

Karine Constant

Université Paris Est Créteil
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Birth date : 5 août 1987
Citizenship : French

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Current position

2016- **Assistant professor**
ÉRUDITE - Université Paris Est Créteil

Research fields

Main : Environmental economics, Macroeconomics.

Details : Public policy, Growth, Inequality, Education, Health, Population, International trade.

Education

2015 **PhD in Economics** *with highest honors*
GREQAM, Aix-Marseille School of Economics, Aix-Marseille Université
Environment and Growth : Essays on Some Implications of Households' Altruistic Choices
Jury : Alain Ayong Le Kama (Chairman), Mouez Fodha (Referee), Carine Nourry (Advisor),
Fabien Prieur (Referee), Thomas Seegmuller (Advisor)

2010 **MS International Economics and Finance**, *with highest honors*
GREQAM, Aix-Marseille Université

Research papers

Publications : **Population Growth in Polluting Industrialization**, with C. Nourry and T. Seegmuller, **Resource and Energy Economics**, 36(1), 229-247, January 2014.

Recently, many contributions have focused on the relationship between capital level, growth and population dynamics, introducing fertility choice in macro-dynamic models. In this paper, we go one step further highlighting also the link with pollution. We develop a simple overlapping generations model with paternalistic altruism according to wealth and environmental concerns. One can therefore explain a simultaneous increase in capital intensity, population growth and pollution, namely a polluting industrialization. We show in addition that a permanent productivity shock, possibly associated to technological innovations, promotes such a polluting development process, escaping a trap where the economy is relegated to low levels of capital intensity, population growth and pollution.

Environmental Quality, Growth and Inequalities : the Specific Role of Health, with N. Raffin,
Revue Française d'Économie, XXXI (3), January 2017 (in french).

In this article, we pay special attention to the mutual interactions between environmental quality, the growth process and inequalities going through the channel of health. Our objective is to shed light on the feasibility of a sustainable development in the long run by identifying the main mechanisms linking the economic, environmental and social dimensions. Finally, we highlight the major role played by environmental policies in improving the economic performance and addressing inequalities.

Environmental Policy and Growth when Environmental Awareness is Endogenous, with M. Davin, forthcoming in *Macroeconomic Dynamics*.

This paper examines the relationship between environmental policy and growth when green preferences are endogenously determined by education and pollution. We consider an environmental policy in which the government implements a tax on pollution and recycles the revenue to fund pollution abatement and/or an education subsidy (influencing green behaviors). When the sensitivity of agents' environmental preferences to pollution and human capital is high, the economy can converge to a balanced growth path equilibrium with damped oscillations. We show that this environmental policy can both remove these oscillations, associated with intergenerational inequalities, and enhance the long-term growth rate. However, this solution requires that the revenue from the tax rate must be allocated to education and direct environmental protection simultaneously. We demonstrate that this type of mixed-instrument environment policy is an effective way to address environmental and economic issues in both the short and the long run.

Working papers : Environmental Policy and Inequality : A Matter of Life and Death, AMSE Working Papers,

This paper analyzes the economic implications of an environmental policy when we take into account the life expectancy of heterogeneous agents. In a framework where everyone suffers from pollution, but health status depends also on individual human capital, we find that the economy may be stuck in a trap where inequalities persistently grow, when the initial pollution intensity is too high. Moreover, it is emphasized that such inequalities are costly in the long run for the economy, notably in terms of health and growth. Therefore, we study whether a tax on pollution associated with an investment in pollution abatement can be used to reduce inequalities and to improve endogenous growth. We obtain that a tighter environmental policy may allow the economy to escape the inequality trap while it enhances the long-term growth rate, as long as initial inequalities and pollution are not too large.

Works in progress : How the Unequal Vulnerability to Climate Change Spreads across the World through International Trade, with M. Davin and A. Le Riche.

In this paper, we consider the unequal distribution of climate change damages in the world and we examine how the cost of global pollution can spread from a vulnerable to a non-vulnerable country through international trade. We treat this topic in a North-South trade overlapping generations model in which South is vulnerable to the damages entailed by global pollution while North is not. Even in this extreme case, we show that the impact of climate change in the South can be a source of welfare loss for the North, in both short and long run. In the long run, the South vulnerability can reduce the North's welfare even in the case in which it improves its terms of trade. In the short run, the South vulnerability can represent a source of intergenerational inequity in the North. Therefore, we emphasize that there are strong economic incentives for non-vulnerable - and a fortiori less-vulnerable - economies to reduce the climate change damages on - more - vulnerable countries. We conclude in favor of aid programs aiming at helping developing countries adapt to climate change and reduce global pollution.

How the European Debt Crisis has Impacted the Renewable Energy Sector, with M. Davin, G. De Truchis and B. Keddad.

Since the 2008 crisis and during the recent European crisis, the clean energy sector has sharply slumped. In this paper, we explore theoretically and empirically the relationship between the macro-financial environment and the downward trend of this sector. Conversely to previous studies that only focus on fossil energy and technology sectors, our empirical analysis also accounts for the private investment environment and the austerity pressures in European countries. We notably find that the poor performance of the private equity, the fall in the crude oil prices and more interestingly, the rise in the sovereign credit risk have directly contributed to explain the decline of the European renewable energy companies during the recent period. Analytically, we develop a model that explains the direct impact of a public budget stringency on the clean energy sector but also its indirect impact through private investment choices.

Conferences and seminars

Conferences :

- Conference of the European Association of Environmental and Resources Economists - EAERE** (2016, ETH Zurich)
- Conference on Sustainable Resource Use and Economic Dynamics - SURED** (2016, Université Paris 1 ; 2014, ETH Zurich)
- 5th Thematic Workshop of the French Association of Environmental and Resources Economists - FAERE** Université Rennes 1 (2016)
- Theory and Methods in Macroeconomics** (2016, Banque de France ; 2011, HEC Montreal)
- Conference of the French Association of Environmental and Resources Economists - FAERE** (2015, Toulouse Business School ; 2014, Université Montpellier 1)
- Public Economic Theory** (2015, University of Luxembourg ; 2013, Catholica-Lisbon University)
- Journées d'Economie Publique Louis-André Gérard-Varet** Aix-Marseille Université (2013, 2012)
- Instability and public policies in a globalized world : Conference in honor of Jean-Michel Grandmont** Aix-Marseille Université (2013)
- Overlapping Generations Days** (2013, Université d'Auvergne ; 2012, Aix-Marseille Université ; 2011, Université Catholique de Louvain)
- New Challenges for Macroeconomic Regulation : Financial Crisis, Stabilization Policy and Sustainable Development** Aix-Marseille Université (2011)
- Rencontres de l'Environnement** (2010, Université Montpellier I)

Seminars :

- Environmental and resource economics seminar of LAMETA INRA** - Université de Montpellier (2016)
- Economics seminar of LEMNA** Université de Nantes (2016)
- Seminar of UMR Économie Publique INRA** - AgroParisTech (2016)
- Seminar of Institut du Développement et de la Prospective** Université de Valenciennes (2016)
- Lunch seminar of EconomiX** Université Paris Ouest Nanterre la Défense (2016)
- Environmental and resource economics lunch seminar of Paris School of Economics** Université Paris 1 (2016)
- Environmental and resource economics seminar of EconomiX** Université Paris Ouest Nanterre la Défense (2015 ; 2014)
- PhD seminar of Aix-Marseille School of Economics** Aix-Marseille Université (2014 ; 2010)

Former positions

2015-2016	Post-doctoral research fellow, EconomiX - Université Paris Ouest Nanterre la Défense
2014-2015	Research and teaching assistant (ATER), Université Paris Ouest Nanterre la Défense
2013-2014	Research and teaching assistant (ATER), Aix Marseille Université
2010-2013	Teaching Assistant, Aix Marseille Université
2010-2013	Doctoral Grant, French Ministry of Research

Referee activities

Environmental and Resource Economics

Teaching experience

Lectures and tutorials, *Université Paris Est Créteil*

- 2016- **Economic policy analysis** - second year undergraduates *Licence langues étrangères appliquées*
2016- **International economics** - third year undergraduates *Licence langues étrangères appliquées*

Tutorials, *Université Paris Ouest Nanterre la Défense*

- 2014-2015 **Macroeconomics** - first year undergraduates *Licence administration économique et sociale*
2014-2015 **Microeconomics** - second year undergraduates *Licence administration économique et sociale*

Tutorials, *Aix-Marseille Université*

- 2011-2014 **Statistics** - first and second year undergraduates *Licence économie et management*
2011-2014 **Probability** - second year undergraduates *Licence économie et management*
2012-2013 **Mathematics** - first year undergraduates *Licence administration économique et sociale*
2010-2012 **Macroeconomics** - first and second year undergraduates *Licence économie et management*

Scientific and administrative responsibilities

- 2015-2016 Co-organizer of the environmental and resource economics seminar of EconomiX
Université Paris Ouest Nanterre la Défense
2011-2014 Member of the doctoral school board (students delegate),
ED 372 Economics and Management - Aix-Marseille
2011-2014 Member of the GREQAM research center board (students delegate),
Groupe de Recherche en Économie Quantitative d'Aix-Marseille, UMR 6579

Languages and computer skills

Languages : French (native), English (fluent)

Softwares : Latex, Mathematica, RATS, SAS, VBA, Stata