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Analysis

Is the 'Troika' Bad for the Environment? An Analysis of EU Countries' Environmental Performance in Times of Economic Downturn and Austerity Memoranda

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ABSTRACT

In this paper we examine the effect of the current economic crisis on the environmental performance of the EU countries. By employing Hierarchical Linear Multilevel (HLM) modeling we find that, for the period 2000–2015, a drop in the national GDP (a "recession effect") as well as endorsing a Memorandum of Understanding (MoU) for receiving a IMF/EU/ECB financial "rescue-package" (a "Troika effect") have non-significant to positive impacts on a number of national environmental quality and policy indicators, over and above other (economic, political and governance) predictors, for Eurozone and non-Eurozone countries alike. Nevertheless, this changes drastically if we examine these two factors' interaction: experiencing a 'recession' while being a recipient of a Troika-sponsored 'rescue package' has detrimental effects on an EU country's national environment.

1. Introduction

In the late 2000s the European Union (EU) faced its greatest economic crisis to date. The global finance markets' unrest -which (was to) developed into 'the deepest [global] post–World War II [economic] recession by far' (IMF, 2009, p. xii) - combined with national fiscal policy shortcomings and long-standing structural deficiencies as well as the inability, in the case of the Eurozone countries, to freely design one's own monetary policy by developing their exchange and interest rate policies (cf. Bieling and Kompsopoulos, 2016; Lapavitsas and Kouvelakis, 2012; Patomaki, 2013; Stiglitz, 2013; Van Rompuy, 2012), resulted in a number of EU countries being unable to repay/refinance their sovereign debt and/or bail-out their indebted banks on their own. In October 2008, Hungary became the first EU country to get a €25 billion financial-aid loan (Datz and Dancsi, 2013), followed later that year by Latvia and in spring 2009 by Romania (which received € 7.5 billion and € 20 billion respectively) (Klyviene and Tranberg Rasmussen, 2010; Lütz and Kranke, 2014). These "rescue packages" were co-funded by the International Monetary Fund (IMF), the World Bank and the EU, and were all conditional on the recipient countries adopting a series of financial restructuring and austerity measures. Eventually the loaning/bailing-out involved also Eurozone countries, whereas the World Bank's involvement was substituted by the European Central Bank, starting with the (first in a series of) Greek bailout(s) in 2010 (€ 110 billion) and continuing with Ireland (€67 billion in 2010), Portugal (€78 billion in 2011), Spain (€ 41 billion in 2012) and Cyprus (€ 10 billion in 2013) (cf. Baldwin and Giavazzi, 2015). Again, all these deals were accompanied with tough financial/austerity measures detailed in the 'Memoranda of Understanding' (MoU) agreed between lenders and recipients. These measures/reforms accompanying the bailout/loan agreements worsened -at least for the short-term- the social welfare, employment and living conditions in the recipient Euro zone countries (cf. Ballas et al., 2018; Lehndorf, 2015; Pochet and Degryse, 2012), thus rendering the lenders' triumvirate (IMF, ECB/World Bank and European Commission), the so-called 'Troika',[1] a harbinger of doom as far as the public opinion of the affected EU countries is concerned.

Besides its other social repercussions, this financial crisis may have also impacted on the EU countries' environmental performance. In the words of Common and Stagl (2005 p.87), "The economic system is a subsystem of the system which is the environment. The economy depends upon the environment, **what happens in the economy affects the environment**, and changes in the environment affect the economy. Regarded as two systems, the economy and the environment are interdependent" (our emphasis). In this paper we are interested in examining the effect of the current economic crisis on environmental

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[1] The term originates from the iconic Russian symbol of a sled drawn by three horses harnessed side-by-side.

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performance at the EU level, yet with a twist. Ten years after the beginning of the European financial crisis, comparative studies of its impact on the EU member-countries' natural environment are strikingly few (e.g. Russel and Benson, 2014; Skovgaard, 2014, see also Burns and Tobin (2016) testifying on the paupacy of existing research). Thus, the first aim of our research is to offer some initial clues on this under-researched topic. Yet what distinguishes this particular financial crisis from others is the existence of the bailout 'rescue packages' offered to EU member-states. In the light of the aforementioned research testifying to the impact of these MoU's on other national policy domains, it is worth examining whether an EU country's agreement to a Troika-sponsored MoU affects its environmental performance *over and above* the 'economic crisis' factor. Answering this question constitutes the second goal of our research.

Accordingly, this paper develops as follows. In the next section we present the available research concerning the impacts of economic crises on national environmental performance and we justify our decision to examine whether an EU country's agreement to a Troika-sponsored MoU affects the country's environmental performance *over and above* the 'economic crisis' factor. Next, we discuss the available literature on other (economic, political, and governance) predictors' influences on a country's environmental performance. These predictors form a control framework against which to test the possible added effects of the economic crisis' aspects -a dropping GDP and the existence (or not) of a MoU- on an EU member-country environment. By employing level-3 hierarchical linear multilevel (HLM) modeling, we find that, on their own right, a decelerating economy and a MoU have non-significant to positive effects on an EU country's environmental performance. Nevertheless, for countries which have agreed on a MoU, the economic downturn loses its positive influence, becoming non-significant for Eurozone countries and resulting to worse environmental performance for non-Eurozone ones.

2. Literature Review

2.1. The Impact of Economic Crisis on a Country's Environmental Performance

Available research has established that economic volatility has a detrimental effect on the sustainable use of natural resources (Huang, 2012) while past analyses have established a correlation between economic crisis and national environment(al performance), yet the sign of this correlation varies. On the one hand, Dauvergne (1999), discussing the implications of 1997 Asian financial crisis on Indonesia's environmental performance, reports that on domains such as water quality, conservation and resources management, the crisis further exacerbated existing pressures or created new ones. In similar vein, Pagiola (2001), reporting on this crisis's environmental effects in a number of Asian countries, argues that it led to increased deforestation, due to more extensive use of forest resources and the expansion of palm-oil plantations. Furthermore, expenditures on environmental protection and management had declined throughout the region as a result of the economic crisis (op.cit. p.29), a finding also corroborated by Knowles et al. (1999) and Vincent et al. (2002), concerning Asian countries, as well as by Kasa and Næss (2005), concerning Brazil. On the other hand, certain environmental quality/performance domains were little, or even positively, affected by the economic crisis. Thus, Dauvergne (1999) notes that concerning air quality and timber management in Indonesia, the crisis signaled a (temporary?) respite of existing degradation, while Knowles et al. (1999, p. 9) report that, contrary to casual observations, 'the only country study reporting official levels [of air pollution in capital cities] (in Seoul [South Korea]) suggests that there has been no departure from previous trends'. On a more promising note, Kasa and Næss (2005) show that the crisis-induced cuts in the environmental spending of Brazil's Amazonia region had prompted novel forms of cooperation between environmental NGOs and public actors, which 'ameliorated the impacts of the financial crisis and helped improve tropical forest management governance systems over the same period' (p.791). These conflicting effects suggest that, when studying the environmental repercussions of financial crises, 'No simple story emerges' (Pagiola 2001, p. 30), *a fortiori* since the various effects may well develop differently over time. Regarding the environmental impacts of the 1990s Asian financial crisis, Elliott (2011) notes that across the area's countries the 'Positive impacts were short-lived and negative impacts were little affected in the longer term' (p.167). This distinction between (overall positive) short − /medium-term and (overall negative) long-term environmental effects is also highlighted by Siddiqi (2000) –regarding the impacts of the late nineties' financial crisis on Asian counries- and Berghäll and Perrels (2010) –regarding the impact of the late 2000s' financial crisis on Nordic countries.

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Hypothesis 1. The current economic downturn has mixed effects on an EU country's environmental quality.

Hypothesis 2. The current economic downturn has detrimental effects on an EU countrys' environmental policy.

As a proxy for the 'economic downturn' predictor, we will use the country's economic growth, measured as the GDP difference between two consecutive years, since a negative GDP growth over time has been the trademark of economic crisis in available studies.

Nevertheless, there exist considerably more studies examining the environmental performance of *individual* member-states' environmental performance, particularly in the EU's south, which show an improvement for most, yet *not* every, air quality indicators during/over the period of crisis (e.g. for Greece, Karagiannidis et al., 2015; Markaki et al., 2017; Slini et al., 2015; Vrekoussis et al., 2013. For Spain, Querol et al. (2014) and Sánchez de la Campa and de la Rosa (2014). For Portugal, Borrego et al. (2012) and Malico et al. (2017). A rare exception to this, virtually monothematic, focus on pollutants' level is a paper by Lekakis and Kousis (2013), titled "*Economic Crisis, Troika and the Environment in Greece*". The authors' unique, to our knowledge, contribution rests not only on discussing the economic crisis' effects on a *number* of Greece's environmental performance indicators (i.e. pollutants- for which an improvement is observed-, institutional/legal framework, policy making, and environmental expenditure- all of which seem to deteriorate over time-), but also on developing their analysis around the mind-provoking allusion, already present in the paper's title, that the environmental repercussions of the economic crisis in Greece may be further accentuated by the specific policy-measures' mix of the Troika-promoted 'rescue package' offered to the country (Lekakis and Kousis 2013, pp. 306, 311). *A fortiori*, some Marxist political economists (Konstantinidis and Vlachou, 2016, 2017) consider the specific character of the Greek MoU as a vehicle 'used to accelerate the neoliberal restructuring of Greece with serious implications for the appropriation [and, arguably, downgrading] of nature'). Thus the second goal of this paper is to empirically examine these intriguing suggestions -not just for Greece but for all EU countries which have agreed on a "rescue package". In particular we wish to answer the following four research questions (RQ):

Research Question 1 (RQ1): Does the existence of a Troika-sponsored MoU worsen an EU country's environmental *quality*?

RQ2: Does the existence of a Troika-sponsored MoU worsen an EU country's environmental *policy*?

RQ3: How does the existence of a Troika-sponsored MoU changes