



Università degli Studi di Padova  
Dipartimento di Ing. Civile, Edile e Ambientale

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Corso di Laurea in Mathematical Engineering

Project in Dynamical Systems

# Economic growth model with open-access natural resources

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## 1 Introduction

This report is based mainly on a couple of papers, which are correlated: the first one is [2], in which I have chosen the a continuous time model and in particular the model briefly described in the subsection 4.1 called "*The Antoci-Russu-Galeotti Model*", and the second one is [1], the one containing the full description. Nonetheless other third part papers could be involved and cited.

## 2 The model

TBA

## 3 Growth and Environmental pollution in the Solow model

Write down here the text

## 4 Optimal growth and Environmental pollution

Write down here the text

### 4.1 The Ramsey–Cass–Koopmans model with environmental pollution

Write down here the text

## 5 Conclusion

Write down the conclusions here!!!

## References

- [1] Angelo Antoci, Marcello Galeotti, and Paolo Russu. Poverty trap and global indeterminacy in a growth model with open-access natural resources. *Journal of Economic Theory*, 146(2):569–591, 2011.
- [2] Andrea Caravaggio and Mauro Sodini. Nonlinear Dynamics in Coevolution of Economic and Environmental Systems. *Frontiers in Applied Mathematics and Statistics*, 4, 2018.