



# The impact of history on regional development

Carlo Ciccarelli<sup>1</sup> · Torben Dall Schmidt<sup>2,3</sup>

Accepted: 11 January 2023 / Published online: 27 January 2023  
© Springer-Verlag GmbH Germany, part of Springer Nature 2023

## 1 Introduction

How does history matter for regional development? This special issue investigates the topic from a wide set of perspectives and methods. It builds on the continued strong interest in the question of how history matters for development patterns in general but adds the dimension of regional heterogeneity and dependencies. A search of the words “historical”, “historic”, “history”, “path dependence”, or “persistence” in the title of papers published in either Economic Geography, Journal of Economic Geography, Regional Studies, Journal of Regional Science or Papers in Regional Science, highlights the continuous importance attributed by the international community of scholars to the impact of history on regional development. Figure 1 shows in particular the increasing number of papers published according to these criteria, which has increased particularly over the last five years.

This special issue is devoted to the two important research fields of economic history and regional development in combination, addressing *the impact of history on regional development*. In doing so, a challenge is to select relevant perspectives. This partly mirrors the different methods often used in the literature, but also the

---

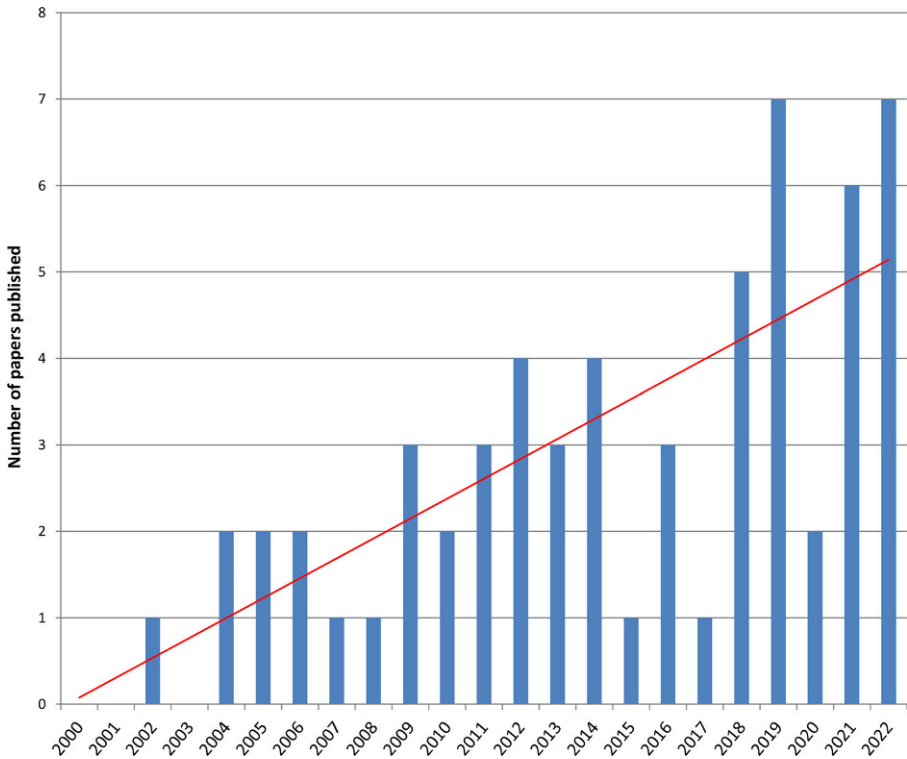
✉ Carlo Ciccarelli  
carlo.ciccarelli@uniroma2.it

Torben Dall Schmidt  
tds@hsu-hh.de, tds@sam.sdu.dk

<sup>1</sup> Department of Economics and Finance, University of Rome Tor Vergata, Via Columbia 2, 00133 Rome, Italy

<sup>2</sup> Institute for Employment Relations and Labour, Helmut Schmidt University, Holstenhofweg 85, 22043 Hamburg, Germany

<sup>3</sup> Department of Economics, University of Southern Denmark, Campusvej 55, 5230 Odense M, Denmark



**Fig. 1** History papers published in selected regional science journals. The figure shows the number of papers published in *Economic Geography*, *Journal of Economic Geography*, *Journal of Regional Science*, *Papers in Regional Science*, or *Regional Studies*, where the title of the paper contains one or more of the following words: “historical”, “historic”, “history”, “path dependence” or “persistence”. (Source: Authors count based on the 11th November 2022 search on the journal’s homepage)

disciplinary diversity seen in the fields. The special issue accordingly includes contributions based on both quantitative and qualitative methods, but it also presents different perspectives in considering the impact of history on regional development from e.g. a spatial econometrics approach, a regional policy evaluation approach, an economic history approach, and a more local development approach. In this sense, it partly addresses the impact of history on regional development while at the same time considering diversity with respect to history, methods, policy, and applications.

The following sections provide a brief summary of economic history and regional science as separate, yet interdependent, scientific fields. We also shortly present some of the current debates on the importance of path dependence and persistence, which may also apply in regional contexts. We conclude by offering a short presentation of the various contributions on the impact of history on regional development in this special issue.

## 2 Economic history

Like most disciplines, economic history is constantly evolving. The Cliometric revolution of the 1960s, and the first application of economic theory and econometric techniques to the study of the past, changed the discipline considerably (see Lamoreaux 1999, Diebolt and Hauptert 2016). Abramitzky (2015), investigates the changing role of economic history in economics since the 1980s, while Federico (2017) analyses the more recent second Cliometric revolution. Galofré-Vilà (2020) uses network analysis to show how economic historians are interconnected through their research. There is little doubt, however, that the recent reduction in the cost of digitizing historical data (often at the individual level) and in computational time is contributing to shaping economic history even further. Bisin and Federico (2021) represent an up-to-date contribution that illustrates in detail the most recent trends on the matter.

The increasing diffusion of Geographic Information Systems (GIS) in the last twenty years also had a tremendous impact on economic history by increasing dramatically the relevance of spatial and regional analysis. Atack (2013) provides a neat example of this tendency in the context of creating a GIS database for the US in the field of transportation (see also the more recent Atack et al. 2022). Another example is provided by Becker and Woessmann (2009), where the authors use GIS and distance for identification purposes in their human capital theory of Protestant economic history.

To conclude this section, we note that the recent decades registered an increasing number of contributions providing statistical reconstructions of national accounts with a regional perspective. An example is the work by Ciccarelli and Fenoaltea (2009, 2014) that produced annual estimates of regional value added at 1911 prices for various sectors of the Italian industry during the period 1861–1913. However, it goes without saying that any list of contributions on the topic in this brief presentation would obviously be partial. Therefore, we refer the reader to studies such as Rosés and Wolf (2019) and to the literature therein. Culminating a long-term research project, Rosés and Wolf (2019) present GDP estimates for European NUTS-2 regions covering the period 1900–2015. The study contains data on nominal GDP (in 1990 and 2011 PPP), population, area and sector-level employment shares. Finally, Enflo and Missiaia (2019) provide a methodological survey of historical regional accounts.

## 3 Regional science

Regional development founded in regional science can be considered from different perspectives. In brief, regional science, following Isard (1975), concerns the careful and patient study of social problems with regional or spatial dimensions, employing diverse combinations of analytical and empirical research. As a natural consequence, regional science is diverse and potentially comprises various disciplines and methods to provide insights into social problems with a regional or spatial focus. Indeed, even today, a focus on regional and spatial problems remains at the core of regional science. Founding and essential contributions to regional science are

given by a series of renowned scientists. The location of economic activities and structures therein was amongst others a well-known contribution by August Lösch (Lösch 1940, 1954), extending on the contributions of central-place theory by Walter Christaller (Christaller 1933). Including a planner's perspective and broadening the methods was emphasized in later contributions by Walter Isard (Isard 1956, 1960).

Since these earlier and important contributions, the field has developed extensively with a wide set of perspectives to regional science. This is reflected in the research monographs of McCann (2013) and Capello (2016) and the multi-volume Handbook of Regional Science (Fischer and Nijkamp 2021) covering a wide set of themes and methods, for example history, location, interaction, housing, labor, growth and innovation using different models and approaches to spatial analysis. The special issue edited in 2020 by Roberto Camagni furthermore offers a collection of contributions dedicated to specific national communities (e.g. McCann 2020 for the contribution of the Nordic community and Camagni and Capello 2020 for the Italian community). Clearly, this reflects the wide reach of regional science in addressing social problems with a regional and spatial focus.

Regional Science, therefore, dates back in time but has been developing strongly over the recent decades. While this shows the richness of the field, it does to a lesser extent address how history matters for the analysis of social problems with a regional and spatial focus. This is the focus of this special issue combining economic history and regional science to investigate the impact of history on regional development.

#### 4 Path dependence and persistence

A current debate in the research community concerns persistence studies. Following Voth (2021), persistence defined as the “continued and prolonged existence of something” relates measures of the past with later outcomes and comes in two shapes—“apples-and-oranges” and “apples-and-apples”. The first shape relates past measures to quite different outcomes today, while the latter relates past measures to similar measures of today. Importantly, Voth (2021) points to economic geography as a factor to consider. Given cross-sectional differences is the variation exploited in persistence studies, it becomes important to consider both effects of economic geography and cultural traits with high persistence. The question is whether new equilibria are driven by an interaction of economic outcomes with historical characteristics, or by the stickiness of economic geography and man-made infrastructure.

Kelly (2019) points to the importance of spatial autocorrelation in assessing persistence, as persistence may be the outcome of fitting spatial noise from the degree of spatial autocorrelation in residuals with geographically adjacent observations being dependent on each other. However, as pointed out in Voth (2021) econometric techniques are available to deal with the issue. Another perspective emphasized in Allen and Donaldson (2022) points to the importance of distinguishing between, multiplicity, persistence and path dependence in an economic geography framework. A historical shock may lead to: 1) Multiplicity in terms of indeterminacy among equilibria; 2) Persistence with a long adjustment period back to the same equilibrium; 3) Path dependence with a shift among steady states.

A related perspective offered by Rodriguez-Pose (2018) points to persistence in poverty and economic decay in specific geographies leading to a place absent of the dynamism from agglomeration economics and then “no future”. Such “places that don’t matter” may lead to reactions at the ballot box and better place-sensitive development policies are required. In line with the definition of Isard (1975) handling social problems in regional or spatial contexts should consider history, persistence, and path dependence.

These contributions on persistence and path dependence point to the importance of *the impact of history on regional development*. Other contributions have stressed related factors. Bleakley and Lin (2012) consider the importance of economic geography in terms of overland hauling and portage associated with the geomorphological feature of a fall line in the southeastern US attracting manufacturing. Differences in the economic geography of Denmark is investigated by Dall Schmidt et al. (2018), showing that geographic variation in soil qualities and the introduction of new agricultural technologies mattered for urbanization.

Basile et al. (2022) investigate the effect of the early creation in the Italian North of a homogeneous territory in terms of literacy rates (i.e. one with small “urban-rural” differences) on the subsequent regional divide. The importance of long-term economic decline on populism in Germany is investigated by Greve et al. (2022), while Fritsch et al. (2022) points to the persistent effect of entrepreneurship over time for knowledge-intensive entrepreneurship.

## 5 Contributions included in this special issue

The opening contribution of this special issue on the *impact of history on regional development* is by leading economic historians. Cioni et al. (2022) in the first contribution discuss the differences between persistence studies and economic history and ask if persistence studies will contribute to the birth of a new kind of economic history. On that account, the authors present evidence on the number of papers covering persistence studies—being inspired by Acemoglu et al. (2001, 2002)—relative to “traditional” economic history papers. They also compare the number of papers relative to their impact. Furthermore, Cioni et al. (2022) consider the research society behind persistence studies and identifies particularly a “Boston cluster”. Finally, they offer insights into the criticism related to available data, spatial autocorrelation and issues of *p*-hacking. In doing this, Cioni et al. (2022) importantly consider the issue of “apples-and-oranges” and “apples-and-apples” comparisons and provide an original assessment.

A renowned researcher on spatial econometrics contributes with the second paper of this special issue on the *impact of history on regional development*. The contribution by Elhorst (2022) considers both contemporaneous and dynamic spatial dependence structures. It starts out specifying a general model comprising different channels of spatial dependence and common factors in terms of a general nesting spatial (GNS) econometric model for spatial panels with common factors (CF). Elhorst (2022) considers a spatial lag of the dependent, a temporal and spatial lag of the dependent, a spatial lag of the explanatory, a spatial lag in the errors, cross-sec-

tional and time specific effect, cross-sectional averages and principal components. The contribution accordingly gives a very comprehensive presentation of the options available to deal with spatial autocorrelation, and gives guidelines on the advantages and caveats of using such elaborate spatial econometric modelling. Elhorst (2022) also reviews relevant contributions to the literature using such methods on historical data showing the pathway for future research in that respect.

The third contribution of this special issue on the *impact of history on regional development* is by distinguished researchers on regional policy. Accetturo and De Blasio (2022) focus on the importance of institutions and preferences as a source of persistence and slow changing processes. An exposure to a given institutional context may change preferences permanently and have long-term historical effects. Accetturo and De Blasio (2022) pays attention to Italy for particularly two reasons: 1) Since 1861, there has been a unitary state presenting the opportunity to observe different cultural traditions in similar legislative and political frameworks and 2) Italy has a long tradition of regional interventions tied to its long-lasting regional divide. This offers a clear case to study how institutional contexts historically may change preferences and norms which are only slowly changing and may have long-run effects. The *Cassa per il Mezzogiorno* (CasMez) initiated in 1950 for the Italian South is the regional policy intervention analysed in Accetturo and De Blasio (2022). The authors point to some of the long-run caveats in providing public transfers to specific regions as part of regional development policies. The paper also speaks to the importance of cultural traits and norms in different regions as a source of persistence.

Finally, Herzog (2022) presents an interesting contribution concerning the specific case of the decline and renaissance of the textile industry in Mönchengladbach, Germany. It offers a different and local perspective to *the importance of history for regional development*. Firstly, it gives a precise impression on the interdisciplinary nature of regional science, as it builds on evolutionary economic geography and sociology. Secondly, it predominantly uses a qualitative approach. Herzog (2022) analyses the extent to which history matters from creating local imaginaries, directionalities and narratives in terms of building interpretations of urban history forming perceptions and identities. This points to the importance of history in terms of creating persistence by forming perceptions, norms and identities that only changes very slowly. It may lead to a renaissance carried by the urban history and the associated persistent perceptions, norms and identities from earlier periods of industrialization and so specialization can have long-run effects in regional development patterns.

## References

- Abramitzky R (2015) Economics and the modern economic historian. *J Econ Hist* 75(4):1240–1251. <https://doi.org/10.1017/S0022050715001667>
- Accetturo A, De Blasio G (2022) History and regional policy: some reflections on Italy's Cassa per il Mezzogiorno. *Rev Reg Res*. <https://doi.org/10.1007/s10037-022-00173-2>
- Acemoglu D, Johnson S, Robinson JA (2001) The colonial origins of comparative development: an empirical investigation. *Am Econ Rev* 91(5):1369–1401
- Acemoglu D, Johnson S, Robinson JA (2002) Reversal of fortune: geography and institutions in the making of the modern world income distribution. *Q J Econ* 117(4):1231–1294
- Allen T, Donaldson D (2022) Persistence and path dependence: a primer. *Reg Sci Urban Econ* 94:103724. <https://doi.org/10.1016/j.regsciurbeco.2021.103724>

- Atack J (2013) On the use of geographic information systems in economic history: the American transportation revolution revisited. *J Econ Hist* 73(2):313–338
- Atack J, Margo RA, Rhode PW (2022) Industrialization and urbanization in nineteenth century America. *Reg Sci Urban Econ* 94:103678
- Basile R, Ciccarelli C, Groote P (2022) The legacy of literacy: evidence from Italian regions. *Reg Stud* 56(5):794–807
- Becker SO, Woessmann L (2009) Was weber wrong? A human capital theory of protestant economic history. *Q J Econ* 124(2):531–596
- Bisin A, Federico G (2021) The handbook of historical economics. Elsevier
- Bleakley H, Lin J (2012) Portage and path dependence. *Q J Econ* 127(2):587–644
- Camagni R, Capello R (2020) Contributions by Italian scholars to regional science. *Pap Reg Sci* 99(2):359–388
- Capello R (2016) Regional economics. Routledge, Abingdon, Oxon; New York
- Christaller W (1933) Die zentralen Orte in Süddeutschland. Gustav Fischer, Jena
- Ciccarelli C, Fenoaltea S (2009) La produzione industriale delle regioni d'Italia, 1861–1913: una ricostruzione quantitativa. 1. Le industrie non manifatturiere. Bank of Italy, Rome
- Ciccarelli C, Fenoaltea S (2014) La produzione industriale delle regioni d'Italia, 1861–1913: una ricostruzione quantitativa. 2. Le industrie estrattivo-manifatturiere. Bank of Italy, Rome
- Cioni M, Federico G, Vasta M (2022) Persistence studies: a new kind of economic history? *Rev Reg Res*. <https://doi.org/10.1007/s10037-022-00167-0>
- Dall Schmidt T, Sandholt Jensen P, Naz A (2018) Agricultural productivity and economic development: the contribution of clover to structural transformation in Denmark. *J Econ Growth* 23:387–426
- Diebolt C, Haurert M (2016) Handbook of Cliometrics. Springer, Berlin, Heidelberg
- Elhorst P (2022) The dynamic general nesting spatial econometric model for spatial panels with common factors: further raising the bar. *Rev Reg Res*. <https://doi.org/10.1007/s10037-021-00163-w>
- Enflo K, Missiaia A (2019) Regional GDP before GDP: a methodological survey of historical regional accounts. In: Molema M, Svensson S (eds) Regional economic development and history. Routledge, London, pp 82–97
- Federico G (2017) Economic history between two revolutions. *Contemporanea* 20(3):467–472
- Fischer M, Nijkamp P (2021) Handbook of regional science, 2nd edn. Springer, Berlin Heidelberg
- Fritsch M, Pylak K, Wyrwich M (2022) Historical roots of entrepreneurship in different regional contexts—the case of Poland. *Small Bus Econ* 59:397–412
- Galofré-Vilà G (2020) The past's long shadow: a systematic review and network analysis of economic history. *Res Econ Hist* 36:109–124
- Greve M, Fritsch M, Wyrwich M (2022) Long-term decline of regions and the rise of populism: the case of Germany. *J Regional Sci*. <https://doi.org/10.1111/jors.12627>
- Herzog A (2022) Imaginaries, directionalities, agency and new path creation. *Rev Reg Res*. <https://doi.org/10.1007/s10037-022-00174-1>
- Isard W (1956) Location and space-economy. John Wiley, New York
- Isard W (1960) Methods in regional analysis: an introduction to regional science. MIT Press, Cambridge
- Isard W (1975) Introduction to regional science. Prentice-Hall
- Kelly M (2019) The standard errors of persistence. CEPR discussion paper no. 13783
- Lamoreaux NR (1999) Economic history and the Cliometric revolution. In: Molho A, Wood GS (eds) Imagined histories: American historians interpret the past. Princeton University Press, Princeton, pp 59–84
- Lösch A (1940) Die räumliche Ordnung der Wirtschaft: Eine Untersuchung über Standort, Wirtschaftsgebiete und internationalen Handel. Gustav Fischer, Jena
- Lösch A (1954) The economics of location. Yale University Press, New Haven
- McCann P (2013) Modern urban and regional economics. Oxford University Press, Oxford
- McCann P (2020) The nordic contribution to regional science: people, principles and empirics. *Pap Reg Sci* 99(2):315–325
- Rodriguez-Pose A (2018) The revenge of the places that don't matter (and what to do about it). *Camb J Reg Econ Soc* 11(1):189–209
- Rosés JR, Wolf N (2019) The economic development of Europe's regions: a quantitative history since 1900. Routledge, London, New York
- Voth J (2021) Persistence: myth and mystery. In: Bisin A, Federico G (eds) The handbook of historical economics, pp 243–267