The Statistics of Industrial Wages in Fascist Italy

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Istat

Numero ore di lavoro complessivamente eseguite da tutte le maestranze			Ammontare salari pagati			Guadagno medio orario			Numero ore di lavoro eseguite in media da ogni operaio		
Giugno 1934	Luglio 1934	Agosto 1934	Giugno 1934	Luglio 1934	Agosto 1934	Giugno 1934	Luglio 1934	Agosto 1934	Giugno 1934	Luglio 1934	Agosto 1934
1.269.824 *100*	1.264.457 *99.57*	2.068.398 *162.88*	1.849.398 *100*	1.693.434 *91.56*	2.643.812 *142.95*	1.45 *100*	1.34 *92.41*	1.28 *88.27*	196 *100*	177 *90.31*	205 *104.59*
622.757 *100*	665.275 *106.82*	660.723 *106.09*	1.371.562 *100*	1.434.084 *104.56*	1.424.861 *103.88*	2.20 *100*	2.15 *97.73*	2.15 *97.73*	191 *100*	195 *102.09*	197 *103.14*
903.008 *100*	897.931 *99.43*	811.810 *89.90*	1.312.841 *100*	1.271.441 *96.85*	1.252.578 *95.41*	1.45 *100*	1.41 *97.24*	1.54 *106.20*	177 *100*	176 *99.43*	165 *93.22*
763 565 *100*	787.122 *103.08*	763.459 *99.98*	1.387.586 *100*	1.423.143 *102.56*	1.399.680 *100.87*	1.82 *100*	1.80 *98.90*	1.83 *100.55*	200 *100*	206 *103.00*	205 *102.50*
2.875. 505 *100*	2.947.359 *102.49*	2.945.002 *102.41*	5.048.852 *100*	5.132 073 *101.65*	5.238.087 *103.75*	1.75 *100*	1.74 *99.43*	1.78 *101.71*	186 *100*	186 *100 —*	187 *100.54*
536.000 *100*	507.963 *94.76*	501.562 *93.57*	1.000.980 *100*	958.144 *95.72*	972.503 *97.15*	1.87 *100*	1.89 *107.07*	1.94 *103.74*	100 *100*	180 *94.74*	182 *95.79*
1.272.774 *100*	1.292.956 *101.58*	5.153.617 *404.91*	3.023.449 *100*	3.152.892 *104.28*	11.890.670 *393.28*	2.37 *100*	2.44 *102.95*	2.31 *97.47*	204 *100*	192 *94.12*	205 *100.49*
169.555 *100*	289.008 *170.45*	289.975 *171.02*	264.926 *100*	397.648 *150.10*	416.729 *157.30*	1.56 *100*	1.38 *88.46*	1.44 *92.31*	170 *100*	198 *116.47*	199 *117.06*

Wage statistics in Liberal Italy

- Since 1876 monographic surveys on single plants and industries
  - Publication belated to dirstat 1886
    - Fear of enticing the social question
    - Difficulties in collecting reliable information from employers
- Montemartini (1904) project for a larger survey
  - Data provided by
    - Industrialists' associations
    - Trade unions (mutual control on data)
  - Partial series on textile industries and metalworks
    - Published in dirstat 1919

Inter-war wage statistics

Inail series

–Insurance against labour accidents

•Started in 1899, new series **from 1913**

•Data on workers injured at work

–Overweighting more dangerous industries

–Not all workers insured with Inail

Istat/Confindustria series

•Based on Confindustria-members businesses

•**From 1928** data elaborated by Confindustria

- Monthly series of hourly wages in industry
- W (tot. wages paid) / H (tot. hours worked)

•From 1930 Istat published a concatenated index of Confindustria monthly data

•**1938 revision**: new series (non-concatenated)

The historical debate

- Salvemini (1939) stressed the arbitrariness of 1938 revision as a proof of Istat manipulation
- Sylos Labini (1965): scarce representativeness of Istat-Confindustria series
  - Preference for Inail series
- Zamagni (1976, 1994): correctness of Confindustria/Istat series and of 1938 revision
  - Use of Confindustria series
- General lack of consideration of the connection between statistical methodology and political use

Beyond political manipulations

- Well-known censorship and arbitrary corrections in 20th-century totalitarian statistics (Tooze 2009, Blum 1998, Ipsen 1996)

- Need to complicate the approach
- Connecting political aims, technical construction, final use of statistics:
- Political aims and administrative use can explain methodological choices *inside of* a scientific range of possibilities
- Detect how political judgements could be incorporated into technical calculations

Industrial wages under Fascism

Fascist Corporatism

- Legal fixing of wages via political imposition

Formally an agreement between Fascist unions and business associations (Corporations), allowing differentiation by industry and qualification

  - 1927-34 **wage cuts** to adjust to *deflation*
  - 1936 on: **wage increases** to adjust to *inflation*

- Strong deviations from the official wage because of overtime, changing qualifications, piece rates
- Corporatist policy needed a **measure** of the **actual** level of wages in order to assess its effectiveness

Discrediting the Inail Series: Confindustria

Inquiring commission on industry (October 1922)

- Mortara (1922): elaboration of **Inail** series on wages
  - Inail data used for wage series in *Prospettive economiche*, 1922-28
- Attacks from Confindustria, criticizing an excess decrease in the 1920s
- Gini (1923) criticism for selection biased by the frequency of accidents

1926 re-evaluation of the Italian lira (quota 90): *deflation*

- Government need to assess nominal labour cost (for wage cuts)
- Need of data focused on *short-term variation of hourly wages* to be compared with the cost of living measured on factory outlets

1926 Gini president of the ISTAT

- Gini (1926): stronger criticism of the Inail series in line with Confindustria
  - Inail data overweighted metal workers (higher starting point)
  - Gradual inclusion of lower-wage workers (underestimating increase)
- Gini (1929) (ILO): preference for **Confindustria** data justified with the need for a measure of the *short-term variation of hourly wages*

Confindustria: Coping with a changing sample

- Changing business membership and respondants to the **Confindustria survey**
  - Problem of **comparability in time** solved with **concatenation** (Istat)
  - Concatenation: Marshall (1887), US price index since Mitchell (1915)
- Each business was asked to provide data for 2 months: the present and the previous
  - Feb data (present) collected in Feb compared with Feb data (previous) collected on the March sample
  - **Concatenation** applied to the initial figure only the variations for homogeneous samples
- X1 = X0 * (Y1 / Y0) ; X2 = X1 * (Z1 / Z0) ; ...
- Base figure: Jul 28 – June 29 average

The 1938 revision of the Istat wage index

Growing gap between
•**Rough data** (higher level)
•**Concatenated index** (lower level)
Plausible reason: increasing size (and wage level) of average Confindustria member businesses

Barberi (1938) - Istat Research Office:

Justifies the **substitution** of **concatenation** with the **average** of monthly double data to assess not only the *short-term **variation** of **hourly** wages*, but also the ***absolute level** of **monthly** wages* using worked hours

Specious technical arguments:
•Bad basic term for the index (but not proposing another)
•Not making reference to Mitchell (1921) criticism of long concatenations assuming the stability of the universe with a changing sample

The representativeness of Confindustria data for the general level of wages was dubious (Arcari 1935)

Plausible reasons for the 1938 revision

Inflation was back from 1935

Ethiopian war, sanctions, autarky

Wage increases decided in July 1936 and April 1937 were lower than inflation

Polemics by Fascist unions

Need to assess the **wage level** (**not** variations) to be compared with a "subsistence" minimum

Barberi (1938, 1939) studies on food consumption and income

Tricks or threats

Odd mistakes in the published istat concatenated index starting from july 1936

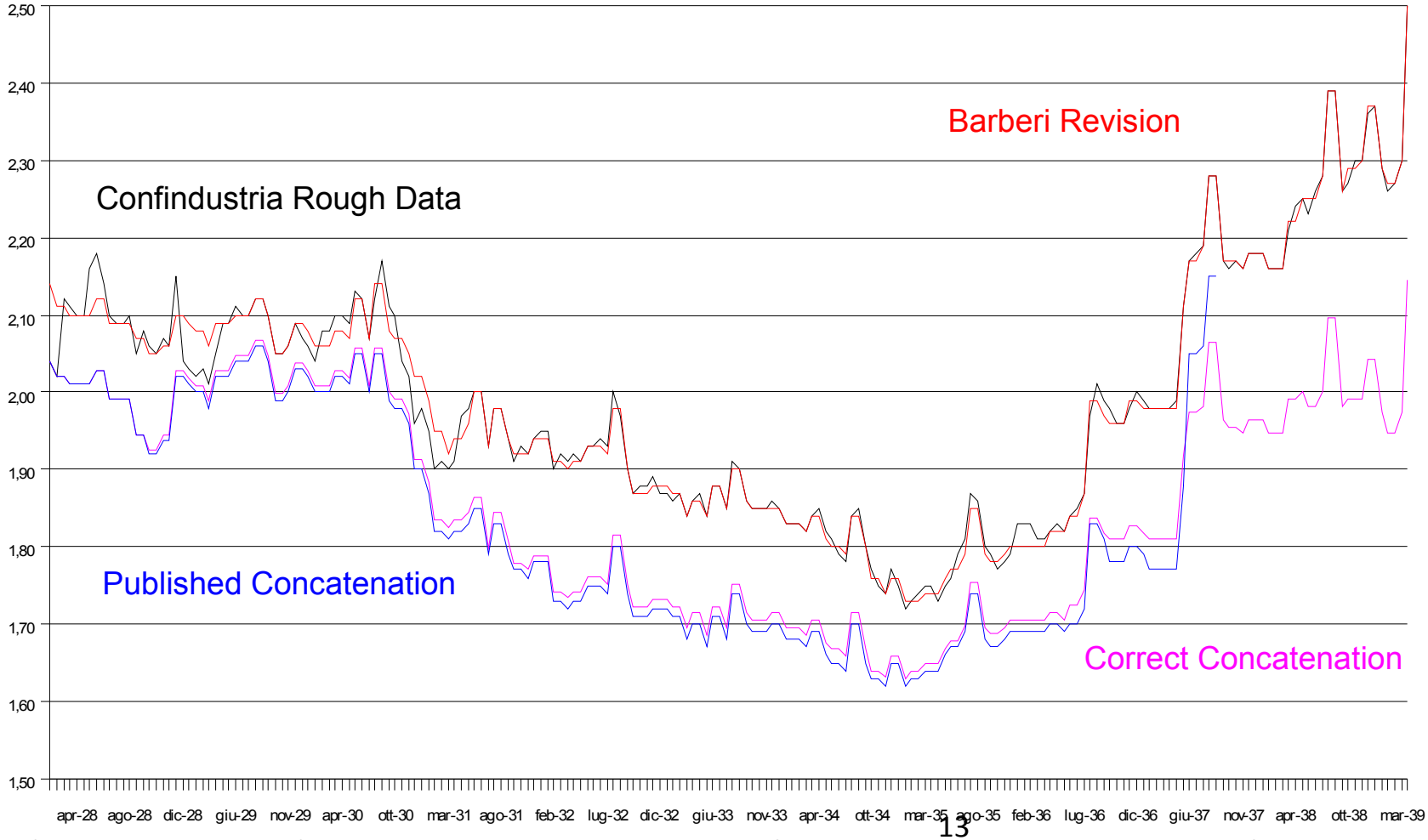
- Wrong calculations emphasizing the trend
- Pushing the index closer to rough data series
- Publication suspended in august 1937

Was it inaccuracy or *manipulation*?

- Barberi was appointed as chief of istat research office in 1936 (totalitarian turn)

Molinari (1929-44 Istat director) accused Barberi (his successor) of being a man of the Fascist party at Istat in the late 1930s in his 1944 *defense during the post-war epuration trial*: **problematic source** (Misiani 2007)

Hourly industrial wages, 1928-1939



A possible assessment

Confindustria monthly data were drawn from the simple average of responding businesses,

- Comparing for **each industry** Confindustria

a) the number of workers in responding businesses and b) the total number of workers in Fascist Corporations

- Makes possible to **weight** the wage index by industry

The *industry-related bias* is supposed to be the main fault in Confindustria's index representativeness

Results do **not** offer a more reliable series, but are useful to assess the **industry-related bias** in the Confindustria series

- Cross-check with concatenation

Summary

Inail series' bias was criticised in the 1920s in order to shift to **confindustria** series of (concatenated) *variations in hourly wages*

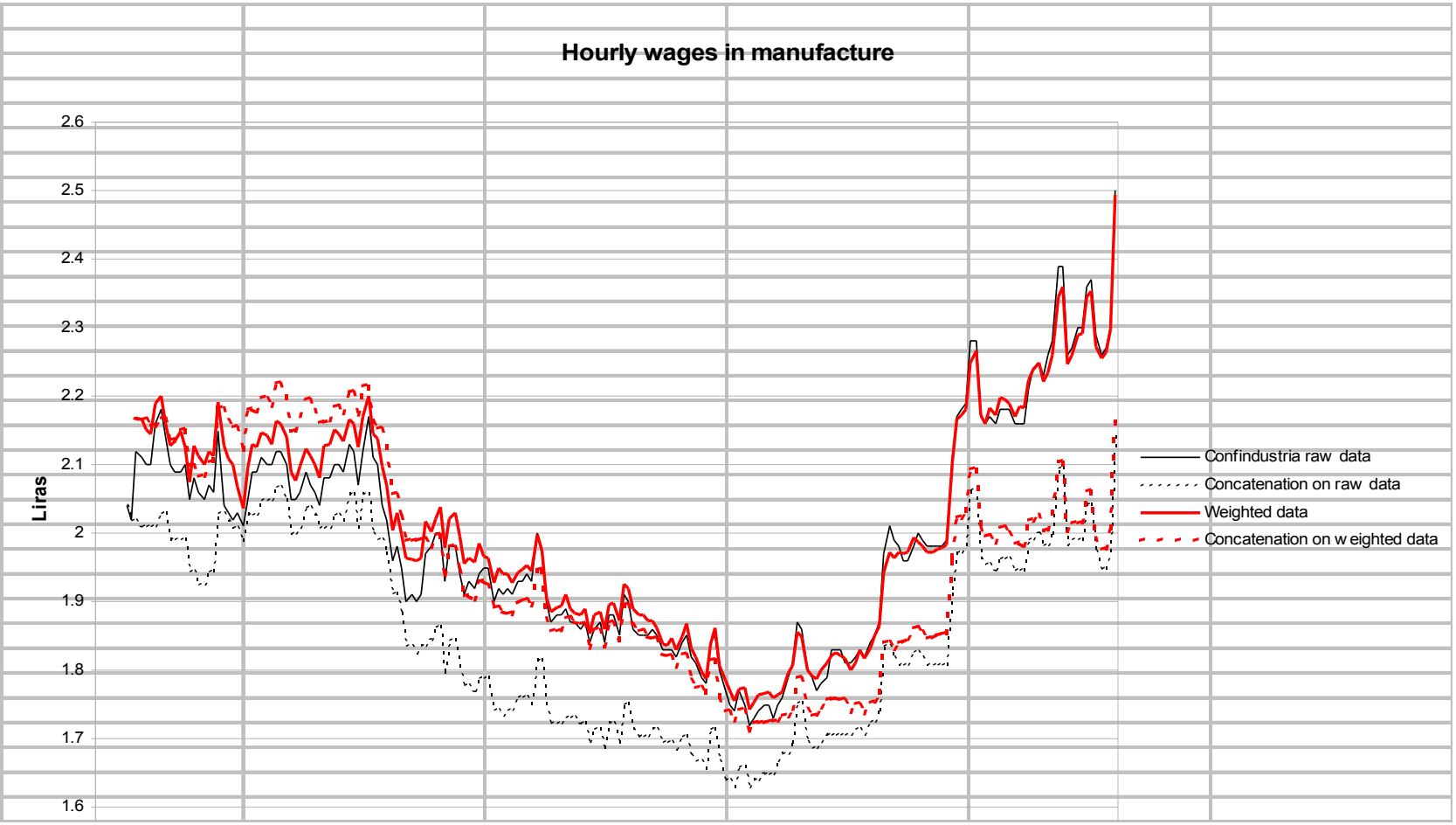
It was useful to assess wage cuts aiming at **labour-cost** adjustment to **deflation**
It was NOT a measure of *wage level*

Post-1935 need for a measure of the *wage level* in order to assess wage increases aiming to (subsistence) **income** adjustment to **inflation**

1938 barberi revision: a loose methodological justification of a revision intended to attain a pretended measure of wage level (**size bias**)

Weighted assessment: **1935-39 lower increase**

Hourly industrial wages, 1928-1939



Results

Other possible bias factors:

Regional;

Dimensional
Confindustria members' **average size** *growth* in **1936** (56 → 63)
Decrease of italian businesses' size (1927/1937-40 census: 7 → 5)

Rough/weighted data:

1928-30: small gap

1930 on: perfect coincidence

Industry-related bias **not** affecting the ***variations*** of wages, **but explaining** the 1930-34 *divergence* between **rough data** and **concatenation**

Weighted/w.Concatenated data

1929-30 small gap

1931-34 perfect coincidence

1935-36 **strong divergence**

1937 on: significant gap (**weighted** concatenated converges on **raw concatenated**)

Provisional conclusion

Reliability of Confindustria series

as a measure of the ***variations*** of hourly wages

(less reliable in late 1930s)

Confindustria over-evaluation of their ***level***

Due to the dimensional composition of Confindustria member businesses

Average size	Census	Confindustria
1927	7	*51
1937	5	62

Confindustria members' **average size** *grows*

Italian business average size *decrases*.

- **Divergence** between the sample and the universe, only partially compensated by concatenation, which assumes a stability of the universe.

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Further research directions

Weighted assessment of *worked-hours series*

- For a check of Barberi's monthly wages

Deeper research in **official archives**

- On Barberi's role (check of Molinari's accusation)

Research in private archives

- (Gini's papers: inventory going on)

Study on C**onfindustria research office**

- For relationship with Istat