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Abstracts of Papers Presented at the Annual Meeting

SESSION 1: INSTITUTIONS AND GEOGRAPHY

The Economic Origins of the Territorial State

This paper challenges the long-standing belief that changes in patterns of war and war making caused the emergence of large territorial states. Using new data describing the universe of European states between 1100 and 1790, I find that small political units continued to thrive well into the "age of the territorial state," an era during which some argue changes in the production of violence led to the dominance of geographically large political units. In contrast, I find evidence that variation in patterns of economic development and urban growth caused fragmented political authority in some places and the construction of geographically large territorial states in others. Exploiting random climatic variation in the propensity of certain pieces of geography to support large populations, I show via an instrumental variables approach that the emergence of towns and cities caused the formation of small and independent states. Last, I explore how changes in economic forces interacted with patterns of war making, demonstrating that the effect of urban development was greatest in periods associated with declines in the costs of producing large-scale military force.

SCOTT ABRAMSON, *Princeton University*

Resources, Politics, Economics, and Curses: Evidence from the United States, 1929–2002

The relationships between natural resources and political outcomes and between natural resources and economics outcomes are important and difficult to examine because of the need for panel data over a long time period. This paper uses state-level data from 1929–1998 on American state natural resources, state political outcomes, and state economic outcomes to address these questions. We build on related work a number of authors by using state-level panel data over a long time period with multiple measures of resources, political outcomes, and economic outcomes. Preliminary results suggest that natural resources have had remarkably little effect on political outcomes, although they have had some adverse effects on economic outcomes. The main driver seems to be oil and not coal or other mineral resources.

KAREN CLAY, *Carnegie Mellon University*

The Persistence of (Subnational) Fortune: Geography, Agglomeration, and Institutions in the New World

Using subnational historical data, this paper establishes the within-country persistence of economic activity in the New World over the last half millennium. We construct a data set incorporating measures of precolonial population density, new measures of present regional per capita income and population, and a comprehensive set of locational fundamentals. These fundamentals are shown to have explanatory power: native populations throughout the hemisphere were found in more livable and productive places. We then show that high precolonial density areas tend to be dense today: population agglomerations persist. The data and historical evidence suggest this is due partly to locational fundamentals, but also to classic agglomeration effects: colonialists established settlements near existing native populations for reasons of labor, trade, knowledge, and defense. We then show that high-density (historically prosperous) areas also tend to have higher incomes today, and largely due to agglomeration effects: fortune persists for the United States show that high-density (historically prosperous) areas also tend to have higher incomes today, and largely due to agglomeration effects: fortune persists for the United States and most of Latin America. Further, we show that extractive institutions, in our case slavery, reduce persistence even if they do not overwhelm other forces in its favor.

WILLIAM F. MALONEY, *World Bank*, and
FELIPE VALENCIA CAICEDO, *Universitat Pompeu Fabra*

SESSION 2: EDUCATION AND HUMAN CAPITAL

A Story of Large Landowners and Math Skills: Inequality and Human Capital Formation in a Global Perspective, 1820–2000

We create a new data set to test the influence of land inequality on long-run human capital formation in a global cross-country study and assess the importance of land inequality relative to income inequality. Our results show that early land inequality has a detrimental influence on math and science skills even a century later. We find that this influence is causal, using an instrumental variable (IV) approach with geological, climatic, and other variables that are intrinsically exogenous. A second major contribution of our study is our assessment of the persistence of numerical cognitive skills, which are an important component of modern human capital measures. Early numeracy around 1820 is estimated using the age-heaping strategy. We argue that countries with early investments in numerical education entered a path-dependency of human capital-intensive industries, including skill-intensive agriculture and services. The combined long-run effects of land inequality and human capital path-dependence are assessed for the first time in this article.

JOERG BATEN, *University of Tübingen*, and
DACIL JUIF, *University of Tübingen*

School, What is It Good For? Schooling and Human Capital Investment in the Nineteenth-Century Habsburg Empire

The rise of education has featured prominently in the debate on the sources of modern long-term economic growth. Existing accounts stress the role of public education and the importance of political support for its provision. We argue that such an explanation for the spread of schooling is probably a poor fit for many nations' schooling histories and provide an example, using detailed data on schooling supply from the Habsburg Empire. We show that while economic development made schooling more affordable and widespread, the politics of demand for schools was not motivated by expectations of economic development but by the ongoing conflict between nationalities within the empire. We find that public schools enjoyed significant political and financial support from local political elites, if they offered the "right" language of instruction. Our results suggest that, for some countries at least, the main link, historically, went from economic development to public schooling, not the other way round.

TOMAS CVRCEK, *Clemson University*, and
MIROSLAV ZAJICEK, *University of Economics in Prague*

The Bracero Program and Effects on Human Capital Investments in Mexico, 1942–1964

The Bracero Program was a massive guest worker program that allowed over four million Mexican workers to migrate legally and work temporarily in the United States from 1942 to 1964. This paper examines the development impacts of the program. Exploiting a natural experiment in the institutional history of the program, I use a state's proximity to the nearest recruitment center as an instrument for bracero out-migration. Falsification tests confirm the validity of the identification strategy. I estimate the causal effect of bracero migration on public goods in sending states, such as school enrollments, school provision, and education spending. IV estimates show that bracero migration causes increases in school enrollments and in education spending. Impacts on school provision are suggestive of positive effects. The Bracero Program increased human capital investments in Mexico, either through positive income shocks or imported ideas that fueled institutional change.

EDWARD KOSACK, *University of Colorado Boulder*

SESSION 3: COLONIALISM

Local Elites versus Dominant Shareholders: 200 Years of Dividend Policy at the Dutch East India Company

One of the most enduring questions in corporate governance is how corporations decide on the redistribution of economic rents. Focusing on a corporation that operated in early modern capitalism, this paper analyzes nearly 200 years of dividend policy at the Dutch East India Company (VOC). The main empirical finding is that the concentration of corporate ownership contributed to the stabilization of dividend payouts and formalization of corporate governance and not to rent-seeking behavior, as agency theory predicts. The reason is that the Company's largest shareholders and directors were not part of the same elite: the directors' constituencies tried to keep shareholder influence to a minimum, while the large shareholders criticized the lack of procedure at the VOC. Our study contributes to agency theory by relaxing the often-made assumption that the coordination between shareholders and managers of closely held firms is smooth. Especially in developing or suspect economies, where rational economic action cannot fully have its way, closely held firms cannot always be considered low agency cost environments. It is when dominant shareholders engage in the minimization of agency cost that they push for stable corporate governance and as such become important drivers of capitalist institutionalization.

WIM VAN LENT, *ESSEC Business School*

The Impact of Colonialism on African Development: Evidence from the Ethnographic Atlas

Conventional interpretations of George Murdock's Ethnographic treat it as a snapshot of precolonial Africa. We deviate from this convention and exploit the temporal heterogeneity across societies in the Atlas captured by the variable "date of observation." Since the date of observation could be correlated with the observed characteristics of societies, we instrument date of observation with the straight-line distance of the observed society from its colonial headquarters. Quite to our surprise, we find this relationship to be negative—that remote societies were observed first—and robust to a variety of geographic controls. We interpret this as evidence that the instrument captures colonial policy of administration rather than ease of observation. We find that the passage of time is significantly correlated with systematic variations in important economic and political characteristics of the societies observed, and that this varied considerably by colonizer. We find, among other things, an increasing incidence of relative democracy over time, driven primarily by British and French colonies, and changes in the structure of inheritance patterns over time, again with heterogeneity by identity of colonizer.

WARREN WHATLEY, *University of Michigan*, and
MORGAN HENDERSON, *University of Michigan*

Is the British Colonization Better Than That of the French? A Study of Vanuatu

Comparative studies have suggested that the British colonization is more beneficial than those of France and other colonizers. It is argued that the British cultures and institutions contributed to stable politics and robust economic development of its colonies. However, evidence is still inconclusive because a controlled experiment is very difficult in social science. Vanuatu—a Pacific island—provides an excellent experimental setting for testing the argument. Britain and France established a joint government, the British government, and the French government, which lasted from 1906 until 1980, in the same territory. Local people could choose whether to be tried under the British common law or the French civil law. Nationals of one country could set up corporations under the laws of the other. The case of Vanuatu suggests that political indicators are in favor of Britain, but economic indicators are in favor of France. The French-dominated areas have been more developed than the British-dominated areas. The major British trading company established a company under the French law and a certain number of British planters registered themselves in the French residency to attain the benefits of French economic policies.

DONGWOO YOO, *West Virginia University*

Endogenous Colonial Institutions: Lessons from Fiscal Capacity Building in British and French Africa, 1880–1940

The economic and historical literature is divided about the role of metropolitan identity for the design of colonial institutions. We explore the importance of exogenously imposed metropolitan policies and endogenous economic and geographic conditions on the comparative development of colonial tax systems in British and French Africa. Fiscal capacity building constituted the financial backbone of the colonial state formation process. Using colonial government budget accounts, we construct PPP-adjusted comparisons of per capita government revenue, and we analyze the source composition of taxes. We find that local geographies and indigenous responses to commercial opportunities were key determinants for the design of local colonial tax systems and that typically “British” or “French” tax policy blueprints are hard to decipher.

MARLOUS VAN WAIJENBURG, *Northwestern University*, and
EWOUT FRANKEMA, *Wageningen University*

SESSION 4: DEPRESSION AND RECOVERY

Goods, Services, and the Pace of Economic Recovery

We argue that service-based economies experience slower economic recoveries than goods-based economies. Using national- and state-level data for the United States for post-World War II recessions, controlling for the depth of the downturn, we find that the higher is the share of services in output, the longer is it takes an economy to recover from recession using a variety of measures of the employment cycle. Extending our results to the 2007 recession, the marginal impact of rise in services will make the post-2009 recovery last about one year longer than it would have a half-century ago. We offer two hypotheses for this relationship and explore policy options to mitigate the negative external macroeconomic effects of a larger service sector.

MARTHA OLNEY, *University of California, Berkeley*, and
AARON PACITTI, *Siena College*

Rethinking the World War II Economy: The Welfare Effects of World War II and the Role of Household Demand in the Postwar Boom

This paper revisits two debates among economic historians about World War II. First, it looks at measures of welfare on the home front during the war and concludes that disposable income is a better measure of “welfare” than consumption alone. By the metric of real disposable income, welfare increased throughout the war. This explains why the war felt like a boom to those on the home front. Secondly, this paper looks at arguments challenging what Robert Higgs has called the “orthodox” story of reconversion. This paper finds that the orthodox story of reconversion—that pent-up demand drove the postwar reconversion process—more or less holds up. However, this paper offers a revision to the orthodox narrative to make it more consistent with the data. There was no need to “spend down” savings to satisfy pent-up demand. Instead, the postwar housing boom meant that households acquired long-term assets and liabilities that did not necessitate the immediate drawdown of the liquid assets accumulated during the war.

ANDREW BOSSIE, *City University of New York*

What Caused Chicago Bank Failures in the Great Depression? A Look at the 1920s

This paper reassesses the causes of Chicago bank failures during the Great Depression by tracking the evolution of their balance sheets in the 1920s. Looking at the long-term behavior of financial ratios from 1923 to 1933 provides new insights on the causes of bank failures. I find that banks which failed the earliest in the 1930s had invested more in nonliquid assets (in particular, mortgages) in the 1920s. However, all Chicago banks suffered tremendous deposit withdrawals during 1930–1933 in what seems to have been an indiscriminate run. The main cause of bank failures was therefore a combination of illiquid mortgages on the asset side and deposit losses on the liability side. Banks heavily engaged in mortgages did not have enough liquid assets to face the withdrawals and failed.

NATACHA POSTEL-VINAY, *London School of Economics*

A Monthly International Data Set for the Interwar Period: Taking the Debate to the Next Level

Recent research on the Great Depression has increased the demand for detailed data on business activity. This paper presents a novel data set that expands the data in three dimensions: (i) a larger cross-section with 28 countries, (ii) a higher (monthly) frequency of real economy data, and (iii) disaggregated data ensuring representativeness. We aggregate in total 415 single series using Principal Component Analysis to construct a business activity indicator for individual countries for the years 1925–1936. We date business cycle peaks and troughs during the Great Depression, and find that while pre-Depression peaks occurred in almost all countries in 1929, some countries were severely hit by the crisis as late as 1930 and 1931. Furthermore, we analyze business cycle comovement during the interwar period and find that exchange controls made countries more independent from the global economy, while the gold standard induced comovement.

MARTIN UEBELE, *University of Groningen*, and
THILO ALBERS, *University of Muenster*

SESSION 5: LABOR MARKETS

The Impact of Progressive Era Labor Regulations on the Manufacturing Labor Market

During the late nineteenth and early twentieth centuries, state governments began playing a larger role in regulating labor markets and labor conditions. States established bureaus to collect labor statistics and regulatory bodies to conduct inspections. We use the information on the presence of these labor laws in each state to develop an index of laws to characterize the regulatory climate and how that climate changed over time. We then examine how the regulatory climate influenced the manufacturing labor market using panel data on unionization, demographic, and other information from the Censuses of Manufacturing between 1899 and 1919.

SAM ALLEN, *Virginia Military Institute*, and
PRICE FISHBACK, *University of Arizona*

Intergenerational Labor Supply in Interwar London

This paper examines the relationship between poverty and household labor supply, and specifically the issue of whether teenage and young adult workers acted as substitutes for or complements to the labor market activity of their parents. Using the detailed information contained in the New Survey of London Life and Labour (1929–1931), I examine the labor supply behavior of individual workers and households in interwar London, focusing especially on intergenerational trade-offs and labor supply across the life cycle. Preliminary results suggest that, consistent with some previous studies, there is little evidence that daughters substituted for mothers in the labor market. Most striking is the similarity in the determinants of labor force participation for unmarried men and women. Adult sons and daughters living in a household were approximately equally likely to be in the labor force, and both genders displayed similarly muted negative labor supply responses to other household income and the wage of the household head.

JESSICA BEAN, *Denison University*

Sons, Daughters, and Labor Supply in Early Twentieth-Century Hawaii

Immigration to Hawaii between 1868 and 1924 transformed its ethnic structure and population size. We investigate whether high Chinese, Japanese, and White sex ratios allowed females to negotiate better marriage terms and to allocate more household resources to daughters. Using IPUMS samples from the 1900, 1910, 1920, and 1930 Territorial Censuses of Hawaii, regression analysis suggests that both daughters and sons reduce mother labor force participation (LFP), but LFP effects are larger for a daughter than a son at some age intervals. Daughters have no effect on father LFP but for some age intervals a son has a positive effect on father LFP.

SUMNER LA CROIX, *University of Hawaii*, and
TIMOTHY HALLIDAY, *University of Hawaii*

On the Historical Development of Regional Differences in Women's Participation in Japan

This study investigates the sources of regional differences in women's participation in Japan. While it is known that the female participation rate is low in Japan, it is perhaps less known that it differs significantly across regions within the country. In particular, in the Northern Coastal region of Honshu Island, the female participation rate is much higher than elsewhere. The participation rate increased throughout the twentieth century. Historically, urban areas had low participation, whereas nonurban areas had high participation. The participation rate rose steadily and significantly in urban areas, and to a lesser extent in nonurban areas. As a result, there was a significant convergence in female participation from 1930 to 2010. The Northern Coastal region, which is a nonurban region, emerged as the region with the highest participation in the 1960s.

YUKIKO ABE, *Hokkaido University*, and
GIORGIO BRUNELLO, *Università degli Studi di Padova*

SESSION 6: AFRICA

Market Integration in South Africa Before and After Unification

The discovery of minerals in the South African interior caused volatile economic transformation and political upheaval across southern Africa which included one of Britain's most expensive colonial wars (1899–1902) and the unification, in 1910, of two British territories and two defeated Afrikaner republics. Using techniques borrowed from the applied business cycle literature, we use two data sources to, firstly, show market integration between South Africa and her main trading partners following the discovery of diamonds, and, secondly, within South Africa after

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the Second South African War. Evidence for the first hypothesis is obtained from an annual grain price series spanning 76 years, while evidence for the second hypothesis comes from a new, monthly panel data set of five commodities across 21 South African towns between 1897 and 1910.

JOHAN FOURIE, *Stellenbosch University*

Was Independence Really Better Than Colonial Rule? A Comparative Study of Liberia and Sierra Leone

In a growing body of literature examining the economic impacts of colonialism in Africa, the experience of countries like Liberia which remained independent through much of the twentieth century is often overlooked. This paper compares the economic development of Liberia with that of colonial Sierra Leone from the late nineteenth century through the interwar period. Both countries were founded as colonies for freed slaves in the early nineteenth century, but while Sierra Leone became a British colony, Liberia was declared an independent republic in 1847. This comparison illustrates the changing constraints to development that faced independent countries in the periphery, and allows these to be distinguished from the impact of colonial rule, bringing new insights to the study of African economic history during the nineteenth and twentieth centuries.

LEIGH GARDNER, *London School of Economics*

Colonial Investments and African Development: Further Evidence from Railroads in Kenya

What is the impact of colonial public investments on long-term development? We investigate this by looking at the impact of railway construction on agricultural and economic development in Kenya. The Uganda railway line was built by the British to link the Uganda protectorate to the coast 1896–1901. A number of branch lines were opened in the 1920s. Using panel data, we show that this boosted production of coffee, tea, and sisal of European settlers at that time. Using panel data at a fine spatial level (10x10 km grid cells) from five Censuses 1948–1999, we show that railroad construction had a persistent impact on Kenya's development of cities: railway districts are more developed today despite a complete displacement of rail by other means of transport. We exploit various strategies to ensure that our effects are causal: we provide evidence that line placement was exogenous, we find no effect for a set of placebo lines, and results are robust to instrumentation and nearest neighbor matching.

ALEXANDER MORADI, *University of Sussex*,
REMI JEDWAB, *George Washington University*, and
EDWARD KERBY, *London School of Economics*

SESSION 7: RAILROADS

American Banking and the Transportation Revolution Before the Civil War

Studies have shown a connection between finance and growth, but most do not consider how financial and real factors interact to put a virtuous cycle of economic development into motion. As the main transportation advance of the nineteenth century, railroads connected established commercial centers and made the unsettled areas along their routes better candidates for development. We measure the strength of links between railroads and banks in seven Midwest states using an annual transportation GIS database linked to a census of banking. These data indicate that those counties which already had a bank were more likely to see their first railroad go through over the next decade, while new banks tended to enter a county a year or two after it got a railroad. The initial banking system thus helped establish the rail system, while the rapid expansion of railroads helped fill in the banking map of the American Midwest.

JEREMY ATACK, *Vanderbilt University*,
MATTHEW JAREMSKI, *Colgate University*,
PETER ROUSSEAU, *Vanderbilt University*

Locomotives of Local Growth: The Short- and Long-Term Impact of Railroads in Sweden

This paper uses city-level data to examine the impact of a first wave of railroad construction in Sweden, 1855–1870, from the nineteenth century until today. We estimate that railroads accounted for 50 percent of urban growth, 1855–1870. In cities with access to the railroad network, property values were higher, manufacturing employment increased, establishments were larger, and more information was distributed through local post offices. Today, cities with early access to the network are substantially larger compared to initially similar cities. We hypothesize that railroads set in motion a path-dependent process that shapes the economic geography of Sweden today.

KERSTIN ENFLO, *Lund University*, and
THOR BERGER, *Lund University*

By How Much Did Railroads Conquer the West?

I study the effect of railroads on integrating the economy of the United States in the mid- to late-nineteenth century. I have assembled a unique data set using hand-collected data on five commodity prices for 283 locations in the United States over the years 1851–1892. A railroad connection between two places should reduce transportation costs and thus price differences. I use the variation in prices, geography, and railroad networks to answer a variety of questions about the role of the railroads in market integration. Recognizing that railroads were built for profit and not at random, a railroad connection may be correlated with price gaps. To correct for this, I use an instrumental variables approach where the population and total railroad network size instrument for whether a city is connected to the railroad. Using this estimation method, I find that a railroad connection reduced the price gap between two cities by an average of 77 percent.

ROSS KNIPPENBERG, *University of Colorado at Boulder*

SESSION 8: POPULATION AND HEALTH

Socioeconomic Status and Fertility: Insights from Historical Transitions in Europe and North America

One of the major demographic changes during the past 200 years is the emergence of the two-child norm as part of the creation of the modern family. While we know a great deal about the timing of the fertility transition in different regions, we know much less about specific features and causes. The aim of this paper is to use longitudinal micro-level data for seven local populations in Europe and North America in the nineteenth and twentieth centuries to study the relationship between socioeconomic status and fertility before, during, and after the transition. Using the same analytical model allows us not only to test hypotheses about the reversal of class differences, but also to address possible determinants of fertility decline more generally. More specifically, we look at the development of socioeconomic differences in marital fertility and relate it to common theories on fertility behavior as adjustment and innovation processes. Our results do not provide strong support for the hypothesis of high fertility among the upper classes in pre-transitional society, but support the idea that they acted as forerunners in the transition by being early in reducing their fertility. Besides this regularity, the patterns of class differences in fertility varied a great deal between populations, pointing to the importance of local contextual factors.

MARTIN DRIBE, *Lund University*,
HILDE BRAS, *Radboud University Nijmegen*,
MARCO BRESCHI, *University of Sassari*,
ALAIN GAGNON, *University of Montreal*,
DANIELLE GAUVREAU, *University of Concordia*,
THOMAS N. MALONEY, *University of Utah*,
JOSEPH MOLITORIS, *Lund University*,
LUCIA POZZI, *University of Sassari*, and
HELENE VEZINA, *University of Quebec at Chicoutimi*

Alcohol Prohibition and Infant Mortality

The merits of alcohol prohibition have been, and continue to be heavily debated. While the net effect of alcohol prohibition on violence is uncertain, one clear potential positive externality to alcohol prohibition is improved health outcomes, through improved prenatal health, reduced domestic violence, and/or higher standards of living. These effects should be especially salient among expecting mothers, birth outcomes for infants, and young children in general. Using data on age-specific mortalities and exploiting the variation of state-level prohibition laws, we estimate alcohol prohibition's impact on mortality rates from internal causes (sickness, congenital disorder) and external causes (violence, neglect, accidents) for infants and young children. We find a reduction in the share of infants under the age of one who die of internal causes rather than external causes when the commercial sale of alcohol is criminalized. We find that the reduction in the number of deaths for children aged one through nine is the result of prohibition's effect on external causes of death.

BRIGGS DEPEW, *University of Arizona*, and
GRIFFIN EDWARDS, *Southern Utah University*

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Childhood Illness and Occupational Choice in London, 1870–1911

We study the long-run effects of childhood illness on socioeconomic outcomes in London, England, between 1870 and 1911. Poor childhood health may have restricted social mobility and contributed to income inequality. We match patients hospitalized during childhood to censuses of England to identify siblings residing in the same household, who would have experienced similar living standards during childhood, and link all individuals to the 1911 Census to observe outcomes as adults. We use sibling fixed-effects models with identifying variation from heterogeneity in disease incidence, severity, and timing. Preliminary results suggest that hospitalized individuals were 5 to 10 percent less likely to be married in 1911 than their siblings. Results are robust to varying restrictions on the quality of matched observations in the sample, and the differences in ages between patients and their siblings. We also find some evidence that childhood illness was associated with lower occupational wages and physical skill requirements.

ANTHONY WRAY, *Northwestern University*, and
KRZYSZTOF KARBOWNIK, *Uppsala University*

SESSION 9: INSTITUTIONS AND BELIEFS

The Reformation, Political Legitimacy, and the Origin of the Modern Economy in England

This paper opens the "black box" of endogenous political legitimacy and asks what role, if any, did political legitimacy play in the process rendering England the first modern economy, a colonial empire, and an exemplary democracy? Legitimacy entails obedience based on the moral obligation to follow the authority, and public displays of support from legitimizing agents increase legitimacy. Although the political authority can potentially select its legitimizing agents, the more the legitimizing agent has the power to decline supporting the authority, the higher legitimacy its support entails. Historically, the break with Rome that Henry VIII instituted during the English Reformation reduced the legitimizing power of the church and the Tudors monarchs increasingly relied on Parliament as a legitimizing agent. They thus increased the power of the Parliament and its secular components. The endogenous change in the balance of political power was the ultimate source of the multiple institutional and policy changes that are the hallmark of England's transformation.

JARED RUBIN, *Chapman University*, and
AVNER GREIF, *Stanford University*

Beliefs, Leadership, and Economic Development: Making the Critical Transition

A lesson from the scholarship on institutions and development is that economic and political transitions towards more openness seldom happen because it is not in the interest of those in power, whose goal is to protect their rents. We know more about persistence than we do about making the critical transition to sustained prosperity. We focus on the question: how have some countries managed to break away and transition to becoming open societies? We highlight the roles played by three concepts: windows of opportunity, beliefs, and leadership. We wed these concepts to institutions.

After presenting our framework, we flesh out the dynamics with a case study of Brazil from 1964–2012. In the early 1990s Brazil seized a window of opportunity with the leadership of President Cardoso and his economic team. Over time, they changed beliefs within Brazil which has set them on a trajectory towards an open economic and political society.

LEE ALSTON, *University of Colorado*,
MARCUS MELO, *Federal University of Pernambuco*, and
BERNARDO MUELLER, *University of Brasilia*

The Persistence of the Inquisitorial Mind: Long-Run Effects of the Spanish Inquisition

This paper analyzes the long-term economic consequences of the Spanish Inquisition and its objective is twofold: first, to show the existence and magnitude of this persistence on economic outcomes; second, to study the channels through which inquisitorial activity hindered economic development. In particular, I explore how inquisitorial activity affected trust levels on institutions and attitudes towards the adoption of new technologies. Using a data set on seven regions, fourteen provinces and 947 municipalities on inquisitorial activity and population outcomes, I show that municipalities that were affected by the Inquisition are associated with a lower economic development than municipalities that were not affected by it. This association is more significant in the nineteenth century and beginning of the twentieth century. In order to explore the channels of persistence, I use World Values Survey questions about trust on institutions and attitudes towards scientific advances as well as the annual number of patents produced by each region since 1850. My results show a strong negative association between inquisitorial activity and patents or attitudes towards new technology, suggesting that the Spanish Inquisition had a long and negative influence on innovation. The results on trust are inconclusive.

JORDI VIDAL-ROBERT, *University of Warwick*

SESSION 10: INDUSTRY AND TRADE

U.S. Manufacturing During the Great Depression: Evidence from the Biennial Census of Manufactures

Financial crises disrupt labor markets severely. The most dramatic example in U.S. history is the Great Depression. This paper uses a new data set drawn from the Census of Manufactures to study the relationship between financial conditions and labor market outcomes during this period. I exploit the geographic variation in the supply of credit across states finding a large effect of bank lending on employment and wages. The relationship between bank lending and employment is found only when controlling for the industrial composition of states.

FELIP BENGURIA, *University of Virginia*

The Wartime Origins of the Wirtschaftswunder: The Growth of West German Industry, 1938–1955

The paper offers a detailed quantitative account of industrial development in West Germany between 1938 and 1955. Our disaggregated analysis focusses on the growth of value added, labor productivity, and TFP. Even though productivity growth was rapid by historical standards in the reconstruction phase following the economic reforms of 1948, the expansion of industrial production between 1938 and 1955 was entirely input-driven. The resulting backlog in productivity growth allowed manufacturing in West Germany to retain remarkably high growth rates until the end of the Golden Age. The postwar productivity gap took a decade to close after 1945 because the West German economy remained dislocated for much longer than previously thought. The main dislocating factors besides labor misallocation resulting from the war-induced urban housing shortage were structural disproportions in industrial production caused by the division of Germany. During the Wirtschaftswunder, industrial recovery could tap into surplus capacity and increased market potential.

TAMAS VONYO, *London School of Economics*

Winners and Losers from Globalization: Why Both European and U.S. Farmers Were Angry in the Grain Invasion Era, 1870–1900

We demonstrate that the agrarian unrest in the United States 1870–1900 can be given an economic explanation, despite increases in the real price of agricultural produce. It was not merely the result of nominal illusions. Falling transportation costs allowed for the extension of the frontier and for more farmers to enter the international grain market. They received, however, the world price minus the transaction costs for getting their produce to market. Many considered these costs to be unfairly large, owing to the perceived market power of rail firms and the discriminatory practice of middlemen. Recognizing the gap between what they received and what farmers further east received, frontier farmers protested. We measure the extent of the protest by the shares of the Populist candidate in the 1892 presidential elections and demonstrate that this is negatively related with state wheat prices relative to East Coast prices, even controlling for other relevant factors.

PAUL SHARP, *University of Southern Denmark*, and
KARL GUNNAR PERSSON, *University of Copenhagen*

SESSION 11: FINANCIAL CRISES

The Savings and Loan Crisis in the Shadow of the 2000s

This paper reassesses the history of the Savings and Loan Crisis (1986–1995), focusing on two related issues. First, does the fact that the sector was already insolvent at the time of the 1980 and 1982 recessions mean that Reinhardt and Rogoff were wrong in classifying these recessions as not associated with financial crisis? Second, if the 2007–2009 calamity makes some of the hyperbolic descriptions of the S & L debacle now seem overblown, in what ways did it help establish preconditions for the more severe crisis that followed? The paper examines the impact of changes during this period in producing a substantial and apparently permanent upward movement in the aggregate debt to asset ratios in the U.S. residential housing sector, and thus situates the history of the S & L crisis within a larger narrative about the sharp rise in U.S. household debt to income ratios beginning in the 1980s.

ALEXANDER FIELD, *Santa Clara University*

Sovereigns versus Banks: Credit, Crises, and Consequences

Two separate narratives have emerged in the wake of the Global Financial Crisis. One speaks of private financial excess and the key role of the banking system in leveraging and deleveraging the economy. The other emphasizes the public sector balance sheet over the private and worries about the risks of lax fiscal policies. This paper studies the co-evolution of public and private sector debt in advanced countries since 1870. We find that in advanced economies financial stability risks have come from private sector credit booms and not from the expansion of public debt. However, we find evidence that high levels of public debt have tended to exacerbate the effects of private sector deleveraging after crises, leading to more prolonged periods of economic depression. Fiscal space appears to be a constraint in the aftermath of a crisis, then and now.

MORITZ SCHULARICK, *University of Bonn*,
ALAN TAYLOR, *University of California, Davis*, and
OSCAR JORDA, *Federal Reserve Bank of San Francisco*

Currency Crises from Andrew Jackson to Angela Merkel

This paper presents a narrative of currency crises for the past two centuries. I use the Swan Diagram as a theoretical framework for this narrative and conclude that many so-called banking crises are in fact currency crises. These crises are caused by capital flows in war and peace and typically result in recessions. The Swan Diagram helps us to consider external and internal imbalances together and understand their interactions. It also reminds us that national histories often ignore the international aspect of economic crises. This paper draws on and extends work reported in Peter Temin and David Vines, *The Leaderless Economy: Why the World Economic System Fell Apart and How to Fix It* (Princeton 2013).

PETER TEMIN, *Massachusetts Institute of Technology*

SESSION 12: FINANCE

Governing Global Capital Markets: Collective Action Clauses, Bondholder Committees, and the London Stock Exchange in the Nineteenth Century, 1827–1868

This paper unpacks the operation of foreign debt bondholder committees before the creation of the British Corporation of Foreign Bondholders (CFB) in 1868. I argue that many ideas about this period need to be revisited. In particular, my evidence (which uses archival work to describe market microstructures) shows the importance of the London Stock Exchange as a Court of Arbitration. I show how the LSE General Purpose Committee set up a system of Collective Action Clauses, requiring majority agreement among bondholders to sanction a restructuring deal and permit market access. I argue that (unlike what research has argued thus far) this created powerful

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incentives for bondholders to get organized as they did. Previous models and formal analyses need to be recast. The CFB appears to have been an experiment in statutory restructurings rather than one in coordination.

MARC FLANDREAU, *Graduate Institute of International and Development Studies, Geneva*

Pre-Banking Financial Intermediation: Evidence from a Brokerage Law Reform in Eighteenth-Century Marseille

Under the Ordonnance du Commerce of 1673, brokers were restricted to gathering price information, putting buyers and sellers in contact, and guaranteeing the authenticity of deals. Brokerage fees were strictly regulated and municipalities controlled market entry by issuing commissions whose quantity was dictated by the government's revenue raising needs rather than by local market conditions. As a result of these restrictions, the common view in the literature is that brokers struggled financially, surviving at the outskirts of the social and financial systems and in competition with petty moneylenders and merchant houses. At odds with this view, the evidence shown in this paper describes a very different reality for brokers in Marseille over the eighteenth century, during which time brokers rose rapidly to occupy a prominent economic and social position. I look at how the path-breaking Edict of 1709, which allowed brokers to perform both matching and proprietary trading, prompted the ascent of brokers in Marseille. I provide preliminary evidence on which financial functions brokers performed and how close they were to banks by drawing on archival sources depicting the relationship of a major merchant house with all its brokers in Marseille. I identify regional differences in enforcement of the critical brokerage rule—the Edict of 1709— and on that basis elaborate on the consequences of allowing intermediaries to endogenously determine the extent of their activities. I investigate whether consolidation of financial services led to an increase in brokers' business volume, protability, and political clout.

VERONICA SANTAROSA, *University of Michigan*

Did the Reserve Requirement Increments of 1936–1937 Reduce Bank Lending? Evidence from a Natural Experiment

Scholars differ on whether the 1936/37 increase in member bank reserve requirements caused a contraction in loan supply and generated the 1937/38 recession. We examine this issue by comparing the loan supply behavior of Federal Reserve member and nonmember banks in the state-chartered banking system in New York. State member banks had their reserve requirements double over a span of two years, while the reserve requirements for nonmember banks were held constant. After implementing the difference-in-difference estimators, we find that the initial reserve increase in 1936 did not cause a contraction in loan supply for member banks, nor did subsequent reserve ratio increases in 1937. Our findings support the idea that it was other fiscal and monetary factors that led to the recession of 1937/1838, not the increase in reserve ratios as Friedman and Schwartz (1963) suggested.

PATRICK VAN HORN, *New College of Florida*, and
HAELIM PARK, *U.S. Treasury*

SESSION 13: TECHNOLOGY

Diffusing New Technology Without Dissipating Rents: Some Historical Case Studies of Knowledge Sharing

The diffusion of innovations is supposed to dissipate inventors' rents. Yet in many documented cases, inventors freely shared knowledge with rivals, including in steam engines, iron and steel production and textile machinery. Using a model and case studies, this paper explores why sharing did not eliminate inventors' incentives. Each new technology coexisted with an alternative for one or more decades. This allowed inventors to earn high rents while sharing knowledge, making major productivity gains. In contrast, patents generated little value. The technology diffusion literature suggests that such circumstances are common during the early stages of a technology. This has important implications for innovation policy.

JAMES BESSEN, *Boston University School of Law*, and
ALESSANDRO NUVOLARI, *Sant' Anna School of Advanced Studies, Pisa*

Necessity's Children? The Inventions of the Industrial Revolution

What does it take for a society to be able to innovate? According to recent historical studies by Mokyr (2009), Allen (2009), and Acemoglu and Robinson (2012), the society's institutions must be able to meet its needs, as expressed by factor prices. However, this approach fails to explain why between 1700 and 1850, the well-organized markets of the commercially oriented Netherlands failed to generate innovation while the less-competitive markets of absolutist France yielded numerous key technologies. This paper presents a complementary approach that emphasizes social networks, distinguishing between cooperative and noncooperative innovations. The empirical results, based on data covering 117 important innovations and 201 regions in ten countries, suggest that ideology and factor prices played a role for the simpler noncooperative subset. However, for the more complex cooperative innovations, the keys were literacy, language standardization, and the openness of the local social structure.

LEONARD DUDLEY, *Université de Montréal*

The Diffusion of Newcomen Engines, 1700–1770: A Revisionist Assessment

The present paper attempts to quantify the diffusion of Newcomen engines in the British economy prior to the commercial application of the first Watt engine. It begins by pointing out omissions and discrepancies between the original Kanefsky database and the secondary literature leading to a number of revisions of the former. The diffusion path is subsequently drawn in terms of adopted horsepower and adjusted for the proportion of the latter being in use throughout the period. This methodology differs from previous studies which quantify diffusion based on the number of steam engines and do not take into account those falling out of use. The results are presented in terms of aggregate, sectoral, and regional patterns of diffusion. Finally, following a long held methodology of the literature on technological diffusion, the paper weighs the number of engines installed by the end of the period in relation to the potential range of adopters. In the end, this method generates a less celebratory assessment regarding the pace of diffusion of Newcomen engines.

HARRY KITSIKOPOULOS, *New York University*

SESSION 14: MIGRATION AND INEQUALITY

The Great Migration in Black and White: Understanding Black-White Differences Using Linked Census Data

The post-World War I migration of Southern blacks to cities of the U.S. North, the so-called "Great Migration," was significant both for its size and for its impact on a variety of economic, social, and cultural outcomes. Yet the black migration was rivaled in size by the out-migration of Southern whites, a largely unstudied migrant flow. We bring new data to bear on the comparative experiences of black and white Southern migrants between 1910 and 1930. Despite similar migration rates between the races, we highlight stark differences in their locations of Southern origin, in their choices of out-of-South locations, and in their labor market outcomes by 1930. We construct a panel data set of 26,000 black and white Southerners, including a full complement of ex ante observable characteristics of migrants, to determine the proximate causes of their differing experiences.

MARIANNE WANAMAKER, *University of Tennessee*, and
WILLIAM J. COLLINS, *Vanderbilt University*

The Dynamics of Mass Migration: The Economics of the Jewish Exodus from the Pale of Settlement in Tsarist Russia

During the period 1881–1914, approximately 1.5 million Jews immigrated to the United States from the Pale of Settlement in the Russian Empire. I construct a data set linking Ellis Island individual immigration records of hundreds of thousands of Russian Jews to data from the 1897 Russian census on their towns and districts of origin, and map local migration networks using data on 1,500 hometown-based associations active in the United States. Using an econometric dynamic model of discrete choice with serially correlated unobserved heterogeneity and an underlying networks diffusion process, I estimate the effects of long-run income differences between the sending and the receiving countries and of short-term income shocks on the magnitude of migration flows. I find that much of the observed volatility of migration is due to individuals timing their migration along the destination county business-cycles, and that short-term shocks are largely offset in the long-run by delayed migration.

YANNAY SPITZER, *Northwestern University*

Tops and Bottoms: Wealth Extremes in Late Nineteenth-Century Ontario: Where Were the Rich People?

Late nineteenth-century Ontario was marked by great wealth inequality as evidenced from census—linked probate data for the years 1892 and 1902. The average wealth of decedents taken from the years 1892 and 1902 was $6,871 with the top 1 percent of decedents reporting an average wealth of $169, 415 and the bottom 1 percent an average of $43. Compared to the United States, Britain or even new settler economies such as Argentina or Australia, Ontario seems curiously bereft of larger supercharged estates more characteristic of the Age of the Robber Barons. This leads to the natural question: where are the wealth extremes and great fortunes of late nineteenth-century Ontario? Explanations explored include a slower rate of economic growth, the predominance of Montreal rather than Toronto as an economic center, and migration of Canadians to pursue opportunities in the United States. It is not that nineteenth-century Canada did not generate rich people, it did not hang on to them in the long run thereby generating perceptions of a shortage of rich people in Canada that persist to the present.

LIVIO DI MATTEO, *Lakehead University*

SESSION 15: LONG-RUN GROWTH AND LIVING STANDARDS

The Heavy Plough and the European Agricultural Revolution of the Middle Ages

This research tests the long-standing hypothesis put forth by Lynn White, Jr. (1962) that the adoption of the heavy plough in Northern Europe led to increased population density and urbanization. White argued that it was impossible to take proper advantage of the fertile clay soils of Northern Europe before the invention and widespread adoption of the heavy plough. We implement the test in a difference-in-difference set-up by exploiting regional variation in the presence of fertile clay soils across European regions as well as across Danish historical counties. Consistent with the hypothesis, we find that regions with relatively more fertile clay soil experienced higher urbanization and population growth after the heavy plough had its breakthrough, which was approximately around the closing of the first millennium AD. Our findings suggest that the heavy plough accounts for around 10 percent of the increase in population density and urbanization during the High Middle Age.

CHRISTIAN SKOVSGARD, *University of Southern Denmark*,
THOMAS ANDERSEN, *University of Southern Denmark*, and
PETER JENSEN, *University of Southern Denmark*

Economic Inequality in Northwestern Italy: A Long-Term View (Fourteenth to Eighteenth Centuries)

This article provides a comprehensive picture of economic inequality in northwestern Italy (Piedmont), focusing on the long-term developments that occurred during 1300–1800 ca. Regional studies of this kind are rare, and none of them has as long a timescale. The new data proposed illuminate many little-known aspects of wealth distribution and general economic inequality in preindustrial times, and support the idea that during the Early Modern period, inequality grew everywhere: both in cities and in rural areas, and independently from whether the economy was growing or stagnating. This finding challenges earlier views that explained inequality growth as the consequence of economic development. The importance of demographic processes affecting inequality is underlined, and the impact of severe mortality crises, like the Black Death, is analyzed.

GUIDO ALFANI, *Bocconi University*

Housing and the Cost of Living in Early Modern Toledo, 1489–1650

Data on housing costs and rental markets for the early modern period are notoriously scarce. Using a new database of rent paid on 183 properties belonging to the Cathedral Chapter of Toledo between 1489 and 1600, we reconstruct housing costs for various social groups and trace the effect of exogenous shocks on the rental market. We then explore the impact of adding rent to early modern price indices and estimates of living standards. Price indices show a moderate effect. The addition of rent reduces the gap between Toledo and two northern European locations by up to 9.5 percent.

MAURICIO DRELICHMAN, *University of British Columbia*, and
DAVID GONZALEZ AGUDO, *Universidad Complutense de Madrid*