NBER AI CONFERENCE
Interest Statement for German Gutierrez

I have become increasingly interested in using AI techniques for the understanding of economics over the past two years. In particular, I have two projects underway that leverage these tools.

For my Job Market paper, I am using scraped data for 200 million products to estimate Industrial Organization-style demand systems in large scale. This involves using recently developed coding languages such as Apache Spark and the Hadoop Distributed File System to process big data, along with machine learning techniques to measure products and similarity.

In a separate research agenda with Thomas Philippon and Nicholas Zarra, we use natural language processing techniques to measure competition. In particular, we use natural language processing tools to extract high-dimensional signals of competition from textual documents ranging from 10-Ks and earnings calls to news articles, patent and start-up descriptions. The goal is to recover robust, repeatable, and narrowly defined measures of competition that vary across firms and industries as well as across forms of competition (entrants vs. incumbents, domestic vs. foreign, competition for talent vs. prices, etc.)

GERMAN GUTIERREZ

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EDUCATION

NYU Stern	Ph.D. in Finance, 2021 (Expected) Focus: Competition, Macroeconomics, Corporate Finance
Cornell University	M.Eng. in Operations Research and Engineering, Cornell University, 2010 GPA: 4.1, Concentration in Strategic Operations
Cornell University	B.S. in Operations Research and Engineering, Cornell University, 2010 GPA: 4.0, *Summa cum Laude*

PUBLICATIONS

1. "Revisiting the Global Decline in the (Non-Housing) Labor Share", with Sophie Piton (2019). *American Economic Review: Insights, Forthcoming*
2. "From Good to Bad Concentration? U.S. Industries Over the Past 30 Years", with Matias Covarrubias and Thomas Philippon, *NBER Macroeconomics Annual* (2019)
3. "Fading Stars", with Thomas Philippon, *AEA Papers and Proceedings* (2019)
4. "Ownership, Concentration and Investment", with Thomas Philippon, *AEA P&P* (2018)
5. "Investment-less Growth: An Empirical Investigation", with Thomas Philippon, *Brookings Papers in Economic Activity* (2017)
6. "Is There an Investment Gap in Advanced Economies? If so, Why?", with Robin Dottling and Thomas Philippon, *ECB Forum on Central Banking* (2017)
7. "Noise-Tolerant Bayesian Bisection", with Peter Frazier and Shane G. Henderson, *INFORMS annual meeting (2010)*
8. "Estimating the probability that the game of monopoly never ends", with Thomas Byuen, Eric Friedman and Shane Henderson, *Proceedings of the 2009 Winter Simulation Conference.* (2009)

WORKING PAPERS

1. "The Failure of Free Entry", with Thomas Philippon (2019)
2. 'Entry Costs and the Macroeconomy", with Callum Jones and Thomas Philippon, NBER WP#25609 (2019)
3. "How EU Markets Became More Competitive Than US Markets: A Study of Institutional Drift , with Thomas Philippon, NBER WP# 24700 (2018)
4. "Fading Stars", with Thomas Philippon, NBER WP# 25529 (2018)
5. "Declining Competition and Investment in the U.S.", with Thomas Philippon, NBER WP# 23583 (2018)

WORK IN PROGRESS

1. "Dominant Firm Advantages and Their Implications for Welfare: Evidence from 200 million Products Sold on Amazon.com", Job Market Paper
2. "Non-Banks and Lending Cyclicality", with Quirin Fleckenstein, Manasa Gopal and Sebastian Hillenbrand
3. "Capital Structure and the Labor Share", with Sophie Piton

COURSEWORK: Computer Programming (Intro and Advanced), Machine Learning, Statistical Data Mining, Optimization, Data and Systems Analysis, Industrial Organization, Simulation

SKILLS LANGUAGES: Python, Java, Matlab, Spark, R, Stata