



Richmond Fed – University of Virginia Research Workshop

Summary of Presented Research

October 11, 2019
Richmond, Virginia

9:30 a.m.

Diego Legal-Cañisá

PhD Candidate, University of Virginia
*Unemployment Insurance
with Consumer Bankruptcy*

10:45 a.m.

Paul Ho

Economist, Richmond Fed
Bubbles and the Value of Innovation

12:45 p.m.

Claudia Macaluso

Economist, Richmond Fed
*Labor Market Frictions in Developing
Countries: Evidence from Peruvian Firms*

2:00 p.m.

Ana Fostel

Professor, University of Virginia
Global Collateral and Capital Flows

3:00 p.m.

Chen Yeh

Economist, Richmond Fed
*Monopsony and Concentration in the
Labor Market: Evidence from Vacancy
and Employment Data*

Since 2014, the Research Department at the Federal Reserve Bank of Richmond and the Economics Department at the University of Virginia have convened a semiannual workshop to share their latest research.

The workshop began as a way to build on the existing partnerships between Richmond Fed and UVA economists. The two institutions have enjoyed long-standing connections on the teaching side, with Richmond Fed economists teaching both undergraduate and graduate classes at UVA, as well as participating in PhD student advising. UVA faculty have been frequent visitors to the Richmond Fed, and there have been many fruitful coauthor relationships between the two groups. In addition, both institutions have a deep interest in understanding the economic forces that shape our national and regional economies. These connections spurred them to exchange research ideas more formally — on UVA's campus in the spring and at the Richmond Fed in the fall. Economists and graduate students have benefited tremendously from the dialogue with their colleagues from different areas of the economics profession.

Within this publication, you'll find summaries of the research discussed at the most recent Richmond Fed - UVA workshop on topics ranging from local labor markets to global capital flows. Both the Richmond Fed and UVA look forward to continuing and strengthening this relationship.

Unemployment Insurance with Consumer Bankruptcy

By *Diego Legal-Cañisá (University of Virginia)*

Labor market risks are the primary source of income risk for most households, and households that are more vulnerable to labor market risk are also the main users of unsecured credit markets. Two-thirds of people who file for personal bankruptcy cite lower labor incomes, quite often the result of job losses, as one of the primary reasons. It is likely then that unemployment insurance (UI) alters default risk by reducing labor income risk.

Legal-Cañisá quantitatively evaluates how UI affects unsecured credit markets and how the welfare implications of UI depend on consumer bankruptcy. Theoretically, higher UI benefits can reduce default risk since they imply higher incomes in the event of job losses. However, higher benefits also can reduce precautionary savings, encourage borrowing and unemployment, and require more taxes — all factors that would increase default risk. Looking at Chapter 7 bankruptcy rates for bordering counties from 1991–

2007 and exploiting policy discontinuities at states' borders, the author finds that bankruptcy rates fall with the maximum amount of UI available.

Legal-Cañisá constructs a general equilibrium model of unsecured consumer credit and unemployment. The model accounts for the cross-state negative relationship of bankruptcy and the maximum amount of UI for values in the range across U.S. states. He uses the model to study changes in the UI replacement rate. For low levels of replacement rate, the model predicts that the first effect dominates and more UI benefits reduce default risk and increase ex-ante welfare. But as UI increases, default risk increases and welfare falls. Increasing the replacement rate above the current 50 percent to 55 percent would increase welfare by 0.5 percent if bankruptcy were not available. (Welfare increases even beyond 60 percent.) With a bankruptcy option, however, a 5 percentage point increase reduces welfare by 1.7 percent.

Bubbles and the Value of Innovation

By *Valentin Haddad (UCLA), Paul Ho (Richmond Fed), and Erik Loualiche (University of Minnesota)*

Episodes of booming firm creation often coincide with intense speculation in financial markets, leading to “bubbles” — increases in firm entry and market valuation — followed by a crash. Haddad, Ho, and Loualiche develop a framework that reproduces this phenomenon and shows how speculation changes the social value of firm entry.

In their equilibrium model of firm entry, the authors distinguish between real spillovers and value spillovers. Real spillovers correspond to the measurement of spillovers using ex-post consequences of firm entry, such as profits or sales. Value spillovers focus instead on how agents evaluate this impact ex ante and are measured using asset prices. Under rational expectations, value spillovers are the expectation of future real spillovers. However, with speculation, investors ignore potential negative spillovers from competing firms because of their optimistic beliefs about future returns on firms in their portfolios. When speculation increases, more firms enter the market,

but investors are less concerned about competition from other firms.

Haddad, Ho, and Loualiche analyze these spillovers using the entry wedge, which they derive as the optimal entry tax of a nonpaternalistic planner who evaluates outcomes based on agents' perceived utility. The entry wedge in their model under disagreement captures value spillovers in the presence of speculation. In contrast, the entry wedge under agreement captures real spillovers. By comparing these two entry wedges, the authors compare both the efficiency in each case and the behaviors of real and value spillovers.

They show empirically that, consistent with their theory, speculative bubbles significantly reduce negative spillovers to market valuations but not to real outcomes. The data and theory together can explain why policies curtailing firm entry may not receive support, even in a situation where there appears to be excess entry and a strong business-stealing effect.

Labor Market Frictions in Developing Countries: Evidence from Peruvian Firms

By *Andrea Atencio-De-Leon (University of Illinois)*, *Munseob Lee (University of California San Diego)*, and *Claudia Macaluso (Richmond Fed)*

Atencio, Lee, and Macaluso note that many labor markets in low-income countries share some stylized facts. Unemployment rates tend to be low, but many workers hold informal jobs, multiple jobs, or are self-employed. The wage/hours locus is negative, and age-earnings profiles are flat. Turnover is high, and there are large dispersions in productivity.

To investigate labor market friction's role in explaining these facts, the researchers analyze 2017–18 surveys of 1,000 firms and 5,000 workers in urban Peru. The firms provide descriptive information — such as size, sector, and products — as well as information regarding their most recently recruited positions, recruiting methods, vacancy durations, vacancy yields, and obstacles to hiring. Workers provide information about their educational backgrounds, employment histories, search methods, job satisfaction, skills, and self-perceived skill mismatches. The researchers find little evidence of meeting frictions or onerous hiring costs. Instead, they

discover widespread skill mismatch. Employers reported that 67.7 percent of their new hires have bachelor's degrees, but only 33.4 percent of the jobs they filled required bachelor's degrees. Likewise, 18.5 percent of the workers reported that their jobs could be performed by someone with less education. Employer responses also indicate mismatch along other dimensions, such as levels of experience and specific skill requirements. Likewise, one in four employees reported underestimating the importance of specific skills in their jobs. In addition to significant evidence of mismatch, the researchers find a large role for informal recruiting practices — such as referrals and network hiring — and some evidence of bias among hiring managers.

The researchers plan to use the survey data to calibrate a model and quantify the contribution of labor market frictions to sluggish economic growth in low-income countries. This project is part of an on-going effort to collect data on hiring and skills in developing economies.

Global Collateral and Capital Flows

By *Ana Fostel (University of Virginia)*, *John Geanakoplos (Yale University)*, and *Gregory Phelan (Williams College)*

In recent decades, there has been a proliferation of financial innovation and dramatic increases in gross international financial flows among rich countries with similar levels of financial development. Fostel, Geanakoplos, and Phelan note that this rise in financial integration correlates with increased comovement and volatility through banking flows and securitized markets, particularly in response to financial shocks.

In a National Bureau of Economic Research working paper, presented at the workshop by Fostel, the authors theorize that cross-country differences in the ability to use assets as collateral can account for both observations. They use a general equilibrium model with incomplete markets, collateralized lending, and tranching in which two countries — “Home” and “Foreign” — are identical except for how their financial systems are able to use assets as collateral. Home's financial system allows investors to use a risky asset as collateral to issue state-contingent financial promises.

In contrast, Foreign's investors can use a risky asset (with identical payoffs as the Home asset) as collateral to issue only noncontingent promises (collateralized debt). This difference in ability to collateralize financial promises gives rise to different abilities to create risk-free and negative-beta financial securities. (Only Home can tranche the asset into negative-beta securities.) Financial integration gives Foreign access to attractive Home financial assets, and cross-border flows arise in both directions as a way to share scarce collateral and to trade contingent claims.

The authors conclude that the difference in the ability to use collateral alone is enough to generate financial flows between the two countries. Moreover, Home always runs a current account deficit proportional to the positive collateral gap. Their results imply that collateral-driven flows increase asset price volatility globally and lead to collapses in flows following bad news about fundamentals.

Monopsony and Concentration in the Labor Market: Evidence from Vacancy and Employment Data

By Brad Hershbein (*W.E. Upjohn Institute for Employment Research*), Claudia Macaluso (*Richmond Fed*), and Chen Yeh (*Richmond Fed*)

Is there monopsony in the U.S. labor market? Hershbein, Macaluso, and Yeh answer this question by estimating plant-level markdowns in manufacturing and by calculating market-level concentration indexes for all U.S. employers. If labor markets are perfectly competitive, then each plant's marginal dollar should go to its workers. This implies that markdowns, which reflect the wedge between a plant's marginal revenue product of labor and its wage, should be equal to unity. If a plant exerts its market power for labor, however, then it keeps a fraction of each marginal dollar that comes at the expense of its workers. As a result, markdowns are an ideal measure of monopsony.

The authors quantify markdowns by building on state-of-the-art industrial organization estimation techniques. Their markdown research focuses on U.S. manufacturing sectors because rich micro-level data

on outputs and inputs are required and only available in administrative data for U.S. manufactures. They conclude that the U.S. labor market is far from perfectly competitive: they find that the average plant charges a markdown of 1.788. This implies that workers only receive fifty-six cents on each dollar of revenue generated. Moreover, there is a substantial amount of markdown dispersion across firms — with a high of 3.032 in computer and electronic products and a low of 1.308 in nonelectrical machinery. The authors also document that markdowns are positively correlated with firm size — implying that large employers exert more labor market power on average.

Lastly, the authors conclude that labor market power has not been rising in the U.S. economy. This is corroborated by their evidence on labor market concentration, which has been declining in the past forty years.