Maria Arvaniti

Current Position and Contact Information

Postdoctoral researcher (Browaldh Postdoctoral Scholarship)
Centre for Environmental and Resource Economics,Umeå School of Business and Economics   *2014-2017*

Umeå School of Business and Economics
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Sweden
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Personal Information

Date of Birth: 04 September 1985   **Nationality**: Greek

Education

PhD Economics
University of Warwick, UK   *2008–2013*
Thesis Title: "Essays on Environmental Economics"

Visiting graduate student
University of Western Ontario, Canada   *2012–2013*

MSc Economics
University of Warwick, UK   *2007–2008*

BSc in International and European Economic Studies
Athens University of Economics and Business, Greece   *2003–2007*

Research Field

Environmental Economics, Externalities and Taxation, Temptation Driven Preferences

Teaching Experience

2010-2014: Teaching Assistant, MSc Microeconomics, 2nd year Undergraduate Microeconomics, 2nd year Managerial Economics, 1st year Economics for Business

2008-2010: Teaching Assistant, 2nd year undergraduate Microeconomics and Macroeconomics for mixed discipline students and Msc Macroeconomics, Warwick Business School

Fellowships and Honours

Teaching Fellowship
University of Warwick   *2011-2014*

Tutor Commendation Award
University of Warwick   *2010-2011*

Scholarship -The George and Victoria Karelias Foundation, Greece
Postgraduate Scholarship for studies abroad in the field of Economics   *2009-2010*

Scholarship's Foundation, IKY, Greece
Scholarship for the recognition of academic merit in undergraduate studies   *2003-2007*

Conferences and Seminars

"Market Failure and Market Design"
ECORE summer school, Louvain-la-Neuve   *2011*

"Developing policy regimes for combating climate change"
organized by CAGE and LSE Grantham Institute for Climate Change Research, London, UK   *2010*

"International climate policy after Copenhagen"
organized by CAGE and Warwick Low Carbon Initiative, University of Warwick, UK   *2009*

Language Skills

Greek (Native), English (Fluent), French (Basic), German(Basic)

Computer skills

Mathematica, Matlab, Eviews

Research Papers

○ **"When financial imperfections are not the problem but the solution"**
(job market paper)

Abstract: The BP Deepwater Horizon oil spill of 2010 has focused considerable attention on the potential liability and the operating conduct of big oil companies. In this case, BP's unusually "deep pockets", made full compensation to the victims feasible, drawing attention away from the glaring safety failures in both the private and the public sector. It seems that big oil companies, the same ones that are more likely to cause a catastrophic oil spillage, do not need to buy liability insurance at all: they have a sufficiently diversified investment portfolio that allows them to self-insure for the vast majority of their potential catastrophic liability. In this light, my Job Market paper suggests that, restricting the insurance opportunities of big oil companies in the asset markets creates incentives to internalize the welfare effects of such catastrophic events, leading to a Pareto improved allocation for society as a whole. I model a class of general equilibrium economies with uncertainty, where the probability of each state rather than being exogenous, depends on the level of effort exerted by one agent. Thus, the probabilities of different states are endogenously determined in equilibrium. When this "effort" is costly and not contracted upon, every equilibrium is Pareto inefficient as in all economies with imperfections, an "externality" in this case. I then focus on welfare improving policies, in particular on the imposition of "participation" constraints in financial markets. I show that generically in the space of endowments, there is a Pareto-improving policy in the form of a reallocation of existing assets. The results extend to economies with aggregate uncertainty and complete markets as well as to economies with uninsurable idiosyncratic risk. This has the important implication that complete markets need not to be optimal in economies with this type of externalities. Restricting the insurance opportunities of agents is welfare improving for society as a whole as it forces the agent to "internalize" the social cost of his choice of effort by making him more vulnerable to risk and uncertainty.

○ **"Temptation Driven Preferences and Environmental Externalities"**

Abstract: Gul and Pesendorfer (2001) are the first to offer an axiomatization of what they call "temptation and self-control" preferences. They build a 2-period decision problem where in the first period agents choose over menus of lotteries and in the second period they choose an alternative from the chosen menu. However, agents are subject to temptation: at the time of actual consumption, they suffer from urges to deviate from their "commitment" preferences which prescribes what they "should" do and instead evaluate alternatives according to their "temptation" preferences which is what they "want" to do. Importantly, even if they resist temptation, they will suffer from a self-control cost. This paper extends their model to an economy with environmental externalities and in particular environmental pollution as a byproduct of consumption. I analyze a two- period, two-countries model where in the first period countries, represented by their decision makers, negotiate over the upper (and potentially lower) bounds of consumption and therefore over the associated level of pollution. In the second period, consumers choose a level of consumption within the allowed range. There are two types of agents: a "pro-business" agent who at the period of consumption forgets all his environmental concerns and is tempted by higher consumption. And an "environmentalist" who is tempted to care only about the environment. In a country where agents are subject to any type of temptation or face random temptation, a decision maker finds it optimal to commit to a singleton set avoiding in this way temptation and the cost of self-control. Allowing for shocks in the economy creates a trade-off between commitment and flexibility to adjust to shocks. In this case, the optimal policy for a decision maker will depend on the range of parameters. I find that for a relatively small shock, full commitment is favored at the expense of no adjustment to shocks. Instead, for a relatively big shock, uncertainty becomes too important to ignore and some degree of flexibility is optimal at the expense of a self-control cost. Extending the model to allow for shocks and random temptation as well as for strategic interaction between countries are the focus of further research on this topic.

○ **"Uncertainty, Extreme Outcomes and Climate change: a critique "**

Abstract: The scope of this paper is to show how deep structural uncertainties inherent in climate change

economics can lead to very different implications for the optimal climate change policy. In Pindyck (2012), the author concludes that given the current "state of knowledge" of warming and its impact, the results are consistent with moderate abatement, below 2% of GDP. My analysis builds upon his work and aims to show how different assumptions regarding the utility and damage functions can support the immediate adoption of a stringent abatement policy. Pindyck as well as most of the IAMs use a CRRA "multiplicative" functional form for utility which implicitly assumes perfect substitutability between material consumption and environmental amenities. However, as Tol et al (2005) and Weitzman (2009) have pointed out, the individual derives utility from environmental amenities, not necessarily translated to market consumption, an effect which can be captured by an additive utility function. Therefore, I employ an "additive" form for the utility function and the corresponding damage function, applied to the level of consumption rather than growth while allowing for an exponent of $N = 2$ and $N = 3$. Using the distribution for temperature change and the economic impact provided by Pindyck (2012), based on information from the IPCC (2007) and recent IAMs, I estimate a simple measure of "willingness to pay": the fraction of consumption, $w^*(\tau)$, that society would be willing to sacrifice today and throughout the future to ensure that temperature change at some horizon H would be limited to τ. My specifications lead to significantly higher estimations for the WTP and in some extreme cases to a value close to 1. Although one could not strongly argue which is the right specification for the model, the analysis suggests that, seemingly small differences in modeling can have very different policy implications. Moreover, a more realistic model that accounts for parametric as well as intrinsic uncertainty in the form of exogenous shocks and risks needs to be developed, if we are to safely answer the question of whether a stringent abatement policy needs to be employed.