The Statistics of Industrial Wages in Fascist Italy

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CONVEGNO SCIENTIFICO
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## The Statistics of Industrial Wages in Fascist Italy

<table>
<thead>
<tr>
<th>Numero ore di lavoro complessivamente eseguite da tutte le maestranze</th>
<th>Ammontare salari pagati</th>
<th>Guadagno medio orario</th>
<th>Numero ore di lavoro eseguite in media da ogni operai</th>
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<tr>
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<td>Luglio 1934</td>
<td>Agosto 1934</td>
<td>Giugno 1934</td>
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<td>169.555</td>
<td>289.008</td>
<td>289.875</td>
<td>264.926</td>
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</tbody>
</table>
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

Istat/Confindustria series
- Based on Confindustria-members businesses
- From 1928 data elaborated by Confindustria
  - Monthly series of hourly wages in industry
  - \( \frac{W}{H} \) (tot. wages paid) / H (tot. hours worked)
  - From 1930 Istat published a concatenated index of Confindustria monthly data
  - 1938 revision: new series (non-concatenated)

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
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

  • Use of Confindustria series

• General lack of consideration of the connection between statistical methodology and political use
Beyond political manipulations


- 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
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

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

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 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 respondents 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
  - \[ X_1 = X_0 \times \frac{Y_1}{Y_0} ; X_2 = X_1 \times \frac{Z_1}{Z_0} ; \ldots \]
- 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

<table>
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<tr>
<th>Months</th>
<th>Confindustria raw data</th>
<th>Concatenation on raw data</th>
<th>Weighted data</th>
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Results

\textbf{Rough/weighted} data:
- 1928-30: small gap
- 1930 on: perfect coincidence

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

\textbf{Weighted/w.Concatenated} data
- 1929-30 small gap
- 1931-34 perfect coincidence
- 1935-36 \textbf{strong divergence}
- 1937 on: significant gap (\textit{weighted} concatenated converges on \textit{raw} concatenated)

\textbf{Other possible bias factors:}
- \textbf{Regional;}

\textbf{Dimensional}
- Confindustria members’ \textit{average size growth} in \textbf{1936} (56 → 63)
- \textit{Decrease} of Italian businesses’ size (1927/1937-40 census: 7 → 5)
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

<table>
<thead>
<tr>
<th>Year</th>
<th>Census</th>
<th>Confindustria</th>
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<tr>
<td>1927</td>
<td>7</td>
<td><em>51</em></td>
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<tr>
<td>1937</td>
<td>5</td>
<td>62</td>
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Confindustria members’ *average size grows*

Italian business average size *decreases*.

**Divergence** between the sample and the universe, only partially compensated by concatenation, which assumes a stability of the universe.
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 to assess wage increases: useful to adjust (subsistence) income to inflation.

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

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 **Confindustria research office**
- For relationship with Istat