

### Where are we now in cliometrics?

Diebolt, Claude

Veröffentlichungsversion / Published Version

Zeitschriftenartikel / journal article

Zur Verfügung gestellt in Kooperation mit / provided in cooperation with:

GESIS - Leibniz-Institut für Sozialwissenschaften

#### Empfohlene Zitierung / Suggested Citation:

Diebolt, C. (2012). Where are we now in cliometrics? *Historical Social Research*, 37(4), 309-326. <https://doi.org/10.12759/hsr.37.2012.4.309-326>

#### Nutzungsbedingungen:

Dieser Text wird unter einer CC BY Lizenz (Namensnennung) zur Verfügung gestellt. Nähere Auskünfte zu den CC-Lizenzen finden Sie hier:

<https://creativecommons.org/licenses/by/4.0/deed.de>

#### Terms of use:

This document is made available under a CC BY Licence (Attribution). For more information see:

<https://creativecommons.org/licenses/by/4.0>

---

# Where Are We Now in Cliometrics?

*Claude Diebolt*\*

---

**Abstract:** »*Kliometrie: wo stehen wir heute?*«. That cliometrics is an indispensable tool in the study of economic history is no longer a very controversial statement. It is now generally agreed that economic theory, combined with new data as well as historical, statistical and mathematical methods are necessary at the theoretical level, to formulate problems precisely, to draw conclusions from postulates and to gain insight into workings of complicated processes and, at the applied level, to measure variables, to estimate parameters and to organise the elaborate calculations involved in reaching empirical results. This article is an illustration of my belief in this principle.

**Keywords:** cliometrics, historical economics, econometric history.

---

## 1. Introduction

---

Cliometric research is characterized by the systematic combination of data, statistical or econometric methods and economic theory. In this context, historical time series play a dominant part in so far as they represent quantitative measures for specific indicators of theoretically defined variables over time. Time series and time series methods in cliometrics can therefore be discussed at least under three aspects which of course are interwoven: the data, the methodological and the theoretical aspect.

The data aspect concerns the availability and validity of data for analysis in economic history. The collection of time series was and still is one of the most time consuming task in historical research. Generations of economic historians have collected an enormous mass of data. An important task for present and future research will be to collect and to systematically compile these data in databases which can be used online. On the other side, new research fields yield to new demands of data which inspired new research projects which are mainly concerned with the gathering of new data out from historical sources.

Although reliable collections of time series are indispensable for looking into the past, linking it with present statistical and econometric methods are necessary as well to analyze the dynamics and structural relations of historical

---

\* Claude Diebolt, BETA/CNRS, Université de Strasbourg, Faculté des Sciences Economiques et de Gestion, 61 Avenue de la Forêt Noire, 67085 Strasbourg Cedex, France; [cdiebolt@unistra.fr](mailto:cdiebolt@unistra.fr).

processes in the short, medium and long term. In some seminal works it has been demonstrated that time series analysis needs special tools. In this context methods have been developed which allow to test on the data generating process, to model and filter stochastic trends and cycles, to identify outliers and structural breaks and last but not least to model causal relationships between stationary and non-stationary stochastic processes. In this field of research there is a strong connection to that part of econometrics which regards itself as time series econometrics.

So far we have discussed the data and the methodological aspect. The last and remaining aspect concerns economic theory. Two aspects must be distinguished here. Economic theory can be tested by the use of valid data and appropriate methods. This is in the spirit of classical econometrics. The other and as we think the more important aspect nowadays is the generation of new hypothesis, new models and new theoretical insights into the dynamics and interrelations of economic variables over time and space by analyzing time series with newly developed methods.

*Cliometrica – Journal of Historical Economics and Econometric History* is an original illustration of the validity of this belief. It tries to bring together scholars who explicitly discuss and develop hypothesis, models and theories for explaining economic history by means of time series and time series methods.

According to this principle, this article gives an overview of what is new in cliometrics, i.e. of contributions dealing with new data and data bases, with newly developed methods for analyzing historical time series and with newly developed hypothesis, models and theories explaining developments and structural changes in economic history and therefore contribute to the progress of cliometrics in general.

### UK World War I and Interwar Data for Business Cycle and Growth Analysis

This article contributes new time series for studying the UK economy during World War I and the interwar period. The time series are per capita hours worked and average capital income, labor income, and consumption tax rates. Uninterrupted time series of these variables are provided for an annual sample that runs from 1913 to 1938. Nason and Vahey (2012) highlight the usefulness of these time series with several empirical applications. The per capita hours worked data are used in a growth accounting exercise to measure the contributions of capital, labor, and productivity to output growth. The average tax rates are employed in a Bayesian model averaging experiment to reevaluate the Benjamin and Kochin regression.

## Regime Switching and Wages in Major League Baseball under the Reserve Clause

Over the course of the twentieth century, American wages increased by a factor of about 100, while the wages of professional baseball players increased by a factor of 450, but that increase was neither smooth nor consistent. Hauptert and Murray (2012) use a unique and expansive dataset of salaries and performance variables of Major League Baseball pitchers that spans over 400 players and 60 years during the reserve clause era to identify factors that determine salaries and examine how the importance of various factors have changed over time. They employ a Markov regime-switching regression model borrowed from the macroeconomics literature, which allows regression coefficients to switch exogenously between two or more values as time progresses. This method lets us identify changes in wage determination that may have occurred because of a change in the league's competitiveness, a change in the relative bargaining power between players and teams, or other factors that may be unknown or unobservable. They find that even though Major League Baseball was a tightly controlled monopsony with the reserve clause, there was a significant shift in salary determination that lasted from the Great Depression until after World War II where players' salaries were more highly linked to their recent performance.

## The Rise of the US Portland Cement Industry and the Role of Public Science

American Portland cement rose spectacularly during the 1890s from being a niche product to dominating a much larger market. The contributions of innovations, factor endowments and public science – factors highlighted as contributing to the more general American industrialization occurring at the same time – are analyzed by Prentice (2012). The successful commercialization of the rotary kiln, enabled by abundant supplies of fuels and minerals, played a key role, as did greater demand. Geological surveys, as highlighted by David and Wright, assisted in some states, but an econometric entry model does not demonstrate that they made a systematic significant contribution to the rise.

## A Quantile Approach to the Demographic, Residential, and Socioeconomic Effects on 19th-Century African-American Body Mass Index Values

Little research exists on the body mass index values of late 19th- and early 20th-century African Americans. Using a new BMI data set and robust statistics, this paper by Carson (2012) demonstrates that darker complexioned black BMIs were greater than for mulattos, and a mulatto BMI advantage did not exist. Throughout the late 19th and early 20th centuries, black BMIs decreased

across the BMI distribution, indicating that the 20th-century increase in black BMIs did not have its origin in the 19th century. During industrialization, black BMIs were lower in Kentucky, Missouri, and urban Philadelphia. Late 19th- and early 20th-century black BMIs were related to occupations, and farmers had heavier BMIs than workers in other occupations.

#### A Critical Note on "This time is different"

This article by Parent (2012) is structured as follows: the first section is based on Reinhart and Rogoff's seminal papers and text book, which today constitute the new cornerstones of conventional wisdom on the recurrence of financial crises throughout History, their development and aftermath. We deliver a critical view of this attempt to infer some systematic empirical relationship between debt, growth and inflation and underline the absence of core variables in this historical analysis. In Section 3, we go back 10 years to illustrate that conventional wisdom was much different at that time, emphasizing the peculiarity of each episode of the financial crises. This raises the issue of the relevancy of the cliometric approach to identify regularities down through History: so, should we trust cliometricians?

#### The Demographic Transition: Causes and Consequences

This paper by Galor (2012) develops the theoretical foundations and the testable implications of the various mechanisms that have been proposed as possible triggers for the demographic transition. Moreover, it examines the empirical validity of each of the theories and their significance for the understanding of the transition from stagnation to growth. The analysis suggests that the rise in the demand for human capital in the process of development was the main trigger for the decline in fertility and the transition to modern growth.

#### The Effect of Investment in Children's Education on Fertility in 1816 Prussia

The interaction between investment in children's education and parental fertility is crucial in recent theories of the transition from Malthusian stagnation to modern economic growth. This paper contributes to the literature on the child quantity-quality trade-off with new county-level evidence for Prussia in 1816, several decades before the demographic transition (Becker, Cinnirella and Woessmann 2012). The authors found a significant negative causal effect of education on fertility, which is robust to accounting for spatial autocorrelation. The causal effect of education is identified through exogenous variation in enrollment rates due to differences in landownership inequality. A comparison with estimates for 1849 suggests that the preference for quality relative to quantity might have increased during the first half of the nineteenth century.

## The Diminution of the Physical Stature of the English Male Population in the Eighteenth Century

Komlos and Küchenhoff (2012) re-estimate the height of Englishmen using the sample originally collected by Roderick Floud. They merge the samples from the army and the Royal Marines by weighting the observations in order to reflect the proportions of servicemen in the two branches of the military. In addition to truncated regression, they use cubic spline functions in order to estimate the trend in the physical stature of Englishmen. The results indicate that a very rapid decline in height of c. 1.6 cm per decade accompanied the onset of the industrial and demographic revolutions, implying that the nutritional status of the population deteriorated considerably as it throughout the European Continent.

## Prices, Wages and Fertility in Pre-Industrial England

This paper by Klemp (2012) sheds light on the economic-demographic mechanisms operating in the epoch of pre-industrial economic stagnation, a two-sector Malthusian model is formulated in terms of a cointegrated vector autoregressive model on error correction form. The model allows for both agricultural product wages and relative prices to affect fertility. The model is estimated using new data for the pre-industrial period in England, and the analysis reveals a strong, positive effect of agricultural wages as well as a nonnegative effect of real agricultural prices on fertility. Furthermore, it is demonstrated that there is strongly decreasing returns to scale with respect to labour in the agricultural sector and approximately constant returns to scale in the manufacturing sector. The analysis provides evidence in favour of the usual Malthusian model, as invoked by unified growth theories such as e.g. Galor and Weil.

## French Revolution or Industrial Revolution? A Note on the Contrasting Experiences of England and France up to 1800

At the end of the eighteenth century, England and France both underwent revolutions: France the French Revolution, England the Industrial Revolution. This note sheds new light on these contrasting experiences in the histories of England and France by looking at the evolution of real consumer prices in London and Paris in the centuries leading up to 1800. Whilst in London, building workers were facing low and stable consumer prices over the period, leaving plenty of scope for a demand-driven consumer revolution (in particular after 1650), their Parisian counterparts had to engage in a year-long grind to maintain a decent living, and often had to cut consumption to make ends meet. The exercise conducted in the paper by Sharp and Weisdorf (2012) gives a quantitative and economic underpinning to the notion that the French revolution did not

arise out of nowhere, but rather had its roots in centuries of hardship amongst working class people as they struggled to make a living.

### Food Availability, Food Entitlements, and Radicalism during the Chinese Great Leap toward Famine: An Econometric Panel Data Analysis

The purpose of this article is to investigate the socio-economic as well as the political, institutional, and ideological causes of the Chinese famine of 1959-1961. The main hypothesis of the paper by Clément (2012) is that the radical policies implemented as part of the Great Leap Forward resulted in agricultural output decline (i.e. availability issues), and in the implementation of an ineffective food distribution policy affecting rural populations (i.e. accessibility issues). An econometric analysis, based on provincial panel data from the 1954-1966 period, stresses the effect of ill-advised economic policies in handling the famine. This analysis also confirms that the increase in mortality rates during the famine was caused by the simultaneous collapse in food availability and food accessibility in rural areas.

### Do Kondratieff Waves Exist? How Time Series Techniques can Help to Solve the Problem

Although the long-wave phenomenon has long been discussed in economic, social and political sciences, there is still highly controversial discussion about the methods of providing empirical evidence of such swings as regular cycles in economic time series. This article by Metz (2012) gives an overview about the historical development of time series methods to investigate such long-term oscillations in historical time series and to proof their regularity. It starts with a brief presentation of the methods used by Kondratieff and shows them in the context of classical business cycle analysis. It continues with ARIMA methodology and spectral analysis, which have been found to be appropriate when long waves are conceived as growth cycles. The author then introduces the filter-design approach that was seen as a perfect solution to the hitherto unsolved problem of dividing trend and long waves in the low-frequency domain. A detailed discussion of the stochastic trend hypothesis and its relevance for long-wave analysis follows before outliers and trend breaks within stochastic models and their relevance for long waves are illustrated by means of the GDP per capita of the United Kingdom for 1830-2006.

### Measuring Core Inflation in Italy Comparing Aggregate vs. Disaggregate Price Data

This paper by Sbrana and Silvestrini (2011) focuses on the core inflation measurement in Italy using univariate (national-level inflation) vs. multivariate

(city-level inflation) models during the period 1970-2006. The authors derive algebraic expressions that allow comparison between the reduced form parameters of univariate and multivariate local level models in the context of contemporaneous and temporal aggregation. They illustrate the relevance of these theoretical results for the empirical analysis of time series. Using Italian data, they find that multivariate and univariate models extract similar core inflation measures when analyzing the moderate-low inflation period. In contrast, the two competing models yield different trends when modeling the Great Inflation period.

#### Regional Specialisation and Industry Location in the Long Run: Spain in the US Mirror (1856-2002)

This paper studies the long-run pattern of regional specialisation in Spain for the period 1856-2002. Betrán (2011) has obtained an inverted U-shape trend in manufacturing specialisation which is similar to that in the USA. Using a model that nests factor endowments and increasing returns, she finds that both the latter influence manufacturing location, albeit with variations over time, factor endowments being the most decisive. Manufacturing industries intensive in agricultural and mining inputs are located near regions with these factor endowments, while human capital location gained importance from 1965 onwards. Being located near the market was also significant for some industries. The inverted U-shape observed in manufacturing specialisation is due to the fact that the importance of immobile factors increased regional specialisation. However, when mobile factors increased, as was the case with skilled labour, and when this factor converged across regions, specialisation decreased. The fact that the importance of central markets diminishing also contributed to this trend.

#### The Early Diffusion of the Steam Engine in Britain, 1700-1800: A Reappraisal

Nuvolari, Verspagen and von Tunzelmann (2011) examine the diffusion of steam technology across British counties during the eighteenth century. First, they provide new estimates for the regional variations in the timing, pace and extent of usage of steam engines. Their main data source is an updated version of the list of steam engines erected in Britain during the eighteenth century originally compiled by Kanefsky and Robey. Following a rather established approach for analysing the diffusion of new technologies they fit S-shaped growth functions to the data on the numbers of steam engines installed in each county. In this way, they are able to provide a comprehensive appraisal of the relative speed of the diffusion process in different counties. Second, in order to assess the relative importance of the variables shaping the diffusion of steam power technology, they study the relationship between the number of steam



engines installed in each county and localization factors such as coal prices, availability of water sites, number of textile mills and number of blast furnaces.

### Real Business Cycle Models of the Great Depression

The Great Depression of the 1930s is again on the frontier of research in macroeconomics. Researchers working in the real business cycle (RBC) tradition have recently started to apply their theoretical apparatus to the event. This paper by Pensieroso (2011) discusses the result of their work and assesses the role of history and macroeconomics in analysing the Great Depression. He argues that the breaking of the depression taboo in macroeconomics has been a desirable completion of the cliometric revolution: no historical event should be exempt from a dispassionate quantitative analysis. On the other hand, the substantive contribution of RBC models is not yet sufficient to establish a new historiography of the Great Depression.

### Do Technological Booms Matter? New Evidence on the Relationship between Firm Size and Innovativeness

Many papers have been written about the effect of firm size on innovativeness, revealing a positive, a negative or a mixed impact. To this day, the so called Schumpeterian hypothesis of the above-average innovativeness of large firms has neither been confirmed nor rejected, often because of insufficient data or a too short observation period. Many studies concentrate only on a specific region or sector, or they analyze a very short time period. Windows of technological opportunities, providing technological booms for both firms and sectors, have not yet been investigated. Degner's (2011) analysis of Germany's chemical, metal and electrical engineering sectors between 1877 and 1932 reveals that the sector-specific long term relationship between firm size and innovativeness is negative, except during times of specific technological booms. In combination with firm-specific characteristics, this new aspect can contribute to a better understanding of the long-term relationship between firm size and innovativeness.

### Manumission in Nineteenth-Century Virginia

Using previously unexplored data, this paper by Bodenhorn (2011) explores the ages at which slaves were manumitted. OLS estimates reveal that mixed-race slaves, slaves in the tobacco-producing Piedmont, and female slaves of female slave owners were manumitted at younger ages. Weibull proportional hazards estimates imply that the same groups were more likely to be manumitted. The results also reveal a markedly diminishing likelihood of manumission after Nat Turner's 1831 insurrection in south-central Virginia. The results are consistent with a principal-agent model in which slave owners contracted with slaves over

consumption and future manumission to elicit effort and control shirking or other unproductive activities.

### What can Price Volatility Tell us about Market Efficiency? Conditional Heteroscedasticity in Historical Commodity Price Series

The development in the working of markets has been an important topic in economic history for decades. The volatility of market prices is often used as an indicator of market efficiency in the broadest sense. Yet, the way in which volatility is estimated often makes it difficult to compare price volatility across regions or over time for two reasons. First, if prices are non-stationary, the variance is inflated. Second, the variance of commodity prices contains information on a number of region- and time-specific factors that are not related to market efficiency. Hence, the popular coefficient of variation and related indicators are not adequate measures of the efficiency of markets and are incomparable across regions. As a solution, Földvári and van Leeuwen suggest using a conditional heteroscedasticity model to estimate the residual (conditional) variance of commodity prices. This measure reflects how markets react to unexpected events and can therefore be seen as a measure of market efficiency. Using this approach on grain prices from the Early Modern Pisa, Paris, Vienna, and Japan, they find that the residual price volatility had declined (and market efficiency increased) in the European markets in the late sixteenth century while it remained stable in Japan.

### Clearinghouse Membership and Deposit Contraction during the Panic of 1893

Moen and Tallman show that clearinghouse membership reduced deposit contraction of commercial banks and trusts during the panic of 1907. This paper by Hoag (2011) uses analogous data on New York banks during the panic of 1893 to quantify the value of clearinghouse membership. In contrast to the previous results, clearinghouse membership does not substantially alleviate deposit contractions in 1893. Most likely, less aggressive lending during the crisis in 1893 explains the different results.

### Early Twentieth-Century Japanese Worker Saving: Precautionary Behaviour before a Social Safety Net

This paper pools data from independent household surveys of Japanese workers roughly spanning the Taisho period (1912-1926), a time before private business or government-provided social safety nets. First, James and Suto (2011) construct estimates of permanent and transitory income and then estimate saving functions consistent with intertemporal optimization. The saving behaviour of Japanese worker households is in turn compared with that of American worker

households before World War I, a time when they too lacked access to general social services. The estimated marginal propensities to save out of permanent and transitory incomes were quite similar for Japanese and American worker households, but the Japanese ones saved more at a given level of income. The economic environment facing Japanese workers, however, seemed to be no riskier than that facing American workers. They attribute instead this result primarily to the widespread postal savings banks in Japan which increased the convenience and decreased the risk of saving.

#### Why did the League of Nations fail?

Why did the League of Nations ultimately fail to achieve widespread disarmament, its most fundamental goal? This article by Eloranta (2011) shows that the failure of the League of Nations had two important dimensions: (1) the failure to provide adequate security guarantees for its members (like an alliance); (2) the failure of this organization to achieve the disarmament goals it set out in the 1920s and 1930s. Thus, it was doomed from the outset to fail, due to built-in institutional contradictions. It can also be modeled and analyzed as a potential military alliance. The results are fairly conclusive: The League of Nations did not function as a pure public-good alliance, which encouraged an arms race in the 1930s.

#### Nominal Wage Rigidity prior to Compulsory Arbitration: Evidence from the Victorian Railways, 1902-1921

Studies across a wide range of countries have shown that relatively few workers have received year-to-year wage cuts since the Second World War. However, there is very little micro-level evidence from earlier years, when lower inflation rates and a less regulated labour market may have led to stronger downwards pressure on wages. This paper by Seltzer and Sammartino (2011) examines wage adjustment at the Victorian Railways, Australia, between 1902 and 1921. It is shown that, despite strong downwards pressure on wages, nominal wages were rigid downwards and a high proportion of triennial wage changes were exactly zero. Even for workers with very long tenure and in years when the national price level declined, wage cuts were rare. They also show that the characteristics of workers whose wages were unchanged were very similar to those receiving wage cuts. Finally, they show that unlike the wages of incumbent staff, entry wages for new junior staff frequently declined from year to year.

#### Large Shocks in U.S. Macroeconomic Time Series: 1860-1988

In this paper, Darné and Charles (2011) examine the large shocks due to major economic or financial events that affected U.S. macroeconomic time series on

the period 1860-1988, using outlier methodology. They show that most of these shocks have a temporary effect, showing that the U.S. macroeconomic time series experienced only few large permanent shifts in the long term. Most of these large shocks can be explained by major recessions and World War II as well as by monetary policy for the interest rate data. They also find that some economic events seem to have the same effect (immediate, transitory or permanent) on a number of macroeconomic series. Finally, they show that most macroeconomic time series do not seem inconsistent with a stochastic trend once they adjusted the data for these shocks.

### The Dynamics of Inequality in a Newly Settled, Pre-Industrial Society: The Case of the Cape Colony

One reason for the relatively poor development performance of many countries around the world today may be the high levels of inequality during and after colonisation. Evidence from colonies in the Americas suggests that skewed initial factor endowments could create small elites that own a disproportionate share of wealth, human capital and political power. The Cape Colony, founded in 1652 at the southern tip of Africa, presents a case where a mercantilist company (the Dutch East India Company) settled on the land and established a unique set of institutions, within which inequality evolved. This paper by Fourie and von Fintel (2010) provides a long-run quantitative analysis of trends in asset-based inequality (using principal components analysis on tax inventories) during the seventeenth and eighteenth century, allowing, for the first time, a dynamic rather than static analysis of inequality trends in a newly settled and pre-industrial society over this period. While theory testing in other societies has been severely limited because of a scarcity of quantitative evidence, this study presents a history with evidence, enabling an evaluation of the Engerman-Sokoloff and other hypotheses.

### The Effects of Unification: Markets, Policy, and Cyclical Convergence in Italy, 1861-1913

This paper by Ciccarelli, Fenoaltea and Proetti (2010) uses time-series evidence on construction movements to examine the convergence of regional business cycles in the decades that followed Italy's unification. The aggregate series point to cyclical convergence, but a sector level analysis traces this result to the decline in differentiated "regional-policy" shocks. The regional market cycles diverged, as regions specialized in different sectors of production; market-cycle convergence is observed only within the "industrial triangle," the regions of which also developed different specializations. This suggests that the balance between growing interdependence and growing differentiation is not general, as the current literature presumes, but specialization specific.

## Military Conquest and Sovereign Debt: Chile, Peru and the London Bond Market, 1876-1890

As a result of the War of the Pacific (1879-1883), Chile conquered Peruvian and Bolivian territories rich in nitrates and guano. Sicotte, Vizcarra and Wand-schneider (2010) conduct econometric tests for structural breaks in the time series of the government bonds for Chile and Peru between 1876 and 1890 in order to examine the effects of the changes in resource endowments on the investors' perceptions of the risk premia of Chilean and Peruvian securities. Our results reveal that investors were extremely pessimistic about the prospects of Chilean, and especially Peruvian debt prior to the war. Early Chilean victories that anticipated the transfer of the richly endowed provinces to Chile caused significant increases in the price of Chilean securities. But such was the low regard with which investors viewed the Peruvian government that the fall of Lima caused an increase in the price of Peruvian bonds on the hope that Chile would assume some of the responsibility for them. Endowments, reputations, and the countries' financial conditions figure prominently as the driving forces behind the investors' behavior.

## Wily Welfare Capitalist: Werner von Siemens and the Pension Plan

The German firm of Siemens and Halske introduced many enterprising features of what later came to be known as welfare capitalism in the mid-nineteenth century. Profit sharing, annual bonuses, a pension fund, a reduction in work hours, and an annual party were all means to ensure a productive, trouble-free workforce. Kastl and Moore (2010) investigate the reasons why Siemens and Halske introduced this internal welfare system. They focus on the by-far most expensive part of the welfare system: the pension fund introduced in 1872, more than a decade before the nationwide social security system was implemented in Germany. They find that the adoption of the internal welfare system increased labor productivity, and in addition discouraged workers from striking. We estimate that the company's gains due to strike prevention and higher productivity were at least as high as the cost of the pension fund. This suggests that (1) the introduction of a pension fund is not inconsistent with simple profit maximizing behavior on the firm's side and (2) increased labor unionization induced firms to introduce subjective components of workers' remuneration packages.

## American Education in the Age of Mass Migrations 1870-1930

This paper by Murtin and Viarengo (2010) derives original series of average years of schooling in the United States 1870-1930, which take into account the impact of mass migrations on the US educational level. They reconstruct the foreign-born US population by age and by country of origin, while combining

data on the flow of migrants by country and the age pyramids of migrants by country. Then, they use original data on educational attainment in the nineteenth century presented in Morrisson and Murtin in order to estimate the educational level of US immigrants by age and by country. As a result, our series are consistent with the first national estimates of average schooling in 1940. They show that mass migrations have had a significant but modest impact on the US average educational attainment. However, the educational gap between US natives and immigrants was large and increased with the second immigration wave, a phenomenon that most likely fostered the implementation of restrictive immigration rules in the 1920s.

### A Schumpeterian View of the Great Merger Movement in American Manufacturing

This paper by Smythe (2010) offers a Schumpeterian view of the Great Merger Movement in the American manufacturing industries, which occurred from 1895 to 1904. From this perspective, the Great Merger Movement was a response to competitive pressures associated with a number of significant technological innovations which occurred at the end of the nineteenth century. Because the implementation of these innovations required large capital investments, and because the returns to the investments would have been highly uncertain if they had been made competitively, firms at the turn of the twentieth century sought to restrain competition. Since the uncertainty precluded cooperating at arms-length, cooperation was internalized through horizontal consolidations. The consolidations in turn increased the size of the capital investments undertaken to implement the technological innovations. The theory is supported with historical evidence about the technological environment and industrial conditions at the turn of the twentieth century, and an econometric model is tested using data from the Twelfth and Thirteenth Censuses of Manufactures.

### Fallacious Convergence? Williamson's Real Wage Comparisons under Scrutiny

The idea of manifest real-wage convergence for unskilled workers in the latter half of the nineteenth century stems from an article from 1995 by Jeffrey G. Williamson. That article presented real wage comparisons of unskilled urban workers for seventeen countries. Sweden, along with the rest of Scandinavia, is found to be an influential case in accounting for much of the alleged factor price convergence taking place. This paper by Prado (2010) takes a closer look at all the three steps that have to be taken in order to establish real wage comparisons, focusing on Sweden in relation to the US and the UK. The most important findings are twofold. First, that the US-Sweden wage gap is considerably smaller for manufacturing than for building workers, and second, that the

rate at which Sweden's real wages approached the American and the British has been grossly overestimated. Swedish real wages did grow rapidly, but not as rapidly as Williamson's comparison will have us to believe, because his real wage series does not constitute a representative account of the Swedish unskilled real wage experience. It is argued that, as we suffer from a serious paucity of data for narrow and comparable samples of late nineteenth century unskilled workers, resorting to more encompassing wage measures is a more viable option. That also implies a questioning of the American unskilled wage series, which makes considerably slower progress than the wage series for manufacturing workers.

#### Personality Interests at the Constitutional Convention: New Tests of the Beard Thesis

Charles Beard argued in 1913 that the U.S. Constitution was created to advance the interests of people who owned personalty, particularly those at the Constitutional Convention. Because delegate votes on individual clauses at the Constitutional Convention were not publicly recorded, prior empirical analyses have been limited to inferred votes on a specific set of unrelated clauses. Heckelman and Dougherty (2010) extend this inquiry by inferring votes related to currency and debt issues which Beard put forth as the prime issues for those who owned personalty. Their analysis on these votes generates little support for a narrow version of the Beard thesis, which states that all personalty groups voted in a unified coalition at the Convention and supported the Constitution. Their analysis provides some support, however, for a broader interpretation that personalty and realty interests affected delegate voting behaviour at the margin.

#### Ranking Economic History Journals: A Citation-Based Impact-Adjusted Analysis

This study ranks – for the first time – 12 international academic journals that have economic history as their main topic. The ranking is based on data collected for the year 2007. Journals are ranked using standard citation analysis where we adjust for age, size and self-citation of journals. Di Vaio and Weisdorf (2010) also compare the leading economic history journals with the leading journals in economics in order to measure the influence on economics of economic history, and vice versa. With a few exceptions, their results confirm the general idea about what economic history journals are the most influential for economic history, and that, although economic history is quite independent from economics as a whole, knowledge exchange between the two fields is indeed going on.

## Explaining UK Wage Inequality in the Past Globalisation Period, 1880-1913

The current era of globalisation has witnessed a rising premium paid to skilled workers resulting in increasing wage inequality in most OECD countries. This pattern differs from that observed during the past globalisation period (1880-1913), in which wage inequality decreased in most of the Old World countries. The present debate over wage inequality focuses on the implications of globalisation, technological change, the role of labour market institutions and education. Similar factors were at work in the past globalisation process. In order to disentangle the main factors that contribute to wage inequality, Betrán, Ferri and Pons (2010) calibrate a general equilibrium model for the UK economy in the past globalisation period. The results show that a trade shock and a skilled-biased technology shock increased wage inequality. However, education and emigration had a more significant impact and led to a decrease in wage inequality.

## Filter-Design and Model-Based Analysis of Trends and Cycles in the Presence of Outliers and Structural Breaks

A large proportion of today's econometric literature addresses the question of whether long run GDP follows a random walk or a log linear trend with one or more structural breaks. Much less attention is paid to the modelling of the long run trend and cycle component. In most studies, the trend is simply eliminated by taking first differences of the log of the series without considering the implications of this kind of trend removal for growth and cycles. Filter design and model-based approaches are used here to assess the long run trend and the cyclical component of Chile's per capita GDP from 1820 to 2007. Careful attention is paid to outliers and trend breaks and how they influence the appraisal of the components. Metz (2010) shows that filter and model-based approaches give comparable results if the filter and model parameters are not chosen mechanically but tailor-made for the time series to be investigated.

## Common Stock Returns in the Pre-WWI Berlin Stock Exchange

Fohlin and Reinhold (2010) provide new evidence on the efficiency of the Berlin Stock Exchange prior to World War I, when it ranked among the top few markets worldwide by market capitalization. Using a new set of monthly stock price data for a random sample of German companies between 1904 and 1910, they estimate a typical three-factor model and find that returns relate positively to risk (beta), but that book-to-market ratios enter as well (negatively). Firm size and earnings/price ratio relate positively but weakly to returns. The results indicate that the Berlin market did not suffer from unusually large pricing anomalies; thus, its performance was not substantially different from



modern markets. Also supporting the conclusion of market efficiency, a momentum portfolio earns returns not different from zero, on average.

## Reflection on Reflections: Review Essay on Reflections on the Cliometric Revolution: Conversations with Economic Historians

Cliometrics is currently celebrating five decades of research and as happens at such benchmarks, there is an interest in understanding the path along which Clio has walked and where the discipline is going. Reflections on the Cliometric Revolution: Conversations with Economic Historians, edited by Lyons, Cain and Williamson provides us with a detailed introductory chapter on the history of the profession and a set of interviews with 25 scholars who were involved in the transformation of a discipline. This review essay by Carlos (2010) reflects on the nature of the transformations during the past five decades.

---

## References

---

- Becker, Sascha O., Francesco Cinnirella, and Ludger Woessmann. 2012. The effect of investment in children's education on fertility in 1816 Prussia. *Cliometrica* 6 (1): 29-44.
- Betrán, Concha, Javier Ferri, and Maria A. Pons. 2010. Explaining UK wage inequality in the past globalisation period, 1880-1913. *Cliometrica* 4 (1): 19-50.
- Betrán, Concha. 2011. Regional specialisation and industry location in the long run: Spain in the US mirror (1856-2002). *Cliometrica* 5 (3): 259-90.
- Bodenhorn, Howard. 2011. Manumission in nineteenth-century Virginia. *Cliometrica* 5 (2): 145-64.
- Carlos, Ann. 2010. Reflection on reflections: review essay on reflections on the cliometric revolution: conversations with economic historians. *Cliometrica* 4 (1): 97-111.
- Carson, Scott Alan. 2012. A quantile approach to the demographic, residential, and socioeconomic effects on 19th-century African-American body mass index values. *Cliometrica* 6 (2): 193-209.
- Ciccarelli, Carlo, Stefano Fenoaltea, and Tommaso Proietti. 2010. The effects of unification: markets, policy, and cyclical convergence in Italy, 1861-1913. *Cliometrica* 4 (3): 269-92.
- Clément, Matthieu. 2012. Food availability, food entitlements, and radicalism during the Chinese great leap forward famine: an econometric panel data analysis. *Cliometrica* 6 (1): 89-114.
- Darné, Olivier, and Amélie Charles. 2011. Large shocks in U.S. macroeconomic time series: 1860-1988. *Cliometrica*, 5 (1): 79-100.
- Degner, Harald. 2010. Do technological booms matter? New evidence on the relationship between firm size and innovativeness. *Cliometrica* 5 (2): 121-44.
- Di Vaio, Gianfranco, and Jacob Louis Weisdorf. 2010. Ranking economic history journals: a citation-based impact-adjusted analysis. *Cliometrica* 4 (1): 1-17.

- Eloranta, Jari. 2011. Why did the League of Nations fail? *Cliometrica* 5 (1): 27-52.
- Fohlin, Caroline, and Steffen Reinhold. 2010. Common stock returns in the pre-WWI Berlin Stock Exchange. *Cliometrica* 4 (1): 75-96.
- Földvári, Péter, and Bas van Leeuwen. 2011. What can price volatility tell us about market efficiency? Conditional heteroscedasticity in historical commodity price series. *Cliometrica* 5 (2): 165-86.
- Fourie, Johan, and Dieter von Fintel. 2010. The dynamics of inequality in a newly settled, pre-industrial society: the case of the Cape Colony. *Cliometrica* 4 (3): 229-67.
- Galor, Oded. 2012. The demographic transition: causes and consequences. *Cliometrica* 6 (1): 1-28.
- Hauptert, Michael, and James Murray. 2012. Regime switching and wages in major league baseball under the reserve clause. *Cliometrica* 6 (2): 143-62.
- Heckelman, Jac C., and Keith L. Dougherty. 2010. Personality interests at the Constitutional Convention: new tests of the Beard thesis. *Cliometrica* 4 (2): 207-28.
- Hoag, Christopher. 2011. Clearinghouse membership and deposit contraction during the Panic of 1893. *Cliometrica* 5 (2): 187-203.
- James, John A., and Isao Suto. 2011. Early twentieth-century Japanese worker saving: precautionary behaviour before a social safety net. *Cliometrica* 5 (1): 1-25.
- Kastl, Jakob, and Lyndon Moore. 2010. Wily welfare capitalist: Werner von Siemens and the pension plan. *Cliometrica* 4 (3): 321-48.
- Klemp, Marc P. B. 2012. Prices, wages and fertility in pre-industrial England. *Cliometrica* 6 (1): 3-77.
- Komlos, John, and Helmut Küchenhoff. 2012. The diminution of the physical stature of the English male population in the eighteenth century. *Cliometrica* 6 (1): 45-62.
- Metz, Rainer. 2010. Filter-design and model-based analysis of trends and cycles in the presence of outliers and structural breaks. *Cliometrica* 4 (1): 51-73.
- Metz, Rainer. 2011. Do Kondratieff waves exist? How time series techniques can help to solve the problem. *Cliometrica* 5 (3): 205-38.
- Murtin, Fabrice, and Martina Viarengo. 2010. American education in the age of mass migrations 1870-1930. *Cliometrica* 4 (2): 113-39.
- Nason, James, and Shaun Vahey. 2012. UK World War I and interwar data for business cycle and growth analysis. *Cliometrica* 6 (2): 115-42.
- Nuvolari, Alessandro, Bart Verspagen, and Nick von Tunzelmann. 2011. The early diffusion of the steam engine in Britain, 1700-1800: a reappraisal. *Cliometrica* 5 (3): 291-321.
- Parent, Antoine. 2011. A critical note on 'This time is different.' *Cliometrica* 6 (2): 211-19.
- Pensieroso, Luca. 2011. Real business cycle models of the Great Depression. *Cliometrica* 5 (2): 101-19.
- Prado, Svante. 2010. Fallacious convergence? Williamson's real wage comparisons under scrutiny. *Cliometrica* 4 (2): 171-205.
- Prentice, David. 2012. The rise of the US Portland cement industry and the role of public science. *Cliometrica* 6 (2): 163-92.
- Sbrana, Giacomo, and Andrea Silvestrini. 2011. Measuring core inflation in Italy comparing aggregate vs. disaggregate price data. *Cliometrica* 5 (3): 239-58.

- Seltzer, Andrew, and André Sammartino. 2011. Nominal wage rigidity prior to compulsory arbitration: evidence from the Victorian Railways, 1902-1921. *Cliometrica* 5 (1): 53-78.
- Sharp, Paul R., and Jacob L. Weisdorf. 2012. French revolution or industrial revolution? A note on the contrasting experiences of England and France up to 1800. *Cliometrica* 6 (1): 79-88.
- Sicotte, Richard, Catalina Vizcarra, and Kirsten Wandschneider. 2010. Military conquest and sovereign debt: Chile, Peru and the London bond market, 1876-1890. *Cliometrica* 4 (3): 293-319.
- Smythe, Donald J. 2010. A Schumpeterian view of the Great Merger Movement in American manufacturing. *Cliometrica* 4 (2): 141-70.