Vanya Georgieva

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PhD Candidate in Economics specializing in International Trade. Passionate about connecting research with policy impact, skilled in public speaking and translating technical findings into accessible insights for diverse audiences.

Research Interests: International Trade, International Macroeconomics, Innovation, Applications of Networks Models, Industrial Organization
Languages: English (Native), French (Fluent), Italian (Fluent), Bulgarian (Native)
Citizenship: Canadian, Bulgarian

Education & Languages

2020 - 2026 (Expected)	**University of Toronto**	PhD (Economics)
Committee:	Daniel Trefler (Supervisor), Kevin Lim, Victor Aguirregabiria, Joseph Steinberg	
2025 - 2026 (Expected)	**University of Toronto**	Data Science Certificate, Doctoral
2019 - 2020	**University of Toronto**	MA (Economics)
2014 - 2018	**University of Ottawa**	BComm (Finance, Summa Cum Laude)
		Bilingual Degree (English, French)
2018	**Università Bocconi**	Academic Exchange

Research All abstracts attached at end of document

Trade and Industrial Policy with Global Production Networks ***- Job Market Paper***

Georgieva, Vanya (2025). "Production Network Features of Industrial Policy". In: *International Monetary Fund, Working Paper Series* 2025.23, p. 65. URL: https://doi.org/10.5089/9798400296413.001.

Georgieva, Vanya, Miwako Nitani, and Allan Riding (2021). "Budgeting and Gender: Employees and Self-Employed". In: *Family and Consumer Sciences Research Journal* 49.4, pp. 310–327. URL: https://doi.org/10.1111/fcsr.12398.

Works in Progress

The State of Semiconductors: Investments in Knowledge and Capital
Transit and Bikeshare: Evidence on rider switching behaviour from subway delays

Work Experience

Fund Internship Program - International Monetary Fund June - August 2024

- Built and analyzed high-dimensional dataset stemming from multiple sources for use in original research and departmental report.
- Completed end-to-end original research project, resulting in solo-author publication.
- Presented findings to economists and leadership from 3 departments.

Research Assistant - University of Toronto & University of Ottawa 2019 - 2024

- Contributed to 5+ projects on diverse range of topics such as economics of AI, wealth inequality, financial literacy, and venture capital.
- Created an instrumental variable to capture the supply of AI specialists by geographic location.
- Replicated previous findings, created visuals and used categorization and clustering techniques on Norwegian tax data. Code was implemented remotely by Bank of Norway.

– Conducted bilingual interviews, gathered data on venture capital funding, performed literature review.

Teaching Assistant - University of Toronto & University of Ottawa 2016 - Present

– Assisted for 10+ graduate and undergraduate courses in economics, business, and policy.
– Led tutorial sessions, prepared supplementary course materials, graded and administered evaluations, held one-on-one sessions, led team of TAs for large courses, liaised between professors and students.

Student Auditor Intern, Public Services and Procurement Canada May-August 2016

– Performed labour time recording systems audit of Federal military contractor in the National Capital Region. Contribution led to qualified finding in audit report. Work required security clearances.

Conferences & Awards

Conferences Attended	Canadian Economics Association Annual Conference, Session Chair (Montreal, 2025) Expert Dialogue on Subsidy Reform, IMF (Washington DC, 2024) National Bureau of Economic Research (NBER) Digital Economics and AI Tutorial (Toronto, 2023)
Graduate Awards	Ontario Graduate Scholarship (2025-2026), Social Sciences and Humanities Research Council Doctoral Fellowship (2022-2025) Dorothy J. Powell Award (2023-2025) Faculty of Arts & Science Top Doctoral Fellowship (2020-present) Canada Graduate Scholarship - Master's (2019-2020)
Undergraduate Awards	President's Scholarship, Dean's Leadership Scholarship, Chancellor's Scholarship Finalist, French Immersion Bursary, Mobility Scholarship, Dean's List

Skills

Research	Structural modeling, optimization, numeric optimization algorithms, empirical causal inference, statistics, econometrics, data visualization, natural language processing, machine learning, graph mining, BigData, web scraping and APIs
Communication	Academic writing, public speaking, proposal writing
Leadership	Project management, team coordination, mentoring students
Technical	**Python** (Advanced - Numpy, pandas, scikit-learn, scipy, nltk, huggingface, umap, matplotlib, seaborn, pystata, networkx, pygeo, pathos, multiprocessing) **SQL** (Advanced), **STATA** (Advanced), **R** (Intermediate), **MATLAB** (Intermediate)

References

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University of Toronto (Formerly)

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Abstracts

Trade and Industrial Policy with Global Production Networks - *Job Market Paper*

Industrial policies are back in fashion: tariffs, subsidies, discriminatory regulations and other interventions are sending shock waves through global supply chains. Indeed, a single supply chain can experience a multitude of shocks simultaneously: increased input costs from tariffs, decreased access to foreign markets due to foreign tariffs, and heightened competition from subsidized foreign counterparts. In this complex setting, I turn to quantitative general equilibrium modelling to answer two questions. First, what is a country's optimal *portfolio* of tariffs and subsidies when, as in the real world, policies are targeted at specific industries in specific countries at specific points in the global supply chain? Second, what are the optimal policies and their impacts when, as happens in practice, unilateral trade actions invoke foreign retaliation? Answering these questions requires high-dimensional, modeling of production networks, especially when global supply chains amplify policy impacts. I estimate the impact of the policy portfolio on output, trade, and welfare under three scenarios: *(a)* unilateral action where each country acts alone; *(b)* a multilateral Nash tariff and subsidy game that captures retaliation; and *(c)* a global central planner. Given the large number of policies in the portfolio, I use Shapley values to identify the most important ones. Three conclusions emerge. (1) Optimal policies targeting services such as IT and finance have the greatest impacts, indicating that it is not enough to study manufacturing alone. (2) In the multilateral Nash game, optimal subsidies are far more welfare damaging than optimal tariffs alone. (3) In all three scenarios, tariffs act like a nuclear option, setting off chain reactions that reverberate through supply networks and stress the economies of third parties.

Production Network Features of Industrial Policy

Industrial policy has gained popularity in recent years and across all regions and income levels. Consequently, it is increasingly important to understand how governments choose the sectors they target. This analysis explores the role of domestic production networks in sector targeting, while controlling for other sector and global value chain characteristics. Combining datasets on industrial policy (Global Trade Alert) and input-output linkages (ICIO, OECD) provides novel insight into the network features of industrial policy. In particular, a sector's 'centrality'—i.e., its degree of connectedness - within the domestic production network is an important and significant predictor of sector intervention. The results indicate that industrial policy is used differently across regions, income groups, time periods, and types of policy tools. Notably, emerging economies tend to target more central sectors, while advanced economies target less central ones, on average. However, there has been a global shift toward more central sectors over time. Lastly, subsidies are deployed on more central sectors, while tariffs are used on less central ones.

The State of Semiconductors: Investments in Knowledge and Capital

This paper builds a novel dataset combining public patent data and proprietary plant-level data on physical capital. Using Natural Language Processing on patent abstracts I establish detailed firm technology profile over time. This is contrasted against location-specific firm investment in physical capital. The analysis presents novel empirical regularities about a key industry and suggestive evidence of the link between R&D investment and physical capital.

Budgeting and Gender: Employees and Self-Employed

with Miwako Nitani and Allan Riding

Budgeting, an exemplar of good financial practices, informs financial decisions. This research employs the Theory of Reasoned Action to identify potential antecedents of individuals' decisions to maintain a budget. Analysis of the 2014 Canadian Financial Capability Survey (CFCS) shows that the likelihood of budgeting depends on attitudes toward finance, reliance on professional advice, financial knowledge, and confidence. Women are relatively more likely to budget than men, but self-employed individuals are no more likely to have a budget than paid employees. The latter result is consistent with research findings of high rates of failure among young enterprises. The need for yet greater financial education is implied.

Transit and Bikeshare: Evidence on rider switching behaviour from subway delays

In recent years, public bikesharing programs have become a common feature in many cities, offering residents and visitors a flexible transportation service for commuting, errand-running, and leisure. This analysis investigates the relationship between bikeshare and the traditional public transportation system. Using granular, trip-level data, I develop a non-parametric model to describe the use of bikeshare at a specific location in Toronto, Canada. Compared to this base-line ridership, I find that severe subway delays are associated with significantly higher bikeshare use. This serves as evidence that transit and bikeshare ridership populations overlap. Results suggest that bikeshare systems can be used to aid with the first/last mile problem.