

Program 2023/2024



## AIMS AND SCOPE OF THE PROGRAM

Improving the provision of public goods and services such as education, health, security, and infrastructure, is a first-order concern, not only to academics but also to the general public all over the world.

This two-year master's program in Public Policy and Development (PPD) combines economic theory, state-of-the-art applied microeconomic techniques, and political economy insights to provide students with tools to jump-start a successful career in development and public policy.

The program provides students with fundamental skills in applied microeconometrics to evaluate public policies and their consequences. This involves developing students' skills in a number of different empirical methodologies, such as Randomized Control Trials (RCTs), impact evaluation techniques that allow researchers to derive causal inference from observational data, machine learning, geographic and spatial analysis techniques, and structural modeling. The general philosophy of the program is to train students, via a wide range of elective courses, on how to analyze real-world problems using economic theory and rigorous quantitative thinking. A special focus is given to topics of infrastructure, governance and industrial organization, political and economic institutions, international organizations, global value chains, trade, and human development.

**Note:** students can apply to either the full program (i.e. two years) or directly to the 2nd year (refer to the Admission section for further information).

## STRENGTHS OF THE PROGRAM

- Courses are taught in English by TSE faculty members with well-established international reputation in the areas of development economics, labor economics, economics of education, industrial organization, and political economy.
- A number of PPD instructors have consulting experience with leading local and international organizations conducting public policy programs and analysis in both developing and developed countries. These include the World Bank, the OECD, the IADB, and the French AFD (Agence française de développement). This ensures a focus on issues that are relevant to policymakers and practitioners alike.
- The program has a large network of alumni in local and international organizations, public agencies, and public policy consulting firms.

## COURSES

### 1<sup>st</sup> Year - Master in Applied Economics

| SEMESTER 1  | SEMESTER 2  |
|---|---|
| <p><b>Compulsory:</b></p> <ul style="list-style-type: none"> <li>• Macroeconomics *</li> <li>• Game Theory*</li> <li>• Theory of Incentives*</li> <li>• Applied Econometrics *</li> <li>• Intermediate Econometrics *</li> <li>• R Programming *</li> <li>• Professional Development *</li> <li>• French as a Foreign Language *</li> </ul> <p><b>2 electives: Choose 2 among 12</b></p> <ul style="list-style-type: none"> <li>• Environmental Economics</li> <li>• Economic History</li> <li>• Markov Chains and Applications</li> <li>• Probability Modeling</li> <li>• Evolution of Economic Behaviour</li> <li>• Experimental Economics</li> <li>• Understanding Real World Organizations</li> <li>• Political Economy</li> <li>• Project Management</li> <li>• Market Power &amp; Regulation</li> <li>• Markets and Incentives: a historical-theoretical perspective</li> <li>• ENGAGE</li> </ul> | <p><b>Compulsory:</b></p> <ul style="list-style-type: none"> <li>• Public Economics *</li> <li>• Program Evaluation *</li> <li>• Applied Econometrics *</li> <li>• French as a Foreign Language *</li> </ul> <p><b>4 electives: Choose 4 among 16</b></p> <ul style="list-style-type: none"> <li>• <u>Development Economics</u> **</li> <li>• Industrial Organization **</li> <li>• Environmental &amp; Resource Economics **</li> <li>• Corporate Finance **</li> <li>• Market Finance **</li> <li>• Dynamic Optimization</li> <li>• Martingales Theory and Applications****</li> <li>• Panel Data **</li> <li>• Time Series **</li> <li>• Data Bases</li> <li>• Empirical Industrial Organization</li> <li>• Topics in Food Economics</li> <li>• Advanced Macroeconomics</li> <li>• Advanced Microeconomics</li> <li>• Behavioral and Experimental Economics</li> <li>• ENGAGE</li> </ul> |
| <p><b>Optional courses:</b></p> <ul style="list-style-type: none"> <li>• Introduction to SAS (for newcomers in the first year of master)</li> <li>• Math camp for M1 and M2 (End of August): Algebra / Probability / Static Optimization refresher***</li> </ul>  | <p><b>Compulsory International internship or Master 1 Thesis*</b></p>   |

\*UE1 / UE2 / UE5 : A minimum score of 10 out of 20 is required

\*\*Masters 2 Directors highly recommend to attend these options:

- Industrial Organization: M2 EMO
- Environmental & Resource Economics: M2 ERNA
- Development Economics: M2 PPD
- Corporate finance et Market Finance: M2 Finance
- Panel Data or Time series: M2 EEE

\*\*\* Math refresher courses opened to M1 and M2 students

\*\*\*\* To attend the Martingales theory and applications course you need to have attended the Markov Chains course first

**2<sup>nd</sup> Year - Master in Public Policy and Development**

| SEMESTER 3  | SEMESTER 4  |
|---|---|
| <p><b>Mandatory:</b></p> <ul style="list-style-type: none"> <li>Causal Inference with Observational Data</li> <li>Empirical Project from October to March (tutored projects)</li> </ul> <p><b>Not mandatory:</b></p> <ul style="list-style-type: none"> <li>Introduction to geographical information systems**</li> </ul> <p><b>1 among 3:</b></p> <ul style="list-style-type: none"> <li>Datanomics: regulation of data spreading and data protection.</li> <li>Project management*</li> <li>Ethics of social studies</li> </ul> <p><b>3 among 4 electives:</b></p> <ul style="list-style-type: none"> <li>Machine learning for economics***</li> <li>Governance, Industrial Organization and Development</li> <li><u>Institutions and Political Economy</u></li> <li>Agriculture and Global Value Chains</li> </ul> | <p><b>Mandatory:</b></p> <ul style="list-style-type: none"> <li>Randomized Control Trials and Policy Evaluation</li> </ul> <p><b>3 among 5 electives:</b></p> <ul style="list-style-type: none"> <li>Structural Models and Policy Evaluation</li> <li>The Long-Run History of Trade</li> <li><u>Political Economy of International Organizations</u></li> <li>Economic Analysis of Infrastructure and Network Industries.</li> <li>Development and Political Economy ***</li> </ul> |
| <p><b>Optional:</b></p> <ul style="list-style-type: none"> <li>Professional Development*</li> <li>Algebra Refresher **</li> <li>Probability Refresher **</li> <li>Dynamic Optimization Refresher **</li> </ul>  | <p><b>Internship or master thesis</b></p>   |

\* Students who followed the course " Professional Development" in M1 in 2022-2023 will be exempted

\*\* Upgrade courses in Mathematics, open to students in M1 and M2 of TSE

\*\*\* Choice of this option must be validated by the ETE Master Director for Development and Political Economy and by the EEE Master Director for Machine Learning, as well as the PP&D Master Director.

## SKILLS

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- Analytical skills of how to analyze real-world problems using economic theory and econometrics: economic theory, state-of-the-art applied microeconomic techniques, and political economy insights relevant to a career in development and public policy.
- Using statistical software packages such as STATA and R through applied projects in courses. Conducting Randomized Control Trials

## COURSE DESCRIPTIONS

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### **Causal Inference with Observational Data (compulsory)**

"This course introduces students to the main research designs that can recover causal effects using observational data. It will cover the key assumptions behind each approach, how and when to implement each of them, and what are their limitations. The course also includes applications with selected papers that use causal inference methods with observational data. TA sessions will allow students to practice and test some of the theoretical properties of these methods with data."

### **Randomized Control Trials and Policy Evaluation (compulsory)**

"This course features a broad overview of Randomized Control Trials (RCTs) as a key tool in empirical research. The first part of the course provides an overview of prominent empirical methods for evaluating public policies. The second part covers econometric aspects as well as a variety of implementation issues that arise when designing and running RCTs in practice. The third part is aimed at illustrating the diverse use of randomized experiments in the most recent research practice through the exposition and discussion of leading academic articles."

### **Year-long Empirical Project**

The goal of this year-long tutored group project is to train students to work on the analysis of a policy relevant research question from the data compilation to the final results. The output of the project is the code used for the analysis, the presentation on the intermediate and final output and the paper presenting the results.

### **Structural Models for Policy Evaluation**

"This course introduces the use of structural models in economics and policy evaluation. It focuses on the intuition behind the estimation of structural models and how they can be used for policy making. These are particularly relevant for simulating the effects of new policies, to calculate welfare effects of different policies, and/or understand the mechanisms that drive the effects of a policy change."

### **Governance, Industrial Organization and Development**

The course explores the interplay between the forces of globalization and economic restructuring in the context of developing countries. With a normative approach rooted in microeconomics, it focuses on issues of industrial organization, such as firm behavior and market organization, and public policies such as (de)regulation and privatization. It also examines the functioning of support institutions, given the budgetary constraints and weak governance capacity prevalent in developing countries.

### **Agriculture and Global Value Chains:**

"This course introduces students to the analysis of Global value chains: concentration at the different stages, impact of import and export regulations, and pass-through of international prices along the chain. The course covers the diverse policy environments across the world, both for agricultural products and manufacturing, that are key for the welfare impact of the connection to these chains. "

### **Development and Political Economy**

"The quality and availability of commodities, services, infrastructure and governance is low in poor countries, hampering their development and growth. How do businesses, politicians and bureaucrats interact to determine these outcomes? The first part of this course will focus on the private sector and issues of industrial organization, while the second part of the course will focus on the public sector and issues of political economy. The course will address these issues by combining the latest microeconomic and empirical theories."

## **Institutions and Political Economy**

This course serves as an introduction to a number of topics in contemporary political economy. As part of the course, students will develop critical understanding of pressing public policy issues, such as: Do institutions have long-run economic effects? What are common manifestations of flawed governance and corruption in terms of human capital incentives, economic and political outcomes? What are the implications of political connections across different economic sectors, including lobbying, finance and public procurement among others? Which policies and institutional remedies may be effective in addressing these problems? These and other questions are examined through the lens of rich qualitative and quantitative evidence from research in economics and political science.

## **CAREERS /JOBS**

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- Economists at European and International organizations in the field of development economics and public policy.
- Economists in international development consulting companies.

## **ALUMNI FEEDBACK**

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### **Mahi ElAttar**

Master PP&D Graduate 2016-17 – Operations Officer and Governance Analyst at World Bank

My role is to coordinate and supervise several activities related to the implementation of impact assessments (mainly RCTs) at all stages of the process. I help the teams to finalize concept notes, to ensure their technical assessment, I intervene in the recruitment process of the survey firms and their supervision once they are engaged, in the management and supervision of the field-based teams, in the processing and analysis of R and STATA data, in the writing of reports and finally in the awareness raising, dissemination, and capacity building activities. To do this, I use the data analysis and interpretation capacity acquired at TSE. I have been fortunate to learn rigorously the econometric theory and practical implementation of the various impact assessment methods used to provide concrete answers to real development problems and to critically interpret the results obtained.

### **Stefan Preub,**

Master PP&D Graduate 2019-20 – German Federal Foreign Office

Following my Master at TSE, I joined the German diplomatic service and currently work on foreign relations with Southeast Asia. The PPD program has been a valuable preparation for my career. Thanks to the careful analysis of applied economic research we conducted at TSE, I am now able to quickly gain an understanding of economic challenges faced by countries in the Global South, as well as identifying potential solutions. In addition, the diverse student body helped me strengthen my intercultural competences and language skills.

## ADMISSIONS

Admission is based on academic excellence.

### First year admission:

- Aimed at English speakers
- Students should hold a BSc in Economics, Applied Mathematics within a recognized curriculum considered as consistent with the program and approved by the TSE selection committee.

### Second year admission:

- Applicants from the French system must have passed the TSE International track Master 1 (1st year Master's) in Economics or another French University master's in applied mathematics or an equivalent degree (e.g., engineering school).
- Holders of a BSc, M.A., or MSc degree, within a recognized curriculum regarded as consistent with the program and approved by the TSE Selection Committee.
- Some brushing-up in Economics or Maths might be advisable in some cases. Working knowledge of English is obviously required.

## APPLICATION

- Master's programs year 1 and year 2

January 15th to February 8th 2024. For applicants holding a foreign degree

- Master's programs year 2 only

May 2nd to 13th 2024. For applicants holding a French degree

- Eiffel Scholarship applications

November 10th to 20th 2023. For foreign applicants and for Master's programs:

<http://www.campusfrance.org/en/eiffel>

For more details about requirement documents and application process, please see the Admission section.

## CONTACT

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