Gabrielle Gambuli

French citizenship Born on March 2nd, 1996

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Research Interests

Regional Development, Connectivity, Economic Geography, Innovation

Education

† *Indicates expected*

2019–2023 †	**Ph.D., Economics**, CY Cergy Paris Université, THEMA
	Thesis Title: Essays on the role of Accessibility on Regional Development
	Supervisors: Sara Biancini & Rodrigo Paillacar
2019–2023 †	**Ph.D., Economics**, ESSEC Business School
	Double degree, associated with the THEMA laboratory
2019–2020	**M.Sc., Business Administration Research**, ESSEC Business School
2017–2019	**M.Sc., Economic Analysis**, CY Cergy-Paris Université (joint program with ESSEC Business School)
Fall 2017	**Graduate Exchange Student**, UQAM, Université du Québec à Montréal, Canada
2014–2017	**B.Sc., Economics and Finance**, Université de Cergy-Pontoise

Research papers

1. **Gambuli, G., and Stipanicic, F.** (*ongoing project*). *High-Speed Railways and the Geography of Inventors' Collaboration: Evidence from France (1980-2010)*

   This paper studies the impact of transportation infrastructure on innovation collaboration between inventors, using the introduction of high-speed railways in France. To conduct our analysis, we use patent data of the European Patent Office from 1980 to 2010 on one hand, and on the other, we construct a novel dataset of city-to-city travel time by train in France. We conduct our analysis at the NUTS3 region level as well as at the region-pair level, using main cities as the reference point for train travel time between regions. First, we rely on a difference-in-difference model to estimate the effect for a region to be connected to the HSR network on its cross-regional patents as well as on its inward regional patents. Second, we estimate a gravity

model with fixed effects to test whether the reduction in travel time, due to the expansion of HSR network, has a causal impact on the evolution of bilateral collaboration between inventors of different regions, as well as on the innovation border effect, which refers to asymmetries in collaboration patterns between versus within regions. Results show that after the introduction of HSR, connected regions count more cross-regional patents and less intra-regional co-patents. We also find that regions sharing a border to a treated region count fewer intra-regional co-patents as well, collaborate with more regions, and collaborate more with regions on the other end of the HSR. Finally, the regional border effect is found to decrease with a connection to the HSR network.

2. **Gambuli, G., and Stipanicic, F.** (*ongoing project*). *A Dataset on Travel Time by Train: Intercity and High-Speed Railways in France (1980-2020)*

   In this paper, we explain how we constructed a novel dataset of city-to-city travel time by train in France, covering the period 1980-2020. We use an arrival-departure time schedule from Société Nationale des Chemins de Fer (SCNF), the French national state-owned railways company, as well as dates of high-speed railways (HSR) openings. From 1981 to 2017, high-speed lines have been built to connect Paris to major cities in France. Using Dijkstra algorithm, we compute the contemporaneous travel time between every two cities in France. Then, to compute the past values of travel time within each pair, we rely on the assumption that prior to an HSR opening, trains were running at a normal speed. We are able to compare our estimations of travel time by train to observed values of travel time from a subsample of city-pairs (SNCF). Our dataset is found to replicate 95% of the observed travel time.

3. **Gambuli, G.** (*working paper*). *Navigating the Geography of Regional Disparities: Market Access and the Core-Periphery Divide*

   This paper investigates the impact of market proximity on subnational development worldwide, considering the heterogeneous effects on core and peripheral regions, as well as on countries with different income levels. A gravity-based market potential index is revised to accurately assess distances for land and maritime trips to better capture geographic limitations. Estimations are performed in cross-section with country-fixed effects, by addressing endogeneity issues with instrumental variables. Robustness checks are also conducted with panel data on a smaller sample. The findings reveal that regions with better market and port access experience higher regional income per capita, with the effect being more significant in wealthier regions. Peripheral regions consistently exhibit a 2 percentage point lower elasticity to market potential compared to core regions. The paper also highlights the potential negative impact of proximity to foreign markets on peripheral regions. These results suggest that policies to improve the connectivity of peripheral regions to core domestic markets could help mitigate the adverse effects of intense foreign competition and reduce regional disparities.

Teaching Experience

Graduate level

Fall 2023 **Econometrics**, CY Cergy Paris Université

Topics: Finite Sample Properties of OLS, large sample properties with random sampling, instrumental variable methods, maximum likelihood methods, time series, applications on R and SAS.

Undergraduate level

Fall 2023 **Applied Econometrics**, CY Cergy Paris Université

Topics: Causality, simple/multiple linear regression, OLS estimator, tests and inference, asymptotic theories, heteroskedasticity, applications on Excel, R and SAS.

Winter 2022-23 **Macroeconomics II**, CY Cergy Paris Université

Topics: Cobb-Douglas function, open economy macroeconomics, Solow Growth model.

Winter 2021 **Statistics**, CY Cergy Paris Université

Topics: Representation of a statistical series, sum and integral operators, position, dispersion and concentration indicators for discrete and continuous variables, two-character series (conditional mean, variance-covariance, correlation), least squares fit.

Winter 2020-22 **Macroeconomics IV**, CY Cergy Paris Université

Topics: National accounts and balance of payments, foreign exchange market, purchase parity power theory, intertemporal current account model, Mundell-Fleming model.

Fall 2019 **Macroeconomics I**, CY Cergy Paris Université

Topics: Macroeconomic statistics and methodology, major macroeconomic aggregates (GDP, inflation, unemployment), economic fluctuations (supply and demand shocks), currency function and monetary mechanisms.

Work Experience

2022-2023 Teaching & research fellowship (*Attaché Temporaire d'Enseignement et de Recherche*, ATER), THEMA, CY Cergy Paris Université

2021-2023 Doctoral student representative, CY Cergy Paris Université

2020-2022 Organizer of the PhD student seminar, THEMA - CY Cergy Paris Université

2019–2022 Teaching Assistant (*Chargé de travaux dirigés*), CY Cergy Paris Université

Presentations & Conferences

2022	Junior Research Day, King's College London & Collège de France – 23^{rd} ETSG Annual Conference – ITEA 2022 Conference
2021	ESSEC PhD Poster Session – 20^{th} Doctoral Meetings RIEF – 22^{nd} ETSG Annual Conference – 21^{st} SPRU PhD Forum – 31^{th} ITFA Conference – 18^{th} ACDD Doctoral Day – 20^{th} RSEP Conference
2020	22^{nd} INFER Annual Conference

Fellowships & Awards

2022	Financial support for research – Labex MME-DII, CY Initiative of Excellence
2021	Best Presentation Award – ESSEC PhD Poster Session
	Presentation: *High-Speed Railways and the Geography of Inventors' Collaboration*
2019–2022	Ph.D. Scholarship – CY Cergy Paris Université
2018	M.Sc. Excellence Scholarship – Labex MME-DII

Other Skills

Languages	French (native language), English (fluent), Italian (intermediate)
Softwares	R, Stata, Python, SAS, LaTeX, Microsoft Office Suite

References

BERLINGIERI Giuseppe, ESSEC Business School – berlingieri@essec.edu
BIANCINI Sara, CY Cergy-Paris Université – sara.biancini@cyu.fr
PAILLACAR Rodrigo, CY Cergy-Paris Université – rodrigo.paillacar@cyu.fr
TERRA Cristina – ESSEC Business School, terra@essec.edu