MIT Economics

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DOCTORAL STUDIES	Massachusetts Institute of Technology (MIT) PhD, Economics, Expected completion June 2024 DISSERTATION: "Essays in International Economics and Macroeconomics"

DISSERTATION COMMITTEE AND REFERENCES

Professor Iván Werning
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Professor Lawrence D.W. Schmidt
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PRIOR EDUCATION	Universitat Pompeu Fabra Master in Economics Research	2016
	Barcelona School of Economics Master in Economics	2015
	Universitat Politècnica de Catalunya Civil Engineering	2014
	Universitat Politècnica de Catalunya Industrial Engineering	2014

CITIZENSHIP	Spanish	**GENDER**	Male (he/him)

LANGUAGES   English, Spanish, Catalan

FIELDS   Primary Fields: Macroeconomics, Finance

Secondary Fields: Labor, International

TEACHING EXPERIENCE	14.462 Advanced Macroeconomics II (Graduate) Teaching Assistant to Ricardo Caballero and Ivan Werning	2022-2023
	14.461 Advanced Macroeconomics I(Graduate) Teaching Assistant to Martin Beraja and Ivan Werning	2020-2021
	14.451 Dynamic Optimization (Graduate) Teaching Assistant to Ivan Werning and Christian Wolf	2020-2021
	15.060 Data Models and Decisions (Executive MBA) Teaching Assistant to David Gamarnik	2021-2022
	Advanced Macroeconomics (Graduate, BSE) Teaching Assistant to Jaume Ventura	2018
	International Economics (Undergraduate, UPF) Teaching Assistant to Andrea Caggese	2018
	CFIS mentor (Undergraduate, UPC)	2015

RELEVANT POSITIONS	Research Assistant to Prof. Lawrence D.W. Schmidt	2020-2023
	Research Assistant to Prof. Ivan Werning	2019-2021

FELLOWSHIPS, HONORS, AND AWARDS	Stanley Fischer (1969) Fellowship, MIT	2018-20
	La Caixa Fellowship	2018-20
	La Pedrera Foundation Fellowship	2016
	CFIS Fellowship	2012-15

RESEARCH PAPERS

"Monopsony in New Keynesian Models" (Job Market Paper)

I study how monopsonistic labor markets affect the wage and price dynamics of an economy subject to nominal rigidities in a model with on-the-job search with preference heterogeneity. I derive new implications for the Philips Curves. An increase in monopsony power, either due to reduced search effort or an increase of preference heterogeneity, flattens the wage curve. An increase of product market power, steepens it. When setting prices, firms consider the direct wage costs and the cost of hiring and retaining workers, and the second term is the main driver of inflation on the calibrated model. Higher monopsony increases the relevance of hiring cost, which coincides with wage markdown, and makes the price Philips curve more inflationary. Overall, a demand shock generates more price and wage inflation, and a bigger decline in the real wage, the more monopsonistic is the economy.

"Currency Pegs, Trade Deficits and Unemployment: A Reevaluation of the China Shock" (with Masao Fukui and Bumsoo Kim)

We study how the interaction between China's productivity growth and exchange rate peg to the US dollar affected US manufacturing, trade deficit and overall welfare. Empirically, we document that in response to similar surges in Chinese exports, countries pegging to the US dollar experienced larger declines in manufacturing and trade deficits compared to floating countries. Theoretically, we develop a dynamic model of trade featuring endogenous imbalances and nominal rigidity. Consistent with the previous evidence, we show that under an exchange rate peg, a permanent foreign productivity growth creates trade deficits and unemployment at Home, and potentially generate welfare losses. Quantitatively, we compare the realized economy with a counterfactual economy in which an identically growing China floated its currency with respect to the US dollar, and find that China's exchange rate peg is responsible for 0.4 million manufacturing job losses in 2000-2012 and 1.4 percentage points of the US trade deficit (% GDP) over the same period. The China shock still increases US aggregate welfare, but the peg reduces the welfare gains from China's growth by 32%. We consider the dynamic effects of short-run safeguard tariffs and alternative monetary policies.

"Model (non-)disclosure in supervisory stress tests" (with Ying Gao and Bumsoo Kim)

We study the Federal Reserve's problem of disclosing the models it uses in supervisory stress tests of large banks. Banks argue that nondisclosure leads to inefficiencies stemming from uncertainty, but regulators are concerned that full disclosure can lead to banks gaming the system. We formalize the intuition behind this trade-off in a stylized model where both the regulator and banks have imperfect, private ``models" about a risky asset, and the regulator uses its own model to `stress test' the investment. We show that if the regulator uses its model to test the banks' investment, full disclosure is suboptimal, and the regulator may benefit from hiding the model when the bank's model is more precise than the regulator's own model. The key idea is that hiding the regulator's model forces the bank to guess it using the bank's own models, effectively eliciting the bank's private information. We also show that if the regulator can fine-tune disclosure policies, the regulator can approximately enforce the first-best action of banks, as if the regulator fully knew all the private information held by banks. The intuition is closely related to the Cremer and McLean (1988) information rent extraction result.

RESEARCH IN PROGRESS

"Phillips Curve and Optimal Monetary Policy Targets under Imperfect Labor Reallocation" (with Masao Fukui and Bumsoo Kim)

This paper studies optimal monetary policy in a multisector economy with endogenous, costly reallocation of workers across sectors. We first provide a

sufficient condition for which labor relocation does not affect aggregate inflation – depending on the Domar weights and labor share of each sector. When this condition fails to hold, sector reallocation may create additional inflationary pressure, or deflationary pressure in response to shocks. Turning to optimal policy, the central bank no longer has one "output gap" to target when there are multiple labor types, and it faces a trade-off across aggregate inflation, relative price distortion, and relative output gaps across sectors. We use this framework to investigate the effectiveness of alternative monetary policy targets, both analytically and numerically.

"Inflation and income redistribution: evidence from tax data from 1969 to the present" (with Stavros Panageas, Dimitris Papanikolaou, John Rothbaum, Lawrence Schmidt,)

Using the tax returns of the universe of US taxpayers since 1969, this paper quantifies the long-term distribution effects of local inflation. We use cross sectional variation across metropolitan statistical areas and a wide range of covariates to study how inflation affects incomes depending on households characteristics. Results are pending to disclosure permission.

"Model Agnostic Dynamic Programming" (with Tim de Silva)

Traditional dynamic programming requires a mathematical model of the transition function of the state. Using Reinforcement Learning techniques, we develop a framework that allows more general transition functions. The modeler does not need to know the transition function as long as it can simulate realizations of it or observe realizations from data. We apply it to the income fluctuations problem. First, we show that the agent is able to learn the process and achieve the same value as the traditional method. Next, we quantify the miss optimization loss of assuming the income process is an AR1 but instead feeding the process with real income realizations.

"Wage posting and preference heterogeneity"

Both wage posting and idiosyncratic preference heterogeneity are common sources of monopsony power but interpreted independently. While both forces, in separate, lead to higher labor market power from firms, its interaction implies an increase of wage inequality. The inclusion of preference heterogeneity induces low productivity firms to reduce wages, waiting for workers that derive high utility from working with them, and raises wages of high productivity firms, since now workers can be poached from lower ranked firms. An implication of the model is that welfare inequality is lower than wage inequality.