FINANCING INVESTMENTS IN CLEAN TECHNOLOGIES

Project leaders

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PROJECT DESCRIPTION

Motivation
- Addressing climate change will require a massive shift of investments towards clean technologies

Goals
- Cleantech investments also offer opportunities for increased growth and competitiveness
- Understand how uncertainty about the policy environment impacts cleantech investments
- Understand how new financing models can help attracting investors into cleantech

RESEARCH QUESTIONS

How can society steer financing towards cleantech investments?
Attracting investments in clean technologies is challenging as cleantech differs from other technologies on two important aspects:

1. Due to the large dependence of the sector on public support, policy uncertainty – i.e. frequent changes in environmental and climate regulations – is particularly harmful to cleantech investment.

2. Cleantech investors differ from traditional investors; they are more dispersed, diverse and small-scale nature and may be driven by different (e.g. altruistic) motives.

From these two specific features, we articulate our main research questions:

1. How does climate and environmental policy uncertainty impacts cleantech investments?
2. How can we attract new types of investors into cleantech? What is the effectiveness of new financing instruments (such as VCs and crowdfunding)?

Methodology

Work Package 1: Building novel indicators of policy uncertainty using:
- Newspaper-based index
- Non-sentiment-based policy instruments

Work Package 2: Impacts of policy uncertainty on cleantech investments using:
- Econometric techniques
- Combining policy analysis and cleantech investment data
- Online and offline interaction with policy makers

Work Package 3: Effectiveness of VentureKick startups:
- Database of VentureKick startups
- Regression discontinuity analysis

Work Package 4: Crowdfunding and early-stage cleantech investors:
- Database of VentureKick startups
- Online and offline interaction with policy makers

IMPLEMENTATION AND KNOWLEDGE TRANSFER

Activities planned
- Scientific publications in leading economic and interdisciplinary journals
- Presentations at international conferences and at policy and professional workshops
- Website, press releases, blog posts and policy briefs
- Final academic workshop and policy forum
- Chapters in the “Startup Panorama” of CleanTechAlps
- Regular meetings with implementation partners

Implementation partners
- Cleantech business sector
  - CleanTech Capital
  - CleanTech Alp Capital
  - Carbon Delta
  - Venture Kick
  - Switzerland Global Enterprise

- Financial institutions
  - Emerald Technology Ventures
  - Jadeberg Partners

- Policy organisations
  - OECD
  - Green Growth Knowledge Platform

SIGNIFICANCE

Scientific significance
- Novel indices of environmental and climate policy uncertainty
- Costs of policy uncertainty on cleantech
- Advancing knowledge on new financing tools for cleantech

Practical significance
- Collaboration with partners from the praxis
- Platform to initiate discussion on new funding instruments
- Practical recommendations for better policies

Contribution to NRP73 goals
- To the extent that we find that uncertainty is particularly harmful to cleantech investments, the findings will have implications for “Module 2: Opportunities and Risks” of the NRP73 by examining how a stable environmental policy regime can help Switzerland attract investors, expand its expertise and develop new export markets in cleantech
- By investigating how financing instruments can help to channel investments towards cleantech companies, the results of the project will have implications for “Module 3: Measures and instruments” of the NRP73. In Switzerland, venture capital investments in cleantech represent less than 4% of the total volume (against 72% for life science technologies)