Interest Bearing Notes **Vol. 21 No. 4**

July 2018

Contents

The next issue of Interest Bearing Notes will appear in September 2018 so please send comments, suggestions (such as your own or others' interesting research), and requests to be added to our distribution list, to Bob Cull (mailto: rcull@worldbank.org) by September 10th.

IBN is a product of the Finance and Private Sector Development Team in the World Bank's Development Research Group. Our working papers and descriptions of research projects in progress can be found, along with a list of forthcoming seminars and conferences, on our web page http://www.worldbank.org/en/research/brief/finance-private-sector

I What's new on our website

Do consulting services promote small and medium enterprise growth?
A new impact note discusses the effects of a program that provided matching grants for consulting services to small and medium-sized enterprises in Mexico. IBN co-editor, **Miriam Bruhn**, together with **Dean Karlan** and **Antoinette Schoar** wrote a working paper (available here) on this program a couple of years ago, that we featured in the IBN at the time. The new impact note summarizes results that include two additional years of data, which show that the program had long-lasting effects on employment.
http://documents.worldbank.org/curated/en/648521527675721245/Do-consulting-services-promote-small-and-medium-enterprise-growth

II World Bank research

The impact of technical assistance for rural credit unions in Mexico

IBN co-editor **Miriam Bruhn** and our own **Claudia Ruiz**, together with **Rekha Reddy**, study the impact of a program that provides grants for technical assistance on the interest rates and outreach of credit unions in Mexico. Through the program, credit unions financing rural borrowers received grants from the development finance institution FND in different years, starting in 2005. The authors obtained detailed financial information for all credit unions operating in Mexico from 2002 to 2012 from the National Banking and Securities Commission (CNBV). They merged this information with an FND-provided list of credit unions that obtained a grant through the program. They estimate the effects of FND grants using difference-in-difference estimation that relies on the comparison of never treated and ever treated credit unions over time, as well as by considering the timing of treatment. The authors also use propensity score matching to create treatment and control groups that have identical pre-program means and changes in outcomes variables. To check the robustness of the results they implement four different matching techniques. The analysis shows that the program lowered lending interest rates by up to 2.6 percentage points (from a pre-program average of 17.8 percent). This drop seems to be due to reduced operating costs and a lower nonperforming loans ratio. That is, the program helped credit unions to make their operations more efficient and to better screen and monitor borrowers. Results also show an increase in returns-on assets (ROA) due to the program. Finally, the program increased the value of the loan portfolio by about 50 percent.
http://documents.worldbank.org/curated/en/591351529583939227/Sowing-the-seeds-for-rural-finance-the-impact-of-support-services-for-credit-unions-in-Mexico

The speed of justice

In a new paper, **Florence Kondylis** and **Mattea Stein** use detailed multi-year data on legal caseloads in Senegal to study the impact of a simple procedural reform on the efficiency and quality of adjudication. The analysis combines within-court variation in coverage and a staggered rollout of the policy to estimate causal impacts of the policy change. The results show that the reform significantly reduced procedural formalism and did not lead to adverse impacts on the quality of legal decisions. There is a substantial reduction in the length of the pre-trial stage of nearly 0.3 standard deviations, and a significant increase in the number of desk-rejections and fast-tracked cases. These gains in speed do not appear to come at the cost of quality, as measured by the completeness of assembled evidence, court appeals, and perceptions of all parties involved. Finally, the paper uses firm-level surveys to show improvements in perceptions of the justice system. These results suggest that simple procedural changes in the way legal cases are processed through the system can have valuable impacts on the levels of procedural complexity and bureaucratic inefficiency.
http://documents.worldbank.org/curated/en/455021521720861143/The-speed-of-justice

Technology, taxation, and corruption: Evidence from the introduction of electronic tax filing

Oyebola Okunogbe and **Victor Pouliquen** study the impact of electronic tax filing on

compliance costs, tax payments, and bribery using a field experiment among firms in Tajikistan. The authors apply an encouragement design methodology where a randomly selected set of firms were invited to in-depth training on e-filing and logistical help in completing the different steps involved in the registration process. The results show that firms that e-file have lower compliance costs, spending five fewer hours each month on fulfilling tax obligations. There are no significant average effects of e-filing on tax or bribe payments, but significant heterogeneity exists across firms by their baseline likelihood of tax evasion. Among firms previously more likely to evade, e-filing doubles tax payments, likely by disrupting collusion with officials. Conversely, among firms less likely to have been evading, e-filing reduces tax payments, suggesting that officials had previously required them to pay more. These firms also pay fewer bribes, as e-filing reduces opportunity for extortion. Overall, these results suggest that e-filing reduces compliance costs and makes the distribution of tax payments across firms more equal. The findings also highlight the importance of pre-existing heterogeneity that can strongly influence the effectiveness of tax policy reforms.
http://documents.worldbank.org/curated/en/906671526994655975/Technology-taxation-and-corruption-evidence-from-the-introduction-of-electronic-tax-filing

III "FYI": Our eclectic guide to recent research of interest

Can state-owned bank lending raise the incomes of the poor? Evidence from Brazil
Daniel Da Mata and **Guilherme Resende** study the economic effects of expanding credit from a state-owned bank, BNB, on rural areas in the northeast of Brazil. BNB lends money from a government fund to two areas in the northeast: the semiarid and the Sudene area. A quota specifies that each area cannot receive more than 50% of the funds. This quota is binding for the Sudene area, but lending to the semiarid area has historically been below the quota. In 2005, the government redefined the border of the semiarid area, now including 102 municipalities that were previously part of the Sudene area, allowing BNB to expand lending in these municipalities. To measure the effects of this expansion, the authors use a difference-in-difference strategy where the 102 redefined municipalities are the treatment group and 99 municipalities from the Sudene area that border the redefined municipalities are the control group. Based on data from various administrative and statistical office sources covering the years 2000 through 2010, the authors show that, after 2005, the number of BNB lending operations did indeed increase in redefined municipalities, relative to control municipalities. This increase in credit comes from borrowers in the livestock sector. There is no accompanying increase in defaults on BNB loans, which may be because borrowers get a discount on their interest rate if they pay on time. Further results show an increase in the number of goats held in treatment municipalities, which are particularly suited for the local climate conditions compared to cows or sheep. While there is no effect on GDP or average per capita income, census data show a 3 to 4 percent increase in the per capita income of poor households. The findings thus suggest that in the northeast of Brazil, state-owned bank lending increased the incomes of the poor (by allowing them to buy goats).
https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnxkYW5pZWxkZGFtYXRhfGd4OjIyYzljODhlZDYxZDQyZmY

Understanding the decline in group lending by MFIs

Chris Ahlin and **Matthew Suandi** shed new light on the factors underlying the decline in group liability lending in microfinance. Using data from 331 microfinance institutions (MFIs) from 2008 to 2014, the authors show first that, controlling for characteristics of the MFIs and the environments in which they operate, there is not a significant general decline in group lending. However, reliance on individual liability loans increases as MFIs age, a sign perhaps that experience gained through group lending with individual borrowers, and knowledge about the overall borrowing population, enables lenders to better tailor loans to individual needs while avoiding the additional costs that group lending entails (such as attendance at regular meetings). The lending environment could also matter – borrowers in high-growth, high-income areas may be more likely to repay loans because they generate higher returns on their projects, thus decreasing the need to rely on group enforcement mechanisms to ensure high repayment rates. Moreover, the group lending arrangements may be especially constraining for such borrowers. And indeed, Chris and Matthew find that MFIs operating in economies with higher growth rates and average incomes tend to use individual lending more frequently. These patterns are robust to the inclusion of MFI fixed effects and alternative estimation techniques designed to disentangle age and time effects (such as the Hausman-Taylor estimator). In all, the findings indicate that group lending remains useful in overcoming obstacles to lending in challenging environments, and that the trend toward individual lending is consistent with MFIs having gained experience (often via group lending) necessary to overcome the information asymmetries, enforcement limitations, and weak/latent social capital that prompted the use of group lending methods in the first place.
https://msu.edu/~ahlinc/research/GLdet.pdf

Microcredit contracts, risk diversification and loan take-up

While the Ahlin/Suandi results help us understand why MFIs find group lending advantageous in developing economies, a related paper by **Orazio Attanasio**, **Britta Augsburg,** and **Ralph De Haas** provides new theory and evidence indicating that joint liability loans may also be especially attractive to borrowers in those contexts. The theory shows that risk-averse borrowers who value a long-term relationship with their lender are more likely to take up a loan to finance a risky investment project when offered a joint-liability contract, rather than an individual-liability one. While take-up rates decline as the risk of the project increases for both types of contracts, the effect is more muted for joint-liability contracts, because joint liability offers borrowers a way to diversify risk and to reduce the chance of losing access to future loans. Testing the theory is challenging because it requires exogenous variation in the liability structure that is offered to borrowers, in addition to measures of potential borrowers' own perceptions of the investment risks that they face. Fortunately, the authors can rely on their RCT among poor women in Mongolia in which individual liability loans were offered in 15 randomly assigned villages, group liability loans in 15 other, and no loans in 10 others. At baseline, the authors also asked potential borrowers questions about the purpose of their prospective loan. If it was to be used for an investment project (and a high share of them were), a series of follow-up questions asked about how much future revenue the project was likely to yield. From those answers, they constructed a measure of subjective risk perceptions at the individual level. Their empirical

findings confirm their theoretical predictions – the probability of take-up was lower in villages where perceived risks were higher, but this effect was almost fully offset in villages where joint-liability loans were offered. The authors close with a plea for more research that examines how the design of microcredit contracts can contribute to higher take-up rates and possibly stronger impacts than has been found in the literature to date.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2771139

A theory of equality before the law
What explains the emergence of equality before the law? **Daron Acemoglu** and **Alexander Wolitzky** propose a new theory in which society can incentivize "effort" in three ways: community enforcement by the threat of withdrawal of future cooperation; coercive punishment, but with favorable treatment of elites; and coercive punishment, but with equal treatment of elites and non-elites ("equality before the law"). Starting from a position of non-equality before the law, why would elites ever give up favorable treatment in law enforcement? The authors presume two key ingredients: that effort on the part of both elites and non-elites is important for a society's development, and that these two types of effort are complementary. Drawing on several historical episodes, they then show that rapid changes in circumstances may make this situation more likely: when the extent of coercion that can be used by elites to enforce the law is further limited (such as by democratizing the availability of weapons to the masses), when the returns to effort rise sharply (such as when there is an external invasion that threatens the elites' interests, as in the case of Commodore Matthew Perry sailing into the Bay of Tokyo in 1853-54), or when the number and the power of non-elites rise sharply (as in the case of England in the 17th and 18th centuries) and, more generally, when economic inequality decreases.
http://www.nber.org/papers/w24681

Inter-city competition, industrial revolution, and the big divergence
Why did the Industrial Revolution (IR) happen in England? Some have argued that it was due to market size and, indeed, England's market was larger than that of countries in continental Europe before the IR. But if market size were the sole determinant, then why didn't China, which had a much larger market than England, experience the IR first? **Klaus Desmet**, **Avner Grief**, and **Stephen Parente** argue that the key driving force for the IR was inter-city competition rather than the size of the national market. Their key insight is that craft guilds had incentives to block new labor-saving technologies, and could do so when there was no strong inter-city competition. In that case, the market was limited to the city, and technologies that destroyed jobs would not offer a sufficient gain in profitability, but definitely would encounter fierce opposition from craft guilds. However, with strong inter-city competition—that is, when nearby cities provided effective demand for a given city's products—producers could reap huge benefits. And these low-cost producers would have sufficient profits to compensate for job losses associated with new technologies. Measuring inter-city competition using population in other cities within a 20-km radius (and other related measures), the authors confirm that such competition was significantly greater in England than in China. They also offer evidence consistent with their story of how craft guilds' reactions to innovations changed before and after fierce inter-city competition arose

in England, and offer further modelling and calibration to bolster their case. http://www.nber.org/papers/w24727

IV Upcoming events and miscellanea

Calls for papers

The XIII Annual Conference on Financial Stability and Banking of the Banco Central do Brasil is taking place in Sao Paulo, Brazil, on October 1-3, 2018. The organizers encourage submission of theoretical and empirical research on financial stability, banking, financial intermediation and innovation, prudential regulation, international finance, financial crises, challenges to macroprudential policy, asset pricing and financial modelling. The deadline for submitting a paper is August 3, 2018. More details are posted here.

The 2018 Paris Financial Management Conference will take place at the IPAG Business School on December 17-19, 2018. The conference aims to bring together academics, practitioners and policymakers sharing interests in corporate finance, financial management, and financial markets. The organizing committee welcomes submissions in all areas of financial management, though the deadline for submission is soon, July 31. https://pfmc2018.sciencesconf.org/

Happy reading!

Your editors Miriam Bruhn (mbruhn@worldbank.org), Bob Cull (rcull@worldbank.org), Colin Xu (lxu1@worldbank.org), and Bilal Zia (bzia@worldbank.org).