Feeding inequalities

The role of economic inequalities and the urban market in late medieval food security

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"The situation where all people, at all times have physical, social, and economic access to sufficient, safe, and nutritious food."

Food and Agricultural Organization (1996)
- HISTORIOGRAPHY -
- CASE STUDY -

Fourteenth century
- Tumultuous period: food insecure?
- Malthusian positive checks

Ghent
- 60,000 inhabitants
- Industrial metropole of Flanders
- Impact plague, famine, warfare?
HOW DOES INEQUALITY AFFECT FOOD SECURITY?
Wealth and income make up the possibilities of households to acquire food and to adapt in times of deearth.
Trade
Labour
Inheritance
Production
“One is entitled to own what one obtains by trading something one owns with a willing party”
- GRAIN STAPLE -

What? Where? When?

Exclusive trade centre and depot within a given area. Strategic: confluence Lys-Scheldt river system. 1323? 1337? Final form in 1357 (Louis of Male).

MANIPULATION OF GRAIN PRICES?
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- MARKET INTEGRATION -

Grain prices in Ghent & Northern France in the fourteenth century (Gr. Silver / hl.)

Price (Gr. silver / hl.)

- Ghent (rye) - Lille (wheat) - Douai (wheat) - Cambrai (wheat)
Interquartile mean of the grain price in Ghent & Northern France (gr. Silver / hl.)
- MARKET INTEGRATION -

- Correlation coefficients with interquartile means (13y)

- Increasing correlation with northern france

<table>
<thead>
<tr>
<th>Period</th>
<th>Pearson Correlation Matrices</th>
<th>N (Frequency)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ghent</td>
<td>Lille</td>
</tr>
<tr>
<td>1300-1400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ghent</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Lille</td>
<td>0.832**</td>
<td>1.000</td>
</tr>
<tr>
<td>Douai</td>
<td>0.904**</td>
<td>0.935**</td>
</tr>
<tr>
<td>Cambrai</td>
<td>0.897**</td>
<td>0.905**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUBPERIODES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1300-1348</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ghent</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Lille</td>
<td>0.222</td>
<td>1.000</td>
</tr>
<tr>
<td>Douai</td>
<td>0.012</td>
<td>0.932**</td>
</tr>
<tr>
<td>Cambrai</td>
<td>0.333</td>
<td>0.688**</td>
</tr>
<tr>
<td>1349-1370</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ghent</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Lille</td>
<td>0.895**</td>
<td>1.000</td>
</tr>
<tr>
<td>Douai</td>
<td>0.797**</td>
<td>0.926**</td>
</tr>
<tr>
<td>Cambrai</td>
<td>0.862**</td>
<td>0.860**</td>
</tr>
<tr>
<td>1371-1400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ghent</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Lille</td>
<td>0.913**</td>
<td>1.000</td>
</tr>
<tr>
<td>Douai</td>
<td>0.965**</td>
<td>0.819*</td>
</tr>
<tr>
<td>Cambrai</td>
<td>0.828**</td>
<td>0.813*</td>
</tr>
</tbody>
</table>

* Sig. < 0.05; ** Sig. < 0.01

Source: S. ESPEEL, Database fourteenth century Flemish grain prices.
“One is entitled to one's own labour power, and thus to the trade-based and production-based entitlements related to one's labour power”
- METHODOLOGY -

Real wages: daily wage / grain price

Living standards with benchmark poverty
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REAL WAGES IN GHENT

LIVING STANDARD IN GHENT

REAL WAGES IN GHENT

LIVING STANDARD IN GHENT
Presentation of preliminary results. Please do not cite or distribute

MONTHLY LIVING STANDARDS

1335-1348

1358-1362

1368-1372
Presentation of preliminary results. Please do not cite or distribute.

- Trade
- Labour
- Inheritance
- Production
“One is entitled to own what is willingly given to one by another who legitimately owns it, possibly to take affect after the latter's death”
METHODOLOGY

What? How? When?

Probate inventories (n=1805) suffer from a social bias. Reconstructing total wealth per household based on valuations of assets.
<table>
<thead>
<tr>
<th>Sample period</th>
<th>1349-55</th>
<th>1371-75</th>
<th>1379-85</th>
<th>1395-1400</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total (N)</td>
<td>302</td>
<td>391</td>
<td>635</td>
<td>477</td>
</tr>
<tr>
<td>Inclusiveness (wealth &lt; 1year skilled wage)</td>
<td>4.0%</td>
<td>9.2%</td>
<td>5.8%</td>
<td>13.2%</td>
</tr>
<tr>
<td>Median wealth (in gr silver)</td>
<td>13,449</td>
<td>10,106</td>
<td>12,654</td>
<td>9,172</td>
</tr>
<tr>
<td>Median wealth (&gt; 1 year skilled wage)</td>
<td>14,510</td>
<td>11,183</td>
<td>13,759</td>
<td>11,640</td>
</tr>
<tr>
<td>Min wealth (in gr silver)</td>
<td>548</td>
<td>550</td>
<td>427</td>
<td>147</td>
</tr>
<tr>
<td>Max wealth (in gr silver)</td>
<td>821,859*</td>
<td>557,966</td>
<td>455,549</td>
<td>575,237</td>
</tr>
<tr>
<td>Gini (all)</td>
<td>0.68*</td>
<td>0.68</td>
<td>0.58</td>
<td>0.67</td>
</tr>
<tr>
<td>Gini (&gt; 1 year skilled wage)</td>
<td>0.68</td>
<td>0.65</td>
<td>0.56</td>
<td>0.63</td>
</tr>
</tbody>
</table>

Presentation of preliminary results. Please do not cite or distribute.
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- DISTRIBUTION OF WEALTH -

[Graph showing the distribution of wealth with categories D1 to D10, Top 5%, Top 1%, Winners, Middle groups (esp. D8-9), and Losers (Top 10% Bottom 10%).]
Poverty increases after Revolt
Trade
Labour
Inheritance
Production
“One is entitled to own what one gets by arranging production using one's owned resources, or resources hired from willing parties meeting the agreed conditions of trade”
METHODOLOGY

What?
How?
When?

Probate inventories (cfr. inheritance)

Analysing specific components:

a) Food processing
b) Land ownership

-1349-55
-1371-75
-1379-85
-1395-1400
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- FOOD PROCESSING -

[Diagram showing box plots for different occupations with percentile data]
- LAND OWNERSHIP -

Legend (period 1349-1355)
- Ghent

Landownership of citizens of Ghent
Size of properties (ha.)
- 0 - 4.68
- 4.68 - 18.94
- 18.94 - 38.25
- LAND OWNERSHIP -

Legend (period 1371-1375)
- Ghent

Landownership of citizens of Ghent

Size of properties (ha.)
- 0.04 - 6.68
- 6.68 - 18.87
- 18.87 - 34.38
- 34.38 - 67.64
- 67.64 - 115.76

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- LAND OWNERSHIP -

Legend (period 1379-1385)
- Ghent

Landownership of citizens of Ghent

Size of properties (ha.)
- 0.00 - 5.85
- 5.86 - 15.50
- 15.50 - 31.72
- 31.72 - 75.53
- 75.03 - 170.98

Presentation of preliminary results. Please do not cite or distribute.
- LAND OWNERSHIP -
## LAND OWNERSHIP

<table>
<thead>
<tr>
<th></th>
<th>Land possession</th>
<th>Income growth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(% within quintile inventories)</td>
<td>(% of previous)</td>
</tr>
<tr>
<td></td>
<td>1349-55</td>
<td>1371-75</td>
</tr>
<tr>
<td>QU1</td>
<td>36.4%</td>
<td>33.8%</td>
</tr>
<tr>
<td>QU2</td>
<td>45.3%</td>
<td>40.3%</td>
</tr>
<tr>
<td>QU3</td>
<td>63.0%</td>
<td>55.9%</td>
</tr>
<tr>
<td>QU4</td>
<td>48.7%</td>
<td>72.2%</td>
</tr>
<tr>
<td>QU5</td>
<td>73.3%</td>
<td>95.3%</td>
</tr>
</tbody>
</table>

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HOW DOES INEQUALITY AFFECT FOOD SECURITY?
Trade
Increased market integration after BD

Labour
Increased real wage after BD, yet still periods of dearth

Production
Middle groups increasingly invest in land after 1370

Inheritance
Middle groups profit at the expense of top and bottom

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