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# Feeding inequalities

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

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 fwo

“

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

”

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# - HISTORIOGRAPHY -



# - CASE STUDY -

## Fourteenth century

- Tumultuous period: food insecure?
- Malthusian positive checks

## Ghent

- 60,000 inhabitants
- Industrial metropole of Flanders
- Impact plague, famine, warfare?





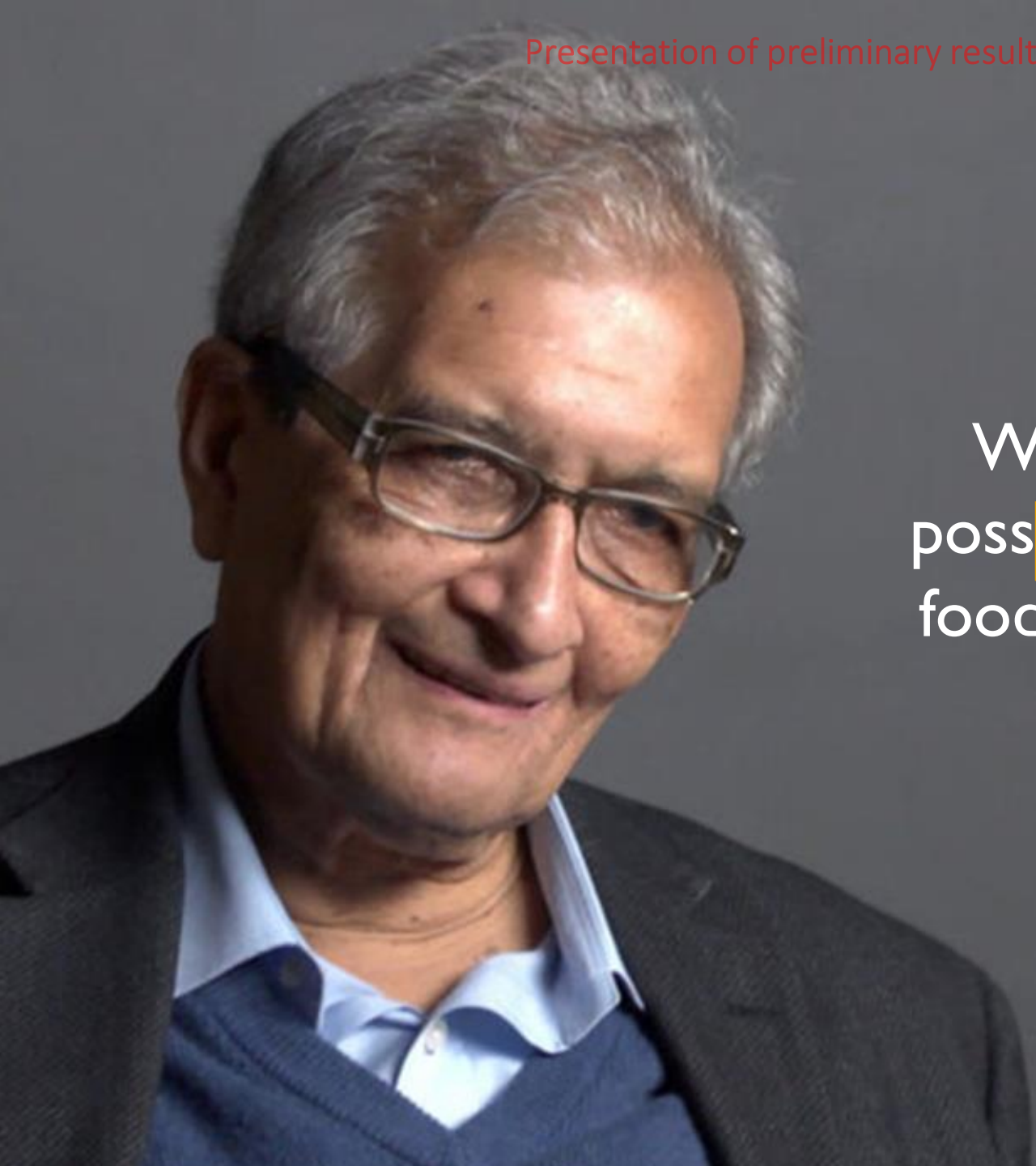
HOW DOES

**INEQUALITY**

AFFECT FOOD SECURITY?



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Wealth and income make up the possibilities of households to acquire food and to adapt in times of dearth

## ENTITLEMENTS

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 Trade

 Labour

 Inheritance

 Production

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 Trade

 Labour

 Inheritance

 Production



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“One is entitled to own what one obtains  
by trading something one owns with a  
willing party”

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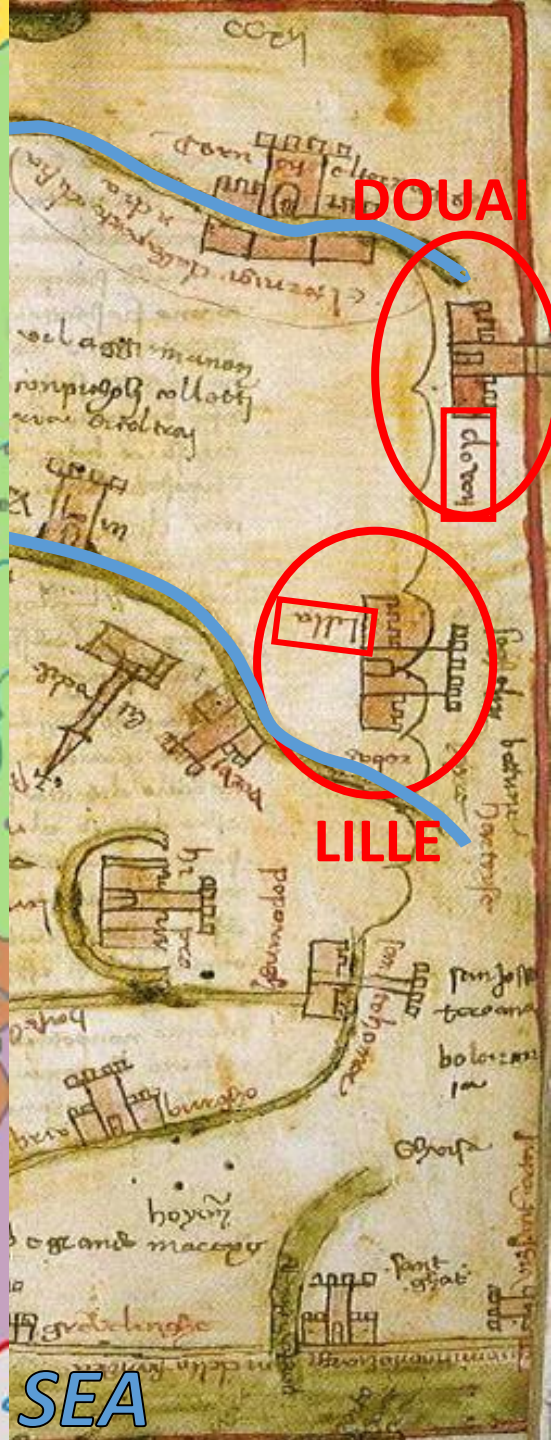
# - GRAIN STAPLE -



MANIPULATION OF GRAIN PRICES?



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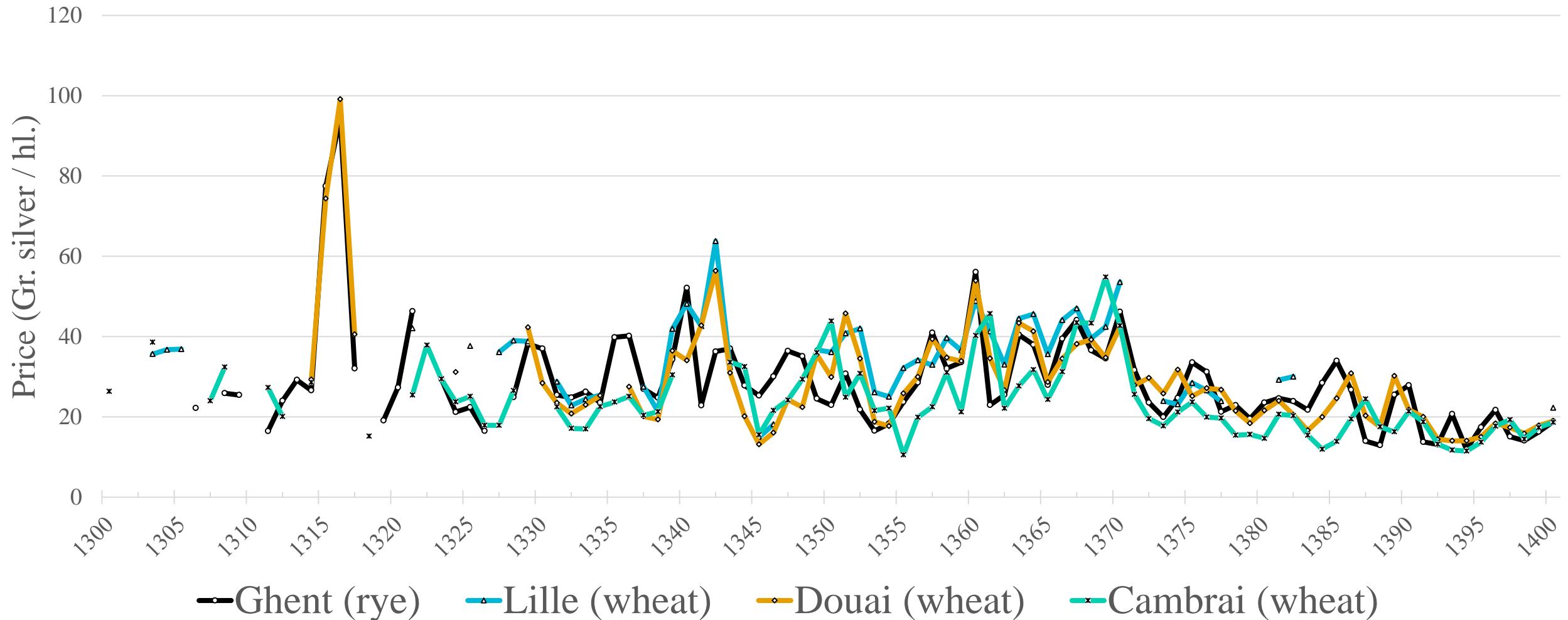




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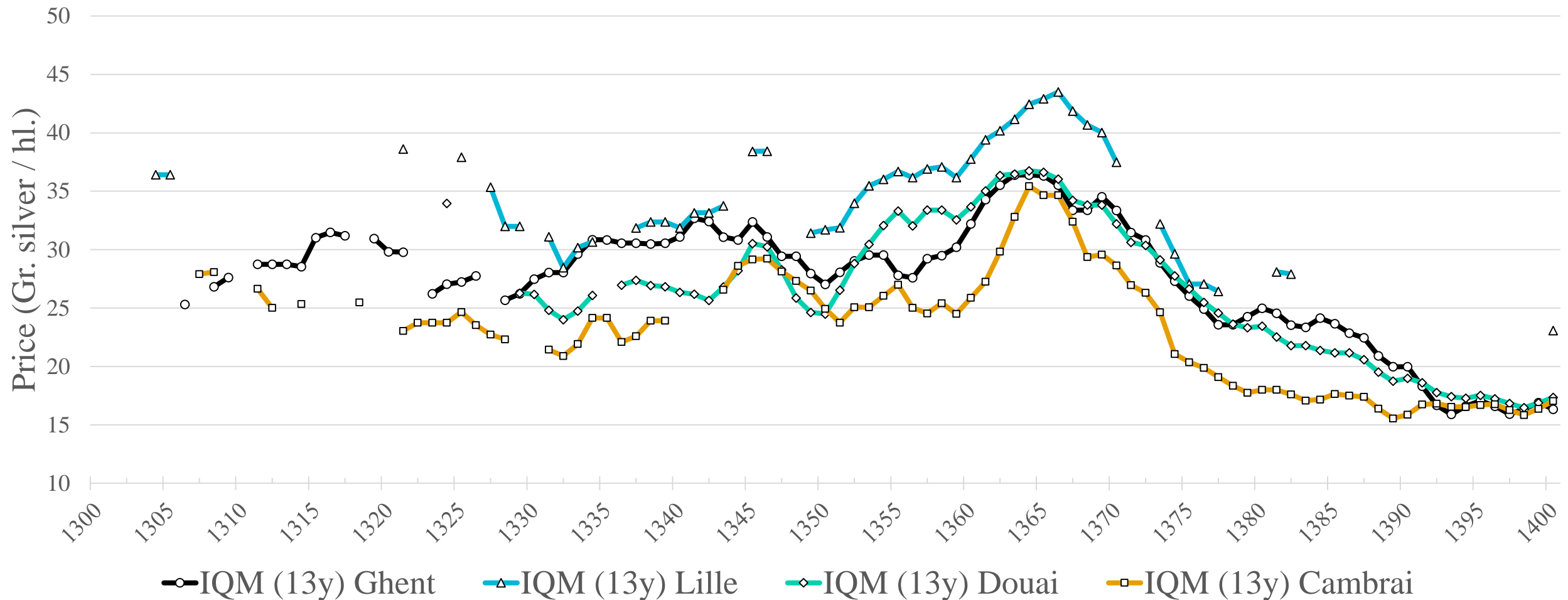
# - MARKET INTEGRATION -

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



# - MARKET INTEGRATION -

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

Period	Pearson Correlation Matrices				N (Frequency)			
<b>1300-1400</b>	<b>Ghent</b>	<b>Lille</b>	<b>Douai</b>	<b>Cambrai</b>	<b>Ghent</b>	<b>Lille</b>	<b>Douai</b>	<b>Cambrai</b>
	<b>Ghent</b>	1.000			90			
	<b>Lille</b>	0.832**	1.000		47	50		
	<b>Douai</b>	0.904**	0.935**	1.000	72	44	72	
	<b>Cambrai</b>	0.897**	0.905**	0.904**	1.000	77	44	67
								81
<b>SUBPERIODS</b>								
<b>1300-1348</b>	<b>Ghent</b>	<b>Lille</b>	<b>Douai</b>	<b>Cambrai</b>	<b>Ghent</b>	<b>Lille</b>	<b>Douai</b>	<b>Cambrai</b>
	<b>Ghent</b>	1.000			38			
	<b>Lille</b>	0.222	1.000		17	20		
	<b>Douai</b>	0.012	0.932**	1.000	20	14	20	
	<b>Cambrai</b>	0.333	0.688**	0.493	1.000	25	14	15
								29
<b>1349-1370</b>	<b>Ghent</b>	<b>Lille</b>	<b>Douai</b>	<b>Cambrai</b>	<b>Ghent</b>	<b>Lille</b>	<b>Douai</b>	<b>Cambrai</b>
	<b>Ghent</b>	1.000			22			
	<b>Lille</b>	0.895**	1.000		22	22		
	<b>Douai</b>	0.797**	0.926**	1.000	22	22	22	
	<b>Cambrai</b>	0.862**	0.860**	0.672**	1.000	22	22	22
								22
<b>1371-1400</b>	<b>Ghent</b>	<b>Lille</b>	<b>Douai</b>	<b>Cambrai</b>	<b>Ghent</b>	<b>Lille</b>	<b>Douai</b>	<b>Cambrai</b>
	<b>Ghent</b>	1.000			30			
	<b>Lille</b>	0.913**	1.000		8	8		
	<b>Douai</b>	0.965**	0.819*	1.000	30	8	30	
	<b>Cambrai</b>	0.828**	0.813*	0.906**	1.000	30	8	30
								30

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

Source: S. ESPEEL, Database fourteenth century Flemish grain prices.



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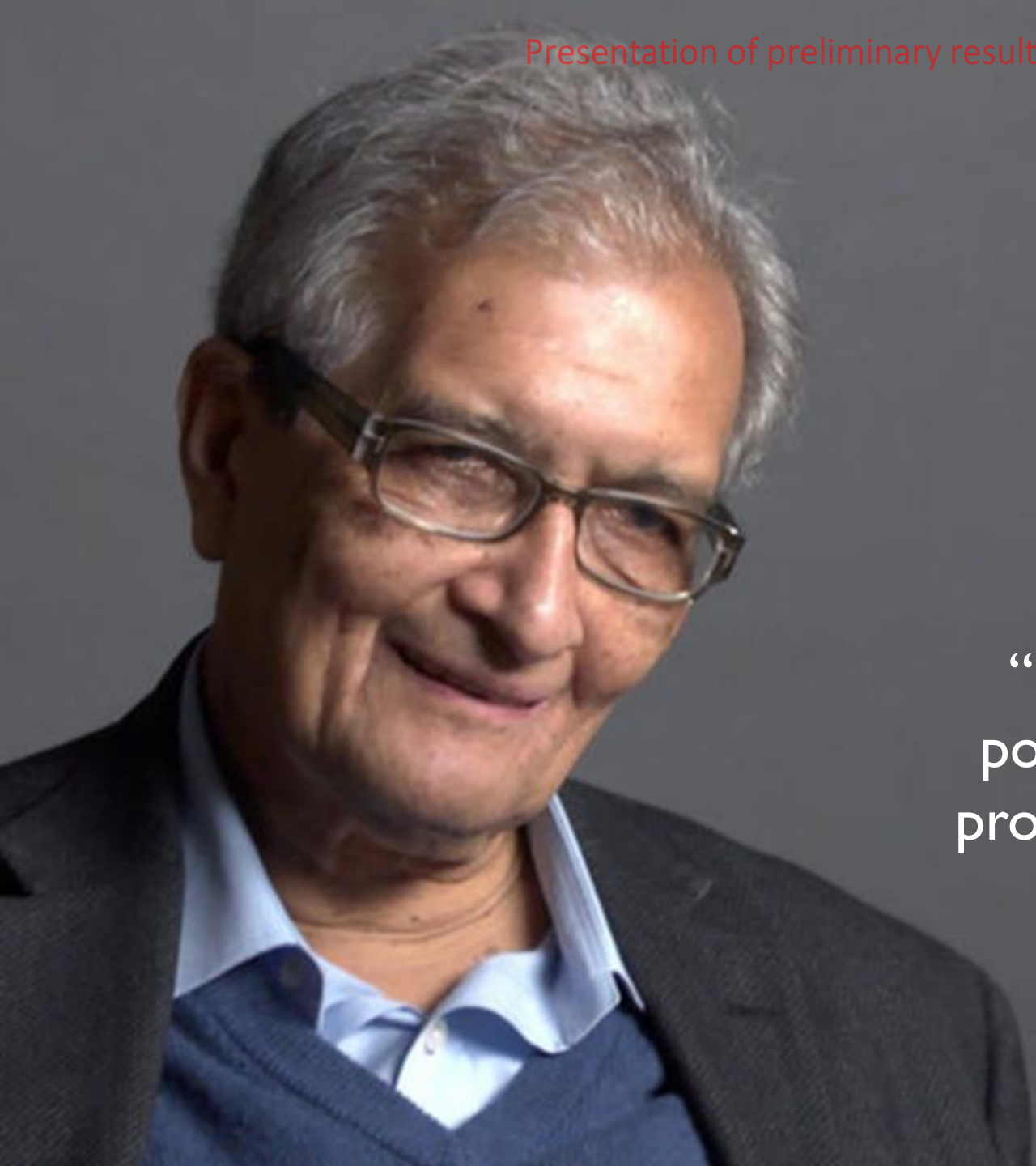


 Trade

 Labour

 Inheritance


 Production



 Labour

“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 -



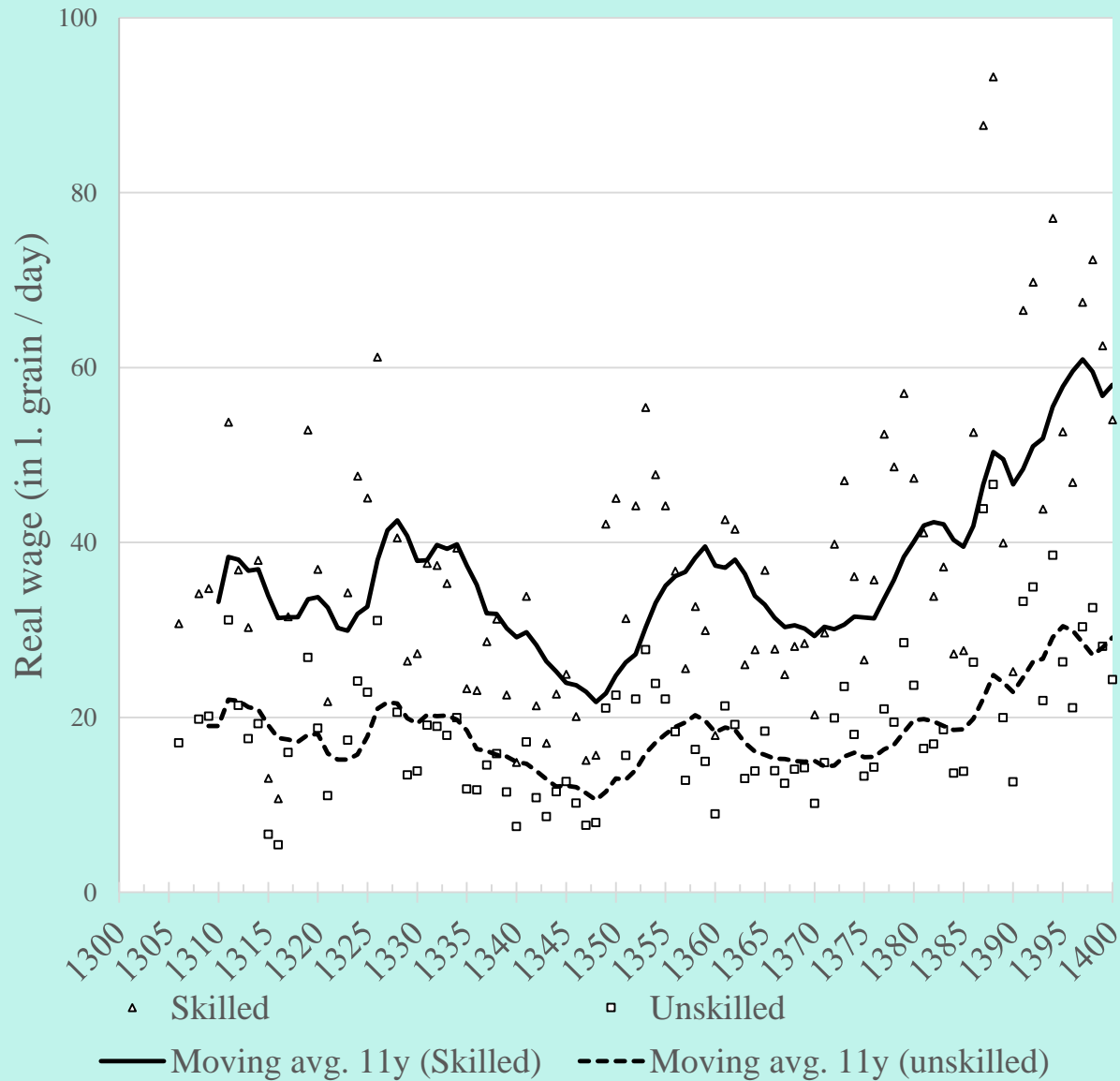
Real wages:  
daily wage /  
grain price



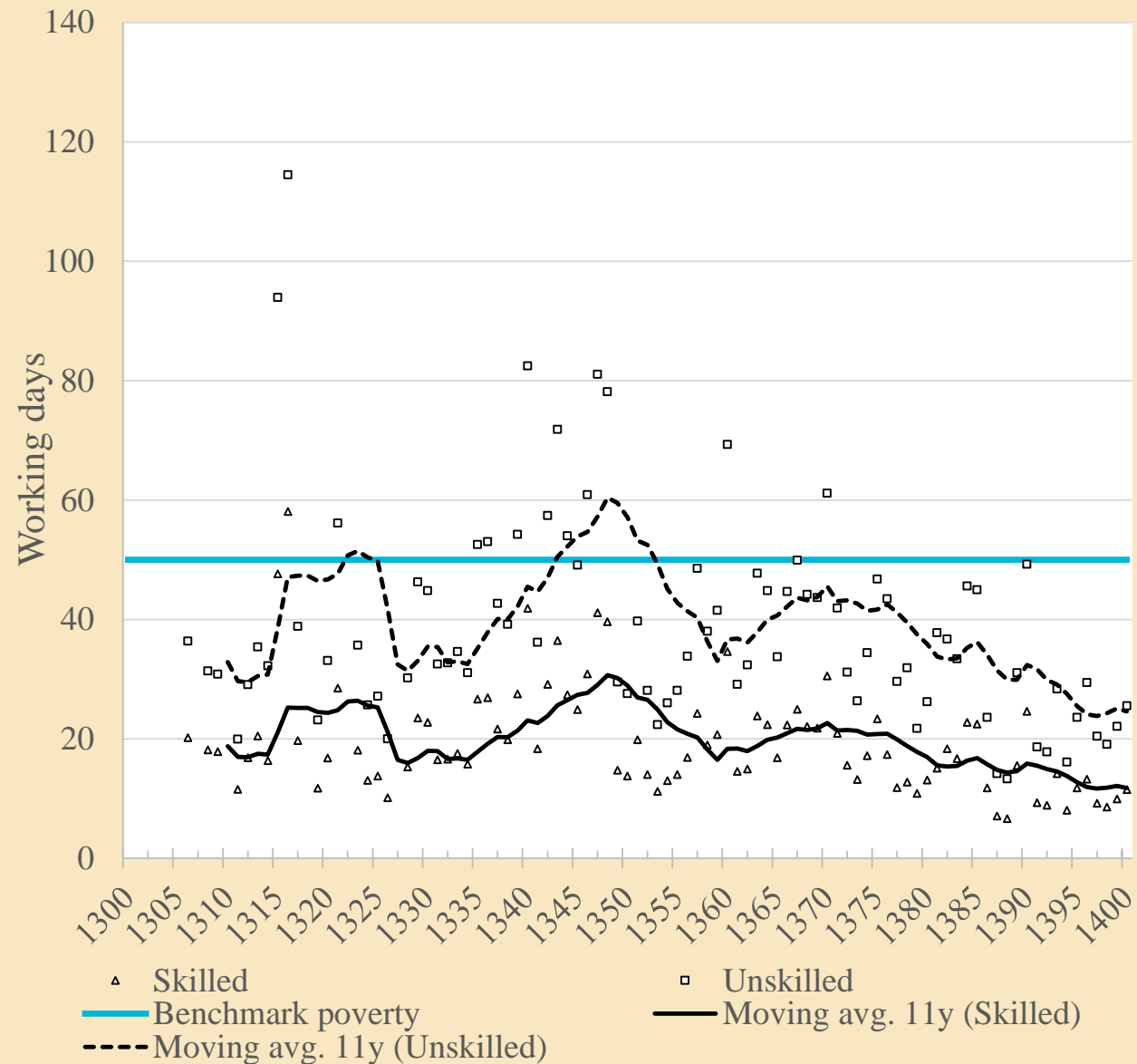
Living  
standards  
with  
benchmark  
poverty



## REAL WAGES IN GHENT

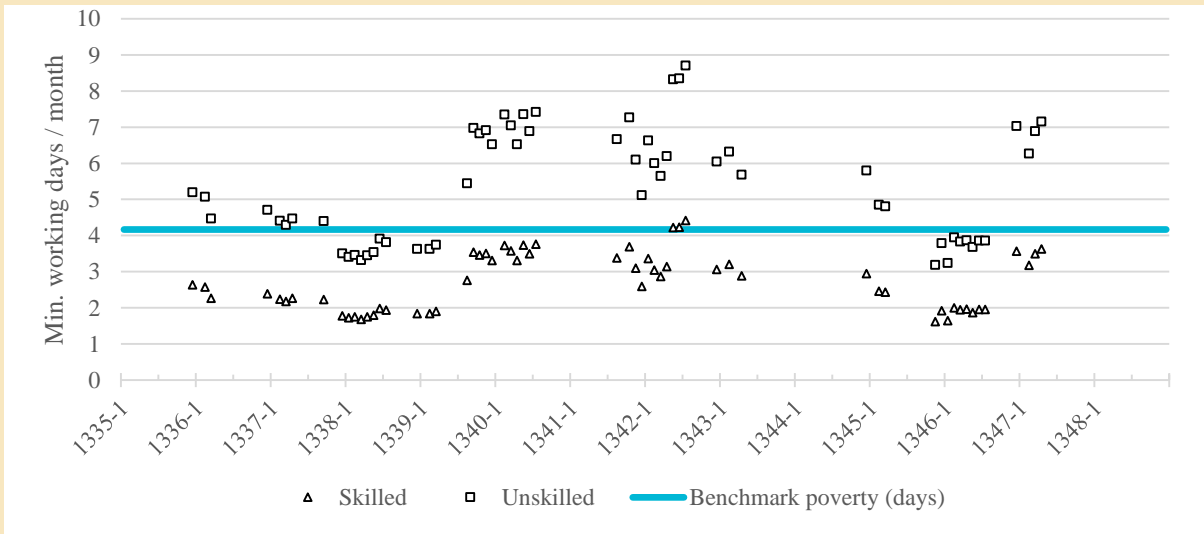


## LIVING STANDARD IN GHENT

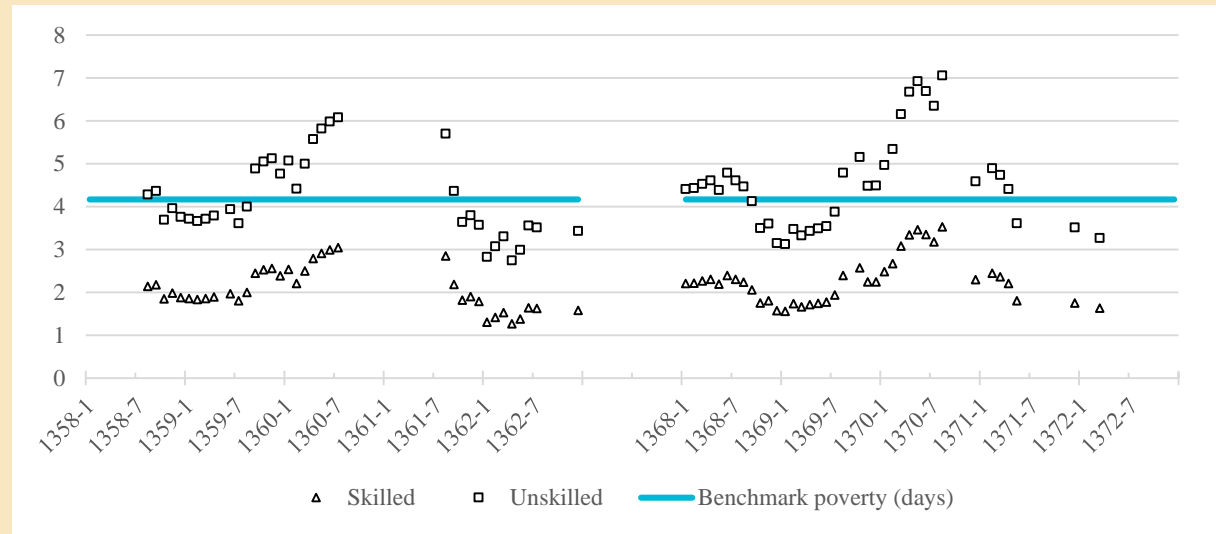


# - MONTHLY LIVING STANDARDS -

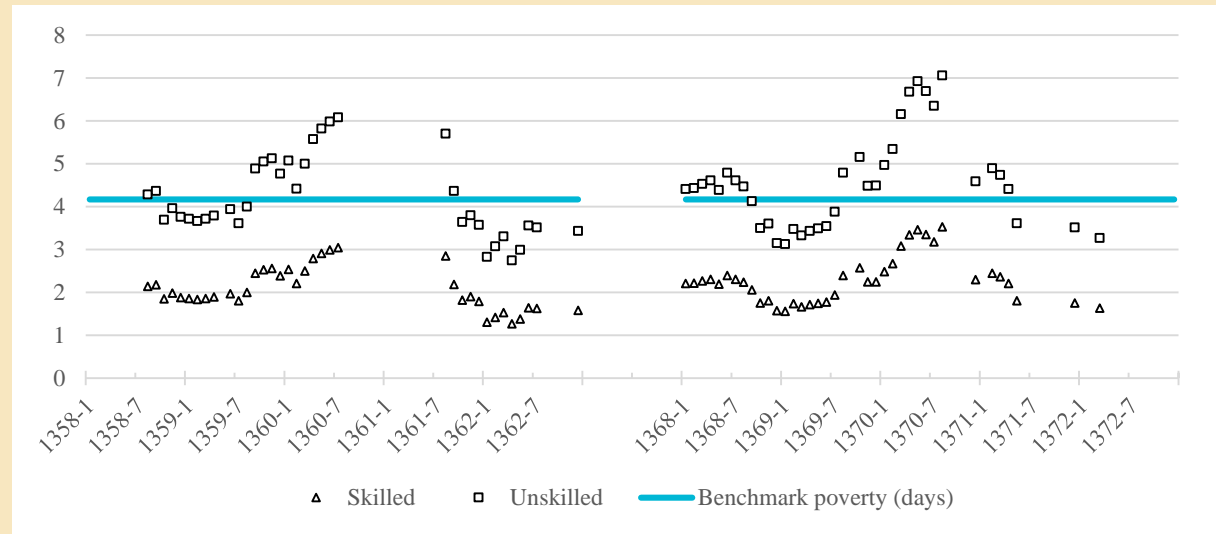
1335-1348



1358-1362



1368-1372



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 Trade

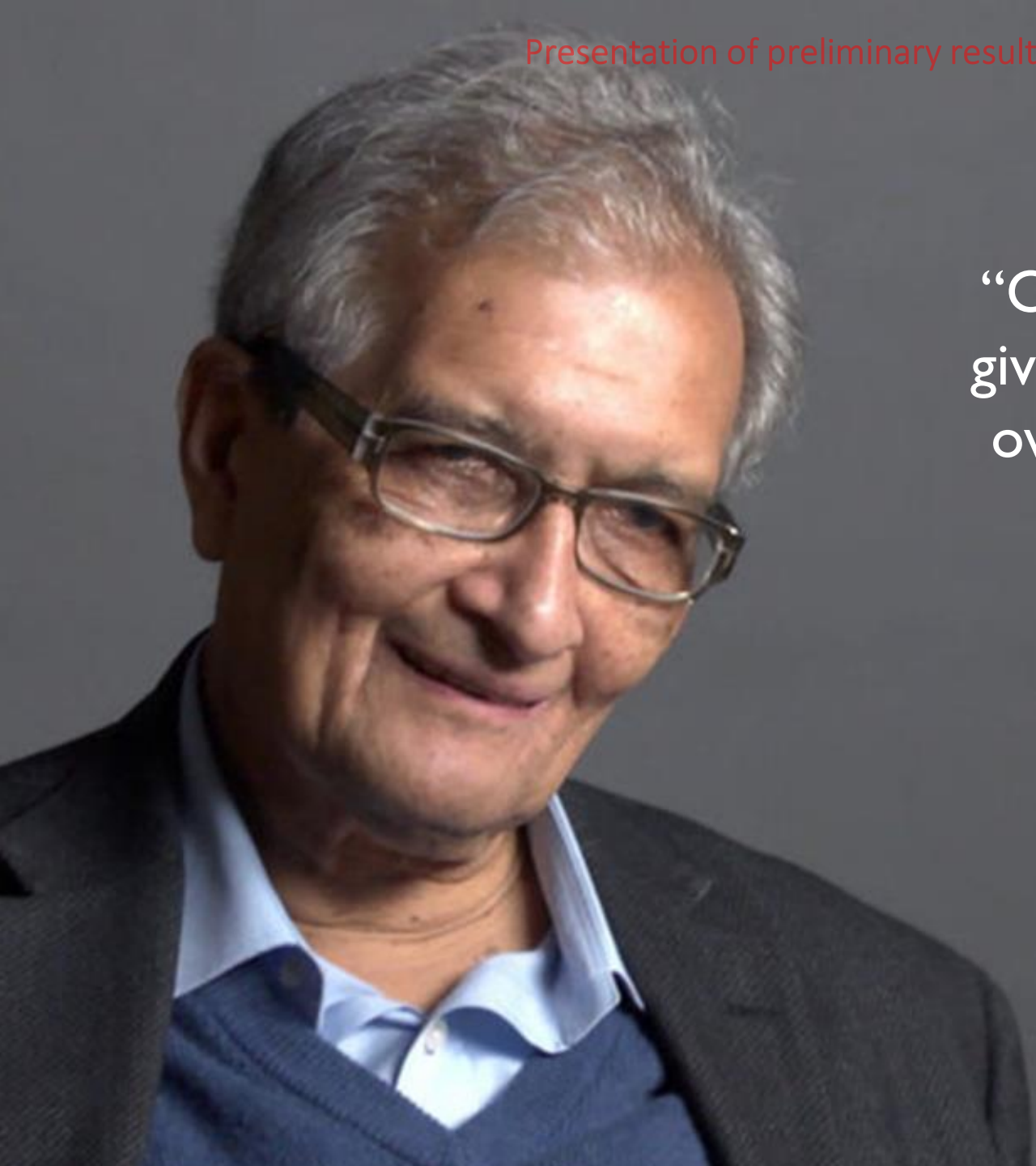
 Labour

 Inheritance

 Production



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“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”

 Inheritance

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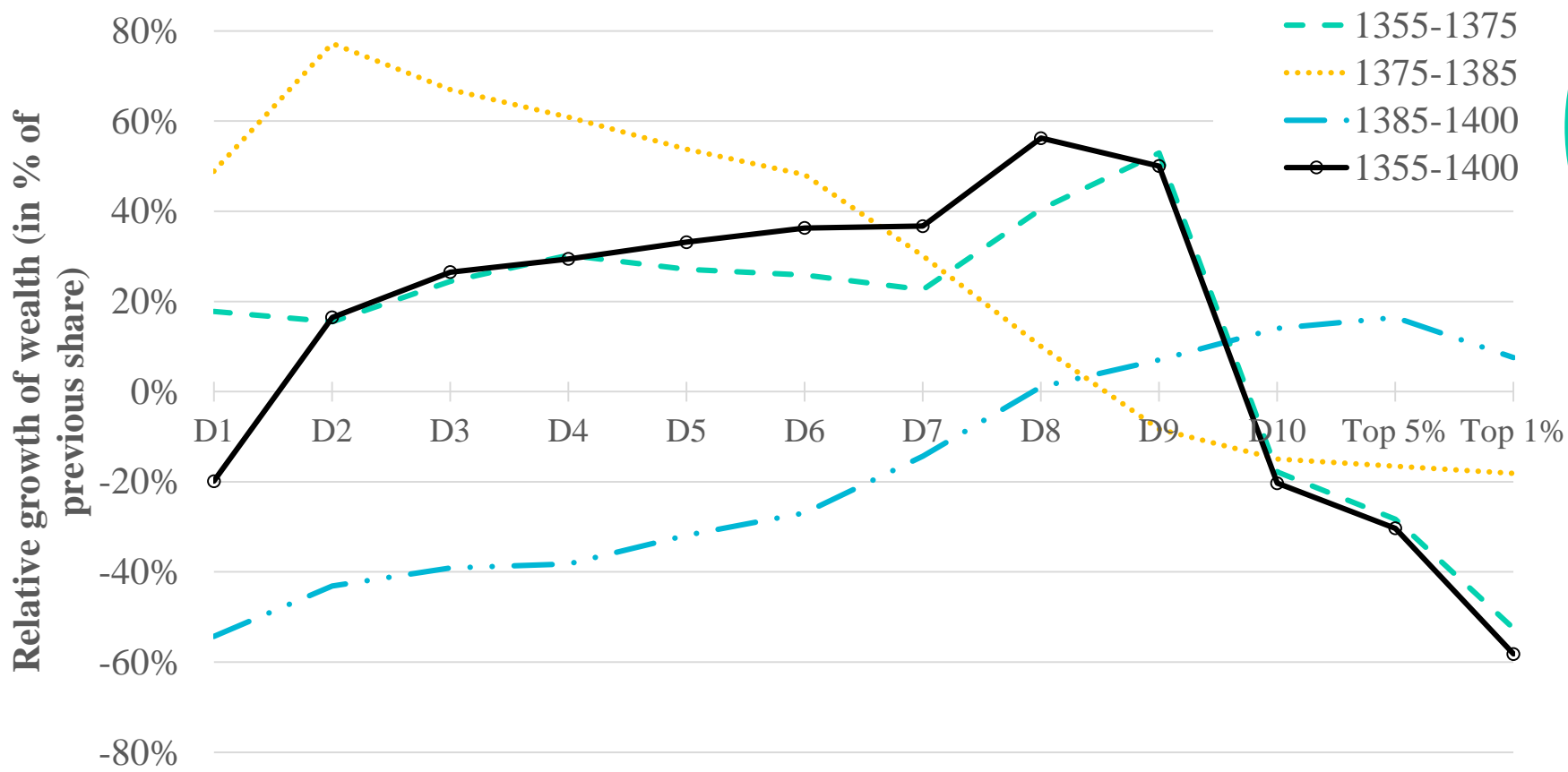
# - METHODOLOGY -

# - WEALTH AND INEQUALITY -

	Sample period			
	1349-55	1371-75	1379-85	1395-1400
Total (N)	302	391	635	477
Inclusiveness (wealth < 1 year skilled wage)	4.0%	9.2%	5.8%	13.2%
Median wealth (in gr silver)	13,449	10,106	12,654	9,172
Median wealth (> 1 year skilled wage)	14,510	11,183	13,759	11,640
Min wealth (in gr silver)	54	550	427	147
Max wealth (in gr silver)	821,859*	557,966	455,549	575,237
Gini (all)	0.68*	0.68	0.58	0.67
Gini (> 1 year skilled wage)	0.68	0.65	0.56	0.63

NO CHANGES?

# - DISTRIBUTION OF WEALTH -



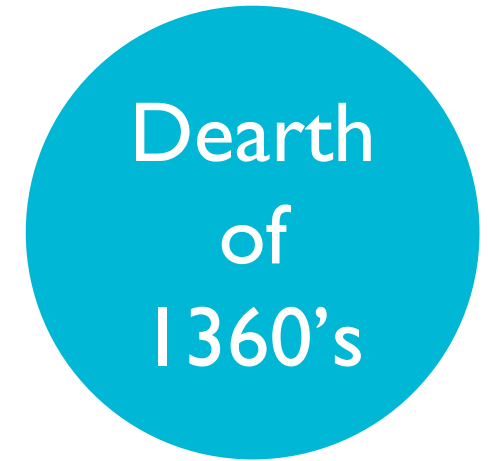
**Winners**  
Middle groups  
(esp. D8-9)

**Losers**  
Top 10%  
Bottom 10%



## - IMPACT ON BOTTOM 10% -

1349



1400



Poverty increases after Revolt

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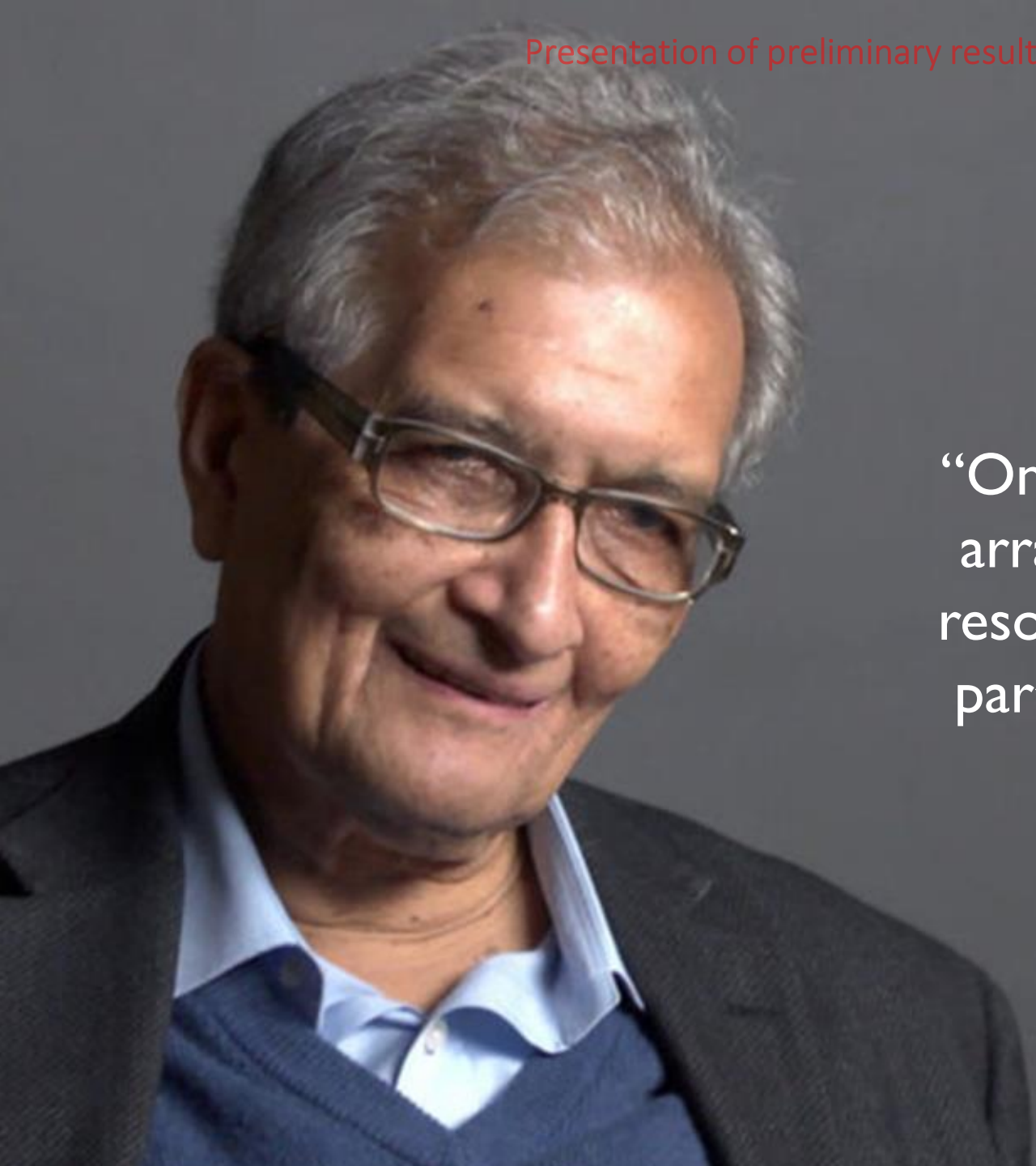


 Trade

 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”



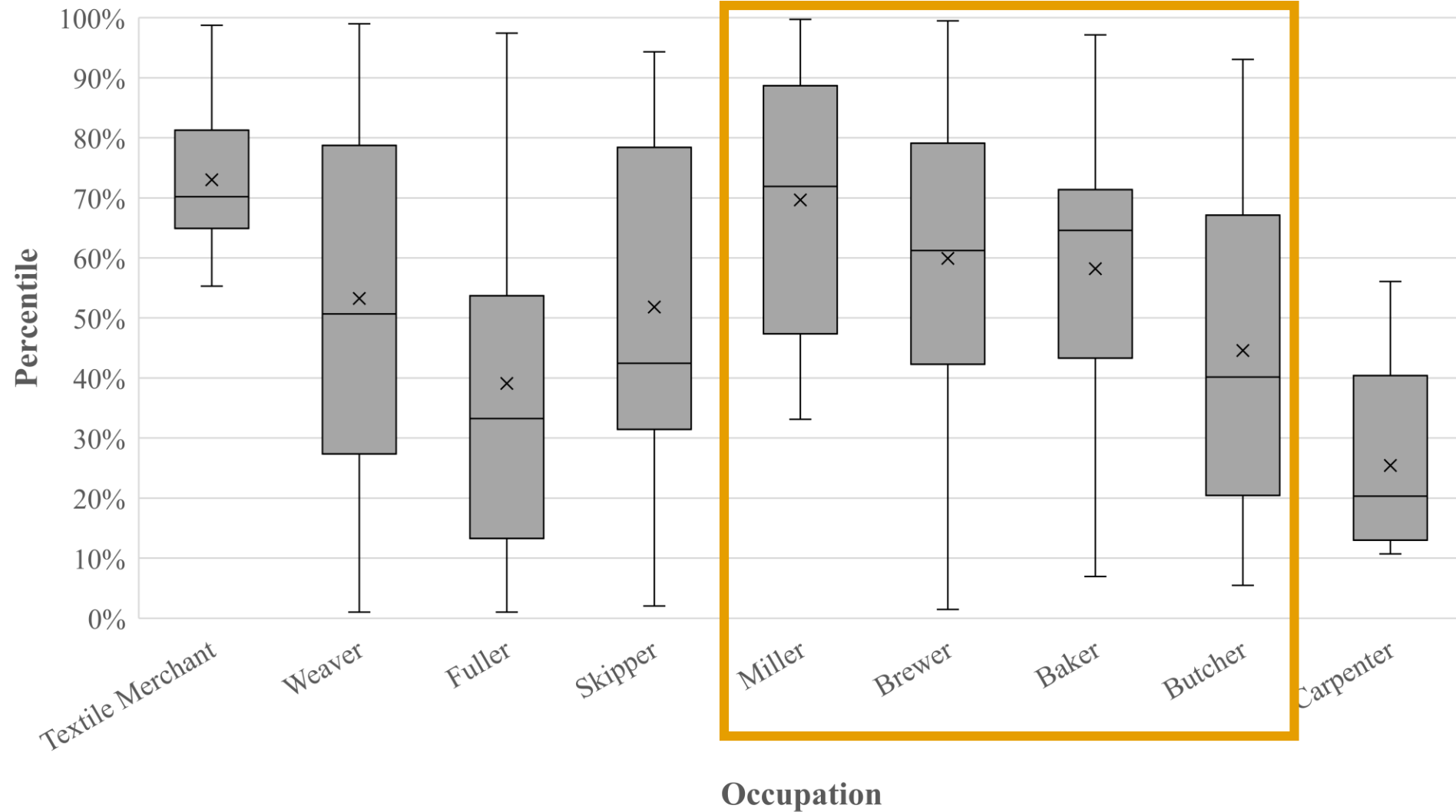
**Production**

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# - METHODOLOGY -

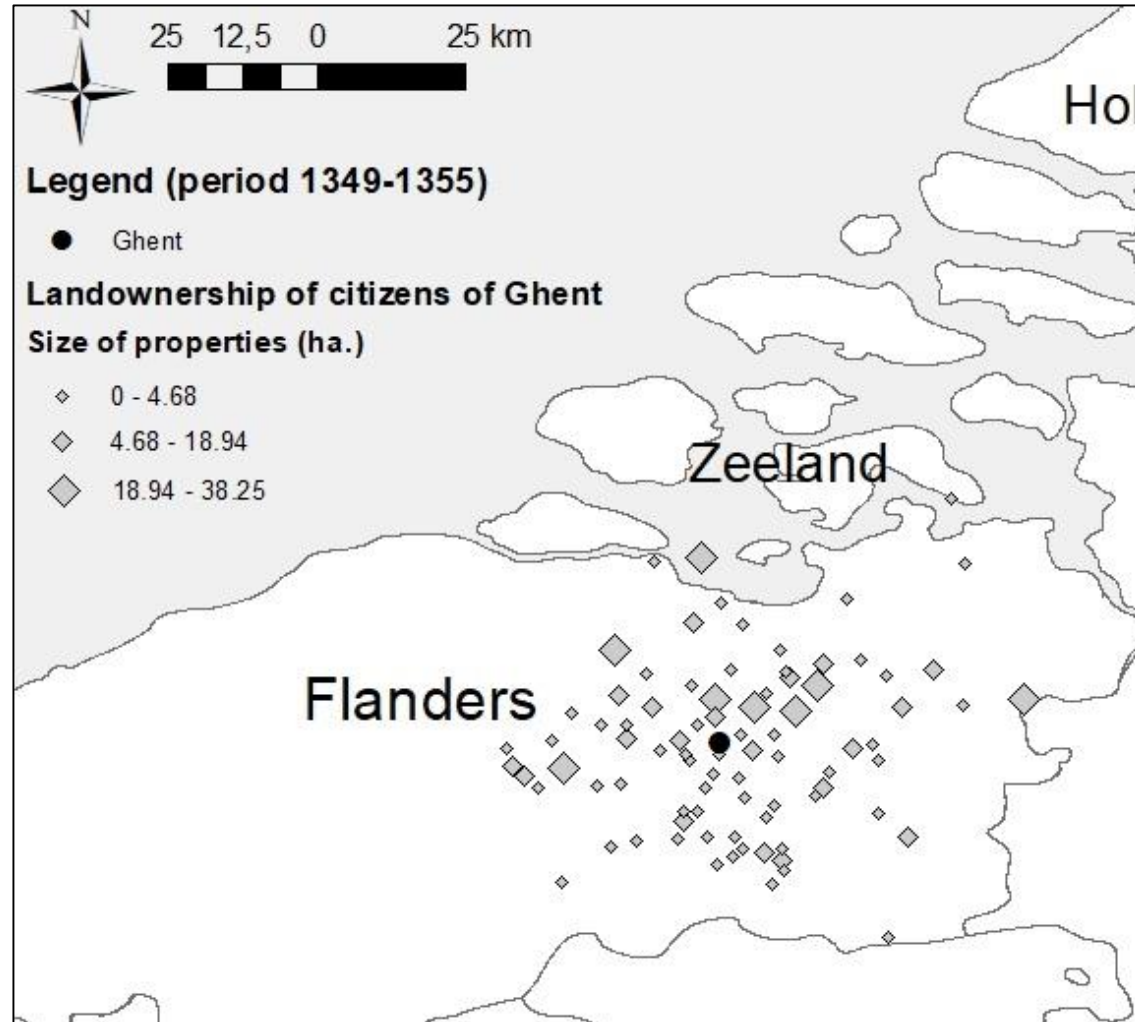


# - FOOD PROCESSING -

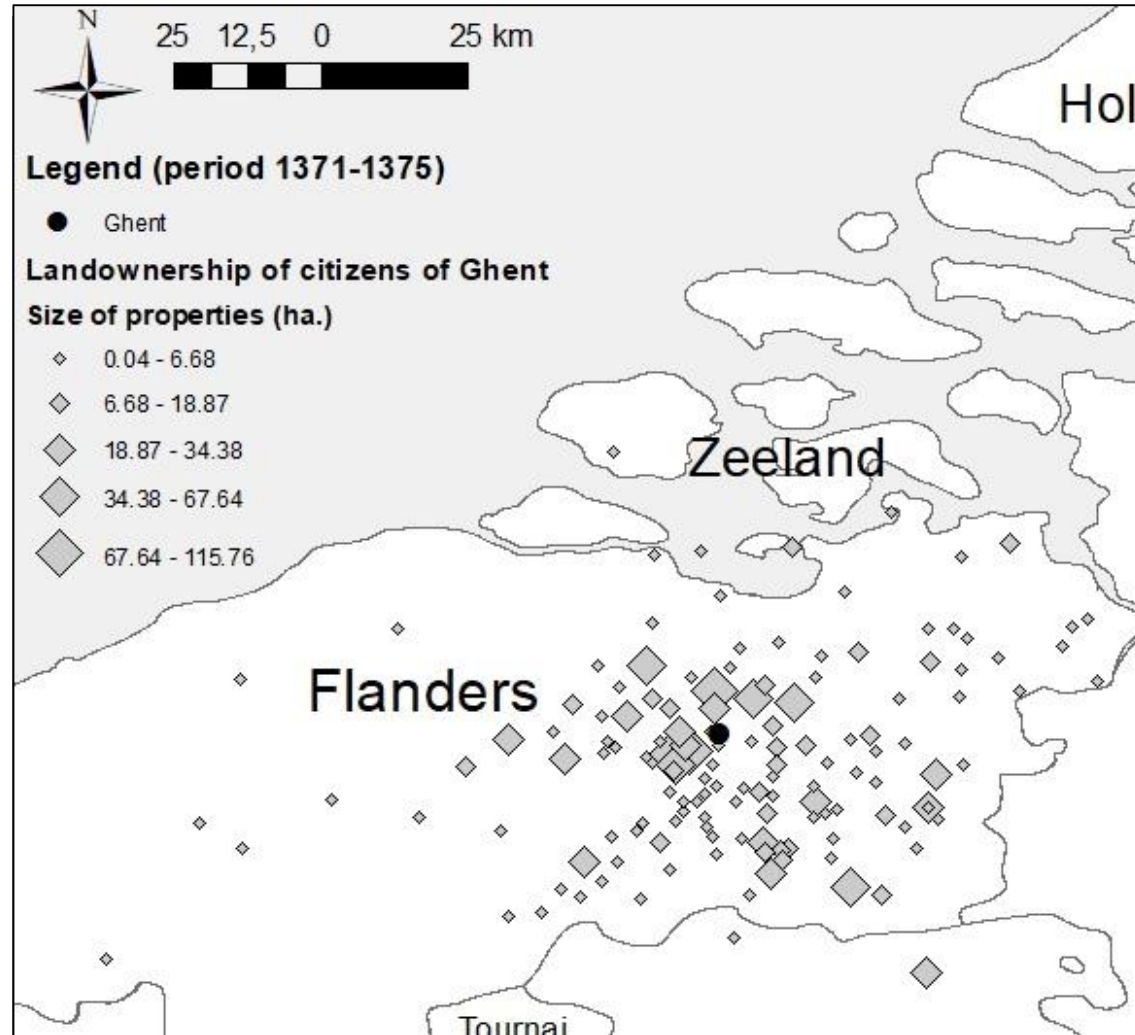
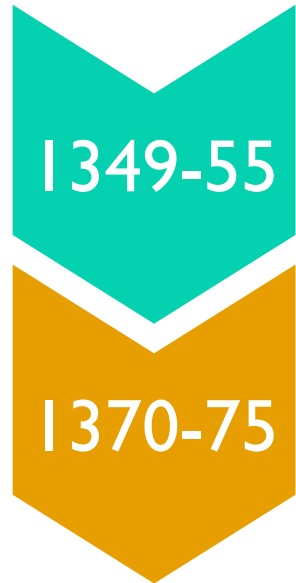


# - LAND OWNERSHIP -

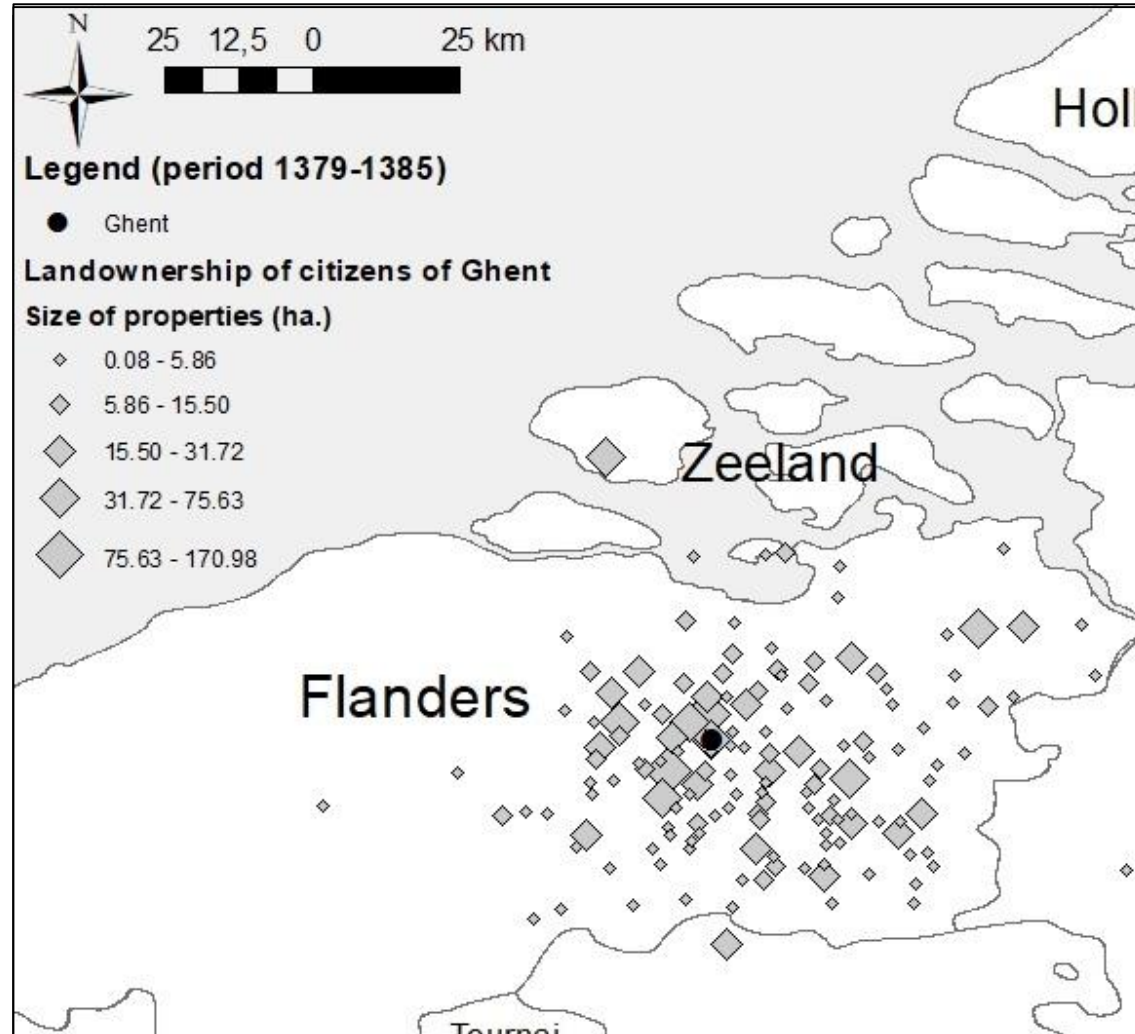
1349-55



# - LAND OWNERSHIP -

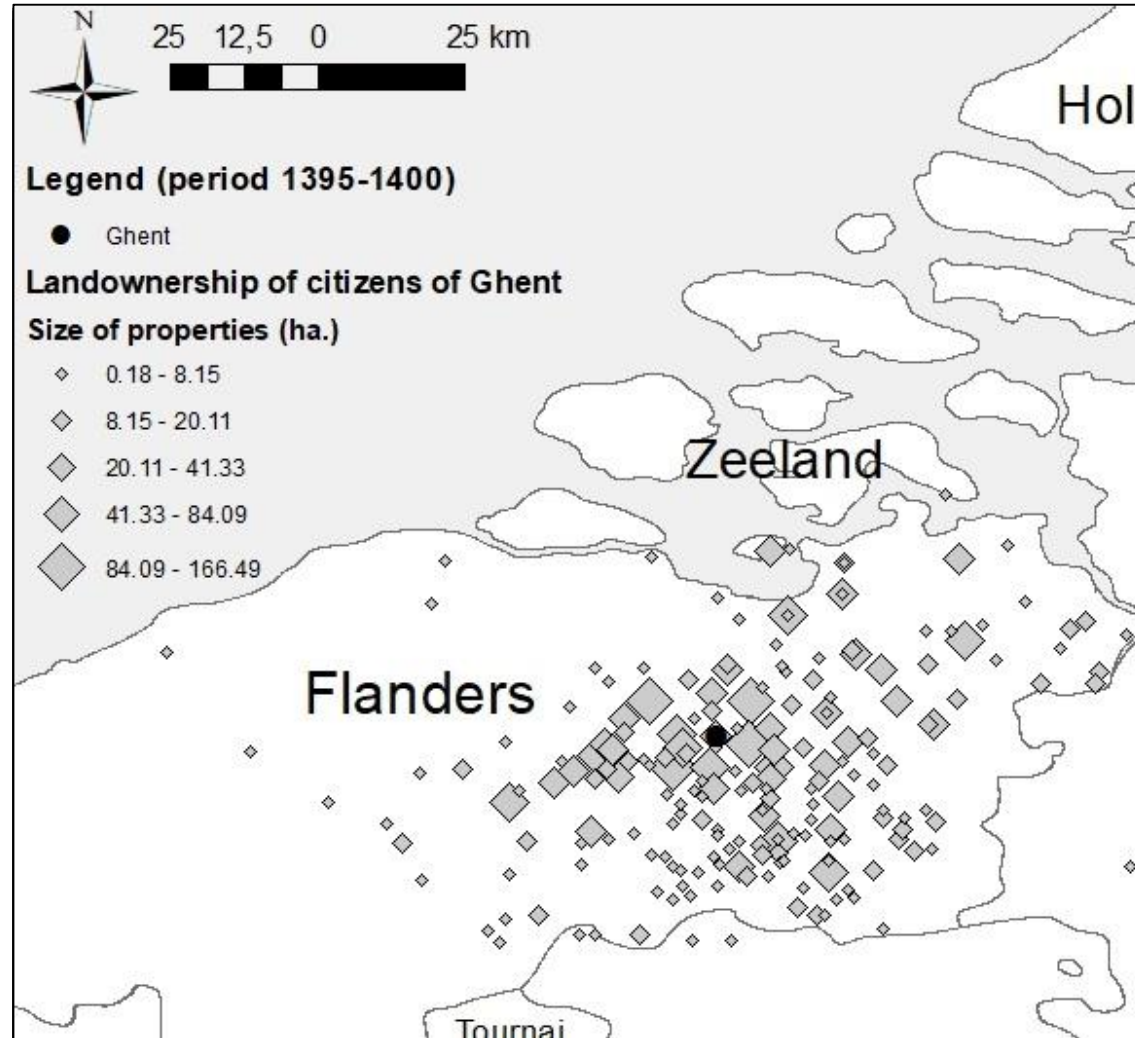
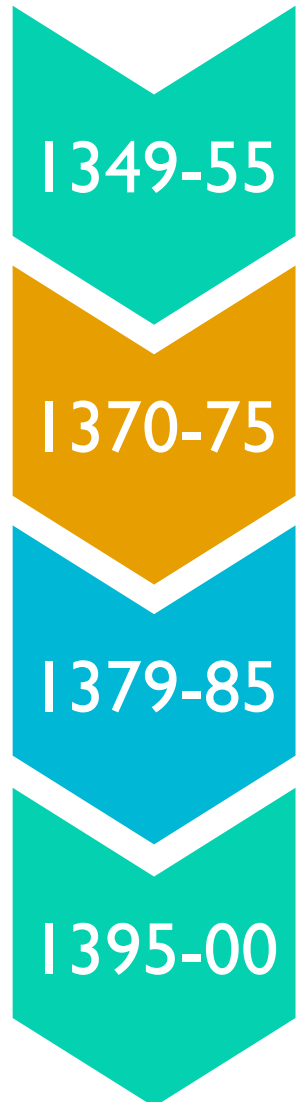


# - LAND OWNERSHIP -





# - LAND OWNERSHIP -



## - LAND OWNERSHIP -

	Land possession (% within quintile inventories)				Income growth (% of previous)			
	1349-55	1371-75	1379-85	1395-00	1349-75	1371-85	1379-00	1349-00
QU1	36.4%	33.8%	37.3%	23.9%	141%	108%	163%	250%
QU2	45.3%	40.3%	37.6%	47.0%	66%	99%	114%	75%
QU3	63.0%	55.9%	46.3%	70.4%	106%	127%	112%	150%
QU4	48.7%	72.2%	65.8%	77.6%	234%	79%	234%	435%
QU5	73.3%	95.3%	94.8%	88.9%	163%	66%	196%	212%

HOW DOES

**INEQUALITY**

AFFECT FOOD SECURITY?



