# Andrea Titton

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Amsterdam

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#### **EDUCATION**

University of Amsterdam

PhD in Economics

Advisors: Prof. Dr. Cees Diks and Dr. Florian Wagener

Paris School of Economics

Research visit

Host: Prof. Dr. Agnieszka Rusinowska and Prof. Dr. Mathieu Leduc

Tinbergen Institute

MPhil in Economics (Advanced Econometrics Track), Cum Laude

Advisors: Prof. Dr. Cees Diks and Dr. Florian Wagener

University of Amsterdam

BSc. Economics, Cum Laude

Amsterdam, the Netherlands

Sep 2021 - Expected Jun 2025

Paris, France
May 2023

Amsterdam, the Netherlands

Sep 2019 - Aug 2021

Amsterdam, the Netherlands

2016 - 2018

# References

#### Prof. Dr. Cees Diks

Professor of Economics, University of Amsterdam

C.G.H.Diks@uva.nl

# Dr. Florian Wagener

Professor of Economics, University of Amsterdam

F.O.O.Wagener@uva.nl

#### RESEARCH

Primary fields: Environmental Economics and Climate Change

Secondary fields: Economic Theory, Industrial Organisation

#### Job Market Paper (Working Paper)

"Regret and Climate Tipping Points", 2024. Download paper.

Abstract: Climate tipping points make climate change abrupt and unpredictable. When crossed, the world climate might enter a high temperature regime, which can be extremely costly, if not impossible, to revert. This paper studies the economic implications of such tipping points, focusing on the costs associated with their unpredictability and irreversibility. I compute optimal abatement policies in a dynamic stochastic general equilibrium model coupled with a climate model with positive feedback effects, which induce tipping points. I define "regret" as the economic losses incurred when a social planner mistakenly assumes that a tipping point is distant, but it is in fact imminent, and optimal abatement strategies are delayed until after the tipping point is crossed. I show that it is socially optimal to "slam the brakes" and stabilise the climate quickly after tipping. However, delayed action induces large regret, suggesting that it is more cost-effective to act prudently in the face of uncertainty surrounding tipping points.

# **Submitted Papers**

"Endogenous Fragility of Supply Chains and Correlated Disruption Risk", 2023. Download paper.

Abstract: I model the endogenous formation of supply chains in the presence of correlated disruptions. The incentives of firms to diversify the supply chain risk are concave in the correlation between the disruption events among producers of their input goods. This concavity has consequences for the endogenous formation of the supply chain. If upstream producers are highly diversified, their disruption risk might be correlated, reducing diversification incentives for downstream firms. Because of this mechanism, a small increase in the correlation of risk among upstream producers, due to, for example, offshoring or climate disruptions to economic activities, can generate under-diversification throughout the production network. This creates large welfare losses. Finally, I show that firms gaining more information on their supply chain risk exacerbates such losses.

# Work in Progress

"Blurred Price Signals in EU Emissions Trading System" with Alessandro Zona Mattioli, 2024.

Summary: We model firm the link between firms' innovation decisions and the price of EU ETS. We then calibrate the model using French firm level data. We show that large volatility in the price of EU ETS can coordinate firms into postponing the green transition.

"An NLP Analysis Of Institutional Investor's Stance Towards Environmental Sustainability" with Davide Grossi, Alessio M. Pacces, Xinyi Wang, 2023.

Summary: We use natural language techniques to identify influence of institutional shareholders on corporate decision-making.

"Options can stabilise markets" with Donald Hagesteijn and Cars Hommes, 2024.

Summary: We show that trading binary at-the-money put option can stabilise markets and mitigate bubble formation, in asset pricing models with trend-following agents.

#### TEACHING EXPERIENCE

# Lecturer, University of Amsterdam

Economic and Financial Network Analysis (Fall 2024)

#### Teaching Assistant, University of Amsterdam

Complex Economic Dynamics 2 (Spring, 2023, 2024, 2025)

Complex Economic Dynamics 1 (Fall, 2022, 2023, 2024)

Mathematics 3 - Advanced Linear Algebra (Fall, 2023, 2024)

Mathematics 2 - Real Analysis (Spring 2022, 2024) Economics of Environmental Tipping Points (Spring, 2022)

#### Teaching Assistant, Tinbergen Institute

Game Theory (Spring, 2021)

Advanced Mathematics (Fall, 2020)

#### Working Experience

### Accurat

Data Scientist and Engineer

Milan, Italy and New York, US  $Jul\ 2017 - Jul\ 2018$ 

# Conferences

2024: DEARE (scheduled, the Netherlands), EEA (EUR, the Netherlands, SING 19 (University of Franche-Comté, France), EGU2024 (Vienna, Austria), T2M (University of Amsterdam, The Netherlands), Search and Patrolling Games (Leiden, the Netherlands), Economics PhD Conference (University of Warwick, UK)

**2023:** EEA (Barcelona, Spain), EPOC conference (University Ca' Foscari, Italy), Dutch Network Science Society Symposium (Leiden, the Netherlands)

# SCOLARSHIPS AND GRANTS

A Sustainable Future Grant (2021)

Tinbergen Institute Scholarship (2019-2022)

# ${\rm Skills}$

Languages: Italian (native), English (C2), Dutch (B1)

Programming: Julia, R, Matlab, Stata, Python, Clojure, Prolog, Javascript, Haskell and LATEX