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Corporate Governance and Cross-Listed Firms

Although many investors may assume that foreign companies that cross-list on U.S. stock exchanges adhere to those exchanges' corporate governance rules, in **Opting Out of Good Governance,** (NBER Working Paper No. 19953), **C. Fritz Foley**, **Paul Goldsmith-Pinkham**, **Jonathan Greenstein,** and **Eric Zwick** show that 80 percent of all cross-listed foreign firms opt out of at least one exchange governance rule. Smaller and more rapidly growing foreign companies are more likely to comply with exchange rules, presumably because this assists them in raising capital. The authors also find that the stock market values a dollar held inside a cross-listed firm from a weak-governance country less when the firm does not comply with exchange rules.

Many foreign companies want to be listed on U.S. exchanges to facilitate their access to capital. Such firms must comply with U.S. Securities and Exchange Commission (SEC) rules designed to protect investors, but U.S. stock exchanges also have their own distinct governance rules that apply to foreign firms. These firms can opt out of some of these exchange rules provided they disclose how their governance practices differ from them. Until recently, these disclosures were often difficult to obtain.

Beginning in 2008, the SEC required foreign cross-listed firms to list their deviations from exchange rules. The authors created a database by sifting through SEC Form 20-F filings and other available documents for 519 firms from 45 countries that cross list on the New York Stock Exchange, AMEX, or NASDAQ. They discover that 47 percent of cross-listed firms opt out of three or more categories of exchange requirements; 80 percent opt out of at least one. About 51 percent of firms opt out of board independence requirements, 55 percent opt out of board committee requirements, 41 percent opt out of audit committee requirements, 31 percent opt out of shareholder approval

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requirements for stock issuance, and 27 percent opt out of general good governance requirements. The authors find a correlation between opting out and weaker governance practices in general. For example, there are fewer independent board members at companies that choose to opt out of board independence rules, board committee rules, and audit committee rules.

The authors view complying with U.S. exchange listing rules as involving a tradeoff between "insiders' ability to consume private benefits when governance remains weak and ... managers' desire to raise capital when growth opportunities are attractive." They conclude that "the high share of foreign firms that opts out, especially foreign firms from countries with weak governance regulations, suggests that the costs of complying with strict governance requirements are too high for many insiders."

— Jay Fitzgerald

Ethnic Patterns in Scientific Collaboration

Scientific researchers based in the United States are more likely to co-author papers with people of similar ethnicity, according to **Richard Freeman** and **Wei Huang** in **Collaborating With People Like Me: Ethnic Co-Authorship Within the U.S.** (NBER Working Paper No. 19905). In addition to discovering ethnic patterns of collaboration, the study also finds that papers written by ethnically similar co-authors are cited less frequently and are likely to be published in lower-impact journals than papers by more heterogeneous teams of authors. Most of this effect is attributable to the fact that ethnically similar co-authors tend to have weaker prior publication records than co-authors who publish with scholars from other ethnicities, but some of the effect may also reflect the way interactions of people with different perspectives produce ideas.

The researchers analyze the ethnic identity of co-authors with U.S. addresses for more than 1.5 million scientific papers in the Thomson Reuters Web of Science database. They use a name-ethnicity matching program to assign ethnicity, which is divided into nine categories. Between 1985 and 2008, the proportion of names from all categories except Anglo-Saxon/English and European increased. Chinese names increased the most, from almost 5 percent to more than 14 percent. Analysis of first names suggests that an estimated 85 percent of the new Chinese co-authors were born in China.

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Freeman and Huang compare the observed distribution of the ethnic composition of co-author teams with the expected distribution if co-author teams were randomly drawn from all authors in the database. For scientific papers with two authors, the ethnic groups for which the ratio of the actual number of ethnically similar co-authors to the number that would be expected based on random matching was closest to one are Anglo-Saxon/English and European, for which the ratios are modestly greater than one. For other ethnic groups, the ratios are much higher, in part reflecting the different number of researchers in these groups. Freeman and Huang note that they cannot reject the hypothesis that researchers in all groups have the same heightened affinity for working with other researchers from their own group. They find strong evidence of similar patterns of ethnic group collaboration for research papers with larger numbers of authors as well.

Co-authors with a larger number of previous papers were less likely to co-author a paper with someone of the same ethnicity, suggesting that they are able to draw on a larger network of potential collaborators outside their ethnic group. Freeman and Huang also find that research papers involving cross-university or cross-research group collaborations have higher impact factors and more citations. They suggest that diversity in location as well as in ethnic mix produces more influential science.

— Linda Gorman

German-Jewish Émigrés and Innovation in the United States

Whether and how high-skill immigrants affect productivity and innovation in their adopted country is a subject of long-running debate. In **German-Jewish Émigrés and U.S. Invention** (NBER Working Paper No. 19962), **Petra Moser, Alessandra Voena,** and **Fabian Waldinger** find that the German Jewish chemists who fled Nazi Germany and Austria dramatically boosted America's scientific prowess. Patenting in the United States rose 31 percent after 1933 in the fields the émigré chemists were working in, and it stayed at elevated levels into the 1950s.

Some historical accounts credit the émigrés of the 1930s with revolutionizing American science in fields such as physics, where several formed the core of the Manhattan Project, and chemistry, where three won Nobel Prizes. However, other accounts are less positive and suggest that the Jewish émigrés met with anti-Semitism in the United States and found it difficult to find jobs. By systematically evaluating the effect of émigrés in chemistry, a field in which innovations are routinely patented and are consequently easy to measure, this study offers the first empirical analysis of their impact. The baseline estimate may underestimate the émigrés' total impact because those who moved to the United States may have been less productive than other chemists who had the opportunity to stay in Europe at prestigious British universities, and because some émigrés may not have been able to find work in the most attractive and productive U.S. research fields, leading to underutilization of their talents.

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One of the study's most striking findings is that the arrival of highly skilled émigrés appears to have encouraged American inventors to patent more in the research fields in which the émigrés were active. This was not the result of rising productivity of U.S. scientists who had already been active inventors in these research fields. There was no significant change in the number of patents that existing inventors produced in the fields of star émigré scientists. Rather, the increase is attributable to a shift in the fields of specialization of new scientists. Prior to the arrival of the émigrés in 1933, U.S. researchers were less inclined to enter the sub-fields of chemistry studied by the émigrés than to enter other fields. In later years, this pattern reversed. Moreover, the new researchers who began patenting in the fields of the émigrés were primarily scientists who had never patented before. The authors conclude that "the émigrés' effect on U.S. patenting was driven primarily by their ability to attract a new group of domestic inventors to their fields." The younger U.S. scientists who were trained by the star émigré professors in turn trained other researchers in the methods they had learned. The paper notes that "U.S. inventors who collaborated with émigré professors began to patent at substantially higher levels in the 1940s and continued to be exceptionally productive in the 1950s."

— Laurent Belsie

Innovative Ways to Increase Tax Compliance

Governments lose billions of dollars in tax revenue each year simply because prospective taxpayers are late in making their payments. Finding ways to accelerate tax payments is the focus of **The Behavioralist as Tax Collector: Using Natural Field Experiments to Enhance Tax Compliance** (NBER Working Paper No. 20007), by **Michael Hallsworth, John List, Robert Metcalfe,** and **Ivo Vlaev.**

The two main reasons for failing to pay taxes on time appear to be a lack of ready cash and mere procrastination. In the United Kingdom, the tax collectors' response to tardiness is to send messages to taxpayers reminding them of their obligations. By conducting two experiments with tax reminders issued to more than 200,000 individuals by Her Majesty's Revenue and Customs (HMRC) office, the researchers discover that the effectiveness of such letters depends on their wording and the messages they deliver.

The authors' first experiment focuses on taxpayers who had declared their taxable income but had not yet paid what they owed. The researchers randomized three norm-based messages and two public-good messages across 100,000 taxpayers. The norm-based messages included: 1, "Nine out of ten people pay their tax on time," (invoking a basic norm); 2, "Nine out of ten people in the U.K. pay their tax on time," (invoking a country norm); and 3, "Nine out of ten people in the U.K. pay their tax on time. You are currently in the very small minority of people who have not paid us yet," (invoking a minority norm). The public-good messages included: 4, "Paying tax means we all gain from vital public services like the National Health Service (NHS), roads, and schools," (emphasizing the gain from paying taxes); and 5, "Not paying tax means we all lose out on vital public services like the NHS, roads, and schools," (emphasizing the loss from not paying taxes).

"Both norm-based and public-good messages increased the likelihood of individuals paying their taxes due…"

Both norm-based and public-good messages increased the likelihood of individuals paying their taxes due, with large differences observed within the various norm-based messages. The basic-norm statement raised the tax payment rate by 1.3 percent, and the country-norm statement by 2.1 percent, within 23 days of communication. The minority-norm statement had an even larger effect, raising the number of taxpayers making payments by 5.1 percent. Both public-good messages, which relied on gain and loss framing, raised tax payments by 1.6 percent.

The second experiment,

involving 119,527 U.K. taxpayers, explored the effect of descriptive norms (describing what others do) relative to injunctive norms (describing what others think should be done). In the latter case, the researchers used messages that either stated that paying taxes was the right thing to do, or that most people thought that paying taxes was the right thing to do. Descriptive norms had a significantly larger effect on payments than injunctive norms. The authors estimate that as a result of their experimental intervention, HMRC collected £9 million more over a 23-day period than they would have otherwise.

— Matt Nesvisky

Recessions are Risky for the Top 1 Percent

Are the earnings of top earners sensitive to business cycles? How does this sensitivity vary by industry? In **How Risky Are Recessions for Top Earners?** (NBER Working Paper No. 19864), authors **Fatih Guvenen, Greg Kaplan,** and **Jae Song** address these questions using a confidential dataset from the Social Security Administration. The dataset includes information on the earnings and industry of employment for U.S. men between 1978 and 2011.

The mean earnings of men in the top 1 percent of the earnings distribution are slightly more cyclical than the mean earnings of all men. However, there are large differences across industries in top earners' cyclical variability. Top earners in finance, insurance, and real estate (FIRE) and construction face substantial business cycle volatility, whereas those in services have earnings that are less cyclical than those of the average worker. Employees of the services industry comprise 40 percent of the individuals in the top 1 percent of the earnings distribution.

"…there are large differences across industries in top earners' cyclical variability."

The study also reveals differences in the relative cyclical behavior of earnings of top earners, and other earners, within industries. In FIRE, for example, the earnings of the top 1 percent are unusually sensitive to business cycle conditions, while earnings for those in the rest of the distribution are not particularly cyclical. In the service sector, the earnings of the top 1 percent are less cyclical than the earnings of those lower in the distribution.

— Les Picker

Social Media and the Measurement of Labor Market Flows

Social media provide an enormous amount of high-frequency, real-time information which can potentially be used to complement or even substitute for traditional sources of economic data. In **Using Social Media to Measure Labor Market Flows** (NBER Working

Paper No. 20010), **Dolan Antenucci, Michael Cafarella, Margaret Levenstein, Christopher Ré,** and **Matthew Shapiro** create indexes of job loss, job search, and job posting with data from Twitter posts and compare these indexes to official data. They conclude that information contained in job-related tweets provides new economic indicators.

To construct the indexes, the authors estimate the principal components of data series on the number of job-related phrases such as "lost my job" in tweets over a period of 28 months. The resulting job loss index, updated weekly by University of Michigan Economic Indicators from Social Media (http://econprediction.eecs.umich.edu/), tracks official data on claims for unemployment insurance well. While the two series exhibit the same general trend and similar spikes, the fit of the social media series is not meant to be perfect because of differences in population, timing, and the fact that some job losses do not lead to applications for unemployment insurance.

The authors compare their social media job loss index to the consensus forecast from macroeconomic forecasters on the eve of announcements of initial unemployment insurance claims. They find that variation in the social media index can account for about one-fifth of the prediction error variance in the consensus forecasts, so information from the job-related tweets could improve forecast accuracy.

> "... information contained in job-related tweets provides new economic indicators."

The authors also use social media data to study domains such as job search and job postings, where official statistics are less timely and less frequent. By studying the relationship between their job loss and job posting indexes, they conclude that the Beveridge curve, which relates the unemployment rate to the job vacancy rate, has been shifting inward since 2011, implying that the number of job vacancies that is consistent with a given unemployment rate has been dropping.

— Claire Brunel