

Società Italiana degli Storici Economici

# INNOVARE NELLA STORIA ECONOMICA: TEMI, METODI, FONTI

*Roma, Università Roma Tre, 10-11 ottobre 2014*

Estratto

Fondazione Istituto Internazionale  
di Storia Economica "F. Datini"

Innovare nella storia economica: temi, metodi, fonti: atti del convegno, Università Roma 3, 10-11 ottobre 2014. – Prato, Fondazione Istituto Internazionale di Storia Economica “F. Datini” / Società Italiana degli Storici Economici, 2016

<http://www.istitutodatini.it/collane/htm/varie9.htm>

ISBN (online): 978-88-95755-65-6

La Fondazione Datini si dichiara fin d’ora disponibile ad assolvere i suoi obblighi per l’utilizzo delle immagini contenute nel volume nei confronti di eventuali aventi diritto.

© aprile 2016 Fondazione Istituto Internazionale di Storia Economica “F. Datini”

Via ser Lapo Mazzei 37  
59100 Prato (Italy)  
<http://www.istitutodatini.it>

*Printed in Italy*

## INDICE

ANTONIO DI VITTORIO, Introduzione.....	»	1
OPERARE ALL'ESTERO		
MAURIZIO PEGRARI, Il ruolo finanziario dei Nunzi Apostolici tra Ottocento e Novecento.....	pag.	5
MARIANNA ASTORE, Dalle technicalities alla storia: l'Ince e il controllo dei cambi tra politica economica e relazioni internazionali .....	»	31
VERONICA BINDA, MARIO PERUGINI, Nella buona e nella cattiva sorte? Le joint venture tra multinazionali straniere e imprese locali in Italia in una prospettiva di lungo periodo .....	»	57
FORME D'IMPRESA TRA PASSATO E FUTURO		
FRANCO AMATORI, L'impresa dopo Chandler (1970---2014) .....	pag.	99
ANGELA ORLANDI, Le prestazioni di una holding tardo medievale rilette attraverso alcune teorie di management e la Social Network Analysis.....	»	117
P. BATTILANI, G. BERTAGNONI, L'utilizzo del <i>social network</i> nel <i>marketing</i> : le imprese cooperative negli anni Sessanta .....	»	149
UNA PRESENZA DI LUNGO PERIODO: L'IMPERO OTTOMANO		
VERA COSTANTINI, Il rinnovamento della politica economica veneziana nei Balcani visto dalle fonti ottomane (1578-1617).....	pag.	185
STEFANIA ECCHIA, A sostegno della Sublime Porta: la cooperazione tra governo, notabili e contadini attraverso le fonti giuridiche palestinesi di fine Impero ottomano .....	»	197
INNOVARE NEL METODO: L'ANALISI QUANTITATIVA		
G. FAVERO, Hybridising Institutional and Ethnographic Approaches to the History of Statistics in Italy .....	pag.	217
PIER ANGELO TONINELLI, La dinamica delle società di capitale in Italia secondo le rilevazioni del BUSA, 1883-1913 .....	»	233
MANFREDI ALBERTI, Storia economica e fonti statistiche: un approccio critico ....	»	269

## SNODI E PROBLEMI NELLA STORIA DELL'ITALIA MARITTIMA

ROBERTO GIULIANELLI, Finanziare l'industria. Il credito navale nell'Italia della <i>golden age</i> (1950-1973) .....	pag.	283
GIULIO MELLINATO, La rivalità marittima italo-austriaca: trasporti e spazi commerciali alla vigilia della Grande guerra .....	»	301

STORIA ECONOMICA TRA AMBIENTE E *CULTURAL HERITAGE*

GRAZIE PAGNOTTA, Nuovi percorsi della Storia economica. Le sollecitazioni della Storia dell'ambiente .....	pag.	337
G. STEMPERINI, G. M. TRAVAGLINI, La Storia Economica e il <i>Cultural Heritage</i> .....	»	349
RICCARDO CELLA, Studiare i Magazzini Generali: un terreno di incontro interdisciplinare per la Storia economica .....	»	357

## DISEGUAGLIANZE, SVILUPPI E RIMEDI

GUIDO ALFANI, MATTEO DI TULLIO, Dinamiche di lungo periodo della disuguaglianza in Italia settentrionale: prime comparazioni.....	pag.	369
GIOVANNI GREGORINI, Welfare Systems e sviluppo locale italiano in età contemporanea: il caso di Brescia nel XX secolo.....	»	397
FRANCESCO AMMANNATI, La distribuzione della proprietà nella Lucchesia del tardo Medioevo .....	»	421

## LE MOLTEPLICI ARTICOLAZIONI DEL BEL PAESE

D. MANETTI, Dalla storia dell'arte alla storia economica. Le carte della famiglia Vanni di Firenze (XVII-XIX secolo) .....	pag.	459
ILARIA SUFFIA, La dimensione nascosta: industria minore e interconnessioni nella 'città delle grandi fabbriche'. Sesto San Giovanni durante il Novecento ...	»	495
C. BESANA, R. D'ERRICO, Per una storia del settore caseario nell'Italia del Novecento. Note su una ricerca in corso .....	»	541

## STORIA ECONOMICA FRA INFORMATICA E UN APPROCCIO FILOSOFICO

FRANCESCO GUIDI BRUSCOLI, Un progetto di digitalizzazione di libri contabili: il <i>Borromei Bank Research Project</i> .....	pag.	571
MONIKA POETTINGER, Tra storia ed economia: Otto Neurath.....	»	591
AMEDEO LEPORE, La Storia Economica come sintesi di culture: il metodo diacronico e diatopico oltre la divisione tra Economia e Storia.....	»	615

Giovanni Favero

*Hybridising Institutional and Ethnographic Approaches  
to the History of Statistics in Italy*

1. QUANTIFICATION AND ITS EFFECTS

In this paper, I focus explicitly on quantification processes as processes of institutionalization.

Drawing the ultimate consequences from a metaphor that underpins much of the research in the history of accounting and statistics, this makes possible to go beyond the usual considerations on the conventional nature of the resulting quantitative representations. I claim for the need to reflect on the nature of these processes rather than on their outcomes, focusing on the mechanisms at work, on the role of individual agents in shaping their direction, and on their historical, unpredictable nature.

The ethnographic study of quantitative practices inside of organizations (ethnostatistics) may be of help for an historical understanding of the constitutive effects that informal assumptions and practical choices exert once blackboxed. On the other hand, a focus on long term final users and on the political reinterpretation of statistical data is possible only where an historical institutional perspective is supplemented to a pure ethnographic approach.

Three cases in the history of Italian statistics are presented as paradigmatic of the research outcomes such an approach can yield. The first deals with the construction of official industrial statistics in the late 19<sup>th</sup> century, and uses correspondence as a source for an ethnographic inquiry on the assumptions that would drive the measurement of economic activity for some decades. The second focuses on the index of industrial wages that was published by the Istat using data collected and elaborated by Confindustria from 1928 to 1939, and makes use of an

alternative weighted index to check for the purported motivations of a revision introduced in 1938, which was the subject of a small historical debate. The third takes as a subject the debate on the perceived inflation burst subsequent to the Euro changeover and its rhetoric, showing that the historical origin of a built-in insensitivity of official inflation metrics to abrupt and exceptional price increases lay in the political use of inflation as a core indicator of policy strictness in the phase of Euro convergence.

## 2. METRICS AS INSTITUTIONS

As a wide historical and sociological literature has shown, quantitative data, indicators and figures are the result of continuous negotiations and conventions with regard to what should be counted.

The “new accounting history” has offered a critical contextualization of accounting concepts and practices, using a historical approach to demystify the pretended “objectivity” of accounting standards.<sup>1</sup> By including accounting into a wider array of practices, from actuarial techniques to cost-benefit analysis up to laboratory measures, Theodore Porter has then developed a more general argument concerning quantification as a “strategy of impersonality” that emerges whenever there is a need to set apart political conflict and personal negotiation.<sup>2</sup>

In the history of statistics, Alain Desrosières has made clear that the preliminary definition of a set of commensurable objects is a necessary condition for counting and comparing them. These “conventions of equivalence” may be interpreted as the actual foundations of the use of quantification to rationalise the political governance of complex societies.<sup>3</sup> Further studies on the historical evolution of statistical objects in the long period, focusing in particular

---

<sup>1</sup> A.G. HOPWOOD, P. MILLER, *Accounting as Social and Institutional Practice*, Cambridge 1994 (Cambridge University Press); J.J. YOUNG, T. MOUCK, *Objectivity and the Role of History in the Development and Review of Accounting Standards*, in “Accounting, Auditing & Accountability Journal”, 9, 1996, 3, pp. 127-147

<sup>2</sup> T.M. PORTER, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life*, Princeton (Nj.) 1996 (Princeton University Press).

<sup>3</sup> A. DESROSIÈRES, *The Politics of Large Numbers: A History of Statistical Reasoning*, Cambridge (Ma.) 2002 (Harvard University Press) [Paris 1996 (La Découverte)]

on economic statistics, show that the contradiction between the purported neutrality of statistical measures and their relevance for political decisions was at the origin of a wide range of institutional solutions.<sup>4</sup>

Following some recent contributions it may actually be possible to argue that metrics are displaying more and more explicitly their nature of institutions (rules) in the neo-liberal environment.<sup>5</sup> Here, the production of ad-hoc indicators providing a “thin description” makes possible to modify social behaviours by way of benchmark-driven incentives.<sup>6</sup> As a consequence, the endogenous, conventional nature of metrics becomes evident. Yet a deeply rooted “trust in numbers”, as a preliminary condition for metrics to work as institutions, is the result of long historical and non linear processes.<sup>7</sup> The history of quantitative rationalization is complicated by deviations and blind alleys, and may pass through different phases, including the use of numbers for planning, market building, welfare State, and macroeconomic policies.

The emergence of the social study of science (and of quantification) as a legitimate field of enquiry dates back to the same neo-liberal shift, to the late 1970s and 1980s. Yet the reception of this line of research by historians has been usually framed in the opposition between “empirical” (quantitative) and “interpretive” (qualitative) approaches, focusing on the resulting problems of reliability and comparability for long data series, and on the need to deal with quantitative data with the same careful criticism we apply to literary or archaeological sources.<sup>8</sup> In such perspective, the inherent *institutional* nature of such conventions of equivalence has somehow remained

---

<sup>4</sup> T.A. STAPLEFORD, *The Cost of Living in America: A Political History of Economic Statistics*, Cambridge 2009 (Cambridge University Press)

<sup>5</sup> A. DESROSIÈRES, *Prouver et gouverner: Une analyse politique des statistiques publiques*, ed. E. DIDIER, Paris 2014 (La Découverte); R. ROTTENBURG, S.E. MERRY, S.-J. PARK, J. MUGLER, *The World of Indicators: The Making of Governmental Knowledge through Quantification*, Cambridge 2015 (Cambridge University Press).

<sup>6</sup> T.M. PORTER, *Thin Description: Surface and Depth in Science and Science Studies*, in *Clio Meets Science: The Challenge of History*, R.E. KOHLER, K.M. OLESKO eds., in “Osiris”, 27, 2012, pp. 209-226

<sup>7</sup> T.M. PORTER, *Trust in Numbers*, cit.

<sup>8</sup> See an example in *Fonti statistiche per la storia economica dell'Italia unita*, ed. G. FAVERO, in “Quaderni Storici”, 45, 2010, 134.2, pp. 285-584.

confined to the sociological discussion concerning standards in general (and metrics among them).<sup>9</sup>

By drawing the ultimate consequences from the implicit institutional metaphor that underpins much of the research in the history of accounting and statistics, I aim here at going beyond the usual considerations on the conventional nature of the resulting quantitative representations, to discuss the limitations and implications of an institutional approach to the study of quantification.

“What are institutions? The most common definition for institutions is: rules”, rules that structure the behaviour of individuals and groups.<sup>10</sup> Such a definition, provided in a summary chapter on historical institutionalism, perfectly fits with the above mentioned results of historical research on quantification. Yet it emerges also clearly that conventions of equivalence are only the outcome of a continuous institutional process of reassessment, negotiation and conflict.<sup>11</sup>

The most recent debate in historical institutionalism claims in fact for the need to reflect on the nature of quantification processes rather than on their institutional outcomes as metrics and standards.<sup>12</sup> The mechanisms of the *institutional work* that is necessary to build, maintain and change them are complex and non linear.<sup>13</sup> Their intrinsic unpredictability emerge as a crucial feature in a long term perspective, despite of the evident role of individual agents and their strategies in quantification processes, usually involving the contribution of scientists and scholars. Setting the problem of institutional entrepreneurship

---

<sup>9</sup> See *Standards and their Stories: How Quantifying, Classifying, and Formalizing Practices Shape Everyday Life*, M. LAMPLAND, S.L. STAR eds., Ithaca (Ny.) 2009 (Cornell University Press).

<sup>10</sup> S. STEINMO, *Historical Institutionalism, in Approaches and Methodologies in the Social Sciences: A Pluralist Perspective*, D. DELLA PORTA, M. KEATING eds., Cambridge 2008 (Cambridge University Press), pp. 118-138, 123.

<sup>11</sup> P.M. HIRSCH, M.D. LOUNSBURY, *Putting the Organization back into Organization Theory: Action, Change, and the “New” Institutionalism*, in “Journal of Management Inquiry”, 6, 1997, 1, pp. 79-88; R. SUDDABY, *Challenges for Institutional Theory*, in “Journal of Management Inquiry”, 19, 2010, 1, pp. 14-20.

<sup>12</sup> R. SUDDABY, W.M. FOSTER, A.J. MILLS, *Historical Institutionalism, in Organizations in Time: History, Theory, Methods.*, M. BUCHELI, R. D. WADHWANI eds., New York (Ny.) 2014 (Oxford University Press), pp. 3–31.

<sup>13</sup> T.B. LAWRENCE, R. SUDDABY, B. LECA, *Institutional Work: Actors and Agency in Institutional Studies of Organizations*, Cambridge 2009 (Cambridge University Press).



against the framework of the history of science makes even clearer the need for a suspension of present-day assumptions in order to understand the historical process of institutional change.<sup>14</sup> Social scientists risk in fact to become blind toward the complex origins of their methods, using them to interpret their history as a progressive rush to the present.

Yet the problems deriving from a narrow focus on the present outcomes of long historical processes do not concern only quantitative or positivist research. Even the ethnographic studies of quantitative practices inside of organizations display some limitations resulting from the lack of a proper historical perspective. In the following paragraph, I will discuss the implications and limitations of ethnostatistical methods.

### 3. ETHNOSTATISTICS AND ITS LIMITATIONS.

In organization studies, a specific focus on the complex dynamics of the construction, use and effects of quantitative measures has been proposed by ethnostatistics. This «clumsy but nonetheless accurate term for denoting the study of the social production and use of statistics» denotes the ambition to provide «qualitative foundations for quantitative research».<sup>15</sup> As Robert Gephart defines it, ethnostatistics «addresses sense-making or interpretive practices», but also «tacit knowledge, and the social activities that constitute doing statistics», with a peculiar attention «for the actual behavior, and the informal subcultural, folk, or ethnic knowledge and activities of statistics producers and users».<sup>16</sup>

In order to understand the role of statistics and quantitative research in organizations and society, Gephart identifies the need to distinguish three levels of inquiry. The first level focuses on both «the informal work practices, meanings and knowledge used along with formal statistical knowledge» to produce quantitative data. At the

---

<sup>14</sup> C. HARDY, S. MAGUIRE, *Institutional Entrepreneurship*, in *The SAGE Handbook of Organizational Institutionalism*, R. GREENWOOD, C. OLIVER, K. SAHLIN, R. SUDDABY eds., New York (Ny.) 2008 (Sage Publications), pp. 198-217.

<sup>15</sup> J. VAN MAANEN, P.K. MANNING, M.L. MILLER, "Editors' Introduction", in R.P. GEPHART JR., *Ethnostatistics: Qualitative Foundations for Quantitative Research*, London 1988 (Sage Publications), pp. 5-6.

<sup>16</sup> R.P. GEPHART jr., *Ethnostatistics*, cit., p. 10.

second level, the ethnostatistician «uses computer based statistical simulations to test the usefulness, validity and implications of technical and practical assumptions necessary to produce and interpret statistics». This way he tests also the effects of these assumptions on statistical outcomes. Finally, on a the third level ethnostatistics «treats quantitative documents that report statistics as literary documents», and views the interpretation and use of statistics and measurement as artful, rhetorical processes oriented to persuasion» rather than to report facts.<sup>17</sup>

It is evident that ethnostatistics hits the mark of most of the points dealt with in the history of quantification. The connection becomes more interesting when it comes to the limitations of ethnostatistical research. History shares in fact with the ethnographic method a descriptive and explanatory approach, which puts prescriptive and transformative aims out of its reach. Yet the two disciplines diverge when political implications and intentional manipulations are concerned. The ethnostatistician accepts that the latter «do occur» and that the former are relevant, but assumes that they «are not fundamental to quantitative social and management research».<sup>18</sup> On the other hand, historical studies on the development of quantitative inquiry provide useful insights on the relationship between intentional and unintentional selection and representation biases, showing that political questions were crucial to the development of new methods, and that very sophisticated manipulations can be embodied in technicalities.<sup>19</sup>

More generally, the historical method, with its focus on source criticism and contextual reconstruction, can usefully join ethnography, computer simulations, and rhetorical analysis, complementing these approaches especially where the interpretations and re-contextualisation in the medium and long term by subsequent users of statistics are concerned. An historical ethnostatistics can restore the possibility to understand the long-period dynamics of quantification and to identify specific historical trajectories, particularly important in

---

<sup>17</sup> R.P. GEPHART jr., *An Invitation to Ethnostatistics*, in “Revue Sciences de Gestion – Management Sciences – Ciencias de Gestion”, 70, 2009, pp. 85-102, 89, 91, 95.

<sup>18</sup> R.P. GEPHART jr., *An Invitation*, cit., p. 100.

<sup>19</sup> A. DESROSIÈRES, *The Politics of Large Numbers*, cit.; E.J. YEO, *Social Surveys in the 18<sup>th</sup> and 19<sup>th</sup> Centuries*, in *The Cambridge History of Science, 7, The Modern Social Sciences*, T.M. PORTER, D. ROSS eds., Cambridge 2003 (Cambridge University Press), pp. 83-99; T.A. STAPLEFORD, *The Cost of Living in America*, cit.

ethnographic inquiries where the transmission and validation of knowledge is involved.<sup>20</sup> This way, the ethnostatistical attempt to provide qualitative foundations to quantitative research may also become more appealing to management and organisation scholars who see further limitations in a purely ethnographic approach.

#### 4. QUANTIFICATION AT WORK: THREE CASES IN ITALY

I show here some applications of the method outlined above to the historical study of the construction, diffusion and interpretation of metrics inside and outside of organisations. I use as examples case studies I published in recent years or I am still working on. In all of these cases, such an approach shows its utility in highlighting the eventual faults of general institutional interpretations of quantification processes, so reducing their explanatory scope back into their specific historical and social context, and providing useful insights into mechanisms otherwise invisible to the researcher or into the existence of forgotten historical possibility windows.

The first case deals with a conscious and successful attempt of an inquired subject to modify the results of a statistical survey and their interpretation.<sup>21</sup> Obviously, this was possible as in the statistical “monographs” on manufacturing realised in 19<sup>th</sup>-century Italy there were not so many inquired informants and they enjoyed some sort of oligopolistic control of the information supply. On the other hand, the approach to the problem of representativeness that was distinctive of statistics in the 19<sup>th</sup> century focused on typical cases, identified as such by some average characteristics. “Typical” entrepreneurs may then play the role of privileged informants, exerting extensive influence on data elaboration and interpretation, and even having a say on the inclusion and exclusion of colleagues and competitors in the survey. This implied also a “deep regulatory capture”, insofar as industrial statistics were used to devise or justify policy decisions, and some entrepreneurs were

---

<sup>20</sup> F. BARTH, *An Anthropology of Knowledge*, in “Current Anthropology”, 43, 2002, 1, pp. 1-18.

<sup>21</sup> G. FAVERO, *Business Attitudes toward Statistical Investigation in Late 19<sup>th</sup> Century Italy: A Wool Industrialist from Reticence to Influence*, in “Enterprise and Society”, 12, 2011, 2, pp. 265-316.

making reference in the parliamentary discussions and in their interventions in the press to the same data they contributed to produce.<sup>22</sup>

The study of the archival correspondence between Alessandro Rossi and Luigi Bodio makes possible to reconstruct in detail the process of sense making that underpinned the deep capture of the observer, in the first place, and then of the regulator.<sup>23</sup> Rossi was the main Italian wool industrialist of his time and from 1870 he became the actual leader of the protectionist movement in Italy; Bodio was the director of Italian official statistics from 1871 to 1898. Their relationship changed a lot in time, as from a privileged source for industrial statistics, Rossi became, in the 1890s, a sort of unofficial expert and consultant, especially for the editing of the first statistical survey on the Italian wool industry, finally published in 1895.<sup>24</sup> This allowed Rossi to correct Bodio's comments, to express judgements on the reliability of other sources, and sometimes to have the final word on the decision as to whether or not to publish collected data. A cross-comparison between the 1895 official publication and Rossi's comments on its proofs allows then a philological assessment of the influence the industrialist was able to exert on the statistician.

The source offers a wonderful opportunity for an "ethnographic" assessment of the ability of a privileged informant to permeate with his opinions the official data that were the main reference in the political

---

<sup>22</sup> J.-J. LAFFONT, J. TIROLE, *The Politics of Government Decision Making: A Theory of Regulatory Capture*, in "Quarterly Journal of Economics", 106, 1991, 4, pp. 1089-1127; J. HANSON, D. YOSIFON, *The Situation: An Introduction to the Situational Character, Critical Realism, Power Economics, and Deep Capture*, in "University of Pennsylvania Law Review", 152, 2003, 1, pp. 129-346.

<sup>23</sup> The correspondence is mainly drawn from Rossi's personal archive at the Schio Civic Library, including both Bodio's original letters and Rossi's letter-books. Some letters sent from Rossi to Bodio are also available in Bodio's papers at the Brera National Library in Milan, but they rarely deal with issues concerning Bodio's official role as the chief of the statistical bureau. The whole available correspondence between Rossi and Bodio was published in G. FAVERO, *Lo statistico e l'industriale: Carteggio tra Luigi Bodio e Alessandro Rossi (1869-1897)*, Rome 1999 (Istat, "Annali di Statistica", X, 19, 1999). On Alessandro Rossi (1819-1898) see *Schio e Alessandro Rossi: Imprenditorialità, politica, cultura e paesaggi sociali del secondo Ottocento*, ed. G.L. FONTANA, I-II, Rome 1985 (Edizioni di Storia e Letteratura). On Luigi Bodio (1840-1920) see M. SORESINA, *Conoscere per amministrare: Luigi Bodio. Statistica, economia e pubblica amministrazione*, Milan 2001 (Franco Angeli).

<sup>24</sup> *Industria della lana*, Rome 1895 (Bertero) ("Annali di Statistica", IV, 84, 1895).

debate. Yet the influence of Rossi went beyond lobbying for protectionism, as his advice affected the same definition of “industry”. His observations on the opportunity to drop from the account the references to the very small businesses relying on domestic systems and traditional production were incorporated in the representation official statistics gave of Italian Industrial development in the last decades of the 19<sup>th</sup> Century. They even had a longer influence on the approach to the 1911 first industrial census in Italy, because of the role Bodio continued to play in official statistics even after his resignation from the office in 1898 until his death in 1920.

It may hence be argued that statistics in Italy added its influence to that exerted by classical economics in promoting a theory of development that focused on specialisation and mechanisation as the main forces leading to mass-production industrialisation.<sup>25</sup> Statistical data providing a portrait of Italian industry undervalued for a long time the importance of small production and contributed to justify contemporary political interventions favouring the interests of big business against small producers and traditional manufacturing. Together with the lack of exhaustive surveys of industry before 1911, the omission of small businesses and craft production in the official statistical series on industry opened later the way to many attempts for a quantitative reconstruction of manufacturing activity, and contributed to a lasting historical debate.<sup>26</sup>

---

<sup>25</sup> C. SABEL, J. ZEITLIN, *Historical Alternatives to Mass Production: Politics, Markets and Technology in Nineteenth-century Industrialization*, in “Past and Present”, 108, 1985, pp. 133-176.

<sup>26</sup> On the historical debate on Italian industrial development and the role of big and small businesses, see A. GERSCHENKRON, *The Industrial Development of Italy: A Debate with Rosario Romeo*, in *Continuity in History and Other Essays*, ed. A. GERSCHENKRON, Cambridge (Ma.) 1968 (Harvard University Press), pp. 98-127; L. CAFAGNA, *The Industrial Revolution in Italy, 1830-1914*, in *The Fontana Economic History of Europe*, ed. C.M. CIPOLLA, Glasgow 1972 (Collins), 4, pp. 279-328; G. FEDERICO, G. TONIOLO, *Italy*, in *Patterns of European Industrialization: The Nineteenth Century*, R. SYLLA, G. TONIOLO eds., London 1991 (Routledge), pp. 197-217; *The Economic Development of Italy since 1870*, ed. G. FEDERICO, Aldershot 1994 (Edward Elgar). An estimated historical series of industrial production was firstly proposed by G. TAGLIACARNE, *Lo sviluppo dell'industria italiana e il commercio estero*, in *Rapporto della commissione economica presentato all'Assemblea costituente*, Roma 1947 (Ministero per la Costituente), parte 2, *Industria*, vol. 1, *Relazione*, tomo 2, pp. 33-92; with reference to this a new index was then proposed by A. GERSCHENKRON, *Economic Backwardness in Historical Perspective*,

The second case that I propose as an example of historical ethnostatistical reconstruction deals with the construction of indicators that were used to frame political decisions. The focus is on the fascist period, and on the data a modern dictatorship produced to govern processes it withheld from conflictual negotiation, as wage assessment in this case.<sup>27</sup> The case of the statistical index of Italian industrial workers' wages in the fascist period was the object of a discussion among historians in the 1960s, and was then dealt with as a technical matter by economic historians. Such an approach neglected in fact some aspects directly concerning the same construction of this statistical index. In fact, in statistics the devil is often in the details, and entering into the technicalities highlights the actual mechanism of manipulation or arbitrary choices. In this cases, simulations, or the construction of new series corrected where possible for some of the identified biases, can provide demonstration of the effects of such choices.

Under fascism, after the abolition of union organization freedom and the institution of a corporatist system in 1926, the level of wages was the result of agreements between the employers' representatives and the fascist unions, joint together in different "corporations" for each branch of industry. This way, it was possible to adjust salaries in different industries to their productivity and to the presumed needs of national production, by means of legally binding measures. Wage cuts were ordered in 1927, in 1930 and again in 1934, following on the reevaluation of the Italian lira to 90 liras per pound sterling and its deflationary effects, continuing during the early 1930s and the world

---

Cambridge (Ma.) 1962 (Harvard University Press), pp. 347-406; this was followed by ISTAT, *Indagine statistica sullo sviluppo del reddito nazionale dell'Italia dal 1861 al 1956*, Roma 1957 (Istat) ("Annali di statistica", VIII, 9, 1957); O. VITALI, *La stima del valore aggiunto a prezzi costanti per rami di attività*, in *Lo sviluppo economico in Italia*, III, ed. G. FUÀ, Milano 1969 (Franco Angeli), pp. 463-477; A. CARRERAS, *La produccìon industrial en el muy largo plazo: Una comparaciòn entre España e Italia de 1861 a 1980*, in *El desarrollo econòmico en la Europa del Sur: España e Italia en perspectiva històrica*, L. PRADOS DE LA ESCOSURA, V. ZAMAGNI eds., Madrid 1992 (Alianza), pp. 173-210; S. FENOALTEA, *Notes on the Rate of Industrial Growth in Italy*, in "The Journal of Economic History", 63, 2003, pp. 695-735. For a detailed bibliography, see S. FENOALTEA, *The Reinterpretation of Italian Economic History: From Unification to the Great War*, Cambridge 2010 (Cambridge University Press).

<sup>27</sup> G. FAVERO, *La statistica dei salari industriali in periodo fascista*, in *Fonti statistiche per la storia economica dell'Italia unita*, ed. G. FAVERO, "Quaderni Storici", 45, 2010, 134.2, pp. 319-357.

crisis. Later on, from 1936 up to the Second World War, wages were increased responding to the rise in consumer prices.

The government was aware that in order to assess the actual trend of wages and its response to central decisions on the pay rate, further inquiries were needed. Overtime, payments by piece work, variations in the number of working hours and in the conditions of labour market implied considerable shifts from the officially agreed salary that often compensated.

A realistic measure of the trend of industrial wages was then the object of different statistical surveys. Only two among the resulting series last long enough to allow an historical evaluation of wage conditions under fascism. They are the result of the elaboration of data gathered, with different methods, by the National Fund for Industrial Accidents (Inail) and by the Manufacturers' Association (Confindustria).

Since the later 19<sup>th</sup> century, Inail published its own statistics of industrial wages, drawn from yearly data provided by workers injured at work. But not all workers were insured, and not all were insured with Inail; what's more, the collected data overweighted the class of workers most exposed to accidents. This criticism was made more explicit in occasion of a scholarly debate opposing in the 1920s Giorgio Mortara and Corrado Gini, who published a detailed methodological discussion of the faults of Inail data in the *Confindustria* journal.<sup>28</sup> This discussion became more heated in coincidence with the foundation of the Central Statistics Office (Istat) in 1926 and with the re-evaluation of the Italian lira decided in the same year by Mussolini. On the one hand, Gini himself was appointed as a member of the board of the Inail, in order to exert an official control on its statistics. On the other hand, in order to obtain the support of Confindustria to its deflationary policy, the government needed to assure the industrialists that it would be able to apply (by means of arrangements with the fascist unions) wage cuts that would provide the needed decrease of nominal labour cost. The data provided by Confindustria itself seemed then to fit better with the "superior needs

---

<sup>28</sup> G. MORTARA, *Sulle variazioni dei salari nell'industria italiana dal 1913 al 1922*, in "Rassegna della Previdenza sociale", 10, 1923, 4, pp. 1-32; C. GINI, *Sul livello dei salari reali nel dopoguerra in Italia in confronto al loro livello prebellico*, in "Rivista di politica economica", 13, 1923, pp. 359-384.

of production”, being focused on hourly wages and compared with a measure of the cost of living taken from factory outlets.<sup>29</sup>

Following these considerations, the Istat started using data directly collected from the accounting books of Confindustria associated industrial businesses, which the industrialists’ association made available. In 1928 Confindustria started processing and publishing on its own these same data, and from 1930 on the Istat simply reproduced in the “*Bollettino dei prezzi*” and in the “*Bollettino mensile di statistica*” the hourly earnings of industrial workers as computed by Confindustria, presenting them as the official index of wages.

This new wage series presented the results obtained by dividing the total amount of wages the Confindustria member businesses paid each month by the total number of the month worked hours. But the number and quality of businesses taken into account was rapidly changing, since they could confirm or not their membership, or go bankrupt, and new businesses could become members of the Association. The problem concerned the elimination of the effect exerted on the observed variations in average wages by the parallel changes in the “sample” of member businesses. In the following years this “sample” was in fact gradually reduced to medium and large businesses, normally paying higher wages.

The solution was found in the *proportional concatenation method*: each month, all member businesses were asked to provide data on the total amount of paid wages and on worked hours in the *two* previous months. This way, it was possible to compare the figures obtained for the same month from two different samples, so assessing the effect of changes in membership on the average wage. It was also possible to isolate the changes affecting each month the same sample, and to build up a concatenated index. This was constructed by applying to the average of the starting period (fixed in the year going from July 1928 to June 1929) the changes observed in homogeneous samples during the following months.

This index provided a reliable measure of monthly variations in hourly wages, but as Confindustria itself admitted in its statistical bulletin, it was not providing a realistic assessment of the absolute level of wages. This became a problem at the moment when, after the

---

<sup>29</sup> C. GINI, *Appendix G*, in C. MCGUIRE, *Italy's International Economic Position*, New York 1926 (Macmillan).



Ethiopian War (1935-36), prices started rising so much to make necessary to align wages to inflation. In the view of fascist government and industrialists, wage increases should be limited to keep real incomes over a minimum level of subsistence, but in order to assess this level it was precisely needed a measure of workers' gains that the existing wage index was not providing.

This explains why only in March 1938, when wages were rising from some years, the Istat started an overall revision of its calculation method. Since his resignation in 1932, Gini was not anymore the president of the Istat. The one who was put in charge to handle the problem was Benedetto Barberi, at the time the head of the Research and cartography office in the Istat, and later on general director of the same Istat from 1945 to 1963. In a short technical note, Barberi justified the need for a revision with the growing gap between the index started in 1928/1929 and the actual level of observed average wages. Yet he hastily ascribed this gap to the major difference between the results of the two samples observed on the starting month, March 1928.<sup>30</sup>

Barberi then introduced a new method to represent not only the changes of wages in time, but also their absolute level, combining the concatenation with the simple equalization of the results of double observations. This was applied when the difference was lower than a fixed threshold. In practice, when the gap between the two results for the same month was negligible, their average was used; in case of significant differences, the concatenation method was applied. The new starting point of the index was the average wage level of the year 1929. Barberi's revised index ran very close to the series of absolute aggregate data published by Confindustria, showing a higher wage level than the one obtained from the simple application of the concatenation method. This way, it justified the delay in the upward adjustment of wages to inflation by the government, despite of the claims of fascist unions starting in 1935.

Was the justification Barberi put forward for his revision reliable? Gaetano Salvemini was the first to complain from the exile about the arbitrariness of Barberi's revision, accusing in fact the Istat of manipulating data in order to play down the extent of the effect of the

---

<sup>30</sup> B. BARBERI, *Nuova serie dei guadagni orari degli operai dell'industria e corrispondenti numeri indici*, in "Bollettino dei prezzi", 1938, 3, *Appendice II*, p. 3\*\* (supplement to the "Gazzetta Ufficiale", 61, 1938, March 15).

wage cuts of the early 1930s. References to Salvemini recurred in the after-war debate on fascist-Italy level of wages. Paolo Sylos Labini stressed in his turn the weakness of Barberi's argument and the limited representativeness of the Confindustria data if compared with the Inail series.<sup>31</sup> On the other hand, Vera Zamagni remarked the technical correctness of the 1938 revision, and used the revised index to reconstruct the level of wages during the 1930s.<sup>32</sup> At a closer look, however, Barberi's methodological arguments seem specious: he finally provided a new index that under the appearance of complex calculations was simply resorting to the monthly average of the wage data collected by Confindustria.

An assessment of the Confindustria index is possible thanks to the availability of data on the *total* number of businesses and workers for each industry (and sub-industry). These data make possible to assign a realistic weight to each industry wage index, independently from their (different) representation inside the Confindustria sample, simulating a new index. I have built then an index that corrects for the industry bias, which together with size was one of the factors that compromised the representativeness of the Confindustria index. My calculations show that up to 1934 the weighted index follows the average level of wages in the Confindustria series. However, from the end of 1934 the concatenated index calculated on the weighted data rapidly diverges from the series of raw data, reaching the concatenated index based on raw data on a lower level.

How to interpret this result? Evidently, in 1935 new distorting elements emerge, probably related to the size composition of the sample, which in the late 1930s included more big businesses and less small enterprises than before. In practice, I argue that the industry weighted index I constructed provides evidence that wages grew higher in the businesses associated to Confindustria than in the whole Italian manufacturing sector. The gap between the concatenated index and the absolute level of wages that Barberi lamented was the result of such an actual divergence and of the declining representativeness of the sample. The abandonment of concatenation in 1938 and the shift to a proxy of

---

<sup>31</sup> P. SYLOS LABINI, *La politica economica del fascismo e la crisi del '29*, in "Nord e Sud", 1965, 70, pp. 59-66.

<sup>32</sup> V. ZAMAGNI, *La dinamica dei salari nel settore industriale*, in *L'economia italiana nel periodo fascista*, P. CIOCCA, G. TONIOLO eds., Bologna 1976 (Il Mulino), pp. 329-378.

an average of Confindustria absolute wage levels had political consequences, allowing the government to discard as groundless the worries circulating about the fall of wages under the subsistence level as a consequence of inflation.

Finally, I summarize briefly here the subject of a last case study I am working on.<sup>33</sup> This focuses on a controversy on inflation statistics and their ability to represent the variations in the level of prices that are relevant for the public. A review of the scientific debate on “perceived” inflation shows the effort of experts and scholars to explain the public’s perception of a mismeasurement as the result of technical and statistical illiteracy. Such an attitude results impervious to any attempt to question the contingent and political motivations of the technical choices that have shaped the metrics used to assess the official inflation index.

On January 2002, the cash changeover from national currencies to the Euro successfully concluded the process toward European monetary unification started in 1992. Yet a strong increase in consumer prices was broadly perceived and interpreted as a consequence of the changeover itself, despite of the modest growth of official inflation rates. Press debates denounced the growing gap between the level of inflation as measured by national statistical institutes and the common sense perception of consumers. Opinion polls provide a clear assessment of this divergence, and of the consequent declining confidence in official statistics. The perception of such a gap was particularly strong and persistent in Italy.

The scientific economic debate on the issue focused on the smoothing effect of the same calculation algorithm of an average price index, pushing the Istat to publish specific price sub-indexes. On the other hand, economic studies highlighted a bias in perception and a correlation between a precise memory of prices and economic literacy.<sup>34</sup>

However, putting such a case in the perspective of the long history of the measurement of cost of living may highlight some issues that this

---

<sup>33</sup> G. FAVERO, *The Gap between Perceived and Measured Inflation in Italy Following the Euro Changeover: An Historical Perspective*, to be presented at the meeting of the Social Science History Association in Chicago (Il.) on 17-20 November 2016.

<sup>34</sup> For a review of the debate see P. DEL GIOVANE, R. SABBATINI, *Perceived and Measured Inflation after the Launch of the Euro: Explaining the Gap in Italy*, in *The Euro, Inflation and Consumer’s Perceptions*, Berlin / Heidelberg 2008 (Springer), pp. 13-49.

literature did not consider.<sup>35</sup> In particular, the inherent multipurpose nature of inflation measures provides a key to interpret the gap between perceived and officially measured inflation. The metrics of the latter were in fact revised during the 1990s, following the need for statistical harmonization and the political relevance of inflation levels as a requirement to participate in the monetary union. In the process, the introduction of specific assumptions about consumption substitution and utility measures heavily reduced the sensitiveness of the index to abrupt and exceptional increases.

Studying the rhetoric arguments put forward in defence of the technical choices underpinning the consistency of statistical indicators can be very useful for the historian, in order to assess the effects of quantification processes on political mechanisms. In the last case, as in the previous ones, scholars and experts seem to lose sight of the political, i.e. negotiated and conflictual, origins of the technical choices that establish the commensurability of their objects of inquiry. In so doing, they end up blaming the ignorance of the public and populist politicians for their uneducated attempts to open the black boxes they were carefully building around their numbers.

Put into a longer perspective, such efforts seem naïve, and highlight the importance for social scientists to be aware of the contingent nature of their assumptions, of the complexity of social and political processes, and of the actual relevance of historical change.

---

<sup>35</sup> For a study on the century-long history of the US consumer price index and the heated political controversies on its construction, see T. STAPLEFORD, *The Cost of Living in America*, cit.