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The next issue of Interest Bearing Notes will appear in November 2017 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 November 8th.

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

Understanding financial education: What works, what doesn't, and what's next?
IBN co-editor **Bilal Zia** recently gave a Policy Research Talk on what we have learned from studies of financial education programs. Financial education is important because poor households are unlikely to reap the full benefits of greater financial access without the tools to make good financial decisions. However, studies have shown that generic classroom-based financial education for adults often does not work, i.e. it does not lead to improved financial behavior. A new wave of research is now exploring approaches to financial literacy training that are more engaging, entertaining, and experiential.
http://www.worldbank.org/en/news/feature/2017/08/02/redesigning-financial-education-to-engage-audiences-is-delivering-results

II World Bank research

Job fairs: Matching firms and workers in a field experiment in Ethiopia

Girum Abebe, **Stefano Caria**, **Marcel Fafchamps**, **Paolo Falco**, **Simon Franklin**, **Simon Quinn**, and **Forhad Shilpi** study matching frictions for youth employment in Addis Ababa, Ethiopia. They report on a randomized control trial conducted with about 500 firms and 4,000 young, educated job-seekers. The authors randomly selected about 250 firms and 1,000 job seekers to be invited to job fairs, with the other firms and job-seekers serving as a control group. The usual method of job search and recruitment in this setting focuses on job vacancy boards, where firms post vacancies. Workers visit these boards, apply selectively, and firms assess workers based on their CVs. This process is subject to high search costs for workers and information asymmetries because of the limited information contained in CVs. The job fairs implemented as part of the study were designed to lower job search and recruitment costs by bringing workers and jobs together directly. The authors estimate that 75% of workers at the fairs had an interview with a recruiter. In total, the fairs led to 105 job interviews. However, these interviews led to only 14 accepted jobs. The paper explores reasons for this low hiring rate, and finds significant evidence for mismatched expectations: about wages, about firms' requirements, and the average quality of job-seekers. What do firms and workers learn from their (disappointing) experience at the job fairs? Data from follow-up surveys suggests that both firms and workers invest more in formal job search after the fairs. Firms increase their advertising and recruitment at the main job vacancy boards. Workers increase their job search at those boards. Job-seekers also adjust downwards their reservation wages to more realistic levels.
http://documents.worldbank.org/curated/en/823481496862668759/Job-fairs-matching-firms-and-workers-in-a-field-experiment-in-Ethiopia

Switching regulation and long-term investment by pension funds

Pension funds are looked at as an important source of long-term capital for many countries, but restrictions on the asset classes in which funds can invest, relative performance benchmarks which encourage herding by fund managers, and fee structures and manager profits based on short-term performance rather long term gains may all incentivize investment in short-term and liquid assets. Our own **Alvaro Pedraza**, together with **Olga Fuentes**, **Pamela Searle** and **Fiona Stewart**, examines the development of pension fund holdings in Chile, Colombia, Costa Rica, Estonia, Hong Kong SAR, China, Mexico, Peru, Poland, and Romania. While the general trend in pension funds' asset holding has been in the direction of longer-term assets as they mature, the authors investigate how changes in the ease with which pension holders can switch between managers and across the funds of a given manager are related to short-term investment. Their main finding is that greater movement between pension fund providers and between portfolios is, in fact, linked to greater holdings of short-term, liquid assets, which fund managers do in order to manage redemption risks. This conclusion is also supported by the authors' evidence from quasi-experiments in Chile and Colombia, where switching rules were recently relaxed. The evidence also indicates that frequent switchers end up obtaining lower returns and thus reduce their retirement income. By compelling fund managers to hold short-term assets, those switchers also impose a negative externality on the returns of other fund members. Among other policy recommendations, the authors urge administrative controls to prevent fraudulent switching, clearer performance and cost comparisons across funds, tighter supervision of the advertising and marketing of funds, and tinkering with the financial incentives of sales agents so that they

offer advice in the fund holders' best interests.
http://documents.worldbank.org/curated/en/289981499787589121/Pension-funds-and-the-impact-of-switching-regulation-on-long-term-investment

Complex software and job growth by occupation and skill
A key concern is whether increasing automation and advances in technology could hinder job growth in general and hurt low-skilled workers in particular. So far, most academic attention has focused on the effects of automation. However, **Rita Almeida**, **Ana Fernandes** and **Mariana Viollaz** examine how the adoption of complex software affects the skill content of occupations. They use data from firms in all sectors from 2007 to 2013 in Chile, a country with a high level of income inequality. They find that the adoption of complex software led to more jobs among administrative workers and unskilled production workers, a lower share of skilled production workers, an increase in the prevalence of routine and manual tasks, and a corresponding reduction in the prevalence of abstract tasks. The observed effects are mainly driven by the adoption of advanced technology in sectors characterized by low worker education levels and productivity. To address the endogeneity of technology adoption the authors employ an instrumental variable approach, using household-level data to construct measures of the regional use of internet and communication technology as their instrument. The research suggests that the adoption of advanced technology actually might benefit unskilled workers and foster greater economic inclusion in some contexts.
http://documents.worldbank.org/curated/en/456621498249925452/Does-the-adoption-of-complex-software-impact-employment-composition-and-the-skill-content-of-occupations-evidence-from-Chilean-firms

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

Benefits and risks of self-employment vs. low-skill manufacturing jobs
A recent paper by **Christopher Blattman** and **Stefan Dercon** compares the benefits and risks of self-employment vs. low-skill manufacturing jobs. The authors collaborated with five Ethiopian industrial firms to randomize entry-level job applicants into one of three experimental groups (1) a treatment group that received an industrial job offer, (2) a treatment group that received an entrepreneurship program including five days of business training, as well as an unconditional cash grant of $300, and (3) a control group. Follow-up surveys conducted 11 and 13 months later show that the industrial job offer did not increase total hours worked relative to the control group, but applicants who received this offer worked more hours in formal vs. informal employment than the control group. However, the industrial job offer had little impact on income due to lower wages. Most applicants quit the sector quickly, finding industrial jobs unpleasant and risky. Indeed, the follow-up surveys suggest that even short spells in industrial jobs resulted in significant increases in physical health problems. Meanwhile, the entrepreneurship program increased both total hours worked and income and had no negative impact on health. Applicants in the entrepreneurship program group worked significantly fewer hours in an industrial job than the control group. The authors conclude that, when the barriers to self-employment were relieved, applicants appear to have preferred entrepreneurial to industrial work.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2843595

Information, demand, and the growth of firms: Evidence from a natural experiment in India
Robert Jensen and **Nolan Miller** study whether lack of information about markets, in particular high search costs for consumers, leads to sub-optimal growth of firms in developing countries. They hypothesize that because of high search frictions it is often difficult for consumers to learn about differences in quality across markets, which results in most consumers buying exclusively from their local market and sellers selling exclusively to their local customers. The authors exploit a plausibly exogenous spread of mobile phones in Kerala, India, to test whether relaxing information and search costs leads to changes in the make-up and growth of firms in local boat building markets. Their results show that the highest quality builders gain market share and grow in size after the shock, which shifts the industry from a large number of very small firms to a smaller number of larger firms Â– a reduction in firm count of almost 60 percent. The lower quality firms exit. They also find improvements in productivity and efficiency among surviving firms, as well as greater labor specialization. Ultimately, these gains are passed onto consumers in the form of lower prices per year of boat-life. These findings suggest that reducing informational frictions for consumers and firms can contribute to growth independent of improvements in credit access or other firm-level enablers.
https://faculty.wharton.upenn.edu/wp-content/uploads/2017/01/FirmsPhonesJensenMillerFinal.pdf

Interfirm relationships and business performance
Jing Cai and **Adam Szeidl** study the effect of business networks on firm performance through a randomized control trial in China. The treatment involved organizing small firms into monthly meeting groups where managers could share business information, learn from peers, and create business partnerships. These meetings led to significant improvements in firm revenues, profits, and management practices. The analysis further tests mechanisms of impact and finds that firms which, by chance, were paired with successful firms grew faster, hence suggesting peer effects are important. Further evidence suggests that peer effects operate both through learning from and partnering with successful peers. From a policy perspective, the findings of the paper suggest that differences in business networks may explain some of the large observed heterogeneity in firm performance in developing countries.
http://www.nber.org/papers/w22951

Deposit insurance and monitoring: Evidence from the creation of the FDIC
Haelim Park Anderson, **Gary Richardson**, and **Brian Yang** use bank-level data from New York from 1929 to 1938 to examine the effects of changes in U.S. deposit insurance on depositors' monitoring of banks. The Banking Acts of 1933 and 1935 shaped the Federal Deposit Insurance Corporation (FDIC) and thus the authors compare depositor behavior from 1929 to 1932 with that from 1935 to 1938, after the deposit insurance system had been fully established. New York banks with state charters accepted both regular and preferred deposits at the time that deposit insurance was created. Preferred deposits had low, fixed interest rates, but received priority in repayment when a bank failed. Regular deposits received a (typically higher) market-based interest rate, but were repaid after preferred deposits in the event of failure. Under the FDIC, Congress capped insurance at $5,000 per account so that small depositors would not run on banks, but larger, better informed depositors would continue to monitor banks' behavior, and they limited the interest that could be paid on regular deposits. By capping interest and insuring a large share of regular deposits, Congress made them much more similar to preferred deposits,

and thus the empirical strategy is to compare the drivers of preferred versus regular deposits before and after the adoption of deposit insurance. Consistent with their conjectures, the authors find that prior to deposit insurance, regular depositors reacted much more to news about general economic conditions and banks' balance sheets than preferred depositors. After the FDIC was created, the two types of depositors behaved more similarly. Regular depositors continued to react to information about economic conditions, but in a less pronounced way than before, while responding much less to news about banks' balance sheets. In all, the authors conclude that Congress achieved its objectives by forestalling bank runs without eliminating depositor monitoring completely.
http://nber.org/papers/w23828

Social structure and civil wars in sub-Saharan Africa
Civil wars are more prevalent in sub-Saharan Africa than in other parts of the world, and many African ethnic groups are organized around "segmentary lineages." A lineage is a group of persons that is differentiated genealogically from others, tracing their ancestry back either through the male (a patrilineal society) or female line (matrilineal), that typically lives in close physical proximity. A segmentary lineage society is defined by anthropologists as one in which segments of a full lineage function as autonomous, cohesive, corporate groups. Anthropologists also offer much anecdotal evidence that segmentary lineage societies are very effective in mobilizing for wars: a member of such a society has almost no identity other than as a member of the lineage, and an offense to one member is taken as an offense to the whole lineage. **Jacob Moscona**, **Nathan Nunn**, and **James Robinson** test this hypothesis using novel data on ethnic groups, their segmentary lineage identity, and the incidence and duration of civil wars in Africa from 1997 to 2015. They confirm their hypothesis using a slew of checks including ordinary least squares regressions and spatial regression discontinuity (using neighboring ethnic groups with and without segmentary lineage). They also show that the effects are quantitatively large. The paper thus suggests that social structure can be a key determinant of civil wars in some contexts.
https://scholar.harvard.edu/files/nunn/files/social_structure_conflict_manuscript.pdf

IV Upcoming events and miscellanea

Call for papers
The **Center for the Study of African Economics (CSAE) Conference 2018: Economic Development in Africa** will be held on March 18 to 20, 2018, at St Catherine's College in Oxford, United Kingdom. The call for papers invites papers addressing economic analysis of the broad issues relevant for economic development in Africa. Papers on countries other than those in Africa are welcome, providing they study issues central to African development. The deadline for submissions is October 27, 2017. More information is posted here.

A new book on the government's role in expanding access to finance
In their new book "Innovative Experiences in Access to Finance: Market-Friendly Roles for the Visible Hand?", **Augusto de la Torre**, **Juan Carlos Gozzi**, and **Sergio Schmukler** discuss the main drivers of access to finance and the impact of different policies in this area. The book analyzes recent innovative experiences in broadening access to credit in Latin America, including structured finance, factoring, credit guarantees, and correspondent banking. These

experiences are consistent with an emerging new view that, while the public sector can play a central role in improving the contractual and informational environment for financial markets, there is room for well-designed, restricted interventions in collaboration with the private sector. The book also discusses open policy questions about the role of the private and public sectors (including state-owned banks) in broadening access to finance in a sustainable and market-friendly manner.
https://openknowledge.worldbank.org/handle/10986/27529

Happy reading!

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