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Cliometrics and the Future of Economic History¹

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Abstract

We give an overview of the origins of the Cliometric revolution, its place within the larger economic history discipline, and what we see as the future of cliometrics and economic history, not as separate disciplines, but as complementary approaches to the study of economic growth in the long run.

JEL Classifications: N01.

Keywords: cliometrics; economic history.

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“We are the opening verse of the opening page of the chapter of endless possibilities.”
—Rudyard Kipling

Introduction

There is no shortage of definitions for economic history and cliometrics. The reason for their existence, their history, evolution, and predicted demise have been the focus of numerous scholars over the years. There has been disagreement over the current state and future of the discipline, but that could also be said about any era through which we could view economic history. Its status, demise, and future have never met unanimous consent, and they certainly do not today.²

In this article we do not dwell on the disagreements about the fate of the discipline, or the naysayers of the future of economic history, but rather argue for a bright future for economic history, whether it is practiced by cliometricians or pursued in its original format. The discipline has a long and respected tradition, and rests upon a solid foundation. Recent trends indicate that it is robust in number of practitioners and publications, and dissemination and citation of its research. It also displays a remarkable penchant for adaptability to current trends, topics, models, and techniques. Economic history is a chameleon, a ninja, a shapeshifter. The discipline has been described as having been co-opted, integrated, and rendered obsolete by trends in the discipline, advances in technique, and the way in which we teach and approach economics and history. But it has survived. More than that, it has thrived. We now take you on a journey from the origins of economic history through its triumphs and travails, and refer to a range of recent papers to illustrate what we believe is a very bright future for this invigorating discipline.

What is Economic History

Economic history is the connection of events viewed from a broad perspective over the long run. Over time, the focus has been transformed by the cliometric movement from a narrative to a mathematical format. It is important to note that the cliometric revolution did not replace traditional economic history with a new methodology. Rather, it fortified economic history with cliometrics. Economic history has suffered in part from the view that cliometrics opened a rift between “traditional” economic history, as practiced by historians, focusing on narrative descriptions and qualitative studies, and “new economic historians” who focus on data and models. The truth, however, is more nuanced. In fact, neither history nor the cliometric approach can really survive without the other. There is not a historical version of economic history and a quantitative version (often confused with cliometrics). There is economic history, which requires both economics and history.

Cliometrics is one approach to the study of economic history, but it does not make the traditional approach obsolete, it merely represents another way to practice economic history. Admittedly, given the growth, power, and availability of computers, big data, and new economic techniques, cliometrics has become the more popular version of the discipline. But without history, cliometrics would merely be economic theory tested with old data. There is no economic history without history. And there is no cliometrics (after all, *clio* is the muse of history) without the history ... and the metrics.

Economists are interested in the relationship between cause and effect as it relates to the ability of the economy to efficiently balance the wants and needs of society with its limited resources. These events are studied on a grand scale, such as the work by Jared Diamond, Oded Galor, Daron Acemoglu and James Robinson, or Thomas Piketty’s history of

² See Hauptert (2016) for an overview of this literature.

capitalism.³ But not all economic history need cover the long run, an entire continent, or a topic as large as why the entire world is not rich. It can be limited in scope: a specific country, industry or event, and still yield valuable insights.

Daniel Sichel (2022) uses the nail industry as a prism through which to examine a wide range of economic and technological developments over three centuries, using a ubiquitous and basic manufactured product, which has changed relatively little in form and function, but has undergone dramatic changes in production process. Pim de Zwart (2022) adds to a growing literature attempting to explain inequality levels in pre-industrial societies by focusing on a specific country: Indonesia. He estimates the degree of inequality for late colonial Indonesian provinces and finds great variation across provinces, casting doubt on the representativeness of using a single number to capture the level of inequality in large economies. And Jason Lennard (2021) questions the stickiness of wages, calculating the degree of nominal wage rigidity in the United Kingdom between the world wars. He finds that nominal wages were more flexible downward than in most modern economies, but that the frequency and magnitude of wage cuts were too low to fully offset deflation, thus reinforcing the effect of sticky wages. Each of these studies is much more limited in focus and scope than the work of Diamond or Acemoglu and Robinson, yet each yields a clue or lesson that can help us understand a bigger picture. Whether the individual project is grandiose or tightly focused, the overall focus of economic historians is broader than a labor market, province, or public institution. Economic history “widens the sympathies, [and] enlarges conceptions of the possible ... allowing us to arrive at a more satisfying and intelligible conception of the evolution of human society”.⁴

This longer run focus is a trademark of economic history. Three quarters of a century ago, John Nef (1944) suggested that the purpose of economic history was to widen the range of observations from the experience of a single generation or society to that of all mankind. While not all economic history research looks at the big picture, the overarching approach of the discipline is the study of growth in the long run. Those studies focusing on the short run tend to build cases for how and why growth occurs. For example, Conor Lennon’s (2021) research on the G.I. Bill examines familiar territory from a different vantage point. He focuses on the American women who served in World War Two and qualified for the Bill’s educational benefits. He finds that veteran status is associated with a 19-percentage point increase in the proportion of women who attended college, leading to earnings that are 20 percent greater relative to comparable non-veteran women, explaining nearly three-quarters of the future difference in the earnings of veteran and non-veteran women.

There are, of course, studies that do step back and try to look at the longer time perspective, pulling grander theories and larger considerations into perspective. One approach to this long-run focus is the event study. The concept of event studies has recently grown in popularity, though it is not new.

Event studies originated in the accounting and finance literature as a statistical tool for empirical research.⁵ They are an attempt to observe the dynamic effect of an event on specific outcomes from one period to the next.⁶ Event studies are a powerful tool for measuring causality. It is a technique ideally suited to economic history because it involves the use of time as a variable, before and after the event, to isolate the effect of the event over time. The time period used is important because if no other significant related events took place during the time period under consideration, the event study can be used to establish direction of

³ See for example Diamond (2017), Galor (2022), as well as Acemoglu and Robinson (2012; 2019), and Piketty (2014).

⁴ Ashley (1893), 134, 136.

⁵ See for example Morton Pincus (1989).

⁶ Charles Corrado (2011); Simon Freyaldenhoven, Christian Hansen, Jorge Pérez Pérez, and Jesse Shapiro (2021).

causality between the event and the outcome. These studies have since migrated to other disciplines, including economic history. Despite the elegant simplicity of a standard event study, variations in methodology and their relative merits keep them relevant and make them an attractive tool for economic historians.⁷

A true accounting of long-run growth requires a broader view, beyond that of economics alone. Economic history has that covered as well. It is an interdisciplinary approach to economics. As Joel Mokyr so eloquently put it, “economic history stands at a busy intersection of history and the social sciences, where economists, political scientists, sociologists, anthropologists, demographers, and historians come and go”.⁸ We cannot understand or explain how growth occurs over time without considering a wider range of impacts. Politics, anthropology, sociology, medicine, anthropometrics, even literature, art and entertainment. All are integrated in the growth process, and economic historians have recognized this and exploited the insights these other disciplines have to offer.

Before Mokyr, there was Douglass North, who promoted the expansion of economic history beyond its traditional confines when he questioned the existence of ideologies such as religion and political doctrines. He argued that their existence entailed faith, not reason. “What makes some persist and others disappear? These are old questions, but cognitive science offers the promise of shedding new light upon them and in the course of doing so opening up new frontiers in the social sciences”.⁹ He notes the importance of culture in developing mental models, and how it in turn is affected by environment and knowledge transfer, and varies among different ethnic groups and societies. “Information processing ... underlies the formation of institutions”.¹⁰ Thus, sociology, political science, anthropology, and psychology matter as well. All are fundamental building blocks of the institutions that humans create, and “the fundamental issue in developing productive economies is the creation of institutions that provide low costs of transacting (and producing)”.¹¹

Economic historians have heeded the calls of North and Mokyr and are well practiced in the use of interdisciplinary approaches to solving problems—more so than their colleagues in other fields of economics. Recent examples include Kamiar Mohaddes, Ryan Ng, M. Hashem Pesaran, Mehdi Raissi, and Jui-Chung Yang (2022), who investigate the long-term macroeconomic effects of climate change in the United States. Samuel Bazzi, Gabriel Koehler-Derrick, and Benjamin Marx (2020) explore the institutional foundations of religious politics in order to determine the conditions in which they thrive. While Gabriella Conti, Stavros Poupakis, Peter Ekamper, Govert Bijwaard, and L.H. Lumey (2021) link health measurements to military recruit data to investigate the impacts of prenatal exposure to multiple shocks. Rocco Rante and Federico Trionfetti (2021) use archaeological data, combining it with modern economic theory and methods to study variations in city size. They compare the impact of the Silk Road on city structure and compare the ancient growth of cities to better understand modern growth. Katharina Mühlhoff (2021) relies on historical demography and evolutionary science to challenge the Neo-Malthusian view that population shocks can create benefits. She finds that natural selection will offset any benefits from population shocks when it comes to achieving sustainable growth.

Then there are the links with geography. GIS (geographic information systems) techniques, developed by geographers, are now commonplace in economic history research.

⁷ Recent examples of event studies published in the *Journal of Economic History* include: Fabio Braggion and Lyndon Moore (2013); Christopher Coyle and John Turner (2013); Aditya Dasgupta, and Daniel Ziblatt (2015); Sibylle Lehmann-Hasemayer, Philipp Hauber, and Alexander Opitz (2014); Mary Tone Rodgers and James Payne (2014); Marianne Wanamaker (2014).

⁸ Mokyr (2003), xxi.

⁹ North (1993), 161.

¹⁰ North (1992), 4.

¹¹ North (1993), 160.

One recent example is Federico Pablo-Marti, Angel Alanon-Pardo, and Angel Sanchez (2021) who apply GIS techniques and network analysis to maps made during the War of Succession to study the development of the road network in Spain during the eighteenth and nineteenth centuries. Economic historians piggyback on the work of geographers in other ways as well. Julio Martinez-Galarraga, Elisenda Paluzie, Jordi Pons, Javier Silvestre, and Daniel Tirado (2021) provide an overview of the benefits of combining economic history with the new economic geography in their exploration of the industrialization process in Spain.

Growth cannot be explained narrowly because it is not simple. Economies, empires, states, and societies grow in a multifaceted manner. In order to truly understand how and why we have evolved to where we are today, and why some nations have evolved more slowly, requires a broad view, over a long time period. This is the specialty of the economic historian. It is not merely the combination of economics and history that are the earmarks of the economic historian, but the willingness and ability to combine a variety of other disciplines into our theories of economic growth.

The approach to the study of the growth of economies was unarguably transformed by the cliometric revolution, but its primary function was not fundamentally altered. Rather, the method by which the study was carried out was changed. Today's cliometrician and traditional economic historian agree on far more than they disagree. They differ in their methodology, but both focus on the same basic problem: what causes growth? In order to better understand this relationship, it is worth going back to examine the evolution and growth of economic history and cliometrics.

The Evolution of Economic History¹²

Economic history evolved out of a discontent with economic theory. It can be first identified in the German school coming from Wilhelm Roscher through Gustav von Schmoller, eventually arriving in the United States in the person of Edwin Gay, a student of Schmoller's. At about the same time, a similar approach can be found in England, beginning with Arnold Toynbee and Sir William Ashley, who also came to America, as the predecessor to Gay at Harvard. But in its infancy, history was actually seen as a threat to the discipline of economic history. Carl Menger likened the history discipline to a foreign conqueror, whose practitioners "entered upon the territory of our economic science, to force upon us their speech and usages, their terminology and methods."¹³

Economic history emerged as a distinct discipline during the course of the revolt against the deductive theories of classical economics. Led by the likes of Schmoller and Ashley, these early economic historians held that history was the key source of knowledge about humans and human organizations, and because it was culture- and time-specific, it could not be generalized over time or space, hence general theories were useless. Their view was that economics was best approached from the vantage point of empirical and historical analysis, not abstract theory and deduction.

The historical school was a reaction against abstract theory, and it was highly critical of the method, fundamental assumptions, and results thereof. Before Schmoller, the historical economists had focused their work more on the field of history than economics. The distinguishing characteristic of Schmoller's work was that it aimed to account for the origin, growth, persistence, and variation of institutions in so far as they affected the economic aspect of life. While he was trained in the historical school, he differed in his emphasis on economics, making him perhaps the first true economic historian.

¹² For a more comprehensive history, see Hauptert (2016).

¹³ Menger (1884), 14.

Schmoller, who studied with Roscher, did not believe the social sciences were suited for any but the simplest mathematical treatment due to the plethora of social interactions that need be considered. He considered statistics, for those variables that could be measured, an invaluable auxiliary to historical research, but always questioned the source and interpretation of the data in relation to other cognate facts and theories. However, the fact that he was willing to go this far is what distinguished him from his mentor and the elder historical scholars.¹⁴

While Gay had arguably the most influential impact on American economic historians, Ashley preceded him. He arrived at Harvard in 1892 and spent a decade as North America's first chair in economic history, returning to his native England in 1901 and succeeded at Harvard by Gay. Ashley represented a dramatic shift from the earliest economic historians. He did not see economic theory as a threat to be avoided. Quite to the contrary, he disapproved of economic history courses that were free of economic theory.¹⁵ He was a product of the historical school, which sought to replace what they characterized as unrealistic theories of deductive economics with theories developed inductively through the study of history. It was this break from the philosophy of the earliest practitioners of the discipline that established the American approach to economic history. With its roots in England, this also became the preferred approach in the UK. And in both countries, the seed was planted for a future that eventually bore the fruit of the cliometric movement.

By the 1920s, the attitude toward theory and statistics further softened, in large part due to the work of Wesley Mitchell and Gay. Mitchell built a career studying business cycles. Gay's work as head of the Central Bureau of Planning and Statistics during World War One convinced him of the importance of the regular and reliable compilation of statistical data that led to the eventual creation of the National Bureau of Economic Research (NBER), ably led for its first quarter century by Mitchell.¹⁶ The NBER was originally established to collect, preserve and disseminate historical data pertaining to the American economy. Gay and Mitchell recognized that the lack of reliable historical economic data was a severe constraint on the ability to make economic projections. Mitchell had already recognized the importance of historical data with his research into business cycles.¹⁷ But it was the war effort that made it easier for them to convince the US government of the urgent need to catalog and analyze data in an orderly and consistent format.

Mitchell and Gay were leaders in the collection of data, but serious analysis required advances in technology. The growth of computing power laid the groundwork for the exploitation of ever larger data sets using ever more sophisticated econometric techniques. Without the computer, the mere collection of "big" data would have required a lifetime of work, and the econometric analysis of it would be virtually impossible. Computers have spawned the exploitation of ever larger, more complex, and better integrated data series and the employment of cutting-edge techniques with which to analyze them.

The Cliometric Revolution

The roots of cliometrics are in this theoretical-quantitative tradition pioneered by Mitchell and Gay. It was fortified by advances in theory and melded with approaches from other disciplines,¹⁸ leading to a shift in the focus of history within economics. Instead of history being

¹⁴ See Hauptert (2016) for a more complete discussion.

¹⁵ Ashley (1927).

¹⁶ Z.L. Potter (1919). See Cristel Anne de Rouvray (2005) for coverage of the origins of the NBER.

¹⁷ Mitchell (1913).

¹⁸ A testament to Gay's interdisciplinary approach to economic history can be found in the Festschrift 33 of his former students authored in 1932. Those students were identified as professors of business history, economics, government, history, industry, law, management, marketing, and transportation (Arthur H. Cole, A.L. Dunham, and N.S.B. Gras 1932).

the enemy, it was seen as an important and necessary sibling of economic theory, so much so that T.S. Ashton (1946) proclaimed that anyone who objected to the suggestion that modern economic theory should be applied to the study of history did not truly understand the nature of economics. Simon Kuznets (1941) went one step further by claiming that little would be gained from a study of the past unless it was systematic and quantitative.

Nobody personified that more than his prize disciple, Robert Fogel. This basically turned the relationship of history and economics on its head. History was no longer seen as a threat, but rather as a discipline in dire need of a new approach: one in which economic theory was the central focus. This rather condescending viewpoint is often cited as the basis of the cleft that eventually grew between economists and historians. But it is worth remembering what preceded this view. Understanding the historical tension between the methodologies used by economists and historians helps to put such comments into perspective. It is also necessary to realize that the two disciplines need each other to be the best versions of themselves. More can be accomplished by the combination of history and economics than can be accomplished by either discipline on its own. Each has a comparative advantage, and cooperation between the two yields greater dividends than either can achieve alone. In the opening paragraph of her famous article asking whether the past has useful economics, Deirdre (née Donald) McCloskey (1976) argued it should be considered bizarre that the study of economics could be conducted if the history were left out.

The birth of the “new economic history”, as cliometrics was first known, can be traced to the 1957 joint meeting of the Economic History Association (EHA) and the Conference on Research in Income and Wealth, held in Bloomington, Indiana. It was there that two of the seminal papers in cliometrics were delivered by the coauthored team of Alfred Conrad and John Meyer. The first was a methodological paper explaining how scientific method applied to economic historians and the practice of economic history.¹⁹ The second was an application of the methodology to the topic of slavery.²⁰ These papers were the opening salvo in what could be characterized as a civil war between these “new” practitioners of the trade and the “old” or “traditional” economic historians.

The rapid growth of cliometrics can be measured by its hallmark dates. The first appearance of the term “cliometrics” was in the *Journal of Economic History* in 1960. Lance Davis, Jonathan Hughes and Stan Reiter said “the logical structure necessary to make historical reconstructions from the surviving debris of past economic life essentially involves ideas of history, economics and statistics ... has been labeled ‘Cliometrics’ ”.²¹ Later that year cliometricians began to organize their own conference, separate and distinct from the EHA’s annual fall offering. Originally, the annual “Purdue Conference on the Application of Economic Theory and Quantitative Techniques to Problems of History” (eventually retitled to the much more mellifluous “Cliometric Conference”) was held at Purdue University, home to a key nucleus of early cliometricians, including Hughes and Davis. Among the earliest attendees were future Nobel Laureates North and Fogel.

In 1983 clio formalized its distinctive existence by forming its own society, the Cliometric Society. It was initially created by McCloskey and Sam Williamson. The latter acted as executive director, newsletter editor, and principal investigator of its NSF funding grant for 17 years. When he stepped down in 1999 his role was divided into three separate positions filled by four people.²² A decade later cliometricians celebrated their finest moment, when North and Fogel were jointly awarded the Nobel Prize. The Nobel committee cited their roles in

¹⁹ Meyer and Conrad (1957).

²⁰ Conrad and Meyer (1958).

²¹ Davis, et al (1960), 546.

²² Lee Craig became the Executive Director, Michael Hauptert took over editorship of the newsletter, and Price Fishback and Sumner LaCroix assumed the role of principal investigators of the grant writing team.

revolutionizing the economic history discipline. North was feted “for having renewed research in economic history by applying economic theory and quantitative methods in order to explain economic and institutional change”. Fogel was lauded “for having clarified the role of the railways for the development of the economy in the United States, and the economic role of slavery”.²³

The current crop of economic historians have all grown up with the dual existence of cliometricians and economic historians. But are they different? The membership of the Cliometric Society and the EHA is highly correlated: in 2021 86 percent of the members of the former also belonged to the latter. So while the approach of clio practitioners may be seen as divisive, they still consider themselves economic historians.

The Contributions of Cliometrics²⁴

Rather than focus on the differences between the traditional and the cliometric approaches to economic history, it is worth noting how the two support one another. Clio’s contributions to economic history are threefold: the combination of theory with quantitative methods, the construction/revision of databases, and the reassessment of earlier findings, based on revelations due to the first two. It is the latter which has caused the greatest amount of strife in the relationship between economic historians of the old school and these new interlopers.

The reevaluation of long-held beliefs that resulted in contradictory conclusions is both an earmark of the early success of cliometrics and the sore point that highlights the perception that the role of clio was to overturn the work of traditional historians and prove them wrong. Conrad and Meyer (1958) demonstrated that slavery was profitable, and unlikely to peter out as was commonly believed at the time. Richard Easterlin (1960) revised GNP figures to demonstrate that the antebellum South did not lag as far behind the North as previously believed. And Fogel (1964) showed that the railroad was not the economic engine and key to growth that it was widely believed to be. Entire topics have been revised as a result of clio. The works of Hauptert (2019) and Richard Sutch (2019), for example, chronicle the evolution of our understanding of the industrial revolution and slavery respectively, as a result in advances fostered by cliometrics.

Egos aside, it is of course the role of academics to pursue the truth. And if new data and techniques allow for clarification and revision, then all the better. The problem comes in the assumption that cliometrics is the only way to the truth. It is not. It is not a substitute for, but a complement to, the traditional historical approach.

Francisco Boldizzoni (2011) attacked cliometrics, focusing his sharpest criticism on the quantification of history at the perceived expense of its humanity. His criticisms highlighted the wedge that had been driven between economic history as it was practiced in history departments and economics departments. The application of theory and quantitative methods for testing those theories, based on the highest quality data available, can only enhance our understanding of history. But an understanding of the history is necessary. To the degree that economists ignore history, and merely test theories with old data, Boldizzoni is dead-on with his criticisms. But we argue that true cliometricians do not behave that way. A cliometrician is an economic historian. And economic historians understand the importance of history. The criticism leveled by Boldizzoni is more accurately focused on non-economic historians who confuse using old data to test economic theory with the study of economic history.

The most common association with cliometrics is theory, though it is often conflated with the focus on econometric technique. Gavin Wright (1971) points out that cliometrics is more about the use of economic theory than the use of econometrics in the study of history.

²³ Nobel Prize announcement 1993.

²⁴ For a more in-depth discussion see Diebolt and Hauptert (2016).

McCloskey makes this clear, arguing that “a cliometrician is an economist applying economic theory (usually simple) to historical facts (not always quantitative) in the interest of history (not economics)”.²⁵

Theory is defined by the latest mathematical techniques. But not all of them are sophisticated, nor does all research rely only on the latest (though follow-the-leader has always been a popular sport in academic work). The counterfactual is a useful and instructive model in this regard. It was made famous by Fogel in his railroad studies, but predates him by a decade.²⁶ Even today it is still employed on occasion.²⁷ Its application is straightforward. The sophistication stems from the ability to measure what it purports to exclude from historical reality.

Fogel defined the methodological features of cliometrics, stressing measurement as the key ingredient. He recognized the links between measurement and theory, arguing that a systematic quantitative analysis of data was necessary. Measurement without it was just another version of narrative history. North (1965) argued that it was *theory* and *data*, not technique, that were the bedrock of cliometrics. Early in the cliometric movement, he chastised cliometric research, calling much of it dull and unimaginative because there was too much emphasis on econometric techniques as a substitute for theory and imagination.

Data is the backbone of cliometric research. Without it, there is nothing to measure. Computing power has reduced the time, effort, and financial cost of gathering and analyzing data, and it has made it possible to do so with ever-larger data sets. Without the computer it would be impossible to carry out research using census data linked across time and related databases, which has allowed scholars to track individual economic agents across time and generations. Long-run event studies that rely on the linking of databases over multiple generations would not be possible without the computer technology to match millions of observations.²⁸

One recent example of this kind of multi-generational data matching is Luna Bellani, Anselm Hager, and Stephan Maurer (2022), who link a dataset consisting of Texas state legislators in the last half of the nineteenth century to their parental ancestor’s census records in an effort to document the persistence of slave ownership in political power in the postbellum South. The work of Miguel Angel Carpio and Maria Eugenia Guerrero (2021), who survey Peruvian surnames to show how the Spanish-introduced mita decimated the native-born male population, is just the latest in a long line of work that uses computing power to exploit massive data sets to examine social issues. Greg Clark is a pioneer in this research,²⁹ but many have followed his lead in the use of surnames to examine social status.³⁰

²⁵ McCloskey (1978), 15.

²⁶ See Fritz Machlup (1952).

²⁷ See, for example, Mohammad Reza Farzanegan and Mohammad Ali Kadivar (2021).

²⁸ See Martha Bailey, Evan Taylor, and Bryan Stuart (2016); Bailey, Karen Clay, Fishback, Michael Haines, Shawn Kantor, Edson Severnini, and Anna Wentz (2018); Bailey, Connor Cole, and Catherine Massey (2020); Bailey, Cole, Morgan Henderson, and Massey (2020).

²⁹ Clark (2014).

³⁰ Pierre Darlu, Pascal Chareille, and James Tovey (2020), Maia Güell, Jose Rodriguez, and Christopher Telmer (2015), and Claudia Olivetti and Daniele Paserman (2015) are just a few recent examples.

The Future of Economic History

If the future continues along the trend established in the recent past, then the prospects for economic history are bright. The contributions of the discipline will continue to be substantial, recognized, and published in high-ranking journals that are cited by scholars from a wide variety of fields.

Economic history publications enjoy a wider appeal than other subdiscipline specialties in economics. This is due to the field's inherent interdisciplinary nature. Economic history spans not just its namesakes, economics and history, but an ever-widening range of other disciplines, from anthropology to geography, and political science to ethnology and science and psychology. It borrows models, methodologies, and data from a wide array of disciplines and speaks to a broad spectrum of scholars.

Hauptert (2017) showed the growth of cliometrics in *Journal of Economic History* publications using a variety of metrics. Ron Abramitzky (2015) demonstrated the growing presence of economic history articles in top economics journals. And Diebolt and Hauptert (2019) demonstrated the interdisciplinary audience of economic history research by looking at citations of articles published in economic history journals. Collins looked at current supply and demand side impacts on economic history research, concluding that "the combination of supply and demand shifts ... should ensure that the quantity and quality of economic history increase in the future".³¹ Both Collins (2015) and Christy Romer (1994) note the blending of economic history with other fields of economics as well as disciplines across the social sciences and beyond. The breadth and depth of interest in the work of economic historians has endured, and there is no sign that it will fade any time soon.

Accessible historical data is critical for economic historians, and recent trends suggest that the ability to access, collect, and analyze ever wider and deeper data sources is only beginning to accelerate. Computing power, the volume of digitized materials, and the ability to link datasets, have all improved our ability to exploit qualitative archives.³²

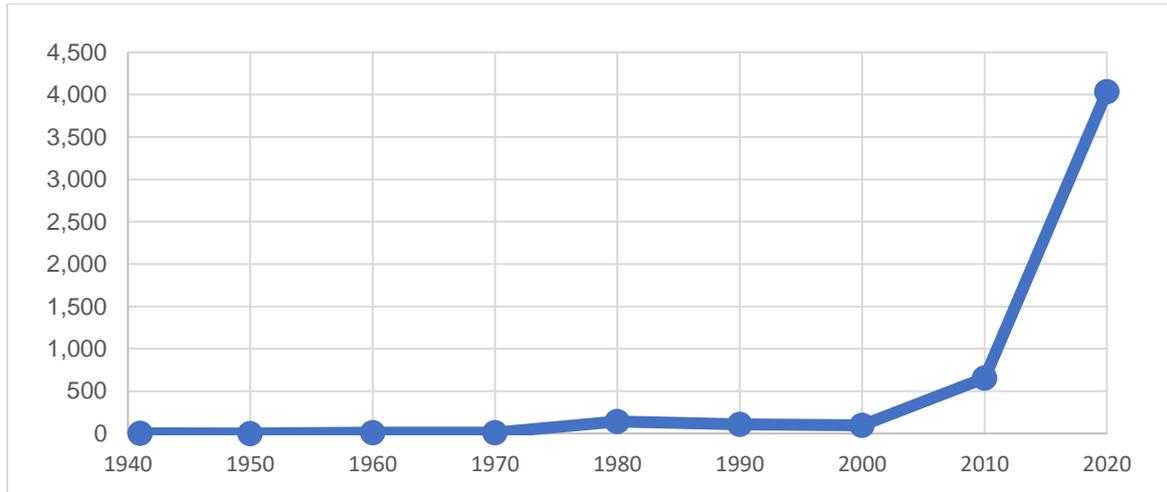
Recent examples of this sort of research include Leonid Kogan, Dimitris Papanikolaou, Lawrence Schmidt, and Bryan Seegmiller (2021), who construct new technology indicators using textual analysis of patent documents and occupation task descriptions spanning two centuries to show the relationship between technological innovation and labor market outcomes. Quentin Lippman (2021) digitized matrimonial ads published in French magazines over a 60-year period to explain the transformation of the mate selection process in the marriage market. Paul Rhode (2021) constructed a sample of price observations culled from a textual search of keywords from 124 newspapers and agricultural journals to document the operation of the cotton seed market in the mid-nineteenth century. James McMahon (2022) uses the Internet Movie Database (IMDb) to analyze how the "star" system of making and marketing movies reduced the risk of investment in the industry. Dora Costa (2021) linked families over multiple generations to study the impact of a health shock on future generations.

As mentioned earlier, larger data sets are an important tool in the economic historian's arsenal. The sheer size alone of data sets is important because it allows for deeper and broader analysis, and allows for a finer parsing of the data set to look at more narrowly defined questions. This makes "big data" particularly valuable. Larger data sets lead to more robust conclusions.³³ Figures 1 and 2 illustrate the trend in the growing size of databases used in articles published in the *Journal of Economic History*.

³¹ Collins (2015), 1232.

³² Lino Wehrheim (2019) demonstrated the usefulness of topic modeling to infer content from large collections of text.

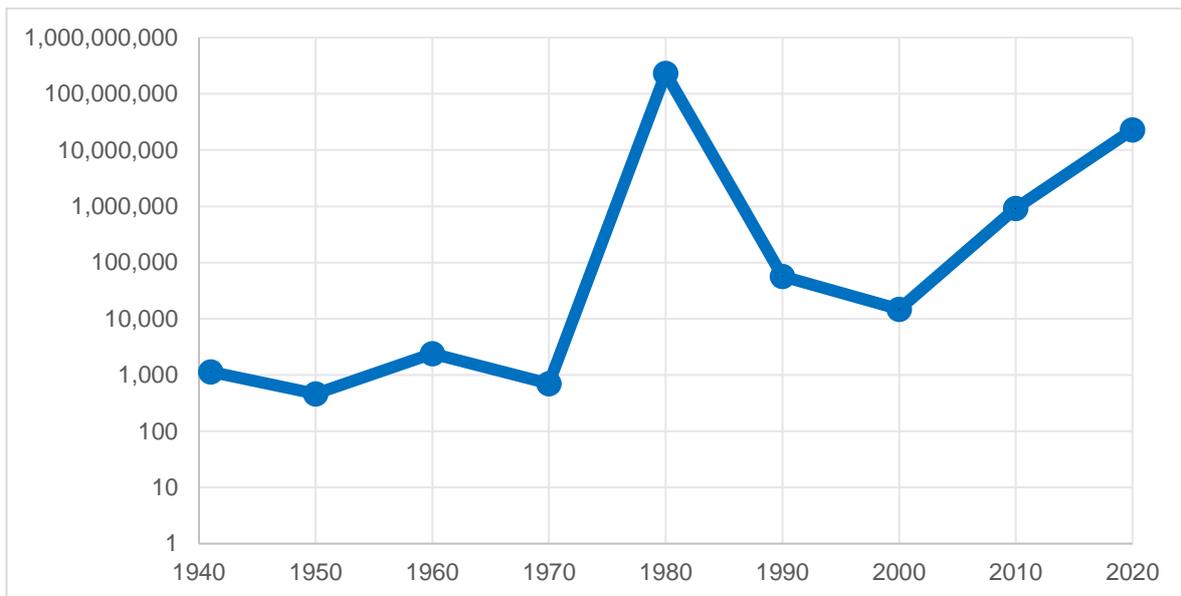
³³ Alexandra Cermeno, Nuno Palma, and Renato Pistola (2021); Neil Cummins (2021); Fredrik Charpentier Ljungqvist, Peter Thejll, Bo Christiansen, Andrea Seim, Claudia Hartl, and Jan Esper (2022).



Source: Diebolt and Hauptert (2021)

Figure 1

Average number of observations in *Journal of Economic History* published articles by decade



Source: Diebolt and Hauptert (2021)

Figure 2

Largest number of observations in *Journal of Economic History* published articles by decade (logarithmic scale)

Economic historians are not shy about developing novel approaches to solving problems. Clio's Nobel laureates gave birth to new institutional economics and anthropometrics, which are no longer novel, but well-established subdisciplines of their own, sporting journals, conferences, and learned societies dedicated to their specialty. More recently, cliometricians have begun to incorporate natural experiments and models from behavioral economics.³⁴

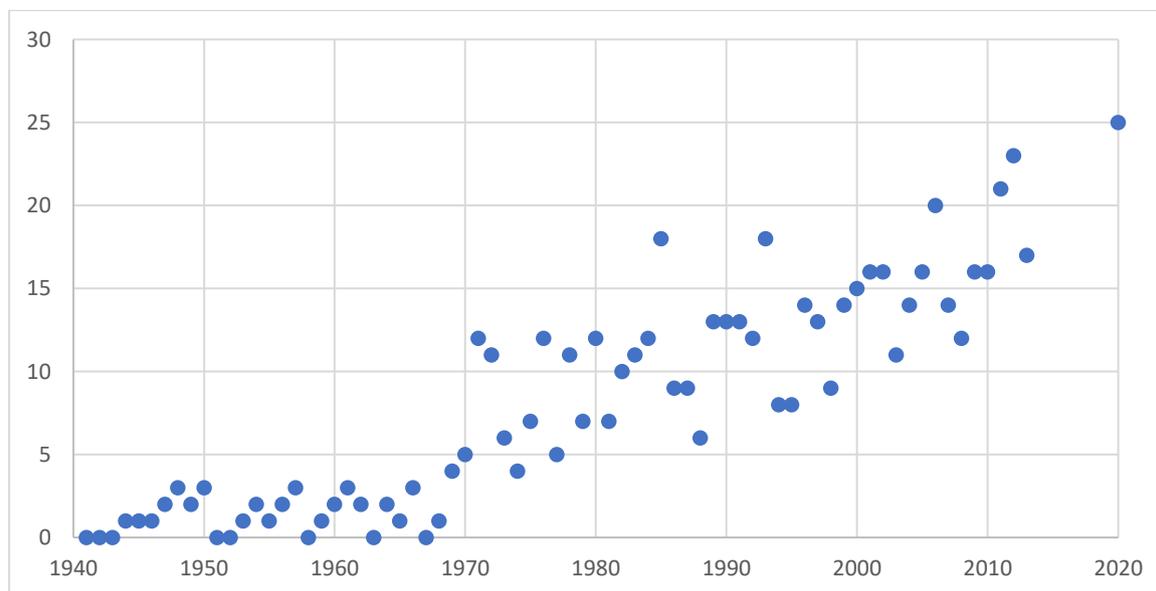
³⁴ Conti, et al. (2021); Laura Wurm (2021).

Behavioral economics combines economics with psychology. It blends well with economic history because it relies on a more broad-based perspective. North preached tenets of behavioral economics when he discussed the cognitive limits of humans. Such limits create problems with the neoclassical assumption that people make optimal choices. It is because of these behavior-induced sub-optimal outcomes that institutions matter.³⁵

Technological advances have made it possible to use GIS and qualitative data in economic history research.³⁶ And the ability to scrape and organize data from the internet only hints at the possible studies one could conduct in the future using data from Facebook, Amazon, Twitter, Paypal or cellphone location data.³⁷ The technology already exists, only the cleverness and motivation of future scholars awaits its rich possibilities for exploitation.

Imryoung Jeong and Hyunjoo Yang (2022) use a novel machine learning approach to read maps and use them to predict economic statistics. Stefan Pauly and Fernando Stipanovic (2021) digitized historical airline flight schedules, allowing them to provide new causal evidence of the impact of improvements in air travel on the creation and diffusion of knowledge.

A deeper scholar pool is also a sign of the times and a tantalizing prospect for the future. Figure 3 indicates the substantial growth in multiple-authored *Journal of Economic History* articles over the past eighty years. The combinations of skills and wider access to data sets made possible with multiple authors indicates a likely continued upward trend in the percentage of co-authored articles. In addition, an increasing acceptance of joint work by university Promotion, Retention and Tenure committees makes this trend likely to continue. The internet, cellphones, and the recent growing availability and acceptance of virtual chat programs such as Zoom have also made it easier for coauthors to collaborate from anywhere on the globe. The recent rise of virtual meetings and seminars has also made the dissemination of ideas quicker and easier, as well as the ability to meet, network, and collaborate.



Source: Diebolt and Hauptert (2021)

Figure 3
Number of multi-authored articles in *Journal of Economic History*

³⁵ North (1992).

³⁶ Jeremy Atack (2019); Martinez-Galarraga, et al. (2021); Pablo-Marti, et al. (2021).

³⁷ McMahon (2022); Pauly, and Stipanovic (2021).

Economic historians cover a broad scope of topics in their research, but there is much room to explore in the future. Geographic areas such as Africa and the Middle East are under-represented in the economic history lexicon. The vast majority of the research published in the *Journal of Economic History* covers time periods since the seventeenth century. Ancient economies are rarely covered. In the past five years less than one percent of all articles submitted (merely *submitted*, not necessarily published), to the *Journal of Economic History* have covered an ancient economy, and only 8.7 percent have studied any period prior to the seventeenth century. Indigenous populations also remain vastly understudied, representing only 0.4 percent of all article submissions.³⁸ Topics that are historically considered qualitative, such as religion and virtues also represent fertile ground for future research, especially given the increased ability to mine data from textual sources.

Economic historians have already begun turning their attention toward this low-hanging fruit, only hinting at the future possibilities. Facundo Alvaredo and A.B. Atkinson (2021) looked at the evolution in income inequality in South Africa. Stephen Broadberry and Leigh Gardner (2022) estimate GDP for sub-Saharan African countries since 1885, and Denis Cogneau, Yannick Dupraz, Justine Knebelmann, and Sandrine Mesple-Somps (2021) digitize archival data to produce more than a century's worth of continuous public revenue data for 18 former French colonies in Africa in order to study the evolution of tax revenues.

The Middle East is also starting to draw more attention from economic historians. Farzanegan and Kadivar (2021) focus on periods of Iranian unrest to study the effect of revolution and war on changes in income inequality levels. Mohammad Alaudin, Clement A. Tisdell, and Md Abdur Rashid Sarker (2021) use national rice production data to investigate the Bangladeshi rice industry over the past 70 years with a focus on the Green Revolution period, which began in the late 1960s. Robert Allen and Leander Heldring (2022) also focus on the Middle East, but on a much earlier time period. They use newly digitized archeological data to explain the ninth-century collapse of the southern Mesopotamian economy.

Religion and virtues, which generally rely on interdisciplinary connections, are also drawing more attention from economic historians. Daniel Araújo, Bladimir Carrillo, and Breno Sampaio (2021) test the anthropological hypothesis that historical dependence on pastoralism favored the adoption of customs that contributed to the reduction in witchcraft beliefs. Bazzi, et al (2020) explore the institutional foundations of religious politics in Indonesia. Jared Rubin (2017) in his award-winning book, *Rulers, Religion, and Riches: Why the West Got Rich and the Middle East Did Not*, uses religion as a lens through which to focus on the granddaddy of all economic questions: why isn't the whole world rich? And with Elira Karaja (Rubin and Karaja, 2022), he conducts a natural experiment to test the impact of historically institutionalized cultural norms on trust. No mention of virtues or ethics in economic history research would be complete without referencing Deirdre McCloskey's three-volume magnum opus, which applies "virtue ethics" to examine the history of capitalism.³⁹

Economic history has always had an interdisciplinary bent and an impact far beyond its intellectual borders. This was recognized 80 years ago by Nef, who proclaimed "the work of economic historians has provided a hunting ground for anthropologists, sociologists, philosophers, political historians, economists, and for almost all other kinds of scholars".⁴⁰ It has also integrated with other fields, to the extent that Romer argues, "economic history is no longer a separate subfield of economics, but rather, is an integral part of the entire discipline".⁴¹

³⁸ Editor's Report, *Journal of Economic History*, (March 2021): 309-315.

³⁹ McCloskey (2006; 2010; 2016).

⁴⁰ Nef (1944), 16.

⁴¹ Romer (1994), 49.

Conclusion

Economic history is not just about the past. It is also uniquely suited to addressing current events and topics. Witness the quick appearance of studies of previous pandemics in response to the Covid-19 crisis.⁴² Similarly, the market crash in 2008 begat a flurry of articles focusing on previous financial panics in an effort to learn from our past.⁴³ The study of economic history is not just about understanding what happened before, but helping us to understand what is happening now.

The present provides so many new opportunities for studying the past. There will always be new discoveries of data sets that allow for their clever use to examine old questions and test economic theories. As discussed earlier, new technology is making existing data of both the quantitative and qualitative variety easier to exploit. The ability to use history as a laboratory for experimentation is endless. Davide Cantoni and Noam Yuchtman (2020) provide a thorough overview of the development and application of this methodology as it pertains to economic historians. It is, indeed, the very essence of cliometrics, which is:

the quantitative projection of social sciences in the past. Cliometrics is, more precisely, the combination of causal explanations embedded in (economic) models, with or without counterfactual speculation, in order to screen the relative importance of various factors, i.e., of forces (in natural sciences) believed to have been operative in a given historical situation. (Diebolt 2016, 1)

The future is indeed bright for economic historians. Alone among economists, time is a common variable in our work. Cross disciplines within and outside of economics are our playground and source for models, motivation, and coauthors. We have bigger, broader, deeper, and more varied datasets to tap and exploit. Using the talents of a diverse pool of scholars around the globe and across disciplinary boundaries only increases the ability to produce a continued pipeline of output that is novel, clever, insightful, and impactful. The results will serve as building blocks for the next generation of economic historians.

Time marches on, and economic historians will always be there to mark its changes.

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⁴² Guido Alfani (2022); Brian Beach, Karen Clay, and Martin Saavedra (2022); Nicole El Karoui, Kaouther Hadji, and Sarah Kaakai (2021); Stefania Fabrizio, Diego Gomes, Carine Meyimdjui, and Marina Tavares (2021); Remi Jedwab, Noel Johnson, and Mark Koyama (2022); Omang Messono and Simplicie Asongu (2021); Pierre Siklos (2022); Paul Slack (2022); Francois Velde (2022).

⁴³ See, for example, Gary Gorton and Andrew Metrick (2013), Richard Grossman and Christopher Meissner (2010), Eric Hilt (2009), Jeffrey Rogers Hummel (2011), Li Minqi (2010), Larry Neal (2011), Patrick Raines, Heather Richardson, and Charles Leathers (2009), Ken Snowden (2010).

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