



Toulouse
School of
Economics

An illustration of a lecture hall with a warm, orange-red color palette. The room is filled with students sitting at desks, some looking towards the front. A laptop is open on a desk in the foreground, displaying a data visualization. Large windows in the background let in bright light, creating a high-contrast scene. The overall atmosphere is one of a modern, active academic environment.

**RESEARCH
PARTNERSHIPS 2023**

2023

This annual report provides an overview of the achievements and goals of research partnerships at TSE, celebrating another year of highly productive interactions between academics and decision-makers.

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SNAPSHOT OF 2023



Alexander Guembel (TSE)

JANUARY

• **15 and counting!**
After a Covid-19 hiatus, the highly anticipated TSE Digital Economics Conference resumed its in-person format. The 130 participants at this 15th edition discussed the EU Digital Markets Act, AI-tocracy and its international ramifications, as well as the metaverse and its implications for competition policy, gaming, advertising, and privacy.



FEBRUARY

• **Digital market regulation**
After its first co-hosted workshop in Toulouse in 2022, the TSE-Yale venture for advancing the global research agenda on digital market regulation held its first conference at Yale University in New Haven. This collaboration is yet another example of our efforts to inspire global responses to worldwide challenges.

“Our model relies on a successful mix of different cultures from both the public and private sectors. Our researchers greatly benefit by engaging in lively and constructive debates with firms and public institutions from around the world.”



From left to right: Marie Briere, Xavier Vives, Kheira Benhamiv, Milo Bianchi

DECEMBER

• **The future of finance**
What are the latest developments in quantifying companies' exposure to climate change? What challenges arise from the use of AI in finance? Academics and professionals convened in Toulouse for the third Sustainable Finance Conference to address the future of the finance industry.

• **Data Protection and Competition**
At a Paris event jointly organized by the French Competition Authority (AdIC), the French Data Protection Authority (CNIL), and TSE, discussions centered on balancing innovation, fair competition, and the introduction of products and services that protect privacy. More than 1,000 participants, including regulators, researchers, and professionals, attended this hybrid event.

• **Understanding risk**
The SCOR Foundation for Science announced it would support the 'Market Risk and Value Creation' Chair for three more years. This chair aims to further theoretical and applied research on risk-sharing mechanisms.

JUNE

• **TSE brings together health economics specialists**
The first major scientific conference of the TSE Health Center brought together 110 international participants, boosting TSE's drive to advance the study of health economics in France and Europe.

SEPTEMBER

• **Investing for biodiversity**
TSE organized its first multidisciplinary workshop on biodiversity at the beginning of the academic year. A panel of experts from economics, ecology, finance, law and policy convened to discuss how decision-makers can protect natural ecosystems.



• **Partnering with the European Commission**
TSE is proud to have signed a strategic two-year partnership with the European Commission's Joint Research Centre (JRC), aiming to energize research in digital economics.



Speakers and organizers at TSE's first workshop on biodiversity

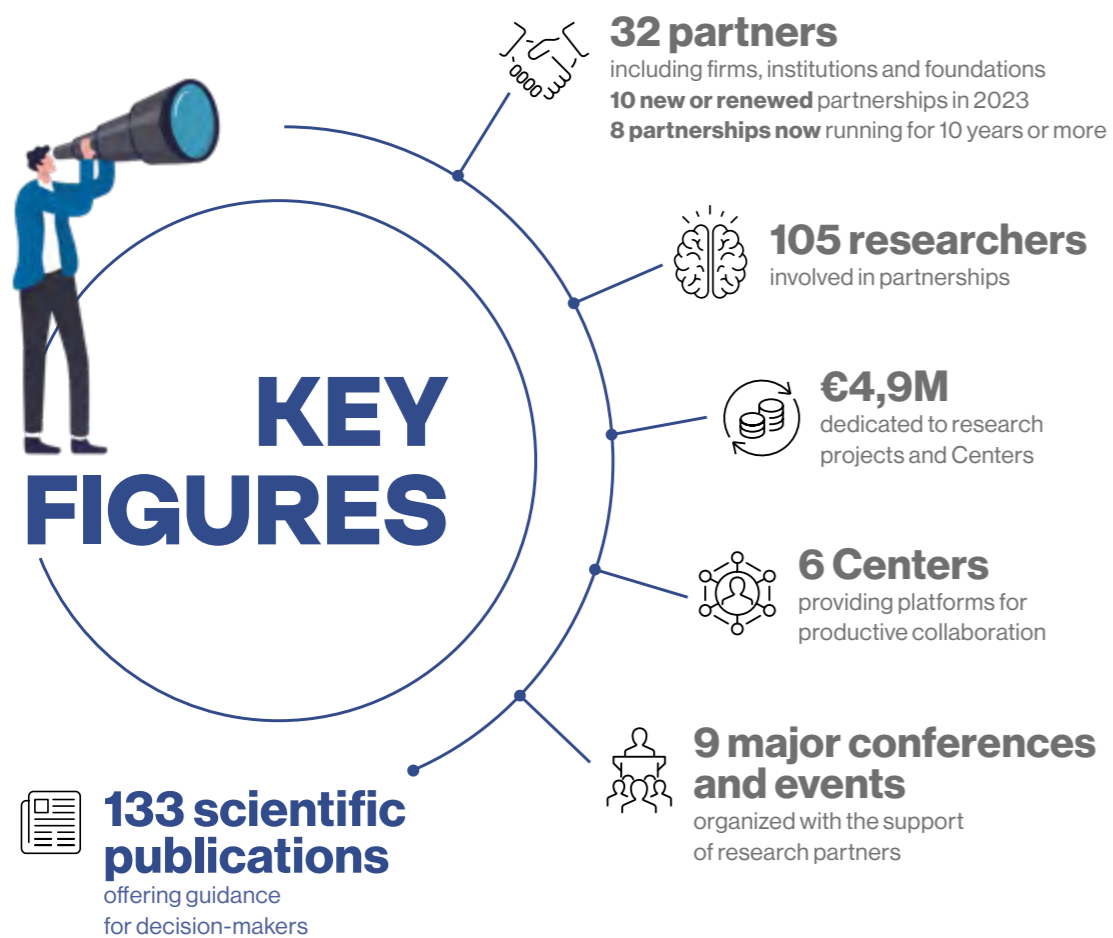
EDITO

“In 2023, our research teams spearheaded major scientific advances, with indispensable support from our partners. A rich array of scientific events and activities disseminated research results in a wide range of fields: digital, energy and climate, sustainable finance, health, competition policy and regulation. As Director of TSE-P, I am grateful to be able to take part in this human adventure, working with a community of experts who are passionately engaged in advancing our understanding of economic mechanisms, and empowering decision-makers with scientific knowledge and tools to take well-informed, impactful actions. Long live science!”

YASSINE LEFOUILI
Director, TSE-Partnerships Foundation (TSE-P)
Professor, TSE

RESEARCH BREAKTHROUGHS

In one of the many scientific advances made by TSE researchers in 2023, Michele Bisceglia and Jean Tirole developed a framework to assess regulatory proposals regarding access prices charged by large digital platforms to business users. Many more examples of TSE research insights can be found in the following pages.



2 QUESTIONS TO PATRICK REY

Leading expert in competition economics and representative for researchers within the TSE-P Executive Committee

What drives our partnerships?

The main driver is the quest for relevant research topics. Interaction with the partners guides us to identify new research avenues, leading to publications in top journals. It helps the partners by offering relevant answers to new questions and by developing new conceptual frameworks that reflect key characteristics of their industries.

Why give so much importance to scientific journals?

The peer-review process employed by these journals improves the quality, validity, and originality of the published research. Conversely, publishing in top journals contributes to the scientific reputation of TSE.

TSE-P WITHIN THE TSE ECOSYSTEM*

TSE-P operates within the Jean-Jacques Laffont - TSE Foundation, one of the three distinct TSE entities that share a common strategy and pool resources.

TSE School

Chair of the Board: Marlène DOLVECK
Director: Christian GOLLIER

Jean-Jacques Laffont TSE Foundation

Chair of the Board: Michel PEBEREAU
Managing Director: Christian GOLLIER

Comprising two sheltered foundations:

TSE-P, responsible for TSE's partner-based research activities

Executive Committee President: Pierre MONSAN
Director: Yassine LEFOUILI

IAST, responsible for multidisciplinary social sciences research activities

Executive Committee President: François BOURGUIGNON
Director: Ingela ALGER

Mixed research unit (UMR) TSE-R

Director: Arnaud REYNAUD
Co-supervising institutions: CNRS, TSE School, INRAE, Toulouse Capitole University

CONVERSATION WITH JEAN TIROLE

Nobel Laureate and Scientific Director of TSE-P, Jean Tirole reflects on our research partnerships' achievements and discusses the challenges ahead.



What are your key takeaways from 2023?

Our research efforts have yielded abundant output, particularly in areas related to regulation of the digital economy. We have dedicated substantial resources to exploring the intricacies of digital markets, with a keen focus on the latest developments of the Digital Markets Act (DMA) and the Digital Services Act (DSA). Collaboration with esteemed partners, such as the Tobin Center at Yale University, has had many rewards including joint publications and conferences aimed at advancing research with important policy implications. Our engagement with various regulators, including the National Commission on Informatics and Liberty (CNIL) and the French Competition Authority (AdIC), culminated in a highly successful conference in December, which focused on pressing issues about regulation and privacy. Let's also not forget our new partnership with the Joint Research Center of the European Commission, focused on the digital economy.

How do TSE researchers keep up with today's rapidly evolving landscape?

We try to establish a virtuous circle in which scientific research informs policy, and policy generates interesting research issues. This demands time and energy, both from academics and from professionals in the field. I thank all those involved in this collective effort to promote

evidence-based policymaking. This maximizes the impact of research and ensures it remains relevant.

TSE has strong in-house expertise, but we also join forces with other academic institutions to inform and reach out to policymakers. For instance, TSE has been collaborating with the Institute for European Policymaking (IEP@BU) at Bocconi University and the CSEifo Institute (Munich) to produce a joint report with concrete policy recommendations for innovation policy in Europe.

What are the target areas for 2024?

Our focus areas encompass a blend of projects, including the continuation of ongoing research - scientific breakthroughs take time! - and new high-impact projects. In health economics, we will continue our research on the critical issue of antibiotic resistance and the value of diagnostics. Combined with our expertise in digital economics, we could also develop our global connections with firms and public health stakeholders to explore e-health, a field which raises many fascinating issues. We also see growing interest in AI and economics, which could lead to interesting and useful research. We will also continue to pursue our research on other key challenges for our economies, such as climate change and the development of sustainable finance.

PARTNERSHIP IMPACT

RESEARCH ADVANCES & OUTREACH

Projects developed in the context of our bilateral research partnerships are usually associated with one or several of TSE's thematic centers. This section showcases the impact of these collaborations and the increasing strengths of TSE in specific areas of expertise.

OBJECTIVES OF THE CENTERS

Bring together TSE's scientific expertise within a given area

Maximize TSE's ability to inform public debate

Connect researchers with partners and policymakers

TSE THEMATIC CENTERS

The first TSE thematic center was launched in 2017. Its success encouraged the creation of other Centers, bringing the current total to six.

- **DIGITAL**
- **ENERGY & CLIMATE**
- **HEALTH**
- **INFRASTRUCTURE & NETWORK**
- **SUSTAINABLE FINANCE**
- **COMPETITION POLICY & REGULATION**

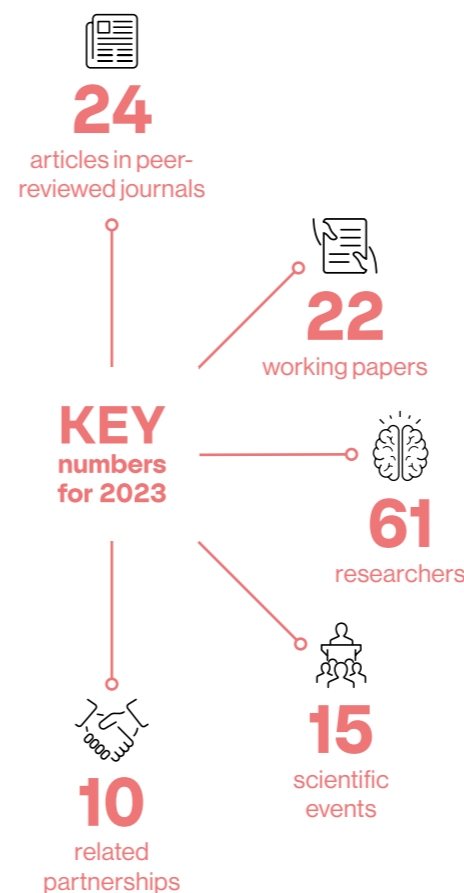
LEADING THE WAY IN DIGITAL ECONOMICS



More information at www.tse-fr.eu/digital



The TSE Digital Center was created in 2018, as a continuation of the Jean-Jacques Laffont Digital Chair. Its teams aim to improve our understanding of the opportunities and risks of the digital economy. Research areas include **analytics and economics of Big Data, AI and society, digital platforms, financial technologies and digital markets**, and **intellectual property in the digital economy**.



“2023 has been another fruitful year for digital economics at TSE. It has also seen the much anticipated in-person return of the Digital Conference, our Center’s flagship event. As I take over the leadership of the Center in 2024, I’d like to express my gratitude to our past co-directors, Christophe Bisière and Jacques Crémer, for their long-term commitment to advancing digital economics at TSE.”

ALEXANDRE DE CORNIÈRE,
Director of the TSE Digital Center

RESEARCH ADVANCES

Here are some 2023 highlights in each of the Center's focus areas.



Artificial intelligence and society

Our objective is to investigate the ethical expectations that citizens and consumers hold to smooth the transition to the new AI society. We conduct research in the high-stakes domain of algorithmic justice and study areas in which AI and powerful algorithms can redesign the social fabric.

Program leader:

Jean-François Bonnefon

Lie-detection algorithms attract few users but vastly increase accusation rates

Imagine a world without liars. Artificial intelligence already detects lies better than the average person, and may soon outstrip the polygraph test and other specialist methods that require considerable time, effort and skill to achieve dubious levels of accuracy. Together with a team at the Max Planck Institute for Human Development, **Jean-François Bonnefon** highlights the potential for algorithmic technology to shred holes in the traditional social fabric that covers up dishonesty. His behavioral experiments provide crucial insights about how to manage our transition to a transparent new world in which lies are exposed and accusations flow more freely.

“Lie-detection algorithms attract few users but vastly increase accusation rates”, TSE Working Paper n. 23-1448, June 2023

Financial technologies and digital markets

This program analyzes the implications of key features of FinTech and cryptocurrencies, and their impact on social welfare. We study the design of markets, institutions and regulations to mitigate coordination problems, information asymmetries and other market failures.

Program leader:

Christophe Bisière

Mobile payments and interoperability

Milo Bianchi, Matthieu Bouvard, Renato Gomes and Andrew Rhodes, jointly with Vatsala Shreeti (Bank for International Settlements) connected various streams of academic literature to shed light on how interoperability in mobile payments affects market outcomes and welfare. They organized their discussion around four dimensions: mobile network interoperability, platform level interoperability, interoperability in the cash-in-cash-out agent network, and interoperability of data.

“Mobile payments and interoperability: Insights from the academic literature”, *Information Economics and Policy*, vol. 65, n. 101068, December 2023

Digital platforms

Research in this program is centered on understanding the business models of platforms and their impact on society and welfare. We hope to shed light on the functioning of platform markets and offer policy recommendations regarding the regulation of such markets.

Program leader:

Doh-Shin Jeon

Intellectual property in the digital economy

The goal of this initiative is to offer a better understanding of intellectual property protection and transfer in the digital economy. We analyze patent litigation involving IoT players and the licensing of intellectual property to manufacturers of connected devices. Our researchers also assess the economic effects of making platforms liable for intellectual property infringements by third-party users.

Program leader:

Yassine Lefouili

Analytics and economics of Big Data

With the help of mathematicians, our economists develop optimization techniques, applied econometric tools and game-theory concepts that help us to handle high-dimensional random phenomena. We study data-related issues such as privacy protection, data markets, and the impact of data on competition.

Program leader:

Sébastien Gadat

How do platforms behave in digital ecosystems?

Emerging from enhanced connectivity between sensors, software, clouds, cars, phones and other devices, the Internet of Things (IoT) will vastly extend the reach of modern technologies. Understanding complex, rapidly expanding IoT ecosystems is essential if governments are to keep pace with the digital revolution. At the frontier of exploration of platform economics, TSE's **Doh-Shin Jeon, Yassine Lefouili** and **Yaxin Li** teamed up with Timothy Simcoe (Boston University) to investigate this issue.

“Ecosystems and Complementary Platforms”, TSE Working Paper n. 23-1468, September 2023

Do standard-essential patent owners behave opportunistically?

Brian Love, **Yassine Lefouili**, and Christian Helmers investigate the prevalence of opportunistic behavior by holders of standard-essential patents (SEPs) using detailed information collected from the dockets of U.S. patent cases filed to enforce SEPs and a matched sample of non-SEPs. They find evidence of opportunistic behavior in both SEP (77%) and non-SEP (65%) cases, with significantly more opportunistic conduct increasing a potential licensee's loss if the patent enforcer prevails in the court in the case of SEPs. The study also reveals how different types of opportunistic behavior influence case outcomes, with behaviors increasing litigation costs correlating with higher settlement probabilities, while those increasing a potential licensee's loss negatively affecting settlements.

“Do Standard-Essential Patent Owners Behave Opportunistically? Evidence from U.S. District Court Dockets”, TSE Working Paper n. 20-1160, revised in February 2023, forthcoming in *American Law and Economics Review*

What's in the news? Textual data can tell us more

Existing research on the impact of news articles is often limited in scope and shackled by presupposed goals or biases. **Yasser Abbas** and **Abdelaati Daouia** use sprawling, pliable datasets from Causality Link to offer a more comprehensive and innovative approach to exploring news data. Analyzing networks of key indicators across industries, companies, countries, and events, they show how their holistic approach to data gathering and text mining can tell insightful stories about the global economy and some of its most influential actors.

“Understanding World Economy Dynamics Based on Indicators and Events”, TSE Working Paper, n. 23-1461, August 2023

SCIENTIFIC EVENTS

15th Digital Economics Conference

Freed from the constraints of online interaction in 2022 due to the resurgence of the pandemic, the full-strength version of TSE's annual Digital Economics Conference returned last year with a comprehensive program. Attended by more than 130 participants on January 12 and 13 in Toulouse, the event was bookended with keynote speeches by Amelia Fletcher (CERRE, Centre for Competition Policy and UEA) on the **EU Digital Markets Act and its implications for economics** and David Yang (Harvard University) on **"AI-tocracy and its International Ramifications"**.

A panel of international experts on digital markets was also invited to discuss the implications of **the metaverse in the digital landscape** in areas such as competition policy, gaming, advertising, and privacy. "The metaverse will not be viable at scale unless we do more to protect consumers" Scott Kominers (Harvard University) emphasized. Tech competition lawyer Stijn Huijts (Geradin Partners) also highlighted the regulatory challenges ahead, addressing "a complex technology spanning cloud service providers, telcos, game-engine builders, GPU companies, and decentralized financial infrastructure."

"The metaverse will not be viable at scale unless we do more to protect consumers"

SCOTT KOMINERS, Harvard University



See the videos



11 seminars on the economics of platforms

Hosted by TSE Digital Center, these virtual seminars covered all aspects related to **platform economics including competition, strategy, design, governance, and policy issues**. This year, the seminar program primarily featured academics from the USA, Germany, and Japan. TSE researcher Jacques Crémer has contributed to these high-level scientific events alongside his colleagues Andrei Hagiu (Boston University) and Julian Wright (National University of Singapore), as well as all members of the scientific committee.



From left: Martin Peitz (University of Mannheim), Arturo Gonzalez, Stijn Huijts (Geradin Partners), Jacques Crémer (TSE)



Amelia Fletcher (University of East Anglia)

OTHER SCIENTIFIC EVENTS

TSE Digital Center has also collaborated with other TSE Centers in the organization of scientific events, some of which are presented in other sections of this report.

Regulating the Digital Economy Conference, **Yale School of Management**, February 23-24

Digital workshop on the regulation of bias and disloyalty of algorithmic decisions **TSE**, May 10

CNIL-AdIC-TSE Conference "Protection des données et concurrence : une ambition commune" **Paris**, December 12

POLICY-ORIENTED ENGAGEMENTS

→ In 2023, TSE researchers continued to actively engage in various expert groups. For instance, Doh-Shin Jeon played a key role as a member of the expert group for the **European Commission's observatory on the online platform economy**. Jean-François Bonnefon served as an advisor on the steering committee of the European Commission's initiative on **Meaningful and Ethical Communication** which aims to explore the relationship between online technologies and political behavior.

→ In March 2023, the evaluation committee of the **France Superfast Broadband Plan (PFTHD)** published its final report for the Ministry of the Digital Transition and Telecommunications. Produced by stakeholders and experts including TSE's Jacques Crémer the report assesses the plan's economic impact on investment and employment across France's territories.

→ Jacques Crémer also contributed to the **Yale Journal on Regulation** special issue on the regulation of the digital economy This features expert analysis of issues such consumer protection for online markets, market design for personal data, interoperability and fairness and contestability in the Digital Markets Act.



"I am very proud to have been a member of the scientific committee of the evaluation of the France Superfast Broadband Plan. The ex-post evaluation of public policies is an important frontier in economics"

JACQUES CRÉMER, Scientific Director of the TSE Digital Center



Read Issue 3, Volume 40



Jacques Crémer took part in the **annual Luohan Academy Digital Conference** on June 20 in Hangzhou, China. He discussed the problem of platform governance from the EU perspective, and shared the floor with Marshall Van Alstyne (Professor of Information Systems, Boston University) and Geoffrey Parker (Professor of Engineering, Dartmouth College) at a roundtable on platform responsibility. The Luohan Academy is a research institute which was initiated by the Alibaba Group in 2018.

“How can technology benefit more people? What ethics should technology adopt? How to better leverage digital technology to solve major environmental and sustainable development challenges? The event was a unique opportunity to tackle these questions from the vantage points of world-class scholars, businesses and policy advisors”

LONG CHEN, Director of the Luohan Academy



Jacques Crémer (TSE)

CONTRIBUTIONS TO THE PUBLIC DEBATE

TSE researchers helped to inform the public debate in many ways. On top of the media exposure generated by their research results, they took part in efforts to disseminate scientific knowledge at the Common Good Summit (organized by *Challenges* magazine, TSE and Les Echos-Le Parisien Evénements) and on our Crossing Channels podcast series.

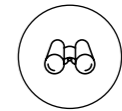
2022 Common Good Summit

“AI for good” (June 1)

What performance can AI deliver, and what are the societal needs it can address? Is health the primary domain for initial experimentation? TSE researchers Jean-François Bonnefon, Joëlle Barral (Director of Artificial Intelligence Research, Google DeepMind), and Eric Hazan (Senior Associate Director, McKinsey) engaged in discussions regarding the responsible use of technologies and the importance of AI regulation.

Crossing Channels podcast

Crossing Channels is a podcast series produced by the Bennett Institute for Public Policy (Cambridge) and Institute for Advanced Study in Toulouse (IAST, TSE’s sister institution) to give interdisciplinary answers to today’s great challenges. Released in April, Episode 8 of Season 2 featured a digital theme: **“Are emerging technologies more hype than reality?”**. Sam Gilbert (Bennett Institute), César Hidalgo (IAST) and Jeni Tennison (Bennett Institute) talked to host Rory Cellan-Jones (former BBC tech correspondent) about recent advances in generative AI and the metaverse, discussing their policy implications, and highlighting the need for deliberative and participatory governance structures.



UPCOMING

As regulators try to keep pace with innovation, 2024 is likely to be another exciting year for the Digital Center.

Understanding the latest development in European regulation

Together with the Digital Services Act (DSA), the Digital Markets Act (DMA) is one of the centerpieces of Europe’s digital strategy. The DMA came into full force in March 2024, and our experts on digital regulation will be closely studying its impact. This will spark numerous debates within the international academic community, with colleagues from American and Chinese institutions showing keen interest in these developments. Together with economists from Yale and the European Commission, a group of TSE researchers will participate in a conference in Brussels on April 25-26 to define a research agenda for the evaluation of the DMA.

Exploring groundbreaking issues in digital economics

TSE teams have previously identified industrial data-sharing and cloud computing as raising interesting and challenging economic issues, that have not yet received significant attention from academics. We anticipate that some of our digital economics teams will delve into these topics.



PARTNERS FOR SPECIFIC RESEARCH PROJECTS

Amazon — BBVA — Bill & Melinda Gates Foundation (for the FIT IN Initiative) — Causality Link — Huawei Joint Research Center (European Commission) — La Poste Groupe — Meta — Microsoft — Orange

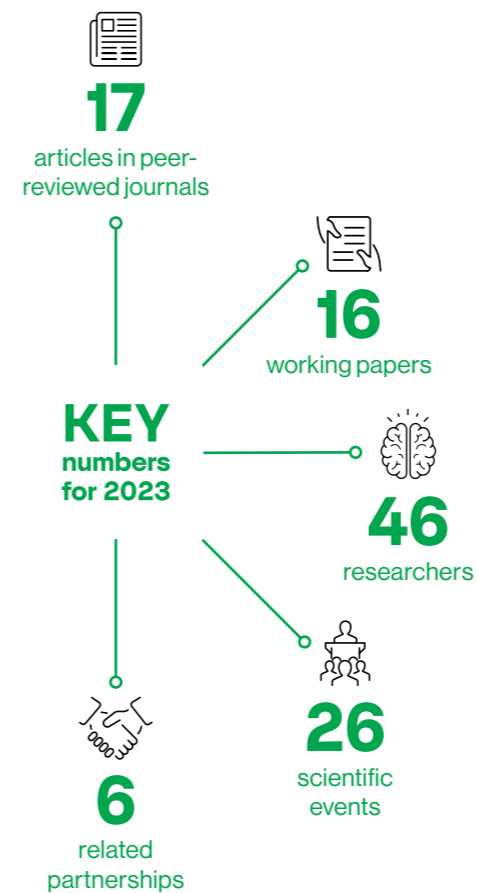
RISING TO ENVIRONMENTAL CHALLENGES



More information at www.tse-fr.eu/energyclimate



The Center was set up in 2017 to promote research in energy and climate economics. It aims to take research one step further and use scientific findings to guide policy in the energy sector and inform decision-making related to environmental issues such as climate change. This implies knowledge sharing about institutional frameworks, empirical observations, and basic theoretical modelling. Research at the Center revolves around the **economics of energy industries** and the **economics of natural resources and the environment**.



“From restructuring electricity markets to fostering green investments and implementing carbon policies, addressing energy and climate issues is paramount. Our researchers’ findings show that numerous viable climate solutions are already within reach. It’s the role of the TSE Energy and Climate Center to promote research in this field and ensure it reaches the right audience”

STEFAN AMBEC,
Director of the TSE Energy & Climate Center

RESEARCH ADVANCES

Here are some 2023 highlights in each of the Center's focus areas.

The economics of energy industries

Our researchers investigate how the energy transition modifies energy markets and the industrial organization of the sector. We identify market designs and pricing mechanisms that insure a reliable supply of clean energy for electricity provision and transportation. We also focus on wholesale and retail markets, network tariffs and international trade.

Can supergrids save the planet?

Electricity links between remote producers and energy-thirsty cities could deliver huge efficiency gains. Should expanded regional networks and international 'supergrids' also be part of a joined-up approach to fighting climate change? **Stefan Ambec** discusses his latest research with TSE alumna Yuting Yang (University of New Mexico) on electricity trade and climate policies.

🔗 ["Climate policy with electricity trade", TSE Working Paper n° 23-1422, Resource and Energy Economics, Volume 76, n. 101422, February 2024](#)

Designing electricity markets for optimal risk sharing

The fight against global warming requires electrifying energy uses and giving up carbon-based power. The organization of electricity production and transmission must not only promote short-term efficiency in dispatch, but also send out reliable signals to guide investment by producers and consumers; and this under normal macroeconomic conditions as well as in the face of unforeseen events, such as Covid-19 and Russia's invasion of Ukraine. To meet these challenges, European authorities and EU member states are negotiating the introduction of long-term physical and financial contracts to complement wholesale electricity markets. **Stefan Ambec, Claude Crampes** and **Jean Tirole** compare the costs and benefits of these contracts and study the optimal assignment of risks among stakeholders.

🔗 ["The design of electricity markets: an economic analysis", TSE Working Paper, n. 23-1484, October 2023](#)

The economics of natural resources and the environment

In this program, our goal is to analyze public policies and business strategies that aim to decarbonate economic activities and improve the environment. We evaluate their impact on the economy, health, biodiversity and the climate, providing recommendations and impact evaluations to practitioners and policymakers.



Protected area policies in the EU

The European Union designates 26% of its landmass as a protected area, limiting economic development to favor biodiversity. Tristan Earle Grupp, Prakash Mishra, **Mathias Reynaert**, and Arthur Van Benthem, use the staggered introduction of protected-area policies between 1985 and 2020 to study the selection of land for protection and the causal effect of protection on vegetation cover and nocturnal light. Their results reveal protection did not affect outcomes in any meaningful way across four decades, all countries, protection cohorts, and a wide range of land and climate attributes. They conclude that European conservation efforts lack ambition because policymakers choose to protect land that is not threatened by development.

🔗 ["An Evaluation of Protected Area Policies in the European Union", TSE Working Paper n. 23-1490, November 2023](#)

Adopting and diffusing hydrogen technology in air transport

Hydrogen has the potential to revolutionize air transport, promising a pathway to cleaner skies and a reduced carbon footprint. Backed by the Energy & Climate Center and the PIPAA project for sustainable aviation, TSE's **Estelle Malavolti** and her coauthors Shangrong Chen, Sai Bravo and Romain Mongeau use evolutionary game theory to assess the prospects for successful adoption of hydrogen technologies by airlines and airports.

🔗 ["Adopting and diffusing hydrogen technology in air transport: An evolutionary game theory approach", Energy Economics, vol. 125, n. 106864, September 2023](#)



“In 2023, European institutions made much progress towards the EU Green Deal, which will adapt our economic dynamic to our goal to reduce our GHG emissions by another 30% within the next six years. The road ahead is bumpy, as this will require an extraordinary transformation of our ways of life and production in such a short period. TSE has built incredible economic and social expertise to help society to succeed in this ambition”

CHRISTIAN GOLLIER, Scientific Director of TSE Energy & Climate Center

SCIENTIFIC EVENTS

24 environment economics seminars

Featuring both theory and empirical work, the seminar series covered issues such as the impact of climate change on growth and energy resources, the management of risk and uncertainty, and the design and evaluation of public policies.



“Seminars are an occasion to share the most up-to-date knowledge on such fundamental issues as the economic and environmental consequences of the EU Emissions Trading Scheme; the cost of species conservation policies for landowners; or the role of social identity in the acceptance of carbon taxation”

ANOUCH MISSIRIAN, Chair of the environment economics seminars

Energy workshop

This workshop is organized by TSE, Universidad Carlos III (UC3) and the Barcelona School of Economics. In 2023, it was TSE's turn as host, welcoming energy economists from all three institutions to Toulouse on October 10-11.

Workshop on “Policy and the Automobile Market Transition”

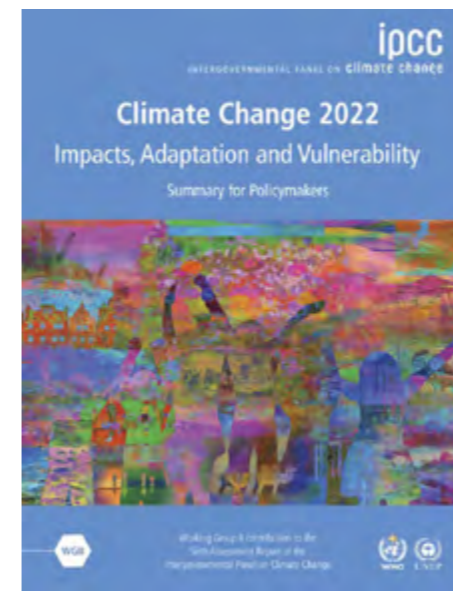
Organized by TSE researchers Isis Durrmeyer and Mathias Reynaert on June 12- 13, this workshop presented the results of the ANR project «Breathe in, breathe out: Regulation on the European Automobile Market and Air Quality.» It also sought to facilitate academic interaction on the economic models required to analyze the electrification of the automobile market and its impacts on consumers, businesses, and the environment.



More about the "Breathe in, breathe out"

Jing Li (MIT)

POLICY-ORIENTED ENGAGEMENTS



→ Stefan Ambec was among the scientists who contributed to the French government's comments on the **6th IPCC (Intergovernmental Panel on Climate Change) report**, published in March 2023. This report describes unprecedented changes with detrimental effects worldwide and presents concrete solutions to meet climate objectives, contingent upon political will to implement them. This work is important as it aims to alert policymakers and civil society.

→ In 2023, Christian Gollier served on the scientific committee of the **Citizens Climate Lobby**. He has also taken an active role in a group of economists within the **One Planet Lab** which brings together influential people from business, finance, international institutions and academic communities, known for their engagement and innovative proposals for the ecological transition.

→ In 2023, France's Court of Financial Auditors (**Cour des Comptes**) initiated a new investigation into the **Energy Efficiency Certificates (ECC)** scheme. Claude Crampes met with magistrates from the Court to help evaluate the effectiveness of the scheme, its coherence with other existing public policy tools, and the prospect of future modifications. For this discussion, he relied on two articles co-authored with Thomas Olivier Léautier, now chief economist at TotalEnergies: "Energy Efficiency Certificates between economics and politics" (*Economic Review*, vol. 74, no. 1, 2023); "White certificates and competition" (*Competition Law Review*, no. 1, 2021). The Court's report is due to be made public in the fall of 2024.



Claude Crampes (TSE)

CONTRIBUTION TO POLICY-ORIENTED EVENTS

Corporate climate action

Ulrich Hege, Sébastien Pouget, and Christian Gollier took part in two events organized by Getlink in Paris: “When ESG rating flaws hinder the effectiveness of corporate climate action” (April 5) and “Corporate climate action: what impact on their cost of capital” (October 11). These events are featured in the section of this report devoted to sustainable finance.



From Left to right: Yann Leriche (Getlink), Charlotte Kan (financial journalist) Estelle Castres (BlackRock), Sébastien Pouget (TSE)

“Standing out in a complex environment”

Christian Gollier joined a roundtable discussion with Dominique Bourg, philosopher and professor at the University of Lausanne, and Louis Bodin, meteorologist and TV presenter, at the annual convention of Cinov in Avignon on April 21. Cinov is an employers’ federation that brings together companies in the fields of consulting, engineering, and digital.

CONTRIBUTIONS TO THE PUBLIC DEBATE

“Abide by the Paris Agreement deadline”

At the Common Good Summit on June 1 in Toulouse, TSE energy specialist Claude Crampes shared the floor with Yann Leriche (CEO, Getlink), Philippe Ducom (President, ExxonMobil Europe) and Lucile Schmid (Vice-president of think tank La Fabrique Ecologique).

“What long-term vision?”

Carlos Tavares (CEO, Stellantis) and TSE Director Christian Gollier were the key speakers at a session focused on the role of cars in a low-carbon society. They discussed the costs of switching to electric vehicles and their social acceptability, as well as the idea of a carbon tax.

In addition to outreach events organized by TSE, our researchers spoke at several conferences. At the **Futurapolis** event dedicated to **ecological innovation** and organized by Le Point magazine and Toulouse Métropole from November 20 to December 2, TSE’s Ingela Alger participated in a panel discussion with representatives from Veolia, Aerospace Valley, Région Occitanie and Toulouse Métropole on the challenge of **reaching climate-neutrality by 2050**. Meanwhile, Estelle Malavolti discussed the future of aviation with speakers from Aura Aero and Toulouse Métropole, before Christian Gollier joined Sylvain Panas (Director, TotalEnergies Occitanie) and Anissa Sauntally (Economist, Observatoire Français des Conjonctures Economiques) gathered for the roundtable exploring the challenges of **affordable energy**.



Ingela Alger (TSE, IAST)

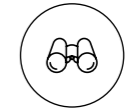
ADVISORY BOARD

This board meets once a year to provide advice and support for the development and dissemination of the Center’s activities. It is composed of TSE researchers, three representatives of the Center’s corporate donors (EDF, Engie, and TotalEnergies), and three external members (Aude Pommeret, Université de Savoie Mont-Blanc; Joël Couse, International Energy Agency, and François Levêque, Ecole des Mines).

International research networks

The TSE Energy & Climate Center is a partner institution of the **Global Excellence in Modeling Climate and Energy Policies (GEOCEP)**, a European-funded project that provides an innovative economic modelling framework to aid the green transition. They have also been involved in the activities of the **European Association of Environmental and Resource Economists (EAERE)** in 2023.

Our Center is also a partner of **Environment for Development (EfD)**, a global network of environmental economics research centers. Coordinated by the EfD Global Hub at the University of Gothenburg (Sweden), the network consists of more than 200 accomplished environmental economists based in the Global South, with many different specializations.



UPCOMING



From Brussels to Washington via... Toulouse

We are delighted to announce the upcoming **14th Toulouse Conference on the Economics of Energy and Climate**, scheduled to take place in Toulouse on June 6-7. Building on the success of previous years, this conference will once again bring together internationally renowned economists. A highlight of the conference will be a roundtable discussion on **market design and public policies for energy transition, featuring a comparative transatlantic perspective**. Distinguished speakers include Catherine Wolfram (MIT), who previously served at the US Treasury during the Biden administration, Miguel Gil Tetre (Chief Economist at DG Energy, European Commission), Antoine Dechezleprêtre (OECD), and Charles Weymuller (Chief Economist, EDF). This session promises to offer valuable insights into the challenges and opportunities of the global energy landscape.



PARTNERS FOR SPECIFIC RESEARCH PROJECTS

EDF — Engie — Esso SAF — Global Commission on the Economics of Water — GRDF — TotalEnergies

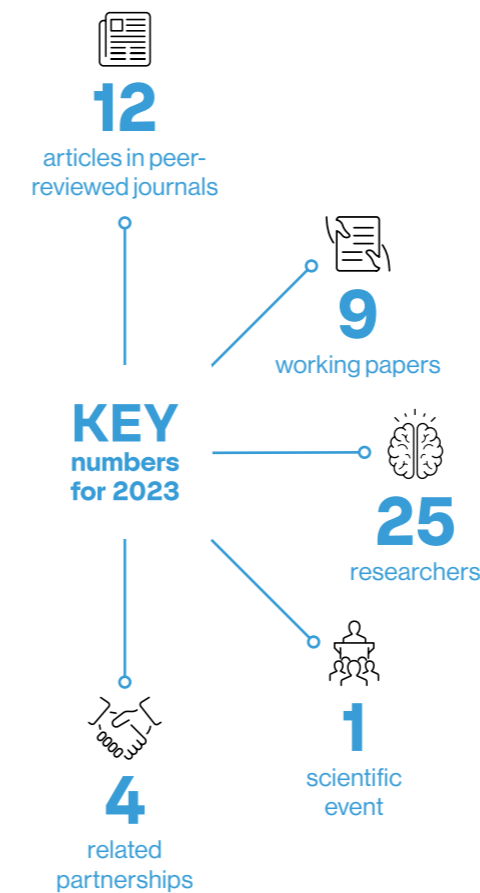
ENABLING HEALTH ECONOMICS TO FLOURISH



More information at www.tse-fr.eu/health



TSE expanded its footprint in the field of health economics by creating the TSE Health Center in 2021. This Center encourages research projects with a view to improving quality and access to care both in France and worldwide. The research projects developed under the aegis of the Center fall into five main areas: **pharmaceutical industry and regulation, innovation in health, public healthcare, long-term care & aging, food & healthy behavior economics, and economics of pandemics.**



“A substantial portion of the work developed by TSE researchers in recent years has provided objective insights into public policy debates in 2023. At TSE Health Center, we are committed to helping address health issues and improve quality and access to care now and in the future. This often involves research on emerging topics identified through a dialogue with our partners and other stakeholders”

PIERRE DUBOIS,
Director of the TSE Health Center

RESEARCH ADVANCES

Here are some 2023 highlights in each of the Center's focus areas.



Pharmaceutical industry and regulation

Researchers involved in this program seek to provide the best trade-off between maintaining incentives to innovate (with high rewards to new useful medicines) and financing health care expenses. They study how regulatory rules impact profitability and welfare in an international context, and analyze the role of marketing authorizations, detailing effort in fostering access and diffusion of medicines.

Program leader:
Pierre Dubois

How should we plan health budgets for new cures?

Medical technology is advancing faster than ever, but little is known about how health authorities should design long-term budgets for expensive new cures: high prices can both incentivize research into life-saving treatments and place a huge burden on public resources. Focusing on treatment of Hepatitis C in France, **Pierre Dubois** and **Thierry Magnac** demonstrate the benefits of forward-looking allocation of funds compared to fixed annual budgets.

🔗 *"Optimal Intertemporal Curative Drug Expenses: The Case of Hepatitis C in France"*, *Journal of Health Economics*, vol. 94, n. 102861, March 2024

Innovation in health

Research work developed in this area is focused on incentive and privacy issues. It includes the design of analytical models and the testing of predictions with existing empirical and experimental data.

Program leader:
Philippe De Donder

Incentives for providers' optimal diagnostic test use

David Bardey, **Philippe De Donder**, and **Vera Zaporozhets** investigate the determinants of diagnostic test use by healthcare providers, as well as the incentives for developing new tests. They adopt a normative approach to determine the incentives necessary for providers to better use existing diagnostic tests. Additionally, they examine the development of new diagnostic tests from both the perspectives of health authorities (timing of development) and the industry (incentivizing the creation of appropriate tests).

🔗 *"Economic Incentives to Develop and to Use Diagnostic Tests - A Literature Review"*, *TSE Working Paper*, n. 24-1507, February 2024

Public healthcare, long-term care, and aging

This program aims to offer a better understanding of the complex relationships between the different actors in this sector: patients, insurers, and care providers including practitioners, hospitals, or the pharmaceutical industry. Researchers also study the different forms of financing expenses related to aging and age-related dependency.

Program leader:
Jean-Marie Lozachmeur

Food and healthy behavior economics

Researchers involved in this program study the determinants of food behavior with special attention given to the role of socio-economic factors, peer effects, food availability and prices, and the environment. Their work helps assess the impact of food policies on health and social welfare and understand how businesses and markets respond to policies.

Program leader:
Céline Bonnet

Economics of pandemics

The purpose of this program is to identify the consequences of health crisis and the optimal public investment policy to face them. Researchers involved study the cost-benefit issues of the different public policies, as well as the factors of individual behavior and responsibility that influence compliance with public health recommendations. They also investigate the commercial and pricing regulations that should be put in place in the context of drug shortages and increasing demand for care.

Program leader:
Nour Meddahi

Who benefits most from health care subsidies?

How can policymakers ensure access to high-quality, affordable health care for all citizens? **Angelique Acquatella** provides new insights explaining why low-income individuals may respond differently to health insurance subsidies than their higher-income counterparts, with important implications for research on health care demand and the effectiveness of subsidies.

🔗 *"The Demand Elasticity of Health Care Spending for Low-Income Individuals"*, *TSE Working Paper n° 23-1477*, September 2023

Should we tax consumption of sugar drinks?

To assess the impact of taxation on the consumption of sugar-sweetened beverages, most economic studies using household data consider the average consumer. **Céline Bonnet** and **Vincent Réquillart** evaluate the impact of sugar taxes using an approach that takes into account the high degree of heterogeneity in individual consumption.

🔗 *"The effects of taxation on the individual consumption of sugar-sweetened beverages"*, *Economics and Human Biology*, vol. 51, n. 101277, December 2023

Did the pandemic hit the poor hardest?

The Covid-19 crisis wreaked havoc on economies around the world. **Hai-Anh H. Dang**, **Toan L.D. Huynh**, and **Manh-Hung Nguyen** offer new theoretical and empirical evidence on its distributional impacts on different income groups analyzing rich individual-level survey data from China, Italy, Japan, South Korea, the United Kingdom, and the United States.

🔗 *"Does the COVID-19 pandemic disproportionately affect the poor? Evidence from a six-country survey"*, *Journal of Economics and Development*, December 2023

SCIENTIFIC EVENT

1st CEPR-TSE Health Economics Conference

June 19-20

Organized in collaboration with the Centre for Economic Policy Research (CEPR), this event aimed to discuss recent research on the **organization and regulation of the healthcare and pharmaceutical sectors**. It brought together over 120 participants from the international scientific community as well as decision-makers from both the public and private sectors. The vast spectrum of topics covered in its 36 scientific presentations included digital platforms and personalized medicine, patents and innovation, drug development antimicrobial resistance and health care organization.

Keynote speeches were given by Rena Conti (Boston University) on static and dynamic efficiency among prescription drugs and Amitabh Chandra (Harvard University) on market failures and missing medicines.

Panel discussions on “**Financing innovation for neglected diseases**” and “**Patient Screening: Ethics and Economics**”, respectively chaired by Pierre Dubois and Jean Tirole, allowed TSE researchers to interact with speakers from the Center for Global Development, Columbia University, Dartmouth College, and Université Libre de Bruxelles.

Ilaria Natali (TSE)



Anais Galdin (Princeton University)

POLICY-ORIENTED ENGAGEMENTS

→ TSE researchers investigating a new mechanism for rewarding innovation **to solve the market failure for antibiotics** have been in touch with a wide range of practitioners in 2023.

With initial research results in hand, they continued their **interactions with policy-makers and public authorities** concerned with the subject, both nationally and at the European level. These included a research presentation to the **Strategic Committee for the Health Industries and Technologies Sector** (CSF ITS), supported by the French National Industry Council. In July, Jean Tirole and his coauthors discussed their paper on “Transferable Patent Extensions” at the antibioresistance meeting of the CSF Santé, in the presence of various representatives from the French Ministry of Health and Prevention.

TSE also continued its participation in the **ARPEGE consortium** alongside the Toulouse-based biotech company Antabio and the leader in health diagnostics bioMérieux, as well as Hospices Civils de Lyon. This consortium receives support from Bpifrance as part of the “Investissements d’Avenir” Program.

→ In April, Pierre Dubois was interviewed for the **interministerial mission “Financement et régulation des produits de santé”** entrusted by Elisabeth Borne (then the Prime Minister) to six experts with various profiles. The Director of TSE Health Center shared his findings from work conducted over the past five years, along with recommendations on issues such as innovation, access to care, drug shortages, and regulation. This mission’s report was made public in August, identifying avenues for improving the financing and regulation of healthcare products, in a context of rising costs driven by population aging and therapeutic advances, unstable geopolitical conditions, and supply chain tensions. Pierre Dubois also presented his work on innovation to members of the **Secrétariat Général pour l’Investissement (SGI)** and members of the **Agence de l’Innovation en Santé (AIS)** which is attached to the SGI.

→ TSE researcher Céline Bonnet is a member of the expert committee on «socio-economic analysis» at the **French Agency for Food, Environmental and Occupational Health & Safety (ANSES)**, a membership that will run until 2026.

→ At the local level, Helmuth Cremer and Jean-Marie Lozachmeur have participated in the **Integrated Care for Older People (ICOPE)** program since 2022. Along with its digital tool, ICOPE MONITOR, this program is promoted by the Gerontopole of Toulouse, which collaborates with the World Health Organization. TSE researchers have focused their work on the role of postal workers in targeting individuals at risk of old-age dependency as part of a large-scale primary prevention program. With the new **IHU-HealthAge** (University Hospital Institute) created in 2023, Jean-Marie Lozachmeur and Catarina Goulão will be working to assess the economic impact of ICOPE and the effect of prevention actions in favor of physical and cognitive maintenance on the evolution of dependency among the elderly.

CONTRIBUTION TO POLICY-ORIENTED EVENTS

At the third international **conference on “Pensions and Ageing”** organized by Caisse des Dépôts, Université Paris 1 Panthéon-Sorbonne, and Institut des Politiques Publiques (IPP) on October 19, Philippe De Donder presented the results of his research project “*At Home versus in a Nursing Home: Long-term Care Settings and Marginal Utility*”, developed with colleagues from Quebec universities. This event provided an opportunity to learn about the perspectives of researchers from various disciplines (economics but also sociology, demography, political science, etc.) as well as individuals involved in the operational management of retirement and aging care systems, particularly public ones.

CONTRIBUTIONS TO THE PUBLIC DEBATE

Journées de l'Economie

Lyon, November 16

For a debate on "Access to medicines in low-income countries" Pierre Dubois shared the floor with Rebecca Grais (Pasteur Network), Izabela Jelovac (GATE Lyon Saint-Etienne), Marie-Paule Kiény (Medicines Patent Pool Foundation) and Bruno Versaevél (Emlyon Business School) to discuss how to provide medicinal drugs to the world's poorest without stifling innovation.



From left to right: Thierry Blandinières, Cyrielle Mazaleytrat, Vincent Beaufilets (Challenges), Zohra Bouamra-Mechemache

Common Good Summit

Toulouse, June 1-2

Medicines and the common good

For the third edition of the Common Good Summit, Pierre Dubois joined Reda Guiha (President of Pfizer France) and Jean-Pierre Delord (Director of Research, Toulouse Oncopole - IUCT) to discuss the balance between financial logic and the Common Good in the healthcare sector.

How to feed future generation?

Feeding nine billion people while respecting the planet is quite a challenge, requiring action from all players in the food sector. Three of them were present at the Common Good Summit, to plot a path ahead: Zohra Bouamra-Mechemache (Economist, TSE and Inrae), Cyrielle Mazaleytrat (Development engineer and coordinator, Fileg) and Thierry Blandinières (CEO, Invivo).



Angelique Acquatella (TSE)

Crossing Channels podcast

Crossing Channels is a podcast series produced by the Bennett Institute for Public Policy (Cambridge) and Institute for Advanced Study in Toulouse (TSE's sister institution) to give interdisciplinary answers to today's great challenges. Episode 3 of Season 3 focused on health: **Can technology rescue ailing health services?** Expert guests **Angelique Acquatella (TSE)**, Shan Morgan (Bennett Institute), and Jennifer Dixon (Health Foundation) discussed the challenges of adopting digital innovations, the opportunities offered by medical technology and its impact on inequalities, and how to mitigate the risks of digital exclusion in healthcare.

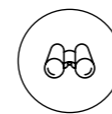


Strengthening our collaboration with the IUCT-Oncopole

IUCT-Oncopole and TSE have been collaborating on research projects since 2021. This collaboration intensified with the signing of a two-year agreement in 2023 and the support of several other partners from the public and private sectors, stimulating a range of potential projects at the intersection of medicine and economic sciences.

"We cannot continue evaluating medications and medical practices solely based on 'how much it costs'. We need to invent precise and practical tools for understanding and measuring 'how much it yields' in terms of lives saved and family, societal, and professional impacts. Medicine is still in the 'Stone Age' in this regard. Our colleagues at TSE must help us transition to the 'Iron Age,' the era of informed discussions about the efficiency of our practices and the major societal role of innovation"

JEAN-PIERRE DELORD, CEO of IUCT- Oncopole



UPCOMING

TSE Health Center conference set for June

After the success of its first dedicated conference, the TSE Health Center has scheduled a new edition for June, with an equally ambitious program focused on digital health. This is not only a high-level scientific event but also a chance to develop dialogue with practitioners in the sector. Representatives from the healthcare industry and public health authorities will be invited.



PARTNERS FOR SPECIFIC RESEARCH PROJECTS

bioMérieux – Danone – GIE GERS – LEEM

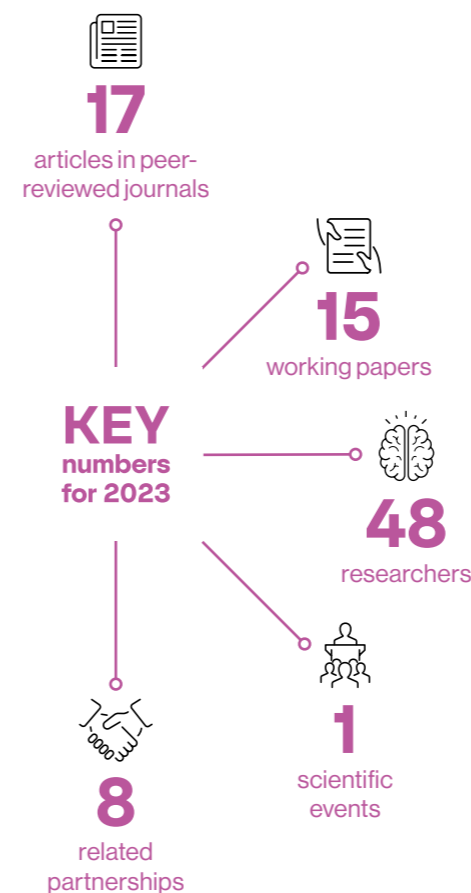
UNDERSTANDING INFRASTRUCTURE AND NETWORK ECONOMICS



More information at
[www.tse-fr.eu/
infrastructure-
and-network](http://www.tse-fr.eu/infrastructure-and-network)



Infrastructure development around the world poses ever-changing challenges, including financing, sharing access, and optimizing the often complex and networked underlying structure. The TSE Infrastructure & Network Center was created in 2021 to better understand these issues and provide operational responses. Scientific work revolves around three main lines of research covering **business strategy**, financing, and regulation. The Center addresses these challenges in six areas: **construction and housing economics, developing countries, postal and telecom, responsible finance and long-term investments, transport, and utilities.**



“Developing infrastructure to meet the demands of the 21st century – in the context of digitization, growing inequality, ageing societies and climate change – is a colossal endeavor. In a fast-changing landscape of densely interwoven networks, success will require decision-makers to embrace long-term thinking and evidence-based economic analysis”

FRÉDÉRIC CHERBONNIER,
Director of the TSE Infrastructure & Network Center

MAIN LINES OF RESEARCH

Finance and decision theory under uncertainty

Infrastructure and network-based industries need to make considerable and irreversible long-term investment decisions even though the parameters guiding these decisions are highly uncertain. It may be necessary to curtail or partly postpone projects to better adjust to future market conditions, whereas financial decision model need to be adapted when facing very long investment horizons and risks with unknown probability distributions.

Network and spatial economics

In markets studied at the Center, an accurate view of the demand curve and cost structure is crucial, as well as a deeper understanding of constraints related to network externalities and geographical location. Efficient mechanisms to share scarce resources are also essential, so we explore how to grant access on saturated links according to precise timetables, and how to allocate costs between infrastructures.

Procurement and regulation

Network industries are generally developed by natural monopolies and oligopolies subject to anti-competitive regulation. Public intervention in this area aims to facilitate non-discriminatory third-party access, incentivizing cost efficiency and high-quality service, while allowing financing of current and future activities. Today, the challenge is to define optimal mechanisms that translate into concrete implications with respect to prices, access mechanisms, and procurement by private contractors on behalf of a public authority.

RESEARCH ADVANCES

Here are some 2023 highlights in each of the Center's focus areas.

Construction and housing economics

This research program aims to offer a better understanding of housing occupancy choices and the consumption of housing services, the political economy of social housing construction, as well as macroeconomic analysis of construction.

Program leader:
Martial Dupaigne

What's the impact of transaction taxes on housing?

Transaction taxes are inherently distortive and, in the case of housing, reduces household mobility and affects the costs of downsizing in difficult times. **Christian Bontemps**, **Frédéric Cherbonnier** and **Thierry Magnac** develop an overlapping generation model in which households are heterogeneous in age and earnings, and prudential regulation and the tax system are modeled in fine detail. Using data from France, where transaction taxes are some of the highest in Europe, they evaluate the counterfactual impact of reducing transaction taxes to US level. Their results show a strong impact on transactions, but limited impact on welfare. Financing this reform through an increase in property taxes (rather than a very broad tax base like the CSG), would reduce the impact on housing prices.

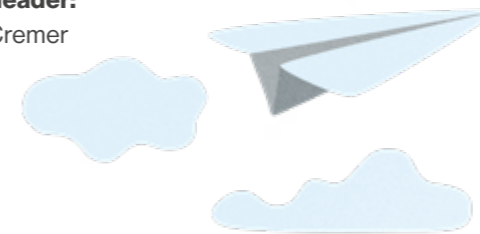
“Reducing transaction taxes on housing in highly regulated economies”, TSE Working Paper, n. 23-1486, November 2023



Postal and telecom

Researchers working on this initiative provide academic insights into economic models of these sectors. We observe their constant need to adapt to the competitive environment, given the rapid advances in digital technologies and the constraints imposed by regulators.

Program leader:
Helmuth Cremer



How can postal operators help the elderly?

As the first baby boomers reach old age, infrastructure solutions are urgently needed in many countries to cope with a huge increase in elderly populations. Economists from La Poste Groupe (Claire Borsenberger and Denis Joram) and TSE researchers (**Helmuth Cremer**, **Jean-Marie Lozachmeur** and **Estelle Malavolti**) investigate the use of large-scale screening tests to target those at risk of loss of autonomy. Their findings suggest that postal networks offer a ready-made opportunity to deliver cost-effective preventive care.

“Testing for fragility: a valuable public policy and an opportunity for postal operators”, TSE Working Paper n.23-1433, May 2023

Developing countries

We provide academic insights into the development of infrastructure and networks in the specific context of developing countries. These countries suffer from major gaps in access to infrastructure, which raises complex investment and financing issues.

Program leader:
Stéphane Straub

The dark side of infrastructure

Can infrastructure be a tool for repression? While new transport links are often a boost to economic development, roads and railways have also been used for social control and to enrich the governing elite. **Josepa Miquel-Florensa**, **Stéphane Straub** and coauthors Felipe González (Queen Mary, University of London) and Mounu Prem (Einaudi Institute for Economics and Finance) examine how the expansion of Paraguay's road network helped to ensnare the country in a cruel dictator's web.

“The Dark Side of Infrastructure: Roads, Repression, and Land in Authoritarian Paraguay”, TSE Working Paper, n. 23-1440, May 2023

Responsible finance and long-term investments

Our researchers are tasked with evaluating long-term assets and investments as well as measuring the impact of ESG (environmental, social and governance) factors on company value.

Program leader:
Catherine Casamatta

Exploring the impact of market structure changes on investments

How do mergers between competitors affect firms' incentives to introduce new products and to carry out cost-reducing and quality-enhancing investments? How acquiring an innovative entrant can influence investment incentives of both the acquirer and the acquired company? **Yassine Lefouili** and Leonardo Madio delve into these research issues connecting competition intensity and investments, starting with a review of the recent scientific contributions on market structure and investments.

“Market Structure and Investments: A Progress Report”, TSE Working Paper, n. 23-1491, November 2023.

Transport

We aim to address a variety of questions of interest to economists in the transport sector, including regulatory policies, optimal resource allocations, and urban development.

Program leader:
Marc Ivaldi

Should France ban short-haul domestic flights?

Marc Ivaldi and Xavier Boilla investigate the determinants of French citizens' preferences for long-distance travel. They assess the potential reductions in CO2 emissions resulting from government-proposed flight bans when there is a train alternative with a travel time of less than 2 hours and 30 minutes. Their analysis reveals a pre-ban inclination among travelers to ward non-flight modes, with just 4% of trips on the studied inter-city routes relying on air travel. It also underscores the expected inverse relationship between travel distance and train travel, with a corresponding increase in flight preference.

📄 *“Banning short-haul domestic flights: A preliminary assessment for France”, TSE Working Paper n. 23-1482, October 2023*

Utilities

Our program seeks to understand the determinants of efficient long-term investments in utilities (water, electricity and gas), confronted with infrastructure aging, decarbonization of economies, extreme climate fluctuations, rapid changes in demand for goods and services, and digitalization of processes.

Program leader:
Arnaud Reynaud

Shared infrastructure can bridge the digital divide

Huge infrastructure costs have often kept the opportunities of digital technology beyond the reach of many citizens in developing countries. Georges Hounbonon, Marc Ivaldi, Emil Palikot and Davide Strusani investigate the impact on digital connectivity and inclusion when mobile network operators transfer towers to neutral owners. Their research suggests that both firms and consumers – especially women and rural households – can benefit from a growing trend for multilateral telecom infrastructure sharing.

📄 *“The Impact of Shared Telecom Infrastructure on Digital Connectivity and Inclusion”, FIT IN Initiative Working Paper n. 3, April 2023*



SCIENTIFIC EVENTS

Conference on the Economics of Housing and Housing Policies (ECHOPPE)

Held on May 15-17 in Toulouse, this TSE event was a collaborative effort with Aix-Marseille School of Economics and Sciences Po Paris. It was also supported by a grant on housing economics and policies from the French National Research Agency (ANR). Among the highlights, Henrik Andersson shared his research on congestion charges and property prices while Lisa Botbol presented her paper on “Applicant Choice in the Design of Social Housing Applications”. Additionally, Thierry Magnac chaired a keynote session featuring Essi Eerola from the Bank of Finland, who discussed macroprudential measures in the housing market. In another session, chaired by Martial Dupaigne, the US Federal Reserve Board’s Kamila Sommer gave a keynote address on the effect of the Tax Cuts and Jobs Act on the housing market.



OTHER SCIENTIFIC EVENTS

Association Française d’Economie des transports (AFET) hosts first conference

Created in 2022 and chaired by TSE researcher Marc Ivaldi, AFET organized its inaugural conference on November 22-23 in Paris with the assistance of the Chaire New Deal Urbain at Paris School of Economics. The conference featured academic presentations, including Isis Durrmeyer’s talk on “**The Welfare Consequences of Urban Traffic Regulations**” and a panel discussion on “**Transport and Environment**” with Jean Coldefy (Advisor to the President, Transdev), Jordan Cartier (Secretary-General, ART), Gilles Roucolle (Managing Partner Europe, Oliver Wyman), and Stephen Perkins (Senior Advisor, International Transport Forum).

31st Conference on Postal and Delivery Economics

TSE researchers connected with many other scholars, regulators and business operators at the Postal and Delivery Economics Conference last May in Gdansk. Helmuth Cremer and Jean-Marie Lozachmeur presented their paper “**Testing for fragility: A valuable public policy and an opportunity for postal operators**”, co-authored with Claire Borsenger, Denis Joram, and Estelle Malavolti. Catherine Cazals and Thierry Magnac presented their paper on “**Brexit, Covid and UK International Postal Parcel Volumes**”, a joint project with Jonathan Pope and Soterios Soteri (Royal Mail Group).

Claire Borsenger (La Poste Groupe) and Helmuth Cremer (TSE), committed to advancing research in postal economics at TSE.



From left to right: Estelle Malavolti (TSE), Benoit Lanusse (Rallumons l'Etoile) and Ghislaine Otteheimer (Challenges)

POLICY-ORIENTED ENGAGEMENTS

→ In 2023, Helmuth Cremer was actively involved with the French regulator for electronic communications, postal and print media distribution (**ARCEP**), interacting with the team responsible for preparing a decision on the multi-year regulation of tariffs for **postal universal service offerings from 2024 to 2025**. He shared the results of research previously conducted with Catherine Muller-Vibes (TBS) on how the costs associated with the transport and delivery of newspapers through postal services should be defined, and offered a theoretical perspective on the determining factors. Their research has provided useful methodological insights during the preparation of the regulator's October 3 decision.

→ TSE director Christian Gollier is a member of the Mission Committee of **Groupe La Poste**, a mission-driven company since 2021.

→ Since 2020, Martial Dupaigne has been involved with the Toulouse rent watchdog **Observatoire des Loyers de l'agglomération toulousaine**, part of the observation network set up in 2013 by the French Ministry of Housing.

CONTRIBUTIONS TO THE PUBLIC DEBATE

Common Good Summit

A number of sessions at the 2023 Common Good Summit organized by Challenges magazine and TSE addressed topical issues related to the future of mobility and transport.

How to pollute less

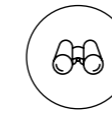
At the 2023 Common Good Summit, TSE and ENAC researcher Estelle Malavolti spoke about the challenges of 21st-century mobility. She shared her constructive approach with Benoit Lanusse, President of Rallumons l'Etoile, an independent association that promotes the creation of a Toulouse Regional Express Network (RER)."

Globalization or regional autonomy?

Various public and private stakeholders came together to exchange ideas on revitalizing regions, focusing specifically on the challenges of employment and accessibility that are integral to the attractiveness of these areas. Participants in this roundtable included Emmanuelle Auriol (TSE), Annabelle Viollet (Banque des Territoires), Sylvain Rabuel (DomusVi), and Marlène Dolveck, (Managing Director, SNCF Gares & Connexions; and Chairman, TSE Board of Directors).



See the video



UPCOMING

12th Postal Economics Conference

Scheduled on April, this TSE-La Poste Groupe event aims to foster exchanges between professionals and researchers on issues such as the economics of e-commerce and parcel delivery, regulation of the digital economy, the silver economy and long-term care, the societal role of postal operators, and environmental sustainability.

World Conference on Transport Research (WCTR)

TSE will host the highly anticipated 17th gathering of the world's leading transport researchers from July 6-10, 2026 in Toulouse. Researchers and support staff are excited to see this event return to Europe after a long hiatus, developing new ideas about transport policy and practice across diverse areas such as logistics, management, engineering, IT, and operations.



TSE researcher and future conference director Marc Ivaldi with WCTR President, Tae Oum at the closing ceremony of WCTR 2023 in Montreal



PARTNERS FOR SPECIFIC RESEARCH PROJECTS



Association Finance Durable et Investissement Responsable (AFDIR) — Autorité de Régulation des Transports (ART) — Bill & Melinda Gates Foundation (for the FIT IN Initiative) — Gaz Réseau Distribution France (GRDF) — La Poste Groupe — Orange — Royal Mail — SNCF Réseau

EXPLORING THE WORLD OF SUSTAINABLE FINANCE



More information at www.tse-fr.eu/sustainablefinance

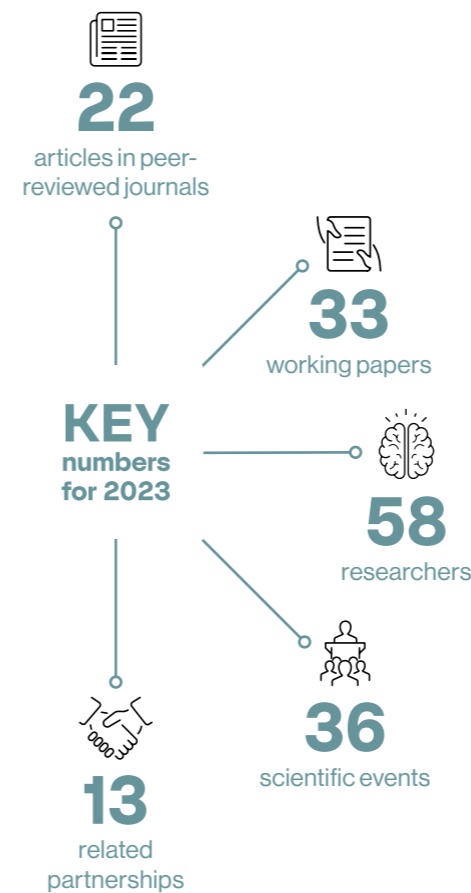


Launched in 2018, the TSE Sustainable Finance Center promotes innovative research on the challenges of finding sustainable finance solutions and assessing their impact on society. Research at the Center focuses on four main themes: **responsible finance and long-term investments; financial technologies and digital markets; financial intermediaries and regulation;** and **financial behaviors, welfare & market (in)efficiencies.**



“Over the past five years, the TSE Sustainable Finance Center has significantly enhanced the dissemination of our research that aims at better understating how finance can contribute to a greener and more sustainable economy. The leadership of my predecessor Sophie Moinas, as well as the support of the Center’s partners, has been instrumental in driving this progress. I am glad that TSE can rely on such a diverse and committed panel of partners to tackle upcoming challenges in 2024!”

SÉBASTIEN POUGET,
Director of the TSE Sustainable Finance Center



RESEARCH ADVANCES

Here are some 2023 highlights in each of the Center's focus areas.

Responsible finance and long-term investments

Our researchers analyze if we invest enough in long-term projects by studying how to compare immediate benefits to distant ones. We measure and evaluate the externalities imposed by firms on society to identify incentives for economic agents to incorporate these externalities in their decisions. This research is crucial to address contemporary concerns about, e.g., climate change, education, health and the welfare of employees and communities.

Program leader:
Catherine Casamatta

How do financial markets respond to green innovation?

For firms developing climate-change technologies, a lenient patent examiner is a great stroke of luck. **Ulrich Hege, Sébastien Pouget** and Yifei Zhang exploit the quasi-random assignment of US examiners with different leniency to study green patents' impact on financial markets. 'Lucky' climate innovators enjoy higher stock returns and a lower cost of capital, especially during periods when climate change is a hot topic in the news. They also gain better environmental ratings and attract more responsible institutional investors. But it is the technology, rather than patent approval, which allows innovators to reduce their own carbon emissions.

🔗 *"The Impact of Corporate Climate Action on Financial Markets: Evidence from Climate-Related Patents", TSE Working Paper n. 23-1400, January 2023*

Financial technologies and digital markets

This program investigates the implications of key features of FinTech and cryptocurrencies, and their impact on social welfare. We study the design of markets, institutions and regulations to mitigate coordination problems, information asymmetries and other market failures.

Program leader:
Christophe Bisière

Digital payment systems for the poor

Digitization of retail payments has helped to promote financial inclusion, stimulating growth, alleviating poverty, and addressing gender disparities in the financial sector. Jose Aurazo and **Farid Gasmi** examine four prominent digital payment systems in the developing world: M-Pesa in Kenya, UPI in India, Pix in Brazil, and Yape in Peru. They show there is no one-size-fits-all solution, and highlight the necessity of active public-private sector cooperation that places the end user at the center of such initiatives.

🔗 *"Digital payment systems in emerging economies: Lessons from Kenya, India, Brazil, and Peru" FIT IN Initiative Working Paper, n. 11, January 2024*

Financial intermediaries and regulation

To deepen our understanding of financial intermediation and to help with the prevention of crises, we investigate various topics related to monetary economics and aggregate liquidity, payment systems, prudential regulation and market finance.

Program leader:
Patrick Fève

Financial behaviors, welfare and market (in)efficiencies

Researchers in this program strive to understand the capacity of financial markets and intermediaries to price assets, finance the economy and allocate risks which may be hindered by informational frictions and human cognitive biases. We identify the impacts of those frictions on welfare and on the efficiency of the financial industry, studying whether their effects are worsened or mitigated by different market arrangements.

Program leader:
Milo Bianchi

Public debt as private liquidity

Georges Angeletos, **Fabrice Collard** and Harris Dellas study optimal policy in an economy where interest rates are low because public debt serves as collateral or buffer stock. Issuing more public debt raises welfare by easing the underlying friction but also reduces the private valuation of this service, raising interest rates. This trade-off shapes the optimal quantity of public debt in the long run, justifies a departure from tax smoothing in the short run, and clarifies when low interest rates represent an opportunity for cheap government borrowing.

🔗 *"Public Debt as Private Liquidity: Optimal Policy", Journal of Political Economy, vol. 131, n. 11, November 2023.*

How should we allocate capital and share risks?

Without information frictions, capital should be allocated according to individual productivity and risks should be diversified. But what happens when individual output is only observed privately? **Jean-Charles Rochet** and **Stéphane Villeneuve** teamed up with former colleague Bruno Biais (HEC), as well as Hans Gersbach (ETHZ) and Ernst Ludwig von Thadden (Mannheim), to study how incentive compatibility constraints affect capital accumulation and risk sharing between a principal and many agents.

🔗 *"Dynamic Contracting with Many Agents", TSE Working Paper n. 24-1511, September 2023 (revised February 2024)*



SCIENTIFIC EVENTS

15 finance seminars

Organized on a weekly basis by Matthieu Bouvard and Patrick Coen, the Finance Seminar series gathers TSE researchers interested in financial economics and guest speakers from leading academic institutions. It features theoretical and empirical work related to **corporate finance, asset pricing and financial intermediation**. In 2023, it notably hosted Lu Liu (Wharton) who presented her work on the US real estate market, and Walker Ray (LSE), who spoke on monetary policy and its effect on financial markets.

18 macroeconomics seminars

The macroeconomics seminars are organized by four researchers with various areas of specialization: Tiziana Assenza, Fabrice Collard, Patrick Fève and Eugenia González-Aguado. Among other interesting presentations over the past year, Oksana Leukhina (Federal Reserve Bank of St. Louis) gave a seminar in March on the 'Causes and Consequences of Student-College Mismatch' and shared insights on the effectiveness of affirmative action.

“We discussed a wide range of topics, including wealth inequality, wage-price dynamics, inflation, taxation of capital, and optimal monetary policy during a cost-of-living crisis”



monetary policy during a cost-of-living crisis”

PATRICK FÈVE (TSE)
Co-chair of the macroeconomics seminars

Banque de France-TSE workshops

These workshops showcased some of the latest research in macroeconomics and finance. Among many contributors from TSE, TSM and Banque de France, Jean Tirole (TSE) delivered an overview of industrial monetary policy during the April 20-21 event. The December 6 workshop concluded with a session on finance including presentations by Jean-Charles Rochet (TSE) on “Money and Taxes Implement Dynamic Optimal Mechanisms” and by Sarah Mouabbi (Banque de France) on “Pre- and Post-Pandemic Inflation Expectations in France”.



Romain Svartzman (Banque de France)

Investing for biodiversity workshop

At this workshop held in Toulouse on September 21, a panel of experts from ecology, economics, finance, law, and policy convened to discuss the issues faced by modern decision makers when it comes to curbing biodiversity loss.



Camille Parmesan (SETE, CNRS)

3rd Sustainable Finance Conference

Helping the finance and insurance sectors to adapt to global environmental issues and technological innovation is a key research focus for the TSE Sustainable Finance Center. Held in Toulouse on December 7-8, this event covered a large range of topics, such as climate risks and regulation in finance, financial stability, privacy issues, fintech and the AI revolution in finance. Key insights were also offered during two roundtable discussions involving practitioners and regulators from the insurance, banking and finance sectors.

Climate Risk and Regulation

Led by TSE researcher Sophie Moinas, the first panel discussion focused on climate risks and regulation. Exploring how to measure companies' vulnerability to climate change and emphasizing the need for public and private responses to these complex challenges. Marie-Laure Fandeur (SCOR) discussed her company's integrated risk assessment approach, while Laurent Clerc (ACPR) outlined France's regulatory framework. Jean-Philippe Desmartin (Edmond de Rothschild Asset Management) highlighted the evolution of sustainable investment. Sébastien Pouget (TSE) raised questions about regulatory coherence and the trade-offs between financial stability and climate regulation.

AI in Finance

This roundtable explored the use of AI in the financial sector, emphasizing both its positive contributions and the need for responsible corporate behavior. Moderated by TSE researcher Milo Bianchi, the discussion touched on recent AI developments, weighing concerns about its potential threats alongside excitement at its promising benefits. Marie Briere (Amundi Institute) highlighted the use of AI in building additional data sets for asset managers and detecting greenwashing, while Xavier Vives (IESE Business School) discussed its impact on competition and stability in banking. Kheira Benhami (French Financial Markets Authority, AMF) shed light on the regulatory perspective, emphasizing AI's role in enhancing supervisory tools and investor protection.



Sophie Moinas (TSE) and Mariana Rojas Breu (Université Paris II Panthéon-Assas)



From left: Sébastien Pouget (TSE), Laurent Clerc (ACPR), Marie-Laure Fandeur (SCOR), Jean-Philippe Desmartin (Edmond de Rothschild Asset Management), Sophie Moinas (TSE)



Participants at the 3rd Sustainable Finance Conference

**CONTRIBUTIONS
TO POLICY-ORIENTED
EVENTS**

What role for finance in the climate struggle?

Christian Gollier was the guest speaker at a conference organized by Occitanie Place Financière in partnership with TSE and the Banque de France on January 12 at La Cité in Toulouse. Responding to rising expectations for the finance sector to help redirect capital towards greener investments, the event was attended by economic stakeholders from across the region.

Workshop on Nature-related Scenarios

On June 26, Fany Declerck and Anouch Missirian took part in a workshop promoted by the task force on “Biodiversity Loss and Nature-related risks” which was set up as part of the Network of Central Banks and Supervisors for Greening the Financial System (NGFS).

Corporate climate action

In addition to the research conducted as part of the **Initiative for Effective Corporate Climate Action** by the TSE team, Getlink organized two early morning events branded as “Les Rencontres du Climat” in Paris. TSE researchers presented their work to an audience of executive leaders from the private and public sectors.

→ Speakers at the inaugural “Rencontres” (April 5) included Delphine d’Amarzit (CEO, Euronext Paris), Yann Leriche (CEO, Getlink), Christian Gollier and Ulrich Hege. This event focused on how **ESG rating flaws reduce the effectiveness of corporate climate action**. The concept of a “carbon-profit-and-loss statement” emerged as a possible alternative to existing ESG tools.

→ For the follow-up edition (October 11), Yann Leriche shared the floor with Estelle Castres (Managing Director, BlackRock - FraBeLux) and Sébastien Pouget (TSE) to discuss the **impact of climate action on the cost of capital for corporations**. Sébastien’s presentation focused on the main findings of his research note “Low-Carbon Transition: What Impact on Companies’ Cost of Capital?”

**POLICY-ORIENTED
ENGAGEMENTS**

→ Jean-Charles Rochet has been on the advisory panel of the **Bank for International Settlements (BIS)** since 2018. The mission of BIS is to support central banks’ pursuit of monetary and financial stability through international cooperation, and to act as a bank for central banks.

→ TSE director Christian Gollier is a member of the Advisory Scientific body of the **European Systemic Risk Board (ESRB)**, which oversees the EU’s financial system. Christian Gollier has also been a member of the independent scientific committee of Euronext which revises the **CAC 40 ESG Index** since its launch in 2021. Sébastien Pouget has joined Catherine Casamatta on the scientific council of the French financial markets regulator (**AMF**). He has been involved with the Haut Comité Certificateur de Place within the same authority since 2021.

→ Since December 2022, Ulrich Hege has been a member of the “Commission Climat et Finance durable” of the French Prudential Supervision and Resolution Authority (**ACPR**).

→ Fany Declerck is a member of the board of **Occitanie Place Financière (OPF)** since 2022. OPF brings together financial professionals and institutional players from across the region.

Expanding our connections with central banks

Decisions made by central banks, whether concerning monetary policy, financial stability, banking supervision, or macroprudential policy, are grounded in thorough analysis. TSE has long-standing research partnerships with teams at **Banque de France** and **Banque Centrale du Luxembourg**, and we look forward to a busy schedule of scientific events in the upcoming months, including a conference with Banque de France on the impact of climate risk and biodiversity loss on financial stability and monetary policy. TSE also signed a new collaboration with the **Central Bank of the Republic of Mauritius** in 2023.



Representants of TSE and Mauritius Bank at occasion of the inaugural research seminar organized in Port Louis in September 2023



Christian Gollier (TSE), Delphine d’Amarzit (Euronext Paris), Yann Leriche (Getlink)

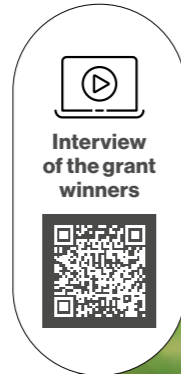


Fany Declerck (TSE)

GRANTS

Banque de France research grants

Thanks to the support of Banque de France, two six-month research grants were awarded to TSE PhD students conducting outstanding research in monetary economics and finance. In their final year of PhD studies when they received their grants, both students successfully defended their theses last summer. **Philipp Wangner**, whose thesis focused on macroeconomics, has since joined Columbia Business School for a post-doctoral position in 2023-2024. He is set to become an assistant professor at the University of Mannheim in the upcoming months. With a specialty in monetary economics and microfinance, **Li Yu** is now affiliated with the University of Liaoning in China. Three other students were selected in 2023 to receive a grant in 2024: Basile Dubois, Jonas Gathen and Oscar Fentanes.



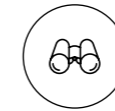
Philipp Wangner



Li Yu

Awards for risk and insurance economists

TSE-SCOR Risk Markets and Value Creation Chair supported the prizes awarded during the 2023 annual seminar of the **EGRIE (European Group of Risk and Insurance Economists)**. Moritz Loewenfeld (TSE) and Jiakun Zheng (Aix-Marseille School of Economics & Centrale Marseille) jointly received the SCOR-EGRIE Young Economist Award for their paper: "Uncovering correlation sensitivity in decision making under risk". Alexis Louaas (Ecole polytechnique & Square Research Center), Pierre Picard (Ecole Polytechnique), Enrico Biffis and Erik Chavez (both from Imperial College Business School), were awarded the **SCOR – The Geneva Risk and Insurance Review Best Paper Award** for their work on: "Parametric insurance and technology adoption in developing countries".



UPCOMING



TSE researchers Matthieu Bouvard, Milo Bianchi and Emmanuelle Auriol (organizers of the upcoming conference), with, third from left, Seth Garz (Bill & Melinda Gates Foundation)

FIT IN Initiative closing conference

Since the launch of the FIT IN Initiative, TSE has issued three calls for research proposals related to the **interoperability of digital payment systems in poorer countries**. They resulted in the selection of an impressive total of 22 research projects (12 projects submitted internally at TSE and 10 externally), involving over 45 researchers from 13 countries and 25 affiliations. Most of the research projects have made good progress between 2022 and 2023, and it is expected that their results will be presented at a concluding conference in Toulouse on May 2-3, 2024.

PARTNERS FOR SPECIFIC RESEARCH PROJECTS



Autorité de Contrôle Prudentiel et de Résolution (ACPR) – Association Finance Durable et Investissement Responsable (AFDIR) – Baillie Gifford – Banque Centrale du Luxembourg – Banque de France – BBVA – Bill & Melinda Gates Foundation (for the FIT IN Initiative) – Causality Link – Danone – Getlink – Institut Europlace Finance – Louis Bachelier – Mauritius Bank – SCOR Corporate Foundation for Science

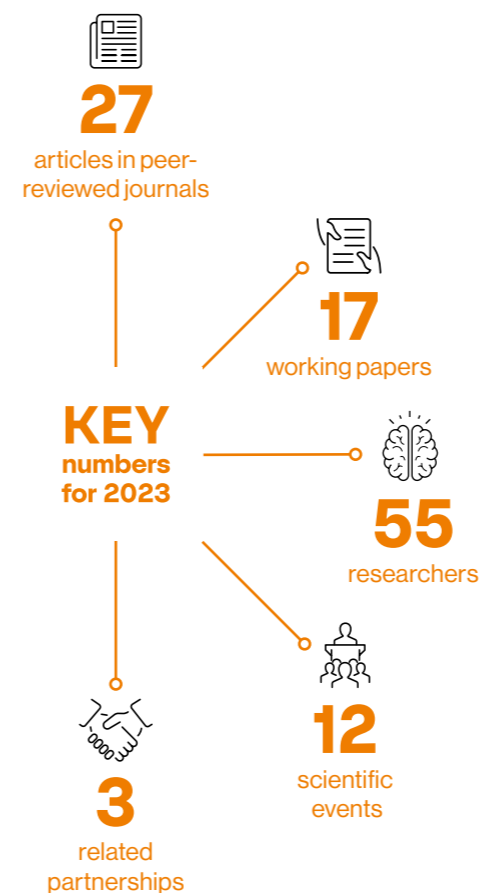
SHARING EXPERTISE WITH REGULATORS



More information at www.tse-fr.eu/competition-regulation

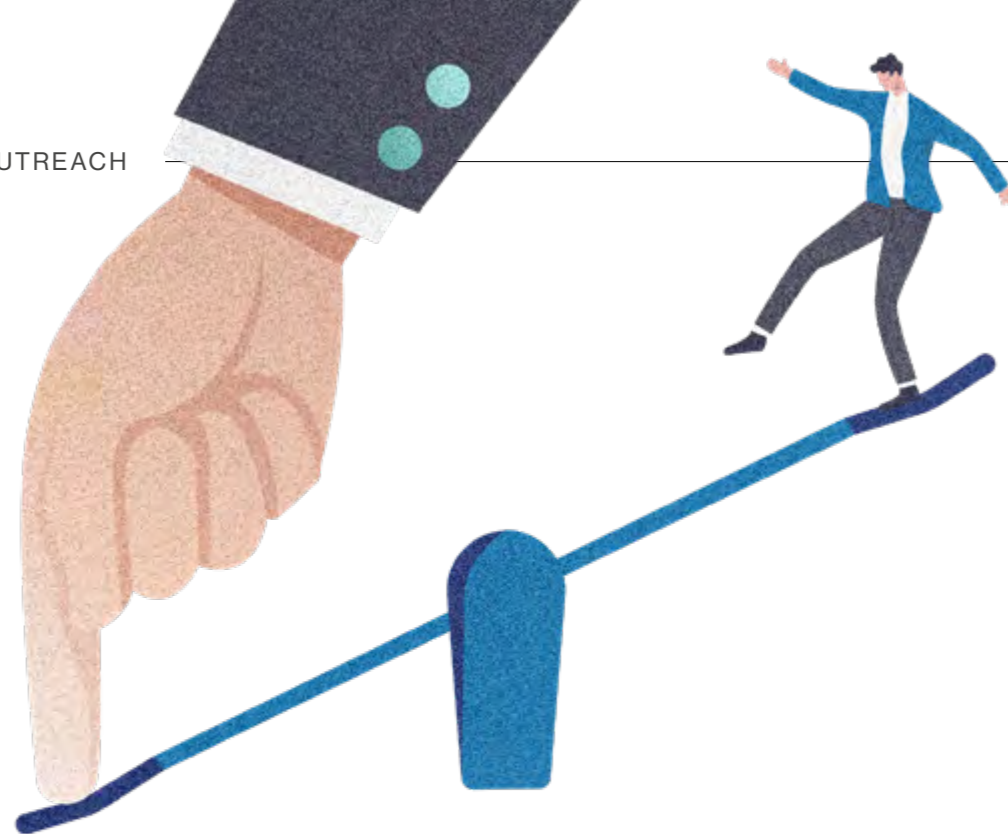


Building on a long tradition of producing leading academic research on market regulation, the TSE Competition Policy & Regulation Center was created in 2021. It coordinates the academic and outreach activities of TSE in these areas and aims to promote policy-relevant research and foster interactions between academics and regulators. Research areas include **competition policy**, **regulation for the digital era**, **regulation of infrastructure and network industries**, and **financial intermediaries and regulation**.



“In 2023, we bolstered the reputation of the TSE Competition Policy & Regulation Center and broadened our connections to include new regulators and top-tier academics. The dedicated work of our economists resulted in first-rate research on regulatory and competition policy issues, further solidifying TSE’s standing in the field”

YASSINE LEFOULI
Director of the TSE Competition Policy & Regulation Center



RESEARCH ADVANCES

Here are some 2023 highlights in each of the Center's focus areas.

Competition policy

Our researchers produce and disseminate academic and policy papers on topics of interest to competition authorities. The target areas for investigation include the effects of mergers, agreements, and unilateral practices on competition and welfare. Special attention is paid to the policy implications regarding specific competition concerns.

Do competition authorities have social responsibilities?

Frustrated with the serial failures of our governments to get to grips with existential challenges including climate change and inequality, many proponents of change have begun to call for competition authorities, central banks and other independent agencies to step in. **Jean Tirole** discusses the tradeoffs that may arise when these institutions enter the vacuum left by ineffectual politicians.

“Socially responsible agencies”, *Competition Law and Policy Debate*, vol. 7, n. 4, April 2023, p. 171–177



“The digital era forces regulators around the world to rethink competition policy and its enforcement. Research in this area, inspired by a dialogue with both agencies and industry players, is particularly relevant in such times”

PATRICK REY, Scientific Director of the Center

Regulation for the digital era

We study existing and contemplated regulations in digital technologies in many areas, including competition, privacy, consumer protection, and intellectual property enforcement. This program aims to highlight the key trade-offs that policymakers face when designing these regulations.

Consumer protection for online markets and large digital platforms

Consumer-protection law is crucial to preserve the economic interests of both consumers and businesses. However, current standards for online markets may not be sufficient for this task. **Jacques Crémer** and ten other researchers have identified 11 key features of online markets that may require additional or different standards than those used for offline markets. They propose potential policies for each feature, some of which are specific to the largest digital platforms.

“Consumer Protection for Online Markets and Large Digital Platforms”, *Yale Journal on Regulation*, vol. 40, n° 3, October 2023, p. 875–914

Regulation of infrastructure and network industries

We strive to advance research about the design of regulations that address the market failures preventing effective competition in infrastructure and network industries, such as telecommunications, transportation, and energy, which have characteristics that call for ex ante regulation.

How to negotiate amendments to motorways concession contracts?

For the past 70 years, France has relied heavily on private-sector investment to develop and maintain its motorway network. Should its concession contracts be renewed? If so, how can they be better designed to serve the common good? TSE researchers **Philippe Bontems**, **Marie-Françoise Calmette** and **David Martimort** examine the methods used to negotiate amendments to motorway concession contracts. They put forward proposals based on insights from incentive theory.

«Menu de Contrats pour les Concessions d'Autoroutes», *Report*, January 2023

Financial intermediaries and regulation

Research in this area is focused on various topics related to monetary economics and aggregate liquidity, payment systems, prudential regulation, market finance and microstructure. Our aim is to deepen understanding of financial intermediation and the prevention of crises.

Public debt as private liquidity

Georges Angeletos, **Fabrice Collard** and Harris Dellas study optimal policy in an economy where interest rates are low because public debt serves as collateral or buffer stock. Issuing more public debt raises welfare by easing the underlying friction but also reduces the private valuation of this service, raising interest rates. This trade-off shapes the optimal quantity of public debt in the long run, justifies a departure from tax smoothing in the short run, and clarifies when low interest rates represent an opportunity for cheap government borrowing.

“Public Debt as Private Liquidity: Optimal Policy”, *Journal of Political Economy*, vol. 131, n. 11, November 2023

**SCIENTIFIC
EVENTS**

**8 competition
policy seminars**

The Competition Policy & Regulation Center hosted eight seminars in 2023, featuring guest speakers from the South African Competition Commission, the Portuguese Competition authority, Jones Day, the Norwegian Competition Authority, the European Commission (DG Competition), and the French Competition Authority. These events also facilitate interaction with academics of other affiliations, practitioners and decision-makers, enriching the perspectives and understanding of students and faculty members who attend the seminars and work on competition policy issues.

Jacques Crémer (TSE), Susan Athey (DOJ/Stanford), Jean Tirole (TSE), Mark Armstrong (ULC), Joshua Gans (University of Toronto)



**POLICY-ORIENTED
EVENTS**

2 workshops

The Competition Policy & Regulation Center co-organized two workshops with regulatory agencies in 2023. The first invited TSE researchers to exchange ideas with representatives of **Spain's National Authority for Markets and Competition (CNMC)**, while the second featured experts from the **French regulatory authority for electronic communications and postal services (ARCEP)**. Both workshops addressed the debate on fair cost sharing in telecommunications.

2 conferences

TSE partnered with a range of institutions to organize two in-person conferences:

Regulating the Digital Economy Conference

Yale School of Management New Haven, February 23-24

After a first workshop co-hosted in May 2022 in Toulouse, TSE and the Tobin Center for Economic Policy at Yale University co-organized a conference on the same topic in February. The event aimed to discuss how academic economists can

produce research and expertise which is helpful to policy makers as they try to develop regulations which prevent anticompetitive behavior without discouraging innovation. The conference was organized around four themes: media, online advertising, platforms and data. TSE researchers Jacques Crémer and Jean Tirole participated in a panel discussion, introduced by Susan Athey (Professor, Stanford University and Chief economist, US Department of Justice), on how economists can do policy-relevant research. This event was part of a broader collaboration between TSE and the Tobin Center, focusing on advancing the global research agenda on digital market regulation.

“TSE and the recently created Tobin Center are natural partners to foster intercontinental dialogue on these issues. They both have deep expertise in competition law, in the economics of regulation, and on digital markets”

JACQUES CRÉMER, Member of the organizing committee of the Regulating the Digital Economy Conference



From left: Bruno Jullien (TSE), Juliette Rouilloux-Sicre (Medef), Bruno Lasserre (CADA), Dorothee Rouzet (Direction générale du Trésor), Alexandre de Stree (CERRE), Brice Allibert (DG COMP)

Conference on data protection and competition

Paris, December 2023

The race for innovation and competitiveness raises questions about the collection and use of data, and ultimately fair competition issues and privacy concerns. The French data protection authority (CNIL), the French competition authority (AdIC), and TSE jointly organized a half-day conference addressing this issue. CNIL President Marie-Laure Denis and AdIC President Benoît Coeuré highlighted the importance of coordinated regulation to balance innovation, competition, and privacy considerations in a globalized digital context. The conference brought together professionals, researchers, institutional representatives, and members of civil society in Paris, with more than 1,000 participants also joining online.

See
replay
(in French)

HIGH-PROFILE VISITORS

The workshops organized by the Center have facilitated numerous interactions with representatives from French and foreign regulators. Valuable discussions have occurred during visits to TSE and also during events organized by other Centers, such as the TSE Digital Center. Indicative list of affiliations for our visitors in 2023:

National competition authorities:

- South African Competition Commission,
- Portuguese Competition Authority (AdC),
- French Competition Authority (AdIC),
- Norwegian Competition Authority (NCA),
- Belgian Competition Authority (ABC),
- EFTA Surveillance Authority (ESA),

European regulatory bodies:

Directorate-General for Competition of the European Commission (DG – COMP)

A new partnership with the European Commission

In June 2023, TSE signed a two-year partnership agreement with the European Commission's Joint Research Center. Building on years of fruitful collaboration, this new partnership will facilitate access to crucial data for TSE researchers, organize impactful events, and improve the dissemination of our research findings within the European Commission. This initiative underscores our commitment to producing and diffusing policy-relevant research on the mechanics and regulation of the digital economy.

As part of their research projects, TSE researchers have also been in touch with **several policy departments** (Directorates-General) within the European Commission such as **DG Competition, DG Connect, and DG Energy**.

“The European Commission is committed to a principle of evidence-based policymaking, supported by the JRC, the Commission's science and knowledge service. We generate high-quality information and research, but honoring this principle also implies building scientific networks with European universities and research centers and drawing on their knowledge and expertise”

NÉSTOR DUCH-BROWN, scientific officer and team leader at the Digital Economy Unit of the European Commission's Joint Research Centre (JRC)



Laurent Clerc (ACPR) at TSE for a conference in 2023

UPCOMING

- The next workshop of the TSE-Yale joint initiative on the digital economy will be held in Brussels on 25-26 April 2024, and will discuss early evidence on the **impact of the Digital Markets Act**.
- Several researchers from the TSE Competition Policy and Regulation Center have joined forces to build an ambitious research project examining the **economics of digital ecosystems** and the regulatory challenges they raise. This project is currently being reviewed for potential funding by the Agence Nationale de la Recherche (ANR).

Sharing expertise with public institutions

TSE faculty members have played a significant role in enhancing economic reasoning within regulatory debates and discussions. They have served as experts for agencies and courts, advisory bodies, and have provided training to both current and future members of public institutions, through the TSE Executive Education program.

TSE researcher Patrick Rey has been a member since its creation, more than twenty years ago, of the **Economic Advisory Group on Competition Policy (EAGCP)**, a group of experts interacting with the Chief Economist of DG Competition. He coordinated the first report of

the EAGCP on an economic approach to Article 82 and was a coauthor of the two most recent reports, on new economic tools for the digital economy and on the revision of the block exemption and guidelines for vertical restraints.

As detailed elsewhere in this report, TSE researchers have also been working closely with scientific committees and evaluation groups linked to regulators and other public institutions such as the **Autorité des Marchés Financiers (AMF)**, **Agence nationale de sécurité sanitaire de l'alimentation, de l'environnement et du travail (ANSES)**, and the **European Commission**.



PARTNERS FOR SPECIFIC RESEARCH PROJECTS

Autorité de contrôle prudentiel et de résolution (ACPR) — Autorité de régulation des transports (ART) — Joint Research Center (JRC), European Commission

RESOURCES

RESEARCH PARTNERS & PEOPLE

We are excited to share our successes with the many people, including donors and sponsors, who played a crucial role in enabling our researchers to advance the progress of economic science in 2023. Thank you for your support!



KEY
numbers
for 2023

32

partners
supported TSE
research partnership
activities and centers

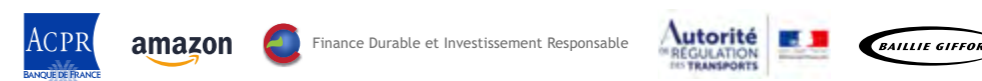
4

new
partners

6

partnerships
renewed

THANKS TO ALL OUR PARTNERS





Jacques Biot (Chairman of the Board of Huawei France) with TSE researchers Yassine Lefouili and Sébastien Gadat

This section provides a list of all our partners, including central banks, global platforms, and public institutions. Despite their varied profiles, they all share a desire to support TSE projects that expand and disseminate knowledge for the benefit of the Common Good.

Association Finance Durable et Investissement Responsable (AFDIR)

In support of the Initiative "FDIR", in collaboration with Ecole Polytechnique.

Sponsors include: ABN AMRO IS - Amundi AM - Caisse des Dépôts - Candriam Institute for Sustainable Development - Edmond de Rothschild AM - Fonds de Réserve pour les Retraites - HSBC Global AM - La Banque Postale AM - Square Management.

Exploring research topics in the areas of responsible investment and sustainable finance, with a focus on long term ESG performance and risk evaluation, corporate governance, and shareholder engagement.

Scientific directors (on the TSE side): Catherine Casamatta and Sébastien Pouget

Autorité de Régulation des Transports (ART)

Investigating the future organization of the motorway sector with a focus on the economics of motorway concessions.

Coordinators: Marie-Françoise Calmette and Philippe Bontems

Autorité de Contrôle Prudentiel et de Résolution (ACPR)

In support of the Regulation and Systemic Risks Initiative, in collaboration with HEC. Enhancing the assessment and comprehension of systemic risks and conducting research on the prudential regulation of the financial and banking system.

Coordinators: Sophie Moinas

Amazon

Exploring a wide range of research topics related to the development of the digital economy.

Coordinator: Karine Van der Straeten

Baillie Gifford

Studying a wide range of research topics with a focus on sustainable finance topics.

Coordinator: Catherine Casamatta

Banque Centrale du Luxembourg (BCL)

Exploring the role of central banks, the conduct of monetary policy, micro and macro-prudential supervision, as well as risks and opportunities in the field of payment systems and services.

Coordinator: Patrick Fève

Banque de France

Developing research in the fields of microstructure, financial intermediation, risk, and macroeconomic analysis.

Coordinators: Fany Declerck and Fabrice Collard

BBVA

Investigating a range of research topics at the crossroads between finance and digital economics.

Coordinator: Alexander Guembel

Bill & Melinda Gates Foundation

(in support of the FIT IN Initiative)

Developing research to understand the implications of alternative competition and regulatory policies and inform efforts to facilitate access to digital payment systems in low- and middle-income countries.

Program director: Milo Bianchi
Scientific director: Emmanuelle Auriol

bioMérieux

Addressing emerging issues in health economics with a focus on market failures for innovation in antibiotics and healthcare products, and the economic evaluation of innovation in diagnoses.

Coordinator: Pierre Dubois

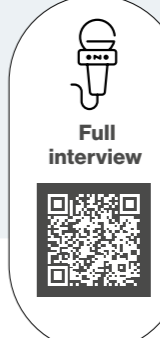
A first successful partnership with Danone

TSE and Danone entered a two-year partnership in 2021 with the conviction that economists can help firms achieve both financial success and broader benefits such as better nutrition and a healthy environment. A team of TSE researchers with backgrounds in finance and industrial organization explored how classical tools in economic and financial decision-making could be extended to integrate corporate societal impacts.



“The results [of this partnership] help to refine our ambition on extra-financial reporting and give very interesting insights on the connection between financial performance and societal impact. This reinforced our conviction that, with the right portfolio, market leaders can have a significant and positive contribution to nutrition and health”

FABIEN DELAERE
Impact Valuation Director, Health Strategy & Partnerships, Danone



The Bill & Melinda Gates Foundation: Improving digital payment systems for the poorest

In the third year since its launch, TSE's FIT IN Initiative maintained its focus on understanding how regulatory frameworks and competition policies impact mobile money development in less developed countries. The research is structured around three pillars: incentives (balancing competition and cooperation), governance (ownership and management of key assets like infrastructure and data), and welfare (impact on households

and firms). The final delivery of the research results is due in 2024.

“[...] What's most exciting about TSE is the culture of collective collaboration for intellectual investigation. It is great to see people [...] talking about topics together and working through the nitty-gritty process of identifying what the real questions are”

SETH GARZ
Senior Program Officer for Research, Bill & Melinda Gates Foundation



Causality Link

Exploring new applied and theoretical challenges in machine learning, building on TSE expertise in economics, mathematics and finance and the power of predictive analytics.

Coordinator: Sébastien Gadat

Danone

Advancing knowledge on the societal impact of companies by exploring a range of research topics at the crossroads between sustainable finance and food economics.

Coordinators: Sébastien Pouget and Sophie Moinas

Electricité de France (EDF)

Studying a wide range of topics related to energy production, and the pricing and distribution of electricity.
Coordinator: Stefan Ambec

ENGIE

Developing scientific knowledge to address issues in energy markets (electricity and gas in particular), using the tools of economic theory.
Coordinators: Christian Gollier and Gilles Lafforgue

ESSO SAF

Exploring a range of research topics related to carbon pricing and the risk of carbon leakage.
Coordinator: Stefan Ambec

Getlink

In support of the Initiative for Effective Corporate Climate Action. Studying the effectiveness of corporate climate action initiatives.
Coordinator: Ulrich Hege and Sébastien Pouget

Connecting with EDF to power the energy transition

For nearly three decades, EDF and TSE have collaborated in advancing research within the electricity sector. Their partnership has yielded significant accomplishments, including studies on designing contracts for renewable energy sources, facilitating market integration among European bidding zones, and optimal pricing structures for electricity consumers. Spearheaded by



the TSE Energy and Climate Center, this ongoing collaboration remains vibrant, with many facets of current TSE research proving highly pertinent to the broader energy sector.

“TSE economists have contributed to maintain EDF expertise at the frontier of current research, by applying powerful IO frameworks to the electricity sector and more generally by bringing a robust economic approach, both theoretical and empirical”

CHARLES WEYMULLER
Chief economist, EDF



Groupement pour l'Élaboration et la Réalisation de Statistiques (GERS)

Advancing research on public-health issues of concern to the pharmaceutical industry.
Coordinator: Pierre Dubois

Gaz Réseau Distribution France (GRDF)

Providing scientific insights on several issues, including the investment choices and incentives for firms like GRDF, the optimal cost-sharing method, the use of smart gas meters, and the consumption behavior of gas users in the context of the energy transition.
Coordinator: Frédéric Cherbonnier

Global Commission on the Economics of Water

Developing research on the conceptual framework to contribute to the Global Review of the Economics of Water which is agreed and prepared by the Global Commission, OECD and the Netherlands Ministry of Foreign Affairs.
Member for TSE: Céline Nauges

Huawei

Encouraging research at the frontier of machine learning, optimization and statistics.
Coordinators: Jérôme Bolte and Sébastien Gadat

Institut Europlace Finance – Louis Bachelier

Developing a research project on collateral demand and liquidity demand in wholesale funding markets (1); Studying the impact of carbon emissions on the cost of capital (2).
Grant holders: Patrick Coen (1); Sébastien Pouget (2)

Joint Research Centre (JRC - European Commission)

Increasing common expertise in digital economics and regulation, in particular with regard to digital platforms and services.
Coordinator: Yassine Lefouili

La Poste Groupe

Addressing new economic challenges linked to major transformations brought by the arrival of new communication technologies.
Coordinator: Helmuth Cremer

Les Entreprises du médicament (LEEM)

Advancing research on a wide range of topics from drug shortage to the financing of the health insurance system.
Coordinator: Pierre Dubois

Mauritius Bank

Accelerating and promoting innovative research on emerging issues in the field of monetary economics and financial stability.
Coordinator: Alexander Guembel

Meta

Exploring topics related to the development of the digital economy.
Coordinator: Andrew Rhodes

Microsoft

Supporting new research on cloud computing and mergers.
Coordinator: Jacques Crémer

Orange

Developing scientific knowledge on the economics of data, the environmental impact of telecoms, and cooperation between operators.
Coordinator: Bruno Jullien

Royal Mail

Proposing research-based solutions for improving demand-forecasting techniques for postal products, estimating the determinants of production boundaries using microdata at delivery points, and estimating price elasticities of demand for postal products such as those used by advertisers or publishers.
Coordinator: Thierry Magnac

SCOR Corporate Foundation for Science

Exploring applied and theoretical research to better understand how risk transforms and influences economic decisions.
Coordinator: Stéphane Villeneuve

SNCF Réseau

Identifying the optimal way to adapt the transport offer to different types of demand, as well as the effects of the ecological transition.
Coordinator: Frédéric Cherbonnier

TotalEnergies

Exploring a range of research topics related to the energy transition.
Coordinator: Stefan Ambec



ASSOCIATED PARTNERS

- Bpifrance - PIA (ARPEGE project)
- Institut Louis Bachelier (ILB) and Risk Foundation
- Institut universitaire du cancer de Toulouse (IUCT) - Oncopole

HOW TO SUPPORT US

Partners can support research within a specific scientific project – a **research initiative or a chair** – and at the same time contribute to the long-running operations of **TSE Centers**. Many research programs are undertaken across several different Centers and adopt a multidisciplinary approach.

Research partnerships at TSE are undertaken within the **TSE-Partnerships Foundation (TSE-P)**, which operates under the aegis of the **TSE - Jean-Jacques Laffont Foundation**. Most of our partnerships are covered by gift agreements. In exceptional cases in which partnership terms do not align with gift conditions, we enter into specific sponsored research under the French R&D scheme called “**Crédit d’Impôt Recherche**” (or Research Credit Tax).

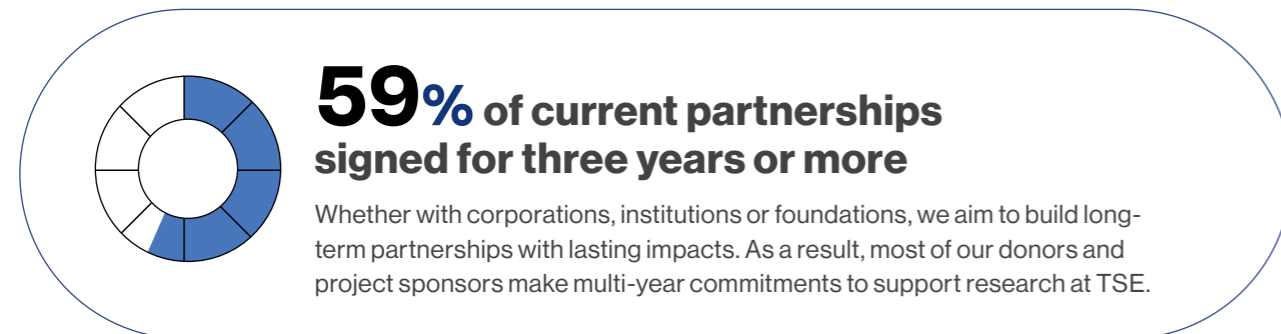
Our partners provide funding for strengthening research capacity, for visiting programs and research grants. In addition to financial support, TSE researchers benefit greatly from access to **databases** that are essential tools for their work.

Contact: partnership@tse-fr.eu



“Sustaining and cultivating long-term research partnerships is a strategic imperative for TSE, and central to our identity. These collaborations frequently uncover innovative research areas overlooked in academia. Beyond presenting new intellectual challenges and bridging the gap between research and public or private decision-making, these partnerships also provide the sustained investments that are crucial for developing our research capacity and environment. In a fiercely competitive global academic landscape, the public and corporate support from our partners significantly enhances TSE’s appeal to top-tier international researchers. It makes TSE a unique place in the international academic landscape”

CHRISTIAN GOLLIER, Director of TSE



TSE-P PARTNERS IN THE TSE ECOSYSTEM

Connecting research and education

Supporting a research project can also lead to other interesting opportunities within TSE for partner companies and institutions. Over the past year, several partners have expanded their engagement with us to include education, both to shape the future of our students and to train their own teams through TSE’s Executive Education programs.

Contact: careers@tse-fr.eu

Contact: exed@tse-fr.eu

Help us to shape the future of TSE

Aside from their support to a Center or a specific research project, several research partners contribute to the overall development of TSE. Members of the “TSE Club des partenaires” are corporations, institutions or foundations which have made large, non-targeted and non-expandable donations to at least one of the two TSE – Jean-Jacques Laffont Foundation fundraising campaigns.

See the list of the members of the TSE Club des partenaires




Business Networking Day, November 2023



STAY TUNED

T Reflect Our monthly newsletter



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 and sign up at


This monthly missive is designed to share research advances as well as news regarding our partnerships and upcoming events. It highlights the impact of our partners' support for research at TSE and the work of the TSE Centers.

TSE Reflect focuses on a different theme each month. Since its creation, we have delivered analysis from our academic community on important current topics about competition, digital economics, energy and climate, health, infrastructure and networks, and sustainable finance.

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