

“Twin transition” and  
techno-organisational  
settings: empirical evidence  
from Italian regions



University  
of Ferrara

DEPARTMENT  
OF ECONOMICS  
AND MANAGEMENT

The logo for SEEDS, featuring a stylized green leaf icon above the word 'SEEDS' in a bold, serif font. The 'E' in 'SEEDS' is highlighted in green.

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# Green and Industry 4.0 Innovation (Joint) adoption & Organisational HR investments in Italian Manufacturing

October 2019



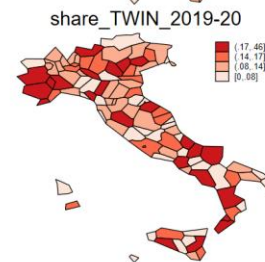
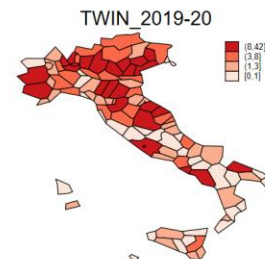
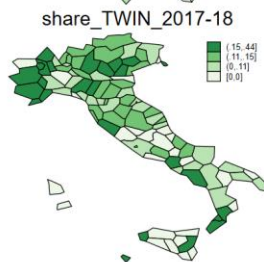
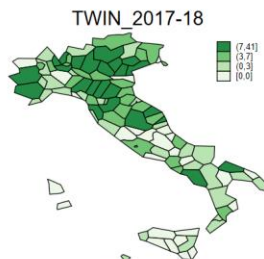
## Report

### Towards an Innovation-intensive Circular Economy. Integrating research, industry, and policies

Roberto Zoboli, Catholic University, Milan, and SEEDS

with contributions from  
Nicolò Barbieri, University of Ferrara and SEEDS  
Claudia Ghisetti, Catholic University and SEEDS  
Giovanni Marin, University of Urbino and SEEDS  
Susanna Paleari, IRCrES-CNR

Edited by Stefano Pareglio, Catholic University, Milan, and FEEM



December 2020



## Report

### Energy and the Circular Economy: Filling the gap through new business models within the EGD

Roberto Zoboli (Catholic University and SEEDS), Massimiliano Mazzanti (University of Ferrara and SEEDS), Susanna Paleari (IRCrES-CNR), Laura Bonacorsi (Fondazione Eni Enrico Mattei), Elisa Chioatto (University of Ferrara and SEEDS), Alessio D'Amato (University of Rome Tor Vergata and SEEDS), Claudia Ghisetti (Catholic University and SEEDS), Mario A. Maggioni (Catholic University), Emy Zecca (University of Ferrara and SEEDS)

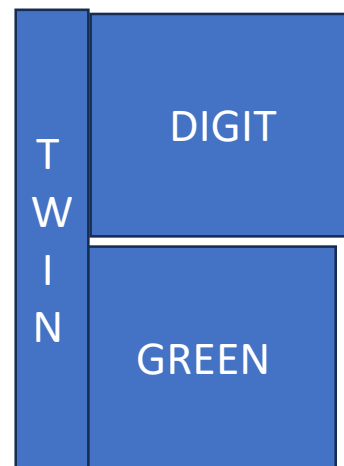
Edited by  
Stefano Pareglio, Catholic University, Milan, and FEEM

ISBN 9791280348012

Regional / provincial perspective on SMEs  
Innovation adoption and diffusion

# Econometric analysis (4500 units Sample SMEs, 2017-2020)

effect of organizational and work practices on the adoption of the TWIN strategy



- the larger knowledge investments are, the stronger the possible role of policy in inducing new inventions. The higher the combination of any R&D/human capital sources, including their spillovers, the stronger socio-technical system capacity to absorb the effect of the policy, translating this into inventions. The economic system absorptive capacity is the ability to recognize the value of new external 'information', a policy in this case, assimilate it, and apply it to invention ends



## Working Paper Series

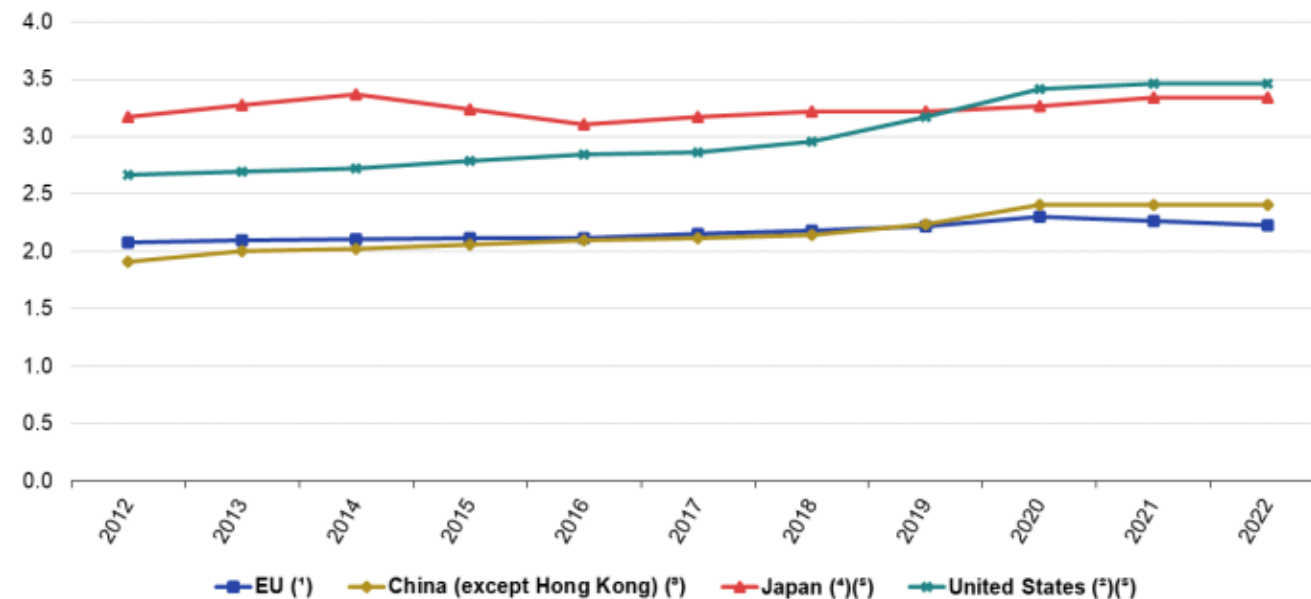
*A Semiparametric Analysis of Green Inventions and Environmental Policies*

by

Massimiliano Mazzanti, Antonio Musolesi

09/2020

**Gross domestic expenditure on R&D, 2012-2022**  
(%, relative to GDP)



(\*) 2012 and 2022: estimates

(\*\*) Excludes most or all capital expenditure. definition differs: 2012-2021