

Abstracts of Posters Presented at the Annual Meeting

Factory Productivity and the Concession System of Incorporation in Late Imperial Russia

Corporations have limited liability for all investors and access to stock markets, and when credit markets are imperfect, incorporation could be crucial for a firm to make productivity-enhancing investments. In late Imperial Russia, commercial credit was scarce. Because the empire had no general incorporation law, all firms wishing to incorporate needed to obtain the Tsar's signature on their charters, a time-consuming and expensive process. Yet, over four thousand firms incorporated between 1700 and 1914. In this paper, I identify the characteristics of firms choosing to incorporate and measure the gains to productivity and growth in machine power enjoyed by corporations. These results come from a novel panel database of manufacturing enterprises I compiled from Imperial Russian factory censuses conducted in 1894, 1900, and 1908, the first large-scale effort to digitize these sources. The data reveal large cross-sectional differences between corporations and other forms: factories owned by corporations have higher average revenue, bigger machines, and more workers. While the distribution of total factor productivity for partnerships and single proprietorships has a long lower tail, the distribution for corporations does not. Within the sample, several factories switch forms from partnerships or single proprietorships to corporations. Before incorporating, these factories have higher average revenue per worker, but the distributions of machine power for these factories and factories that do not incorporate are identical. After incorporating, however, factories have higher average revenue per worker and larger machines, suggesting the importance of incorporation for capital accumulation in this context.

AMANDA GREG, *Yale University*

Foreign Debt and Secondary Markets: Lessons from Interwar Germany

Recent advances in sovereign risk theory have suggested that secondary market activity can act as an enforcement mechanism for sovereign debt and help avert defaults. We show this mechanism in action by revisiting a little-explored aspect of German economic history in the interwar period: the large repurchases of foreign debt carried out by German citizens and companies between 1931 and 1939. We support our interpretation of the episode with empirical evidence from both secondary and primary sources. The analysis is based on a unique weekly data set of prices of German bonds in New York between 1930 and 1940 and an electronically available data set of weekly bond prices in Berlin for the same period. Through a simple VAR with Markov switching, we show that German and foreign investors faced different probabilities of repayment, which were decisively influenced by secondary market activity in the form of debt buybacks. We also conclude that, far from encouraging the buyback activity, the German governments, which succeeded each other throughout the decade, kept it under strict control in order to enjoy some of its benefits, while avoiding detrimental macro effects for the German economy and their policy objectives. Unrestrained debt repurchases would have led to excessive debt repayment

and welfare losses, while carefully managed ones were an important tool in reaching specific micro goals such as the subsidization of exports, profit boosting, and debt reduction for key industries, companies, and individuals.

ANDREA PAPADIA, *London School of Economics*

Estimating the Treatment Effects of Bank Recapitalization in the Presence of Sample Selection

This paper is concerned with studying the impact of the Reconstruction Finance Corporation (RFC), a major bank recapitalization program established during the Great Depression, and evaluating its effectiveness at resuscitating in the banking system. Drawing inference from the RFC is an important and relevant topic because the RFC was used as a model for the Troubled Asset Relief Program (TARP) employed during the recent crisis. A Bayesian framework is developed to jointly model a bank's decision to apply for bailout funds, the RFC's decision to approve or decline those funds, and the overall failure or success of that bank a few years after the disbursements. This study is the first to acknowledge and endogenize a bank's decision to apply for a loan. This additional dimension of the bailout process is revealing and offers a unique hierarchical dynamic to the multivariate sample selection model. A novel bank-level data set is employed and fit using Markov chain Monte Carlo methods. The data set is constructed from RFC Loan Index Cards acquired from the National Archives, and from the Rand McNally Banker's Directory. This unique data set combined with a model that can account for endogeneity and intertemporal correlation can address issues mentioned in the existing literature including political influence and contagious risk. Overall, the analysis presents practical estimation tools to unveil new answers to questions regarding lender of last resort regulation including whether and to what extent these programs stabilize the economy or simply privatize the gains and nationalize the losses.

ANGELA VOSSMEYER, *University of California, Irvine*

Internal Migration in the United States Before 1940: A Welfare Analysis

Geographic wage discrepancies and disequilibria in the land-labor ratio in the United States have historically been met with internal migration to an extent unseen in other major economies prior to the twentieth century. The absence of this response in other countries has been credited with delaying industrialization and growth, with Russia and Japan serving as archetypal examples. This paper seeks to quantify the welfare gains accruing to individuals of various types, as well as to the economy as a whole, from the elimination of disequilibria of this nature. Using linked census data, I estimate a characteristics-based model of location choice derived from the demand estimation literature. I rely on this model to perform counterfactual analysis in which comparisons are made to an environment in which internal migration—either to particular locations or in general—is impossible. I find that the largest welfare gains from internal migration in the United States came in the interwar period, with the westward frontier migration in the mid-nineteenth century providing comparable welfare gains. I also show that internal migration in the late nineteenth and early twentieth centuries was welfare-improving to a previously unrecognized extent.

Comparisons of outcomes of migrants to nonmigrants, controlling for selection into migration, reveal the treatment effects of migration on migrants. Continuing work for this paper is directed toward forming and estimating a general equilibrium model of internal migration to better capture the impact of migration on persistent residents of the origins and destinations of migrants.

ARIEL ZIMRAN, *Northwestern University*

Experiment Associations and Agricultural Innovation

Economic historians have rarely been able to trace the information flow that leads to the diffusion of technology. In this paper, I investigate the role of the Ontario Agricultural and Experimental Union (OAEU) and the Wisconsin Agricultural Experiment Association (WAEA) in the development and dissemination of agricultural innovations within their respective regions. These organizations were networks of scientifically literate farmers working in cooperation with researchers at the agricultural experiment stations both to conduct localized tests in their own fields and to disseminate biological and nonbiological innovations within their communities. I focus on efforts to improve the productivity of field crops during the early years of each organization's existence. I observe the location of members and the crops each experimenter was testing or growing for seed each year. I study the changes in crop productivity at the county level and seek to understand the extent to which this was affected by the activity of the respective association. My empirical results suggest that experiment association activity was associated with a statistically significant increase in the productivity of barley in Wisconsin, peas in Ontario, and oats in both regions. I find a negative and statistically significant effect on corn in Wisconsin. I demonstrate that the anecdotal evidence accords with these findings. My results provide insights into the timing of diffusion: the effect of the OAEU was delayed while the effect of the WAEA came immediately. In each case, the effects of the association tended to occur with crops figuring prominently in their activities.

BEN ZAMZOW, *University of Arizona*

Tax Reform, Protests, and Incidence in Eighteenth-Century China

The paper examines the influence of a major tax reform in the Chinese history. The reform *de jure* increased the tax on the gentry class and decreased the tax on commoners. Panel data analysis combining multiple databases shows that the tax reform was followed by about half a standard deviation increase in the number of protests and conflicts. Surprisingly, further examinations find that the reform was correlated with an increase in conflicts led by commoners, and it had no effects on conflicts led by the gentry class. This result suggests the *de facto* effects of the reform were different from its original goal. I argue that the gentry class was able to pass the negative impact to commoners as a reaction to the reform. This finding differs from traditional historical views. In addition, by emphasizing reactions by the gentry class, this paper attributes the persistent fiscal difficulties and long-term stagnation in premodern China to institution defects.

CONG LIU, *University of Arizona*

Dangerous Education? A Human Capital History of Iberian and Latin American Jews and Other Minorities During the Inquisition

We study the impact of religious motivations to generate human capital, using Spanish Inquisition sources. The age-heaping technique designed to measure the numeracy component of human capital makes it possible for the first time here to compare both the Jewish minority and the non-Jewish majority back to the fifteenth century. We find the hypothesis confirmed that the Jewish had a substantial advantage in numeracy skills. However, also other elite groups of the society had a similar level of numeracy (and became targets of the Inquisition). With this study, we contribute to a growing literature that has recently studied the effect of religion on human capital.

DÁCIL JUIF, *University of Tuebingen*

State Taxes, Wealth, and Public Debt After the American Revolution, 1775–1820

My dissertation, “State Taxes, Wealth, and the Issue of Public Debt After the American Revolution, 1775–1820,” examines the ways in which state governments dealt with the vast debts incurred during the Revolution, and emphasizes these policies’ implications for economic growth. In the absence of strong taxing authority under the Articles of Confederation, the burden rested entirely on the newly formed state governments. Dealing with the debt proved particularly challenging in the decade following the Revolution, as consistent deflation magnified the states’ obligations. State governments operated independently during this period, and pursued a variety of policy strategies to address their fiscal crises, with mixed results. Through using property tax records to measure changes in wealth levels, wealth distribution, and insolvency, my project surveys the lasting effects of state-level fiscal policy. While some states found ways to mitigate the effects of the tax burden on the populace, other states encountered violent resistance to tax collection and widespread insolvency as a result of their tax policies. Through implementing changes in their tax laws, seven states succeeded in eliminating their war debts completely by 1790. In the years that followed, additional states modified their tax collection practices, and increased revenues by shifting the tax burden from poor farmers to wealthy consumers. By comparing and evaluating the various strategies state governments employed, my dissertation studies the effects of early fiscal policy in facilitating economic growth in the Early Republic.

FRANK GARMON JR., *University of Virginia*

Currency Black Markets, and Financial Repression: Zurich and New York, 1939–1950

During and after World War II sophisticated markets for “free” currencies existed in various financial centers. This paper analyzes new daily time series data from arguably the two most important such markets, New York and Zurich. The data set includes: British pound sterling, the Swiss franc, and the U.S. dollar; also included are rate spreads between bank notes of different denominations, volume data, as well as information on the financial houses which dealt in these markets. During a time of fixed exchange rates, parallel currency data can offer a market perspective on historical turning points. While spreads across different parallel markets compressed as the 1940s progressed, significant arbitrage opportunities persisted through the

end of the decade. Archival sources reveal an embattled Bank of England, desperately seeking to squash the highly visible “cheap” sterling market in New York while Britain fought a “financial Dunkirk.” Widespread currency black markets provide strong evidence of financial repression.

GARRICK HILEMAN, *London School of Economics*

A New Old Measure of Intergenerational Mobility: Iowa 1915 to 1940

Was economic mobility high during the first half of the twentieth century in the United States? I combine two historical data sources to estimate intergenerational income mobility between 1915 and 1940. I match fathers from the Iowa State Census of 1915 to their sons in the 1940 Federal Census, the first state and federal censuses with data on income and years of education. In my sample of fathers and sons, I estimate a lower intergenerational elasticity of income than is found in modern studies of the United States, suggesting higher levels of income mobility. Intergenerational mobility of education is higher in my sample than in modern measures as well. I find sons in rural counties in 1915 to have more mobility of both income and education than urban sons. Lacking data on income, past studies of historical intergenerational mobility have relied on occupation transition data for fathers and sons to measure mobility. When I compute standard measures of occupational mobility for my sample, I find statistically similar levels of mobility between 1915 and 1940 and modern estimates, which contrasts with the higher mobility I find in income measures. This suggests that the standard estimates of historical occupational mobility may not be accurate substitutes for measures of income mobility.

JAMES FEIGENBAUM, *Harvard University*

The Illiquidity of Water Markets

There is ample evidence that institutions governing human relationships are persistent over time. I explore a particular historical episode, irrigators communities in Mula (southern Spain), that went from a market institution (auctions) to a nonmarket institution (quotas) in the 1960s. I show that by focusing only of the distribution of power or the efficiency of each available institution, we are unable to explain the institutional change. One institution is a market mechanism while the other requires a ban on trading. Depending on the parameters of the model one mechanism is more efficient than the other. Moreover, each mechanism could achieve full efficiency under some parameters. The nonmarket mechanism requires an egalitarian distribution of property rights. I use this fact to show that a transition into a more efficient (and more equal) institution may not happen because of commitment problems when the new institution requires the owners of property rights to sell them to other agents with limited liability. Hence, the model predicts that an existing institution will persist, even though the new institution could be adopted without any cost, and the old institution is both less efficient and less egalitarian. I show how the role of collateral, due to the increase in savings of the farmers, solved the commitment problem and led to a change to a more efficient institution.

JOSÉ-ANTONIO ESPIN SANCHEZ, *Northwestern University*

Institutional Innovation and Assortative Matching: The London Season, c.1800–1875

I study the determinants of marital sorting analyzing a unique setting: the London Season. The Season, a central clearing house for marriages developed by the nineteenth century British aristocracy, is particularly suited to study the role played by the matching technology in determining marriage decisions. Combining evidence from the peerage records (Holligsworth 1964) with newly compiled data on family seats, land rents, and attendance rates to royal parties, I find that in years in which the Season was assembling large numbers of people, the children of the aristocracy married more assortatively in the basis of class and land. Endogeneity is addressed by exploiting the cancelation of royal parties after the death of Prince Albert (1861), and by instrumenting attendance to the Season with variation in the size of the marriageable cohort. Results suggest that, if the Season hadn't existed, marriages between peer daughters and commoners would have been 15 percent higher between 1851–1875. In addition, the Season also induced sorting among its participants in terms of the size of spouses' landed estates. Finally, and consistently with the centralization of the marriage market in London, I find that when the Season attracted large numbers of singles, the distance between spouses' home seats increased. All together, these results reconcile the empirical evidence with the theoretical search literature, providing support for the classic result that, once a search friction is introduced (or withdrawn) from the matching process, the degree of sorting is affected.

MARC GONI, *Universitat Pompeu Fabra, Barcelona*

Education Returns in Developing Economies: The Case of Turn of the Century Tennessee

In this paper, I will use finely detailed archival records from high schools in early twentieth-century Tennessee to explore returns to education during the ascent of the high school movement. With these newly compiled data, I can observe both the diffusion of new high schools and the “quality” of schools using information on teacher qualifications, teacher workload, and school amenities. This, in turn, can provide a more informative picture of how variation in schooling opportunities and resources translated into differences in school attendance (when young) and labor market outcomes (when adult). The labor market outcomes will be obtained by linking the school quality measures to local boys, ages 4–18, in the 1920 IPUMS 1 percent census sample. This sample can be linked to the 1940 census manuscripts to observe adult earnings and final educational attainment for this cohort. This data will allow me to analyze the high school movement's effect on labor markets, considering both returns to quality and promotion rates as an indicator of quality on learning. Multinomial choice models will let me measure high school quality's impact on career paths (e.g., college, business, normal school, etc.). An important challenge is that school location and quality may be endogenous. I am developing an instrumental variable approach that draws on the ability, granted by the state legislature, of some “special school districts” to levy taxes on railroads. Although I am still exploring the instrument's validity, historical sources indicate that districts near railroads commonly used this special status to improve local schools.

MICHAEL MOODY, *Vanderbilt University*

From Partisan Banking to Open Access: History of Political Banking in the Antebellum Massachusetts

This paper studies the role of elites in the transition of banking sector, from limited entry to open entry, in the early nineteenth-century Massachusetts. I show the intralite competition, rather than the elite-mass competition, led to the transition. While Massachusetts is often viewed as the epitome of open access, we find clear historical and statistical evidence that bank chartering was closely connected to the Federalist political party. Before 1811 Federalist elites controlled almost all banks and excluded Republicans from banking. Republican partisans often complained that the Federalist banking policy was corrupt. In 1811, when the Republicans gained control of the Governor's mansion, the House, and the Senate at the same time, however, they did just what they accused the Federalists of doing: they rejected Federalist petitions for rechartering banks and chartered Republican banks. Both parties used banks for their political purposes. By collecting the original data on bank directors and legislators, I look closely at the connection between Massachusetts bankers, legislators, and political parties between 1790 and 1824. I show that before 1812, at least 70 percent of bankers either had been or would become legislators, and Federalists were closely associated with banking. After 1812, however, the bankers were less associated with legislators, and parties had more equal shares in banking. The events in 1811 led elites in both parties began to accommodate other elites' banking interest. The number of banks grew and Massachusetts entered the era of de facto free banking.

QIAN LU, *University of Maryland*

From the Field to the Classroom: The Boll Weevil's Impact on Education in Rural Georgia

While various factors affecting education have been examined as potential sources of the black-white education gap, the role of the cotton economy has been relatively neglected. In the early twentieth-century South, the harvesting of cotton required a large number of extra workers for three months of the year. Children were employed to help fill this seasonal labor demand. Because the harvest happened during the fall, it conflicted directly with traditional school attendance. This paper investigates how cotton production affected schooling decisions, with a particular focus on racial differences. Since whites were wealthier and attended better schools than blacks on average, a theoretical model of the time allocation of children predicts that the educational attainment of blacks was more responsive to changes in cotton production. I test this prediction using newly collected county-level panel data on educational attainment and quality in Georgia—a major cotton producer. Because cotton production may be endogenous, I use the arrival of the cotton boll weevil as an instrumental variable. Preliminary 2SLS results suggest that a 10 percent reduction in cotton production caused a 1.8 percent increase in the school enrollment rate of blacks. By contrast, I find little evidence that cotton production affected the enrollment rate of whites. The racial difference is important because it suggests that the shift away from cotton production after the arrival of the boll weevil may explain an economically significant amount of the convergence of the black-white education gap observed in the decades that followed.

RICHARD BAKER, *Boston University*

Forced Saving or Voluntary Thrift? The Household Savings Glut in Prewar Nazi Germany

Household consumption and saving are central to the debate over the economic performance of the Third Reich before the Second World War. While some economic historians have acknowledged full employment and stable real wages as unquestionable achievements, critics have inferred stationary living standards from the sluggish recovery of private consumption. This inference logically requires that the concurrent rise in household saving was involuntary, due to shortages of consumption goods induced by rigid price and wage controls imposed by the regime. This thesis of “forced saving” has not been tested empirically, and the historiographical dispute over German living standards in the 1930s has thus not been resolved conclusively. Employing cross-sectional data from household budget surveys conducted in 1927 and 1937, this paper demonstrates that the rise in the household saving rate cannot be fully explained by shifts in socioeconomic parameters and instead constitutes a structural break in household saving behavior. Furthermore, I find no evidence that high average saving rates in 1937 can be explained on the grounds of “moral suasion” inducing ideologically committed households to engage in private thrift for the sake of the nation. These findings provide strong indirect evidence for the thesis of “forced saving.”

ROBIN WINKLER, *University of Oxford*

An Analysis of Entrepreneurial Networks in Mexico City During the Mexican Revolution

Using data from contract registered in the archive of notaries in Mexico City, I analyze the effects that the Mexican Revolution revolt had on the life cycle and partner connections among firms chartered in Mexico City between 1900 and 1925. Preliminary evidence suggests that the Mexican Revolution had a significant negative impact in the duration of the firms. Using partner-level data, I construct a social network of interlocked directorates and partners for the firms under study. Results suggest that a limited banking system led entrepreneurs to start business with limited capital. Later, firms expanded by adding new partners or by becoming partners in another firm. Preliminary results point to higher densities of interlocked directorates/partners between the commerce and service sector and between the mining and real estate sector. The manufacturing sector is the one with the lowers density of interlocked directorates/partners. Surprisingly, there is no evidence of financial flows coming from the financial sector to the manufacturing one; the principal partners connected the firms with the firms in the commerce sector. I construct subnetworks based on nationality to investigate if there is difference among business practices or styles related to interlocked directorates or partners. The evidence suggest that the French, Spaniards, and Lebanese entrepreneurs were the ones who opted to follow different strategies for their business, in particular, to perpetrate the endogamy tradition among their partners and directors. This network study helps us to shed light about information transmission among entrepreneurs about violence and protection of property rights.

RODRIGO PARRAL DURAN, *University of Arizona*

War Plants and Industrialization in the American South: Was There a Mid-Century Big Push?

This paper tests the claim that World War II industrialized the American South against alternative explanations that emphasize the transition out of agriculture and the role of agglomeration economies. I estimate a random-coefficients discrete choice model that separately identifies the contribution of World War II spending, the Agriculture Adjustment Act (AAA), and the level of overall manufacturing activity to industrial growth. Industries closely related to the mobilization effort experienced a boom during and immediately after the war; however, gains from the war boom were gone by the 1950s. Overall, there is little evidence that spending on supply contracts and war-related capital investment was decisive. Instead, the AAA along with the growth of traditional centers of manufacturing was more beneficial to industrialization.

TAYLOR JAWORSKI, *University of Arizona*

Confederate Deaths and the Economy of the New South

Civil War deaths in the American South represent the largest mortality event in American history, with death rates higher than any nation experienced in World War I. While these losses were long important in the Southern psyche, they have generally been treated as aspects of the region's social, not economic, history. Little empirical work has been done with these deaths because the losses incurred at county and state levels remain almost entirely unknown. Using new data on county-level death rates from the Confederate army for Virginia, Georgia, and Louisiana, I find counties with greater losses lagged behind other counties in their states in terms of population growth, income, and education in 1960, nearly 100 years after the war. Preliminary results show African Americans, however, may have fared better in these areas for many decades. These estimates do not reflect counties' prewar characteristics—deaths were largely determined by where soldiers fought, chosen by high-ranking officers without regard to initial county characteristics. To ensure robustness, data on battles in which companies fought is used to predict a first-stage relationship with Confederate deaths. This variation in counties' death rates is driven entirely by officers' troop assignments. Results do not reflect corresponding losses of capital—destruction of counties' capital and labor were independent of each other in the American Civil War, allowing their effects to be estimated separately. Thus the estimations here provide a test for the effects of an exogenous change in population on development.

TIM LARSEN, *University of Colorado*

Birds of Passage: Self-Selection of Return Migrants in the Early Twentieth Century

Immigrant assimilation studies are biased by selective return migration, but the self-selection of return migrants is typically not observed. The United States currently does not keep track of migrants leaving the country, but the government did in the first half of the twentieth century. Using data from 1908–1932 that directly observes return migrant's occupation at the point of departure, I estimate the self-selection of out-migrants from the United States. I compare the mean occupational score of out-migrants to the occupational score of the foreign-born within the United States to

generate estimates of self-selection of return migrants to Europe, Central America, and Asia. I find that the self-selection of return migrant varies both across country of origin and across time. I compare direct data on the self-selection of return migrants to indirect estimation used by comparing longitudinal and repeated cross-sections. I also estimate how the literacy test and the quotas, the major policies that restricted immigration, affect the self-selection of out-migrants.

ZACHARY WARD, *University of Colorado*