
November 2, 2025

RESEARCH STATEMENT

I am an international macroeconomist studying heterogeneous monetary spillover mechanisms operating through the global financial markets. My research contributes to the literature on macroprudential policy designs that safeguard domestic financial stability. I am passionate about using applied econometric methods to answer macroeconomic questions, often from a historical perspective. Methodologically, I work with both applied empirical identification strategies (LP, VAR, IV, DiD, and Bayesian methods) and structural DSGE models (linearization, value function iteration, perturbation methods, and cloud computing). This broad toolkit enables me to draw insights from international economics, finance, and economic history, as illustrated by my research agenda described below.

My [job market paper](#) uses a novel shift-share instrument—developing countries’ currency composition of external debt (endogenous shares) interacted with advanced economies’ interest rate movements (exogenous shocks)—to estimate the *causal* effects of sovereign default on output loss in a local projection framework (LP-SSIV). I find sizable but non-persistent output loss (declines by 8% initially; peaks at 18% by year 2; persists until year 4; and returns to zero by year 6). Robustness checks using arrears-based partial default measures, narrative monetary shocks, and difference-in-differences estimators align with baseline LP-SSIV estimates. I also find heterogeneous default costs: countries under floating exchange rate regimes experience smaller output loss following default. I develop a probabilistic sovereign default model that naturally links corner solutions in multiple equilibria to the local average treatment effect. Imposing Fréchet tails on nominal exchange rates—motivated by occasional extreme depreciation episodes in emerging markets—I derive a shift-share representation of default probability that rationalizes my empirical design. This probabilistic approach shows how tools from the trade literature can be used to measure frictions—on both extensive and intensive margins—in international financial markets.

My second [paper](#) (draft available upon request) evaluates the credibility of inflation-targeting regimes in emerging markets. Using Bayesian VAR and EIU forecast data, I introduce a numerical algorithm to identify country-specific central banks’ objective weights on output growth, inflation, and exchange rate stability. I then estimate the implied deviations from the “optimal perturbation (OPP) statistics”—the optimal policy path under a credible inflation-target policy. I find that (i) noticeable country-specific deviations from optimal monetary policies around the 1997 Asian Financial Crisis, 2008 Global Financial Crisis, and the Covid-19 pandemic that warrant closer examination on the policy decisions during those episodes. (ii) inflation-target regimes have become increasingly credible and

effective at anchoring expectations in post-crisis periods, thereby explaining the marked decline and increased transience of inflation rates.

A third project (work in progress) examines why developing countries borrow predominantly in foreign currencies, especially in U.S. dollars. Since frictionless models imply strictly positive currency shares, the presence of zeros indicates the existence of fixed entry cost for borrowing in additional currencies. Using bilateral debtor-creditor interest rate data on new debt commitments, I will extend the Melitz model from the trade literature, featuring monopolistic competition in which fund suppliers have market power and earn markups. Then, I will quantify the selection and scale effects in adopting an additional currency denomination through well-established international trade frameworks that accommodate zero flows. I complement the structural analysis with a portfolio-optimization approach from the finance literature, featuring a mean-variance trade-off between exchange rate risks and borrowing costs. Preliminary empirical results suggest low fixed entry costs for U.S. dollar borrowing and strategic complementarities that stabilize currency denomination shares—especially with dollar dominance—over time.

As the Principal Investigator of the “[Global Price Initiative](#)” project (work in progress), I aim to extract price information from printed advertisements in historical newspapers, both in the U.S. and internationally. This ambitious data project allows me to study heterogeneous effects of macroeconomic policies (e.g., tariffs and monetary policy) by linking product-level prices across geographies to income groups over long horizons (1850–2000). My research is funded by Google Cloud Research Credits, and a preliminary research idea examines whether the staggered expansion of information access after the USPS Rural Free Delivery in the early 1900s helped prices and/or wages converge across regions.

I am passionate about mentoring undergraduate research in economics. I have actively participated in the UC Davis Undergraduate Research Fellow Program, working closely with undergraduate research assistants on cloud computing, machine learning classification algorithms, and the Bloomberg Terminal. In particular, I am working with an undergraduate student from the newspapers project to test whether exchange rate regimes help explain the UIP puzzle because in the original Fama regressions many countries were under pegged exchange rate regimes—a plausible omitted variable that may attenuate the true UIP coefficients (work in progress). We collect historical Euro-currency interest rate series from the Financial Times over 1970–1999—e.g., Belgium, Denmark, and the Netherlands—which are absent from commercial databases. The term structure of the Euro-currency market also allows us to examine whether expectations play a role in the cross-regime variation of UIP coefficients. This project is designed to be accessible to undergraduates and reflects my commitment to training the next generation of economists.