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IMF-lending programs and suicide mortality

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ABSTRACT

While the economic consequences of IMF programs have been extensively analyzed in the literature, much less is known about how key welfare indicators, including suicide-mortality rates, correlate with countries' participation in such programs. This paper examines the impact of IMF lending on suicide mortality, using data from 30 developing and transition countries that received non-concessionary IMF loans during 1991–2008. Our results support the hypothesis of a positive causal relationship between suicide mortality and participation in IMF programs but reveal no systematic suicide-increasing effect from the size of IMF loans. This holds after accounting for self-selection into programs, resulting from the endogeneity of a country's decision to resort to the IMF for funding, and after controlling for standard socio-economic influences on suicidal behaviour. In particular, we find a positive aggregate suicide-mortality differential due to IMF-program participation of between 4 and 14 percentage points. We also find that the positive association between suicides and program participation is stronger and more robust among males. Comparing age groups, individuals belonging to the age group 45-to-64 exhibit the highest increase in suicide due to program-participation, which amounts to over 18 percentage points. Overall, our results imply that when countries are exposed to IMF programs in an attempt to resolve their economic problems, social-safety nets need to be designed to protect the adversely-affected part of the population.

1. Introduction

Over the years, IMF-lending programs have been heavily criticized both for failing to resolve participating countries' economic problems and for generating adverse social consequences. Recently, there has been renewed attention to the social consequences of Fund programs as a result of the financial crisis of 2007–2009 and the European debt crisis thereafter, which led to recessions and forced several countries to resort to the IMF for funding. Prompted by this situation, a number of papers have stressed aspects of the negative side-effects of austerity programs, like those of the IMF, including greater inequality, increased impoverishment and decreased provision of health services (Stuckler et al., 2008, 2010; Stuckler and Basu, 2009; Barr et al., 2012; Chang et al., 2013; Karanikolos et al., 2013). In this paper we focus on an aspect of the social consequences of IMF programs that has not yet been examined systematically in a cross-country context, their effect on suicides. With respect to suicides, a bold case in recent years is Greece, which was the first Eurozone member-state to turn to the IMF for financial assistance, making from 2010 front-page news across the globe. The Greek program was designed in an environment of low growth, significant market rigidities and a serious gap in competitiveness. Economic activity dropped further thereafter, as austerity measures and extensive structural reforms were implemented, leading to a severe economic depression that lasted six years, wiping out more than twenty-five percent of GDP and raising the official unemployment rate to over 27%. As Antonakakis and Collins (2014), Economou et al. (2011) and Kentikelenis et al. (2011) point out, even more important was the shock that hit people in Greece. In a country with one of the lowest rates of suicide mortality worldwide, the number of people resorting to suicide increased dramatically in the aftermath of the 2009–2011 crisis, leading to a rise in total suicides by almost 40%. Another bold case was observed during the Asian financial crisis of the late 1990s, when Indonesia, South Korea and Thailand, faced with a loss of market confidence and pressures on their currencies, resorted to the IMF for funding. These countries experienced a substantial rise in suicides (Chang et al., 2009; Kim et al., 2010).

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To what extent do countries systematically experience the same pattern? To what extent is there an underlying positive relationship linking IMF programs to suicide-mortality rates across countries and over time? This paper seeks to investigate whether there is a causal association between suicides and IMF programs in participating countries, using data from 30 transition & developing countries that received non-concessionary IMF-funding under the SBA (Stand-By Arrangement) and EFF (Extended-Fund) facilities during 1991–2008. Our regression results point to a robust positive relationship between suicide-mortality rates and participation in IMF programs but reveal no systematic suicide-increasing effect from the size of IMF loans. This holds after accounting for self-selection into programs, resulting from the endogeneity of countries' decision to participate in IMF-loan agreements, and after controlling for standard socio-economic influences on suicidal behaviour.

Overall, our results suggest that while IMF-supported policies may have long-run benefits, raising economic efficiency and restoring competitiveness, suicide mortality should be seriously considered as one of the potential short-term, or even medium-term, negative side-effects of participation in IMF-lending agreements. Our estimates indeed imply a positive aggregate suicide-mortality differential due to IMF-program participation of between 4 and 14 percentage points, while individuals belonging to the age group 45-to-64 exhibit the highest differential, amounting to over 18 percentage points.

The structure of the paper is as follows. In Section 2 we identify possible channels through which IMF-loan programs might influence suicide rates in recipient countries. Section 3 describes the empirical methodology and data, while Section 4 reports the estimation results. Section 5 reports on robustness controls and Section 6 follows with concluding comments.

2. IMF programs and suicides

A country's signing of an IMF-loan agreement may affect suicides both through the resources involved and through the terms and conditions of IMF lending. The resource element of programs can be expected to have no suicide-increasing effect and may even lead to a decline of suicide rates, to the extent that the extra liquidity provided can prevent a domestic economic or financial crisis, thus helping countries move forward and making their population more hopeful. However, the terms and conditions of IMF lending may result in a higher rate of suicide mortality. There are several channels involved. First, IMF programs usually require demand-restraining measures, which, at least in the short run, can lead to higher unemployment and lower growth. As the sociological literature of suicide suggests, increased unemployment or lower growth can raise the probability of suicidal behaviour by causing a decline in expected life-time income.

Second, IMF-loan agreements often involve a large number of structural conditions, requiring reforms in many areas, which typically include reduced regulation of product markets, deregulation of labour markets and a fall in employment protection, restructuring or privatization of public enterprises and other institutional or legislative measures to increase market forces in the economy. As non-compliance with IMF conditionality can result in suspension or termination of programs, governments are often forced to carry out the required structural reforms fast and despite adverse domestic macroeconomic conditions. This can lead to abrupt deterioration in the socio-economic position of certain groups in participating countries, raising socio-economic inequalities and resulting in increased poverty and insecurity. Badly hit groups, realizing that their socio-economic status has suddenly changed and are no longer able to achieve what has previously been expected may then be led to resort to suicide.

Third, signing an IMF-lending agreement often reduces the flexibility of governments to respond to the adverse social consequences of economic change with appropriate policies. For example, IMF-induced fiscal constraints can make it difficult for governments to fund services or programs that prevent social isolation, and thus potentially reduce suicide risk during periods of economic change, such as family-support systems, active labour-market policies, educational programs for early-school leavers and financial-assistance programs for small-scale businesses. IMF-induced budgetary cuts can also weaken the capacity of governments to provide special health-support services to individuals with higher-than-average suicide propensities, including those suffering from mental disorders or from chronic-psychical illness.

Fourth, fast IMF-induced structural adjustments involving privatizations of state-owned enterprises in key sectors, like energy and telecommunications, or reduced government subsidies for basic public services, like healthcare and education, can result in preventing access to these sectors or services for a certain segment of the population, particularly low-income groups, thus raising the likelihood of suicidal behaviour by making relative deprivation more noticeable.

Fifth, a lower level of employment protection or cutbacks in unemployment benefits, again typical components of IMF conditionality, can induce suicidal behaviour through increased insecurity and anxiety among workers about losing jobs. IMF-induced lower pensions or increases in VAT on basic goods can also raise suicidality among older-age groups and other already disadvantaged families through increased impoverishment.

Lastly, the requirement to rapidly liberalize trade, which is a typical IMF condition, can result in reduced effectiveness of a country's effort to control drug-trafficking and domestic drug-use or alcoholism, which are factors likely to be associated with higher suicide risk.

Indeed, a growing literature finds adverse social consequences of IMF programs, including negative effects on labour, greater inequalities, increased impoverishment, lower health expenditures and worsened health outcomes, which may lead to increased suicide risk through the channels discussed. For example, Vreeland (2002), based on data from 110 countries, has found evidence of a significant decline in labour's share of output after receipt of IMF loans, which can be related to suicide risk through increased impoverishment and a deterioration of socio-economic position, while Garuda (2000) has found a sizable drop in the income of the poorest 20% of the population in 88 countries following program participation. The estimates of Nooruddin and Simmons (2006) show that the presence of an IMF program reduces the positive impact of democracy on social and other pro-poor policies, while Weisbrot and Jorgensen (2013), examining the Fund's recommendations to EU governments during the crisis period of 2008–2009, confirms the emphasis of the IMF on policies that tend to reduce labour's share of national income or increase poverty and socio-economic inequalities. At the same time, many studies suggest negative effects of programs on health-care expenditures and health outcomes. Kentikelenis et al. (2015), Stuckler and Basu (2009) and Stuckler et al. (2010), among others, find evidence indicating that, at least in richer developing countries, Fund programs are associated with significant health-spending cuts, a factor that can lead to suicides through decreased health services. Graybill (2013) finds a positive association between compliance with IMF conditions and infant mortality for a group of 36 developing countries during 1980–2010. Shandra et al. (2010), using data from 65 countries for 1980–2003, present evidence supporting the hypothesis that IMF-type of structural adjustments are associated with increased maternal mortality. Stuckler et al. (2008) find a