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# WORKING PAPERS

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Cliometrics: Past, Present, and Future

**Claude Diebolt, Michael Hauptert**

# Cliometrics: Past, Present, and Future

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and

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## **Summary**

Cliometrics is the application of economic theory and quantitative methods to the study of economic history. The methodology rose to favor in economics departments in the 1960s. It grew to dominate the discipline over the next two decades, culminating in the awarding of the 1993 Nobel Prize in economics to two of its pioneers, Robert Fogel and Douglass North. Cliometrics has always had its share of critics, and some have blamed it for the diminished role that economic history had in economics programs in the 21<sup>st</sup> century.

## **Keywords**

Cliometrics, economic history, new economic history, multidisciplinary, methodology, quantitative

## **JEL codes**

A12, N00, N01

## ***The role of economic history*<sup>1</sup>**

Economic history brings together the methods of economists and historians, as well as other social scientists. Both economists and historians are trying to tell plausible stories about the past, and they succeed or fail by narrative standards to connect one event to another. Economic historians have contributed to the development of both economics and history on numerous margins, perhaps none more important than promoting the interest of economists in studying long run changes in institutions, norms, technologies, and political economy.

The cliometric movement, or “New Economic History,” as it was originally known, grew out of “traditional,” or “old school,” economic history in the late 1950s. It arose from the confluence of advances in economic theory, econometric techniques, and technology. Since that time, it has evolved

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<sup>1</sup> This article borrows in part from our 2019 paper “We are Ninjas: how economic history has infiltrated economics” (Diebolt & Hauptert, 2019b), which appeared in *Sartoriana*. An earlier version of that work was presented at the American Economic Association meetings in Philadelphia in January 2018.

to the point where it has either taken over the field of economic history, or made itself redundant – depending on your point of view.

In a 1994 article in the *Journal of Economic Education*, Christina Romer wondered whether economic history had come to the end of its useful life. While she quickly admitted that this statement was intentionally controversial and even misleading, she believed that the field of economic history had evolved to a point where it was no longer a separate and oft poorly regarded stepchild of economics, but was now infused into the entire discipline. Her point was that economic history had not, in fact, ended, but been assimilated. She felt that the most exciting recent development in economic history was that the rest of the profession had recognized its value.

Romer was neither the first, nor the last person to raise this issue. However, her query can serve as a launching point to consider the past, the present, and the future of cliometrics. How did it arise from the much older, and well established field of economic history, where does it fit in the field today, and has it outlived its usefulness, as some critics claim?

### ***What is economic history?***

Economic history is a subset of both economics and history. Scholars in both disciplines seek to understand the past by connecting historical events through narrative standards. The cliometric movement transformed this approach from a narrative to a mathematical format. Economic historians have always contributed to the development of both disciplines. The cliometric movement allowed them to do so with greater precision and confidence. The combination of rigorous theory with cutting-edge technique allows cliometricians to employ history as a laboratory in which to examine the growth and development of economies across the globe and over time.

After his arrival at Harvard in 1892, Sir William Ashley made the case for the inclusion of economic history as a standard part of the curriculum.<sup>2</sup> He eloquently argued that the gratification of natural curiosity, a desire to understand our past, what created it, and how it led us to the present, was by itself motivation enough to study it.

More than a century later Peter Temin (2016) argued that economic history and economic development were conjoined in their desire to understand how economies grow. They differ primarily in their geographic areas of focus: poor countries outside of Europe and North America for the latter, and a Euro-centric focus for the former. Both analyze the growth of economies with new technologies, and focus their attention on the incentives within economies that lead to (or hinder) the adoption of new techniques, innovations, and institutions critical to the process of economic growth and development.

Emphasis on this close relationship between the two disciplines goes back at least to E. B. Lyon, who in 1926 championed a “theory of development and not merely an explanation of the method or manner by which humanity produces wealth and shares its income under a given set of social conditions.”<sup>3</sup> Richard Tawney identified the role of economic historians as chroniclers of social behavior across environments and over time, their objective being the discovery of “the forces in which change has found its dynamic, and to criticize the doctrines accepted in each epoch as self-evident truths.”<sup>4</sup> John Nef (1944) put it simply – the purpose of history is “to widen the range of observations from the experience of a single generation or society to that of mankind.”<sup>5</sup> Twenty years later, Robert Gallman (1965) emphasized the

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<sup>2</sup> In 1892 Harvard hired Ashley as the first Professor of Economic History in the English-speaking world.

<sup>3</sup> Lyon 1926, p 241

<sup>4</sup> Tawney 1933 p 11

<sup>5</sup> Tawney 1933 p 11

importance of developing a theory of economic development in order to fully understand economic growth. It was up to historians to do this, since theorists seldom included it in their models.

In the early 1960s, Purdue University was the epicenter of cliometrics. Its department of economics housed some of its earliest practitioners, and it hosted the first meetings of cliometricians in West Lafayette.<sup>6</sup> Graduate students were required to take a sequence of courses in economic history as the empirical balance to the theory sequence. The skills taught in the economic history courses were designed to “provide the student with a basic knowledge of economic institutions and their evolution . . . [and] emphasize the impact of these institutions on economic processes.” Moreover, since “all empirical work is by its very definition economic history,” the courses were designed to introduce students to the tools and techniques of empirical testing of economic hypotheses. In particular, students were exposed to the sources of economic data and, “in connection with the course in research methodology, the formulation of hypotheses in forms that are subject to test.”<sup>7</sup>

So, what *is* economic history? Joel Mokyr compares it to a small open economy, which “stands at a busy intersection of history and the social sciences, where economists, political scientists, sociologists, anthropologists, demographers, and historians come and go.”<sup>8</sup> This view recognizes the broad spectrum of topics covered by economic historians today, reflected in the broad range of journals publishing economic history research. We will have more to say about this later.

### ***The evolution of economic history***

The earliest form of economic history was narration occasionally fortified with data. When it began to evolve as a distinct discipline in Germany and England in the late nineteenth century, leading scholars such as Gustav Schmoller in Germany and Sir John Clapham in England sought to develop it independent of standard economic theory. Clapham (1929) argued that the central problems of economic theory, though stated in terms of a particular historical phase, were in essence independent of history. Prior to this, the emphasis in economic history was on the history more so than the economics. Schmoller distinguished the discipline from traditional history by focusing on the concepts of economic growth and institutions. To this day, these are defining features of economic history that sets it apart from other subfields of the economics discipline. And it is for this reason that he can be considered the true father of economic history. He emphasized history as the key source of knowledge about humans and human organizations, and because it was culture and time specific, it could not be described by general theories. Thus, economic history was best approached from the vantage point of empirical and historical analysis, not abstract theory and deduction.

Independent departments of history and political economy existed before the arrival of economic history, but neither was a natural home for the economic historians. Political economics departments were policy oriented, and tended not to focus on history. And the general approach by scholars trained in history departments in the 19<sup>th</sup> century was to consider economic factors as perhaps a contributing factor to change, but not necessarily an important one.

The London School of Economics (LSE), which opened in 1895, was founded in opposition to the tenets of orthodox economics. As a result, economic history was an important presence from the beginning. In 1901, it became the first British university to offer a degree in economics, with economic history offered as a possible course of specialization. The first teachers of the subject were W. A. S. Hewins, the

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<sup>6</sup> The first eight annual meetings of the Cliometric Society were held at Purdue, beginning in December 1960.

<sup>7</sup> Cameron 1965 p 113

<sup>8</sup> Mokyr 2003

inaugural director, and William Cunningham, author of the first English language economic history textbook, published in 1882.

While the LSE was the first to offer a degree in economic history, the subject had been previously taught. In the English-speaking world, Arnold Toynbee can be considered a pioneer for his lectures on the industrial revolution at Oxford. Though he died at the young age of 30, he is credited with introducing the term “industrial revolution” into the English language. His opus on the subject, *Lectures on the Industrial Revolution in England*, was published posthumously.

In the early 20<sup>th</sup> century, economics as a discipline took a scientific turn, becoming more deductive, in response to the rising stature of the natural sciences. Economists, wishing to maintain their position at the pinnacle of the social sciences, believed that rigor, formalization, and mathematical models were the way forward. Economic historians resisted this movement however, arguing that an inductive approach was better suited to the study of history, and models were either too general or needed to be too complex to capture historical evolution.

### ***The roots of cliometrics***

Harvard was the incubator of economic history in the US, appointing William Ashley as the first chair of economic history in the world in 1892. Ashley was strongly influenced by the Schmoller school, as was his Harvard successor, Edwin F. Gay.

While economic historians gained positions at prestigious universities across America, they failed to gain much traction within the larger economics discipline. In part, this was due to their growth concurrently with that of the theoretical movement within economics, espoused by the work of Marshall, and abhorred by economic historians. Another contributing factor was the lack of a dedicated society or journal for economic historians to promote their research and viewpoints. The scientific approach to economics in the US is exemplified by the growing focus on economic forecasting, which eventually led to the establishment of the National Bureau of Economic Research (NBER).

During WWI, Edwin Gay and Wesley Mitchell headed the government’s Central Bureau of Planning and Statistics. The bureau was responsible for gathering and reporting statistical data. The lack of reliable sources of economic data convinced Gay of the need for better economic statistics. After the war, he and Mitchell were responsible for creating the NBER to carry out the collection, maintenance, and investigation of current and historical economic data.

Mitchell directed the NBER for its first quarter century. He oversaw efforts to accumulate economic data in order to draw inductive generalizations from it, combining his historical approach to understanding business cycles with a call for more data collection. The NBER was central to this effort and served as a sort of haven for statistical economists. The mission of the NBER was to gather empirical information about the American economy in order to create a robust foundation for theoretical generalizations.

The NBER ultimately served as a catalyst for the change in emphasis from narrative to quantitative studies in economic history. Bureau staff, including Mitchell, Simon Kuznets, Arthur Burns, Solomon Fabricant, and Harold Barger, produced a series of quantitative descriptions of American economic growth dating back to the 1870s.

By 1941, Gay was calling for the unification of economic history and theory. He urged economic historians, who knew a great deal about the long trends of productive energies and social pressures leading to economic growth, to make use of the tools of the theorist to lend greater insight into the growth process. Far from incompatible, he felt that true philosophical objectives and the careful assembling of data were complementary.

Over time, economic history presented itself as empirical and multidisciplinary. Empirical in that it dealt with the facts of the past. These facts could be both quantitative, as the NBER emphasized, and qualitative, as the German school believed was the responsibility of economic historians. Combining the tools of the historian and the theoretician allowed economic historians to employ history as a laboratory in which economic hypotheses could be tested. This became the foundation upon which the next revolution in economic history, cliometrics, would be built.

### ***The New Economic History movement***

The postwar boom in the American economy elevated the status of economists. Their rigorous, mathematical models, applied to copious data collected by the likes of the NBER, became the standard by which other social sciences were measured. At the same time, there was a growing interest in predicting business cycles and understanding economic growth. It was natural that economic historians would join this movement. They were in a perfect position to contribute to the debate about why some countries were rich and others poor. Economic history provided a unique insight into the issues of economic growth and development, and the new quantitative methods were the ideal tools for its rigorous analysis.

If any one person could be considered the “father” of cliometrics, it would be Simon Kuznets. The timing of the cliometric movement, originally referred to as “the new economic history,” corresponded to the success of the quantitative growth studies of Kuznets. Robert Fogel, who studied under Kuznets at Johns Hopkins University, credited him as the primary inspiration for the work of the new economic historians.

Kuznets may have inspired the cliometric movement, but it was Fogel who unified economics and history. He used the latest techniques of modern economic theory and gathered reams of historical data with which to test them, using cutting edge econometrics to reinterpret American economic growth in sectors as diverse as railroads, slavery, and nutrition. Rather than conjecture about the causes of growth, he set about to measure them. He pioneered the use of large-scale, cross-sectional and longitudinal data sets harvested from original sources to examine policy issues.

The cliometric revolution pitted economic “theorists” against “traditional” economic historians, setting up a clash between the quantitative and narrative approaches to economic history. The traditionalists accused the newcomers of bringing economic theory to history without a proper understanding of the facts. The disagreement was about the choice of models. Traditional, or “old” economic historians, claimed that realistic models had to be too highly generalized or too complex to allow the assumption of mathematical relationships. The “new” economic historians (cliometricians), however, were primarily interested in applying operative models to economic data. There was a difference in method between new and old economic historians that could not be ignored.

The main achievement of cliometrics has been to establish a solid set of economic analyses of historical evolution by means of measurement and theory. But it has also pushed the boundaries of traditional economic history, particularly through the work of its two Nobel laureates, Robert Fogel and Douglass North. North recognized the limits of neoclassical theory and pioneered the role of institutions in historical models. He was also critical of the over-reliance on econometric techniques as a substitute for theory and imagination.<sup>9</sup>

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<sup>9</sup> North 1965

Fogel was innovative in his use of economic historical methodology. He famously employed counterfactual arguments and cost-benefit analysis in his path-breaking railroad research, and returned to it in his later work on slavery and demography.<sup>10</sup> He recognized the need to gather and analyse quantitative evidence in order to answer the pressing questions he pursued. His mastery of the most advanced analytical and statistical methods available allowed him to exploit those data to the best possible end. Nothing can now replace rigorous statistical and econometric analysis based on systematically ordered data. The traditional practice of economic history as a purely narrative exercise was all but extinguished in economics journals, and ultimately led to a split between historians and economists.

### ***The decline of economic history***

The growing popularity of cliometrics led to a rift between economists who practice it and historians who practice economic history without the use of formal models, which they argue miss the context of the problem and have become too enamored of statistical significance at the cost of contextual relevance. 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.

These new economic historians, who began to refer themselves as cliometricians, threw their lot in with the econometricians. They turned to the collection and accumulation of historical data and their use in testing hypotheses about economic activity. In this way, cliometrics brought economic history into the mainstream of economics as it was developing. Economic history is now dominated by the cliometric method, so much so that it may be a contributing cause to the demise of economic history positions and courses at the leading universities in the United States.

To non-historians, it appears that economic history is little more than the application of theory and the latest quantitative techniques to historical data instead of contemporary data. In that world view, a cliometrician is just a theorist with a more limited repertoire – and hence a luxury in an environment of shrinking resources. As a result, cliometrics has been blamed to a degree for the demise of economic history positions in many economics departments. As early as 1986 William Parker foreshadowed this problem when he observed that what was lost in the move to theory and econometric emphasis was the humane interest of the old British political economy and social welfare and the idealistic German historical economist's concern for the whole society.

But economic history has been written off many times before, and survived each of those predictions of extinction. One of its earliest and most persistent doomsayers was Norman Gras, who in 1920 wondered whether economists were losing interest in economic history because "historical economics has become discredited, or because the statistical method as applied to historical data has failed, or because economic history has neglected to keep pace with the change in interest from production to distribution."<sup>11</sup> Ten years later, he gloomily summarized the state of economic history as being neglected by universities, who regarded it as a very special subject, but one suffering a lack of intellectual resilience.<sup>12</sup>

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<sup>10</sup> Fogel and Engerman 1974, Fogel 2000

<sup>11</sup> Gras 1920 p 222

<sup>12</sup> Gras 1931



A generation later, Hugh Aitken, perhaps doubting the ability of the nascent cliometric movement to deliver, warned that “there is no scarcity of evidence to suggest that economic history is at present in critical condition . . . Economic theory today, in most of its branches, neither draws on economic history for its data nor goes to economic history for empirical verification. Economic history, for its part, commonly uses only the crudest of the tools in the economist’s tool-box, and displays almost complete indifference to the refinements in analytical methods that occupy the theorist’s working time.”<sup>13</sup> And a quarter century after that, Robert Solow expressed an equal degree of pessimism. When commenting on the recent work in economic history he expressed “the sinking feeling that a lot of it . . . gives back to the theorist the same routine gruel that the economic theorist gives to the historian. Why should I believe, when it is applied to thin eighteenth-century data, something that carries no conviction when it is done with more ample twentieth-century data?”<sup>14</sup>

More recently, Lars Magnusson referred to economic history as “a now rather defunct specie,”<sup>15</sup> and Robert Whaples bemoaned “the vast body of ahistorical economists who flip right past the economic history articles that still appear in the leading mainstream journals and wouldn’t even consider picking up a journal or book with the word ‘history’ in the title.”<sup>16</sup> In his presidential address to the Economic History Association in 2007, Paul Hohenberg warned that “our discipline is not exactly prospering . . . [it] is struggling [because] the underlying disciplines of economics and history have diverged sharply.”<sup>17</sup>

### ***The disappearing economic history course***

Recent scholarship has highlighted the drop in economic historians and economic history course requirements at leading PhD granting institutions.<sup>18</sup> Two examples will suffice to illustrate the problem.

Temin (2016) noted that when he first joined the MIT economics department in 1965, the approach to graduate education had long since been a three legged stool consisting of theory, econometrics, and economic history. Today, the three legs of the stool are micro theory, macro theory, and econometrics. Economic history is no longer required, nor is it listed as a subfield available to graduate students. In fact, among the 46 courses listed in the current graduate curriculum, six are statistics and econometrics courses, four are micro theory, and none are economic history.

Research by Hauptert (2005) indicated that 7.1% of the economic historians then listed on eh.net had earned their PhD at the University of Chicago. This was second only to Harvard, which had produced 7.4% of economic historians, and just ahead of UC-Berkeley at 6.3%. Like MIT, the University of Chicago no longer requires a field course in economic history at the graduate level. Unlike MIT, it does at least still have one economic history course listed in the graduate course catalog. The three core areas of study at Chicago are price theory, quantitative methods, and the theory of income. The decline of economic history at Chicago began with “the elimination of the economic history requirement for the PhD in the early 1980s, in the decline in the percentage of doctoral dissertations written in the field

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<sup>13</sup> Aitken 1960 p 87

<sup>14</sup> Solow 1985 p 330

<sup>15</sup> Magnusson 2003, p 928

<sup>16</sup> Whaples 2003

<sup>17</sup> Hohenberg 2008 p 340

<sup>18</sup> Mitch 2011, Temin 2016

after 1990, and in the shift of the two remaining economic historians into other fields, and in the termination of the economic history workshop.”<sup>19</sup>

MIT and Chicago are not unique among top programs. More than half the 50 programs in a survey conducted by Diebolt and Hauptert (2019c) do not offer any economic history course, only 11 offer it as a field of emphasis, and eight require a course in economic history as part of the core curriculum. An additional three programs offer an economic history course as one of a number of restricted electives. The view that economic history is a useful tool, and that the research of its practitioners is useful, has not translated into the belief that it is important to teach it as an independent course in graduate programs.

While the decrease in economic history positions is discouraging, many young economic historians market themselves as specialists in other fields, and indeed continue to publish in the economic history journals as well as other field journals. However, the drop in required economic history courses presents a concern for the future production of economic historians.

### ***The purpose of economic history courses***

Economic history courses in US graduate programs tend to focus either on European or American economies. The typical European course will focus on the evolution of the economy from the industrial revolution forward, and the typical American course begins with the colonial economy. While the overarching theme tends to be economic growth, coverage of specialized topics is prevalent on the syllabi. For the European courses topics include mercantilism, industrialization, the standard of living debate, international trade, the gold standard, war, and the European Community. The growth and development of the economy forms the backbone of the American courses. Certain topics receive special attention there as well: agriculture, banking, slavery, westward migration, the Great Depression, and postwar growth.

In either case, the tools learned in the core courses are applied here as well as in other field courses. In economic history courses, the focus is on the use of theory and econometric techniques to research long-term factors in the development of the economy. While any country could be the focus of such examination, Europe and North America are the most frequent focus of economic history courses in the US.

The overall themes that pervade these courses focus on big questions such as the sources and determinants of sustainable economic growth. In particular, can technical progress alone increase social welfare or can capital accumulation also lead to a permanent increase in per capita income? What factors of production engender sustainable growth: physical, environmental, human, social or technological knowledge? What mechanisms guarantee long-term growth in a market economy? What are the market structures within which such growth can be achieved? Why are current societies more productive and wealthy than their ancestors? And why isn't the whole world developed?

The primary skills emphasized in these courses include basic econometrics and modeling, with a strong focus on quantitative and empirical methods. These are skills that most graduate students will be taught in their first year quantitative methods sequence. However, economic history courses emphasize their use in a historical setting, which requires recognizing the diversity of methodologies practiced in conducting historical analysis, and putting historical events into context, which often requires non-quantitative analysis. In addition, economic historians often have to construct data sets, or at the very least learn to work with data sets that are not as complete or exhaustive as modern data. This includes

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<sup>19</sup> Mitch 2011 p 263

an understanding of how a dataset is constructed, its relationship to other sources of similar data, and the pitfalls of using data without an understanding of its underlying source and construction. This long run, big picture focus is common across economic history courses, and indeed, is central to the argument that economic history does provide added value to the education of an economist.

### ***The status of economic history***

The wide reach of economic history is a reflection of what John Nef argued in 1944. “Any attempt to separate the economic side from the rest of life leads to a narrow view of history. . . the past work of economic historians has provided a hunting ground for anthropologists, sociologists, philosophers, political historians, economists, and for almost all other kinds of scholars is an indication of the relevance which economic history has for all other subjects.”<sup>20</sup> That is still true today.

Economic historians have long had an impact far beyond their own discipline. Economic history is a field that crosses many disciplines, as can be seen by the JEL code distribution of economics articles and the broad range of journals publishing economic history articles. Research by Ran Abramitzky (2015) indicates that over the forty year period 1970-2010, the percentage of articles in the top five economics journals coded as economic history rose from about 1.5% to more than 5%.<sup>21</sup> More recent research, looking at citations over the past 15 years, indicates a large and persistent percentage of citations of articles from the *Journal of Economic History* in non-economic history journals.<sup>22</sup>

It was this trend that Romer referred to when she claimed that “the field of economic history is no longer a separate, and perhaps marginal, subfield of economics, but rather, is an integral part of the entire discipline.”<sup>23</sup> Throughout its history, economic history has had a tentative relationship with the economics profession as a whole. It is ironic then, that the rise of cliometrics, which brought economic history into the mainstream of the economics discipline, may have proved to be its undoing.

While economic history is gaining wider support both within and outside of the economics discipline, there is some concern that the tools of the economic historian are being overlooked. Economic history is not just theory applied to old data. It is the empirical extension of the theory all economic graduate students are taught. It adds history, institutions, demography, geography, politics, and religion, among other variables, in the effort to understand how and why economies grow, or more often, do not. These dimensions are often missing from theoretical growth models, but have proven critical to understanding how economies work. And if they are not being taught to economics graduate students, what is their future?

Nearly a century ago, G. N. Clark claimed that “everywhere, the study [of economic history] is now pursued by more people and with greater interest than ever before.”<sup>24</sup> And fifty years ago Rondo Cameron confidently boasted that “the vast majority of professional economists are trained in graduate schools that require their students to take course work or examinations in economic history.”<sup>25</sup> The respect that has been accorded economic history in its publications and citations has not translated into

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<sup>20</sup> Nef 1944 p 16

<sup>21</sup> The top five journals cited by Abramitzky (2015) p 1243 are the American Economic Review, Econometrica, Journal of Political Economy, Quarterly Journal of Economics, Review of Economic Studies

<sup>22</sup> Diebolt and Hauptert 2018, 2019b

<sup>23</sup> Romer 1994 p 49

<sup>24</sup> Clark 1932 p 100

<sup>25</sup> Cameron 1965, p 112

the belief that it is important to teach it as an independent course in graduate programs. We have cited evidence of this in the dwindling number of required, and even regularly offered field courses at the top graduate programs in American universities.

Instead, the absence of economic history as a field of study in so many economics departments signifies the attitude that economic history is not an enhancement of economic tools, but just another application of them, different from the application to labor, or trade, or banking only by the age of the data used in the analysis. Economic history is indeed a different way of thinking, a different approach to considering, analyzing, and understanding a problem. It is not necessarily a better approach than that of say, the labor economist or the theoretician, but it is different. Different, and complementary. One does not serve as a substitute for the other. Economic history “accustoms the student to the inductive method of thinking; to the practice of generalization, and to the realization of the multiplicity of causation; and all this in an environment not of assumption but of recorded fact. It is precisely as a half-way house between the abstract and the concrete that . . . [it] is useful.”<sup>26</sup>

The economics profession does not appear to share the view of economic history espoused by Ashley, that we should pursue a subject “in order to gratify a natural and innocent curiosity . . . even if the subject had no utility outside its interest for the student himself, it would widen his sympathies, [and] enlarge his conceptions of the possible.”<sup>27</sup> Today the typical economist cares about the past “only to the extent that it sheds light on the present. This is unfortunate and we can (and should) keep arguing that this is a narrow view of social science.”<sup>28</sup> We ignore history at the risk of missing many important contributions, or worse, failing to investigate them at all.

### ***Cliometrics and the future of economic history***

The use of history to examine economic theory has deepened our knowledge and understanding within fundamental areas of research as to how, why, and when economic change occurs. It is perhaps in this area where the greatest contributions of economic historians have appeared. There are several promising and innovative applications of cliometric techniques that have evolved as new datasets, new techniques, new approaches, and new technologies have been discovered.

One of the most recent evolutions in cliometrics has been in the area of experimental economics, using history as a laboratory to perform natural experiments that can greatly augment and alleviate the limited ability of economists to employ true empirical experiments. An early important application of this methodology is Jeremiah Dittmar’s study of the impact of the printing press on economic development (2011). Other studies have explored historical questions with more traditional experimental economics techniques (Wilson, et al 2012). An excellent overview of this approach can be found in Cantoni and Yuchtman (2020)

Cheap and powerful computing power has opened up many possible tools for the study of economic history. One popular example, which combines the talents of economic historians with geographers, is the use of geographic information system tools for the analysis and display of data along spatial dimensions. This allows for the combination of standard economic history issues of growth and development with the social and environmental aspects of geography. One of the earliest uses by cliometricians of geo-coded mapping techniques applied them to the study of the American railroad industry (Atack 2013 and 2019, Donaldson and Hornbeck 2016). Geo-coding has also been used for

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<sup>26</sup> Ashley 1927, p 9

<sup>27</sup> Ashley 1893, pp 134-35

<sup>28</sup> Abramitzky 2015, p 1242

historical demographic analysis (Hedfalk et al 2017 and 2018, Kasakoff et al 2013), census studies (St-Hilaire, et al 2010, Lan and Longley 2019), and spatial modeling (Ploeckl 2019), among other creative uses by economic historians. Overviews of the potential of geocoding to economic history and the challenges of using it can be found in Goldberg, et al (2007), Cura et al (2018) and Weinberg (2018). Underlying the future importance of this branch of research is the new program in economic history and geography offered by the London School of Economics.

Cliometrics has a history of contributing large and important data sets, which have been useful in reexamining old issues, such as slavery and economic growth. The accumulation of the data is in itself monumental in many respects, but its usefulness has been expanded by the rapid growth of computing power, and its significance has been enhanced by the application of economic theory. The ability to handle “big data” is not an economic issue by itself, but the construction of significant, important historical data sets, which can then be analyzed using the latest econometric techniques and computer programs, is very much a contribution of cliometrics.

Cliometrics and big data are a match made in heaven, which has been exploited by economic historians in many creative ways. James Feigenbaum (2015) used automated linking methods to manage enormous volumes of census data. Large-scale qualitative databases have also been used to analyze text (Gentzkow, et al 2014, Wehrheim 2019). On a broader level is the Integrated Public Use Microdata Series (IPUMS), which provides census and survey data from around the globe for historical research on a variety of economic, social, and health topics.

The Longitudinal, Intergenerational Family Electronic Microdata (LIFE-M) combines new techniques with novel approaches and large data sets. LIFE-M is a large-scale public database covering the period from the late 19<sup>th</sup> through the 20<sup>th</sup> century. It uses vital records as a method for linking census data from 1880 forward. The combination of birth, death, and marriage records with data across censuses allows for the creation of a multi-generational database.<sup>29</sup>

The revision of history is often controversial, but the revision of misunderstandings in history is certainly both important and necessary, not just for the reason of setting the record straight, but helping us understand how and why economies grow (or do not grow, as the case may be). A clear understanding of the causes of economic growth is among the most important things an economic historian can offer. Cliometricians have played a leading, and not always appreciated role here, overturning some accepted wisdoms, leading to hard feelings, resentment, and controversy. However, in the process they have also pushed forward the frontier of our understanding of economic growth and development.<sup>30</sup>

Among the notable “revisions” made by cliometricians were the findings of Conrad and Meyer (1958), Yasuba (1961) and Sutch (1965) that slavery was indeed a profitable investment. Easterlin (1961) used revised GNP figures to show that income in the antebellum South grew at a faster rate than previously believed, and Fogel (1964) showed that the railroad was not the determinant of American economic development that it was believed to have been.<sup>31</sup>

Cliometrics has even led to the development of novel approaches to the study of economics. At the forefront are the new institutional economics, pioneered by Douglass North<sup>32</sup>, and anthropometrics,

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<sup>29</sup> Bailey et al 2017

<sup>30</sup> Hauptert (2016)

<sup>31</sup> Hauptert (2016)

<sup>32</sup> This strand of research has been carried out more recently by Acemoglu, et al (2005).

which counts among its initial practitioners Robert Fogel. It is no coincidence that these two were recognized with the Nobel Prize in Economic Science in 1993.

Fogel was at the forefront of the gathering of historical primary datasets that were essential for the large-scale data-driven studies he pioneered in the era before “big data” became ubiquitous. The linking of census data with such datasets has produced ground-breaking work.<sup>33</sup> And the improvement in optical recognition software, coupled with the growing volume of digitized archival material portends well for the future of this research.

Economic History plays an important role in the training of economists: Milton Friedman's classic treatise on money, as well as the path-breaking work on economic development by Simon Kuznets, for example, were, to a considerable degree, based on historical analysis. Economic historians analyze the dynamic processes of development over time by formulating explicit formal models and econometric methods. They test hypotheses formally in order to enhance our understanding of such major determinants of the way we live today as the industrial revolution, industrialization and the information revolution. And they use historical (often archival) data to test the extent to which economic theory can be validated or improved upon in a wide array of ways, spawning totally new perspectives, such as counterfactual history.

Finally, there is the expansion of cliometrics from its birthplace in North America to Europe, and more recently to the rest of the world, both in practice (in economics departments) and in research subject. In part, this is a natural extension of the discovery and creation of rich datasets for cliometricians to exploit.<sup>34</sup> By the same process of data availability, either through discovery or clever (re)construction, cliometrics has also pushed back the boundaries of time to conduct studies in medieval, ancient, and even Neolithic time periods. The efforts of Broadberry, et. al.<sup>35</sup> to extend national income estimates both geographically and chronologically is an important example. The work is not without its critics, but answering their questions about the precision of the estimates will likely provide for a rich and productive exchange of ideas for future cliometricians.

Jeffrey Williamson has long been a proponent of global studies and a pioneer in the expansion of cliometric techniques to countries outside of the United States and Europe and time periods predating traditional industrial revolution studies. He is one of the leaders of what has become known as the new comparative economic history, a focus on the comparison of economic practices and processes across time and geography as a method for studying economic growth and development. An excellent summary of this work can be found in the festschrift dedicated to Williamson (Hatton, O'Rourke, and Taylor 2007).

But should we even have to argue for a place for economic history? “At the least pragmatic level, indeed, the worth of economic history is that of intellectual activity generally, and nothing should be easier than convincing professional intellectuals that such activity is worthwhile.”<sup>36</sup> Economic history provides more and better economic facts, better economic theory, better economic policy, and does so over a longer period of time and greater variety of institutional settings than any other field of economic study can provide. The practical value of historical scholarship is not necessarily in its direct or immediate application. It is, rather, an indispensable part of the combined labor of the social sciences.

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<sup>33</sup> See Bailey, et al (2017), Clark (2014), and Ferrie (1996), for example.

<sup>34</sup> See Diebolt and Hauptert (2019d)

<sup>35</sup> Broadberry et. al. 2019, 2015, 2014, Broadberry and Gardner 2016, Broadberry, Custodis, and Gupta 2015

<sup>36</sup> McCloskey 1976 p 438

### ***The role of cliometrics***

If the Great Recession and crash of 2008, and the Covid-19 pandemic of 2020 have taught us anything, it is that we need to hear from people who know and understand what's happening in our economy. And this can best be accomplished by understanding our history. As George Santayana famously warned, "those who cannot remember the past are condemned to repeat it." Now is the time to study economic history. Alone among economic disciplines it crosses the boundaries of academic fields of study, geographic borders, and time. It has become, as John Nef called for more than 75 years ago, "an instrument for reducing rather than for increasing the number of compartments into which scholarship is now divided."<sup>37</sup>

Cliometrics may have superseded traditional economics in its practice, but at its core, it answers the same questions, faces the same hurdles, and offers the same advantages as it has since its inception. To paraphrase Deirdre McCloskey (1976), the past does indeed have useful economics, and it is the job of economic historians, whether using the old school narrative approach or the more quantitative cliometric one, to deliver that message. The *Handbook of Cliometrics* and the journal *Cliometrica*<sup>38</sup> are witnesses of that reality, linking the past, the present, and the future of cliometric research.

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<sup>37</sup> Nef 1944 p 15

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