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The next issue of Interest Bearing Notes will appear in January 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 January 5th.

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

Global Financial Development Report 2017/2018: Bankers without Borders
The Global Financial Development Report (GFDR 2017/2018), the fourth in the series, brings to bear new evidence on the debate on the benefits and costs of international banks, particularly for developing countries. It provides figures on recent trends, discusses emerging patterns since the global crisis, and distills a large body of evidence on the economic impact of international banking. Per the report, policymakers have a vital role to play in maximizing the benefits of international banking while keeping the risks under control. Research suggests that institutionally better-developed countries tend to reap more of the development and risk-sharing benefits from international banking. Moreover, for designing effective policies, it is crucial to keep in mind differences in bank characteristics and home and host country conditions. There is much more in

the report on recent trends in bank globalization — South-South Banking, the shift toward alternative sources of funding, and Fintech — and their implications for policy. The GFDR webpage includes the background papers, as well as several updates of major datasets on financial systems (including our own Global Financial Development Database).
http://www.worldbank.org/financialdevelopment

II World Bank research

Small firm death in developing countries
Our own **David McKenzie** together with **Anna Luisa Paffhausen** have put together systematic information on the failure or death of small firms in developing countries. Their new paper draws on data for more than 14,000 small firms from 16 firm panel surveys in 12 countries. The data show that small firms die at an average rate of 8.3 percent per year over the first five years of following them, so that half of all firms observed to be operating at a given point in time are dead within 6 years. Death rates are higher for small firms in richer countries, younger firms, retail firms, less productive and less profitable firms, and those whose owners are female and not middle-aged. The paper considers three theories of why small firms die: firm competition and firm shocks, occupational choice, and non-separability from the household. David and Anna Luisa bring these theories to the data by examining the extent to which firm death occurs for more, or less, productive firms, measuring the change in total labor earnings of the owner after death, and using cause of death questions included in nine of the surveys. On average, firms that die are less productive to begin with, and their owners suffer a fall in labor earnings. This is most consistent with the firm competition theory, and least consistent with firm death being a voluntary occupational choice. However, there is considerable heterogeneity in the cause of death, with subsets of firms appearing to die in ways consistent with each of the three theories.
http://documents.worldbank.org/curated/en/215441510078083132/Small-firm-death-in-developing-countries

Learning the impact of financial education when take-up is low
In another new paper, **David McKenzie** along with **Gabriel Lara Ibarra** and our own **Claudia Ruiz Ortega** combine non-experimental empirical methods with a field experiment to study the impact of a financial education program in Mexico with very low take-up rates. Take-up of traditional financial education has been shown to be fairly low across a spectrum of studies around the developed and developing world, and is especially low in Mexico where the authors experience a take-up of less than 1 percent. The key question this paper addresses is whether we can still obtain reliable measures of the impact of financial education by employing non-experimental methods, in this case matching individuals who take up the program with those who do not using a rich monthly panel dataset that spans 16 months prior to the introduction of the program. Combining these matching protocols with the exogenous assignment to financial education through the experiment allows for a credible difference-in-difference empirical strategy. Using this approach, the authors find that attending financial education results in significantly better repayment rates on credit cards and greater likelihood of having a bank deposit account.
http://documents.worldbank.org/curated/en/366421510084807543/Learning-the-impact-of-financial-education-when-take-up-is-low

Making it easier to apply for a bank account

Our own **Asli Demirguc-Kunt**, **Leora Klapper**, and **Saniya Ansar**, together with **Aditya Jagati**, provide new evidence on opening bank accounts from a survey carried out in India in January-March 2016, roughly a year and a half after the government launched its flagship program aimed at achieving universal account ownership, the Jan Dhan Yojana (JDY) scheme. By offering accounts that required no minimum balance or opening fees, the goal of the JDY was to open one account per Indian household. At the simplest level, the JDY program has been successful in making it easier to become an account holder – by the end of 2016 roughly 250 million JDY accounts had been opened, and about one-third of adults who ever applied for an account did so under the program. And women, the poor, and the illiterate were more likely to apply for a JDY account than other groups, suggesting that the program has been successful in promoting financial inclusion among typically underserved groups. At the same time, not all households have applied for a JDY account, and those respondents indicate that the costs of traveling to a bank branch, collecting the required documentation, and associated monetary costs dissuaded them from applying. But perceptions about costs and documentation requirements among that group are often wrong – 94 percent of those who cited lack of documentation as their reason for not applying for an account actually had the one piece necessary for a JDY account, an Aadhaar number used for personal identification. Similarly, it is unclear whether the 35 percent of respondents who indicated that the process of applying for an account was too expensive were aware that JDY accounts are free and that no minimum balance is required. In part, this could be because about a fifth of JDY applicants were asked by bank agents for an unofficial payment and nearly half were required to make a minimum deposit. It seems that better communicating documentation requirements and costs associated with JDY accounts, and better accountability among agents in adhering to those requirements, could make the program even more successful in promoting financial inclusion.
http://documents.worldbank.org/curated/en/504741506452393306/Making-it-easier-to-apply-for-a-bank-account-a-study-of-the-Indian-market

Financial development, growth, and crisis: Is there a trade-off?

Norman Loayza, **Amine Ouazad**, and **Romain Ranciere** provide a timely review of the literature on financial development, economic growth, and the likelihood and severity of financial crises. They describe how the finance-growth and finance-volatility literatures developed along separate tracks that gradually have given way to more integrated empirical approaches that can account for both the generally positive relationship between long-run growth and financial development and the link between financial development and greater short-run financial volatility and likelihood of crises, especially when levels of bank credit, sovereign debt, and equity prices are accelerating rapidly. The integrated approach confirms a trade-off between higher growth and higher credit risk in response to financial development, especially among middle income countries. Another strand of literature emphasizes the role of policy, showing that the trade-off between growth and crisis risk is associated with financial market liberalization policies (as one might expect), but not reforms associated with product markets, labor markets, and trade. Indeed, trade reforms and some active labor market programs simultaneously increased growth and reduced the risk of crisis. The authors suggest that the tradeoff is most relevant for liberalizing middle income countries because their institutions related to contract enforcement are strong enough to benefit from financial liberalization in tranquil times, but weak enough that the severity of credit constraints make it worthwhile for them to take on crisis risk to

boost leverage, investment, and growth. For advanced economies, credit constraints are presumably less severe and thus the growth gains from relaxing them are more limited. In fact, a more recent literature explores whether there is a threshold beyond which financial development becomes detrimental to growth by crowding out other productive activities and contributing to resource misallocation. While the authors do not take a strong stand on that literature, they do point to evidence from the U.S. that the less affluent and minorities lost disproportionately more than other groups in the wake of the Great Recession. Those groups experienced the trade-off firsthand as the hoped-for benefits of a large expansion of credit to the less creditworthy that began in the 1990s proved unsustainable without proper financial regulation and supervision. Thus, the growth/risk tradeoff is also relevant for within-country distributional impacts of financial development and crises, even in advanced economies.
http://documents.worldbank.org/curated/en/512501510080248213/Financial-development-growth-and-crisis-is-there-a-trade-off

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

Can subsidized early child care promote women's employment? Evidence from Kenya
Shelley Clark, **Sonia Laszlo**, **Caroline Kabiru** and **Stella Muthuri** study the effect of subsidized early child care on women's labor market participation in a slum area of Nairobi, Kenya. The authors report on a randomized control trial with 48 well-established and registered daycare centers and 849 mothers with at least one child aged one to three years. The daycare centers were randomly assigned to one of three groups: control, voucher-only, or voucher-plus-quality. Both the voucher-only and voucher-plus-quality centers agreed to accept monthly vouchers from women assigned to their centers. Daycares assigned to the voucher-plus-quality group were given additional training and materials. Mothers were also randomly assigned to one of the three groups (control, voucher-only, or voucher-plus-quality). Mothers assigned to the voucher-only group were given a list of the voucher-only centers, while mothers in the voucher-plus-quality group were given a list of the voucher-plus-quality centers. All treatment group mothers were given 12 monthly vouchers, for all their children aged one to three years. Data from a follow-up survey shows that about 80% of mothers in the treatment group were sending their children to daycare compared to 58% in the control group. Treatment group mothers were also, on average, 8.5 percentage points (or over 17%) more likely to be employed than control group mothers. Working mothers in the treatment group worked fewer hours than those in the control group (possibly because daycare was only open for 40 hours a week while many control group women worked longer hours), but the reduced number of hours worked was not reflected in lower earnings. The study does not find statistically significant differences in the effects of voucher-only and voucher-plus-quality daycares.
http://aphrc.org/wp-content/uploads/2017/08/Mat-Employment_gwp-05-2017.pdf

Religious competition and resource reallocation
Five centuries ago, Martin Luther posted his famous 95 theses, and ushered in the Protestant Reformation. The immediate effect was greater religious competition, but what were the effects of religious competition on resource allocation? **Davide Cantoni, Jeremiah Dittmar**, and **Noam Yuchtman** study this question using novel microdata. They offer a conceptual framework in which religious authorities exchange legitimacy to rulers for control over resources. The introduction of religious competition reduces the bargaining power of religious

authorities, and therefore shifts resources toward secular uses. The authors assemble new, disaggregated data on education, occupational choices of German university graduates, and construction events at the town-year level across over 2,000 German towns since 1517, the beginning of the Reformation. They document a significant transfer of control of resources from both Catholic and Protestant churches to secular lords. Moreover, during the Reformation graduates from Protestant universities shifted toward secular occupations and away from religious ones, and they show that this was not driven by a pre-Reformation trend. In addition, Protestant university students reallocated their human capital investment away from theology degrees toward the study of more general, secular subjects. Finally, new construction events shifted from religious purposes toward secular ones (i.e., not churches, but administrative buildings and lords' palaces). The study is novel in that it looks at the immediate effects of the Reformation (and the subsequent religious competition) on the mechanisms of resource allocation at a relatively micro level.
http://www.nber.org/papers/w23934

Capital accumulation, private property and rising inequality in China, 1978-2015
Economists and policymakers have been increasingly concerned about inequality, and research in this area for developed countries has been growing over the past decade. However, much less is known about inequality in China, the world's second largest economy. **Tomas Piketty**, **Li Yang**, and **Gabriel Zucman** have teamed up to provide consistent series on the distribution of income and wealth from 1978 onwards. Because no single consistent data set is available, the authors draw information from several data sources including national accounts, surveys, wealth rankings, and tax data, including recently released income tax data covering top earners. They make two main contributions. First, they provide the first systematic estimates of the level and structure of China's national wealth since the reform began in 1978. They find that the national wealth to income ratio increased from 350% in 1978 to 700% in 2015, due largely to high saving rates and a rise in relative asset prices. The share of public property in national wealth declined from 70% to 30% in this period. However, Chinese corporations are still predominantly publicly owned: close to 60% of Chinese equities are held by the government, 30% by private owners, and 10% by foreigners. Second, based on their multiple data sources, they conclude that the top 10% of income earners accounted for 41% of total income in 2015 (rising from 27% in 1978), while the top 1% accounted for 14% of total income in 2015. In contrast, the bottom 50% accounted for 27% of total income in 1978, but only 15% in 2015. The authors conclude that China's inequality level is approaching that of the U.S., though it remains slightly lower. In terms of policy options, they point out that their very large equity holdings could allow the Chinese government more leverage in combatting inequality.
http://piketty.pse.ens.fr/files/PYZ2016.pdf

Price floors and employer preferences: Evidence from a minimum wage experiment
John Horton studies the impact of the minimum wage on wages earned and hiring dynamics in a field experiment with an online labor market. The existing literature is inconclusive on the effects of a minimum wage on both the extensive and intensive margins, that is whether the minimum wage reduces employment and whether it reduces the number of hours worked. This study provides an empirically clean setting to address these questions through a field experiment where a randomly selected set of firms was required to pay a minimum wage on new contracts, while firms in the control group had no such restrictions. The author finds that while wages

tended to increase with minimum wage, there was a reduction in overall hiring as well as substantial reductions in the number of hours contracted within the same category of work. In addition, firms subject to the minimum wage hired more productive workers. The author shows that this result of hiring more productive workers sustains in general equilibrium once the minimum wage is extended to all participant firms on the online platform. These results suggest a clear substitution by firms in favor of more productive workers.
http://www.cesifo-group.de/DocDL/cesifo1_wp6548.pdf

IV Upcoming events and miscellanea

Call for papers
The **2nd CEPR/EBRD/Economics of Transition Economics Symposium on Globalisation and Labour Markets** will take place at the EBRD in London, UK on June 14 and 15, 2018. The symposium will provide a platform for researchers and policymakers to discuss new research findings and to identify areas where further academic and policy-oriented work is needed. The deadline for submitting a paper is January 30, 2018. More details are posted here.

Happy reading!

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