than chronic ailments, and occur despite a protective effect of income and a possible increase in the use of medical care; and (3) mental health appears to be better during expansions, a pattern opposite from that for physical health. Similar results have been found in other countries; e.g., Gerdtham and Ruhm (2006) found that mortality increased during high employment or strong economic conditions in 23 Organization for Economic Cooperation and Development countries, and Katikireddi et al. (2012) found deteriorations in men's mental health in Britain during recessionary periods. However, Cooper et al. (2006) found, using data from thirteen European Union countries, that unemployment at the individual level was associated with poorer physical and mental health, suggesting that macro-level economic conditions and micro-level economic circumstances affect health through different pathways.

Economic theory and past research point to several mechanisms by which recessions could affect health. At the macro level, recessions could affect health through changes in physical, public service, or social environments. Recessions could enhance health by leading to reductions in air pollution or traffic or increases in social cohesion in times of crisis, but also could compromise health by leading to deteriorations in public service infrastructure (e.g., reductions in health services or essential services such as police and firefighting) or limiting social opportunities due to reductions in facilities or widespread inability of others to afford them. At the micro level, recessions could affect health through changes in health behaviors (as a response to changes in prices, income, and time constraints, through changes in tastes or time preference, or as a result of changes in environmental factors, such as availability of high-quality health care), exposures to health risks (e.g., a construction worker who becomes unemployed may no longer be working with dangerous machinery), or stress resulting from losing a job, income, and/or wealth. The directional effects for changes in exposures to health risks and stress are clear. For health behaviors, the focus of this paper, the directional effects would depend on the specific behaviors and pathways.

In considering the effects of macroeconomic fluctuations on health behaviors, studies have generally focused on health-compromising behaviors, such as heavy drinking and smoking. Some have focused on specific subpopulations, such as women of childbearing age (Dehejia and Lleras-Muney, 2004). Many fewer studies have focused on health-promoting behaviors, such as exercise. Although the body of research findings is growing, it is not yet clear whether and how various behaviors are affected. Pacula (2011), in a recent review of the literature on the effects of business cycles on excess alcohol consumption, highlights the empirical challenges involved in isolating business cycle effects from other confounding factors.

In this study, we use the 2008 economic crisis in Iceland—a severe and unexpected macroeconomic shock—to identify the effects of a macroeconomic downturn on a range of individual health behaviors. We use longitudinal survey data collected in 2007 (during the boom) and 2009 (during the bust) that includes pre- and post-reports of the same health behaviors as well as other relevant variables. We investigate the effects of the crisis on a range of health-compromising behaviors (smoking; heavy drinking; consumption of sugared soft drinks, sweets, and fast food; and indoor tanning) and health-promoting behaviors (consumption of fruits, vegetables, and fish oil; use of dietary supplements; and getting the recommended amount of sleep). We estimate effects for the overall adult population and separately for the working-age population, men, and women.

Across the various health behaviors, the effects of the crisis will depend on the "goods" versus time costs of those behaviors, realized changes in income and time constraints, and crisis-induced changes in relative prices. Overall, we expect that the crisis reduced health behaviors that are goods intensive, such as cigarette smoking, alcohol consumption, or taking dietary supplements; increased health behaviors that are time intensive, such as getting the recommended amount of sleep; and reduced health behaviors with higher relative price increases (e.g., heavily imported goods such as alcohol or fruit, since a major effect of the crisis was the devaluation of the Icelandic krona). For behaviors that are both time and goods intensive, such as indoor tanning, the expected directionality is ambiguous.

Because we observe information on health behaviors as well as key hypothesized mechanisms (work hours, real income, financial assets, mortgage debt, and mental health) on the same individuals over time, we are able to investigate mechanisms underlying changes in health