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.** (*working paper*). *High-Speed Railways and the Geography of Inventors' Collaboration: Evidence from France (1980-2010)*

   This study explores the impact of high-speed railways (HSR) on inventor collaboration over long distances, which plays as a catalyst of face-to-face interactions and knowledge exchange. We use a novel region-to-region travel time dataset using HSR implementation in France. Employing a gravity model with three-way fixed effects, we assess the causal relationship between travel time reduction and cross-regional co-patenting trends between NUTS3 region-pairs, addressing endogeneity concerns. Results show a robust positive effect of reduced travel time on collaboration, most of all as comparison of intra-regional and long-distance collaborations. Core regions significantly benefit, but advantages extend beyond directly-HSR-connected

regions. Moreover, reduced travel time is related to collaborative patents exhibiting higher novelty and wider scope within the realm of technology fields. Finally, we find that the reduction in travel time has fostered connections among inventor leaders and inventors with superior productivity compared to their collaborators' pool, validating the model and findings presented by Catalini et al. (2020).

2. **Gambuli, G., and Stipanicic, F.** (*working paper*). *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 access to markets and port experience higher regional income per capita, with the effect being higher for 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, especially if they are central to foreign core markets without free trade agreement in place between the respective countries. Results suggest that policies which aim at improving the connectivity of peripheral regions to core domestic markets and develop trade agreements could help mitigate the adverse effects of trade barriers and reduce regional disparities within countries.

4. **Gambuli, G.** (*ongoing project*). *Redefining Commuting: High-Speed Railways and Workers' Mobility in France*

This paper studies the impact of France's high-speed rail network on workers' commuting and relocation decisions regarding their workplace and residence. This work utilizes data on French workers from the DADS Panel tout salarié, and train travel time data from Gambuli and Stipanicic (2023). Specifically, I employ a gravity model to estimate the effect of a reduction in travel time on commuting patterns adjustments across NUTS3 regions. Then, I examine the factors that drive these shifts in patterns, seeking to provide a deeper understanding of the impact of such changes on spatial dynamics. Notably, the study examines transitions both from urban to rural environments and vice versa, considering both residential and workplace locations, as well as firm mobility, and changes in skills and wages at destination workplaces relative to the origin. Additionally,

the research explores the relationship between travel time and exposure to telework. Overall, the goal of this study is to identify the factors that influence workers' commuting and relocation decisions and understand the impact of high-speed railways on those spatial dynamics.

Teaching Experience

Graduate level

Fall 2023-24   **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 2023-24   **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 2022-24   **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

2022-2024	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

2023	24th ETSG Annual Conference – 71st Congress of the French Economic Association (AFSE) – 20th Augustin Cournot Doctoral Days
2022	Junior Research Day, King's College London & Collège de France – 23rd ETSG Annual Conference – ITEA 2022 Conference
2021	ESSEC PhD Poster Session – 20th Doctoral Meetings RIEF – 22nd ETSG Annual Conference – 21st SPRU PhD Forum – 31th ITFA Conference – 18th Augustin Cournot Doctoral Days – 20th RSEP Conference
2020	22nd INFER Annual Conference

Fellowships & Awards

2023	Best Paper Award – 20th Augustin Cournot Doctoral Days
	Paper: *High-Speed Railways and the Geography of Inventors' Collaboration*
2022	Financial support for research – Labex MME-DII, CY Initiative of Excellence
2021	Best Presentation Award – ESSEC PhD Poster Session
	Paper: *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
Sports	Tennis, Catamaran

References

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BIANCINI Sara, CY Cergy-Paris Université – sara.biancini@cyu.fr
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