Interest Bearing Notes | APRIL 2022

A Finance & Private Sector Development Research Newsletter

What's new on our website

Policy Research Talk: Data from secondary markets: Insights and implications for development
In a recent Policy Research Talk, our own **Alvaro Pedraza** discussed the role of global and domestic investors in capital markets, using detailed information on the transactions of all investors participating in the Colombian Stock Exchange. Alvaro tackled several questions, such as “What is the response of different classes of foreign investors to monetary policy shocks or to equity/debt index rebalancing?” The answers to these questions can provide greater insight into the risks faced by emerging markets and can help guide policymakers and regulators on how to better manage risks.

World Bank research

Firm resources, strategies, and survival and growth during COVID-19
While much research has been done on firm characteristics and firm performance during the pandemic, little is known about how firms adjusted their strategic choices during this turbulent time. Drawing on the organizational resources and strategic change literature, **Sheng Fang, Chorching Goh, Shaomin Li**, and IBN co-editor **Colin Xu** use World Bank Enterprise Surveys and the COVID-19 Follow-up Enterprise Surveys to examine how different endowments in organizational resources affected firm performance as measured by their survival status and sales growth, and how those resources interacted with and affected strategic responses in the supply of inputs, responses to changing demand, liquidity management, and innovation. They find that larger firms, firms with foreign or state ownership, and subsidiary companies performed better during the pandemic by more effectively stabilizing supply, managing liquidity, and fostering new product development. Chief executive officers with longer tenure improved survival rates. Firms in richer countries have coped with the pandemic better and stringent government COVID-19 control policies have tended to hurt firms’ performance.

Targeting in tax compliance interventions: Experimental evidence from Honduras
Tax authorities often use low-cost communication with taxpayers to encourage voluntary compliance. In a

recent paper, **Giselle Del Carmen, Edgardo Enrique Espinal Hernandez**, and **Thiago Scot** assess how taxpayers responded to a communication intervention in Honduras. The authors partnered with the Tax Authority (SAR, for Servicio de Administración de Rentas) to implement a randomized experiment with about 32,000 taxpayers considered to be at risk of noncompliance based on a recently developed risk model. Taxpayers in the control group received a reminder about the income tax filing deadline – a typical message sent by SAR. In contrast, those in the treatment group were informed that the tax authority observes specific transactions they engaged in, implying knowledge about (part) of their realized revenue. SAR administrative data shows that, on average, the intervention had no effect on tax compliance. Taxpayers assigned to receive the treatment were no more likely to file income taxes, declare higher revenues, or declare higher taxable income. However, an analysis of heterogenous treatment effects finds that the intervention increased the probability of filing taxes for taxpayers with low ex-ante noncompliance risk. The intervention also increased declared revenue for these taxpayers, but this increase in gross revenues was accompanied by an increase in claimed deductions resulting in a modest increase in taxable income. The finding that only low-risk taxpayers responded to the intervention is at odds with the current practice of the tax authority, which focuses communication on medium- and high-risk taxpayers. The results thus suggest that, while models to predict risk of non-compliance are an important tool for tax authorities, they are not sufficient to determine targeting of communication campaigns.

A gender employment gap index with an application to the Pacific Islands

Steven Pennings has developed a new Gender Employment Gap Index (GEGI) based on employment rate data which measures the long-run GDP per capita gains from increasing women's employment rates to those of men. The basic GEGI is simply the gap between male and female employment as a share of total employment, which Steven shows is equivalent to the gain in long run GDP (or long run GDP per capita) from an exogenous increase in female employment to erase gender employment gaps under standard neoclassical growth assumptions, while holding other factors constant. A variant of the basic GEGI accounts also for the quality of male versus female employment (the so-called full GEGI). Unlike alternative approaches, this simple, transparent measure of the growth impacts of eliminating gender employment gaps is available for almost every country and can be calculated easily in a spreadsheet from employment rates using closed-form expressions. While the GEGI is not intended to be the most accurate or comprehensive measure of gender employment gaps in countries with very good data, it does provide approximate estimates of GDP impacts in 185 countries and is highly correlated with more comprehensive measures. Moreover, the GEGI indicates that the potential gains from closing gender employment gaps are large – the average gain in long-run GDP per capita would be around 19%, and the largest gain would be 85%. Across eleven Pacific Islands for which no other estimates of gender employment gaps exist, and thus provide an illustration of the GEGI's usefulness, the average gain in GDP per capita would be 22%.

Our eclectic guide to recent research of interest

Indirect effects of access to finance

A new paper by **Jing Cai** and **Adam Szeidl** measures the indirect effects of access to loans using a field experiment with 3,172 small and medium enterprises (SMEs) in China. The authors collaborated with a large bank that introduced a new loan product for SMEs which provided better terms than existing alternatives, primarily in that it did not require collateral. The authors first randomized treatment intensity across 78 local markets: 37 markets had 80% treated firms, 10 markets 50% treated firms, and 31 markets no treated firms. Within treatment markets, they then randomized which firms were treated. Treated firms had a loan officer visit once a month for a year, to explain the loan terms and offer help filling out the application. Follow-up surveys were conducted two, three, and seven years after the intervention. Treated firms were 28 percentage points more likely to take-up the new loan product than control firms. Relative to untreated firms in control markets, treated firms experienced higher sales growth, pointing to a positive direct effect of access to loans. In contrast, relative to untreated firms in control markets, untreated firms in treated markets experienced lower sales growth, revealing negative indirect effects of access to loans. The size of these effects is approximately equal, suggesting zero impact on market-level revenue. Increased access to finance also had a positive direct effect on business practices, service quality, and consumer satisfaction, and a negative effect on prices. None of these effects were offset by indirect effects, suggesting net gains in consumer surplus.

Invisible primes: Fintech lending with alternative data

Using a unique new dataset from a major fintech lender (Upstart), **Marco Di Maggio**, **Dimuthu Ratnadiwakara**, and **Don Carmichael** study whether its automated underwriting approaches, which are reliant on algorithms and alternative types of data (such as on education, employment history, monthly cash flows, and type of device used to apply for credit), can reduce loan origination costs, lower rates for borrowers, and identify borrowers currently overlooked by standard measures of creditworthiness, such as credit scores. The dataset covers rejected as well as funded loan applications and provides panel information on both funded and rejected applicants. Importantly, the authors are also able to assess the impact of Upstart's underwriting model on credit access by comparing its outcomes to counterfactual ones based on a traditional credit scoring model developed in coordination with the U.S. Consumer Financial Protection Bureau (CFPB), which has been used for regulatory reporting purposes. The Upstart approach provides substantially more predictive power with respect to likelihood of default than the traditional credit score model, which translates into broader access to credit. The beneficiaries of the Fintech underwriting approach are so-called 'invisible prime' borrowers, highly creditworthy low-credit score applicants who would otherwise likely be denied credit under traditional underwriting models or subjected to high interest rates. These invisible primes, typically younger individuals or recent immigrants, have thin credit files based on short credit histories, but many have advanced degrees and salaried jobs, and lending to them is shown to be profitable for Upstart. While the authors acknowledge that their analysis does not address concerns about using alternative information in lending decisions with respect to privacy or statistical discrimination, it does demonstrate that alternative data models deliver quantifiable benefits to both borrowers and lenders, and it calls into question how traditional credit scores are computed and used.

Overdraft fees: The link between the traditional and alternative financial systems

"High-to-low" reordering of transactions happens when a bank processes a transaction larger than the balance in the checking account before a smaller transaction (lower than the balance) even if the smaller transaction was posted earlier. High-to-low reordering would thus cause the client to incur two overdraft fees compared to just one under chronological ordering. In this case, clients may be forced to borrow from a payday lender to bring their bank balances out of the red. Using several novel data sources, including multiple class-action lawsuits resulting in mandatory changes to this practice, coupled with credit bureau and payday lending data, **Marco Di Maggio**, **Angela Ma**, and **Emily Williams** investigate whether aggressive pricing of bank overdrafts via high-to-low reordering contributes to alternative system borrowing and overall credit health deterioration among low-income consumers. Comparing the behavior of clients in zip codes where banks were banned from using high-to-low reordering to zip codes where banks were sued but not banned, the authors find that after banks cease high-to-low reordering, low-income individuals reduce borrowing from alternative lenders. These consumers increase consumption, experience long-term improvements in overall financial health, and gain access to lower-cost loans in the traditional system. Although policymakers focus on ensuring that poorer areas are served by traditional financial institutions, these results suggest that bank practices may be harmful to precisely consumers in these areas and may be the original reason they are forced to turn to alternative credit.

What does economic theory say about popular financial advice?

In a recent working paper, **James Choi** surveys the advice given by the fifty most popular personal finance books and compares it to the prescriptions of normative academic economic models. The survey covers advice on asset allocation, savings rates, the purchase of illiquid assets (i.e., housing) leaving consumers with almost no liquid wealth, non-mortgage debt management and mortgage choices, among others. The author finds that popular advice frequently departs from normative principles derived from economic theory, which he argues should call into question some of the assumptions made by the models and motivate new hypotheses about why households make the financial choices they do.

Official and excess COVID-19 mortality

Joshua Aizenman, **Alex Cukierman**, **Yothin Jinjarak**, **Sameer Nair-Desai**, and **Weining Xin** document huge differences between the official and excess mortality rates for the two COVID-19 years 2020-2021. They note that richer countries have the highest official mortality rates but also have better statistical capacity, as well as better accountability. They then use several sources of data, including the Economist's tracker for excess COVID-19 deaths, to examine the covariates of the ratio of cumulative excess to official COVID-19 mortalities (the E/O ratio). Based on data from 140 countries, they find that the E/O ratio is lower in countries with higher vaccination rates and those that score higher on measures of voice and accountability.

Upcoming events and miscellanea

Call for papers: Annual Bank Conference on Development Economics 2022 – Recovery, Reform, and Business Environment

The Annual Bank Conference on Development Economics (ABCDE), organized by the World Bank's Development Economics (DEC) Vice Presidency, will be held online using a Zoom platform on June 20–24, from 9:00 am–12:00 pm (EST). The theme of ABCDE 2022 is "Recovery, Reform, and Business Environment," with a key focus on how enterprises are recovering from the pandemic crisis, how the business environment was affected by the pandemic, and reform prospects for the future. Paper submissions are due by **April 29, 2022**.

Call for papers: MIT GCFP 9th Annual Conference on "Building and Regulating the New Financial Infrastructure"

MIT's Golub Center for Finance and Policy (GCFP) is inviting paper submissions for its 9th annual conference this year on the theme of Building and Regulating the New Financial Infrastructure. The focus will be on how new technologies are reshaping financial services and how regulatory policies must be rethought and reshaped. This conference will be held in person at the MIT Media Lab in Cambridge, MA on October 19 and 20, 2022. The deadline for submitting a paper is **May 15, 2022**.

Call for papers: 11th EBA Policy Research Workshop on "Technological Innovation, Climate Finance and Banking Regulation"

The 11th European Banking Institute (EBA) Policy Research Workshop will take place in Paris on October 26 and 27, 2022. This workshop will explore the impact of technological innovation and climate finance on banking regulation. The organizers invite submissions of policy-oriented, preferably empirical, research papers. Researchers from supervisory authorities and central banks are especially encouraged to submit papers for presentation. The submissions deadline is **June 24, 2022**.

Happy reading!

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