Towards Estimates of Long Term Growth in the Southern Low Countries, ca.1500-1846

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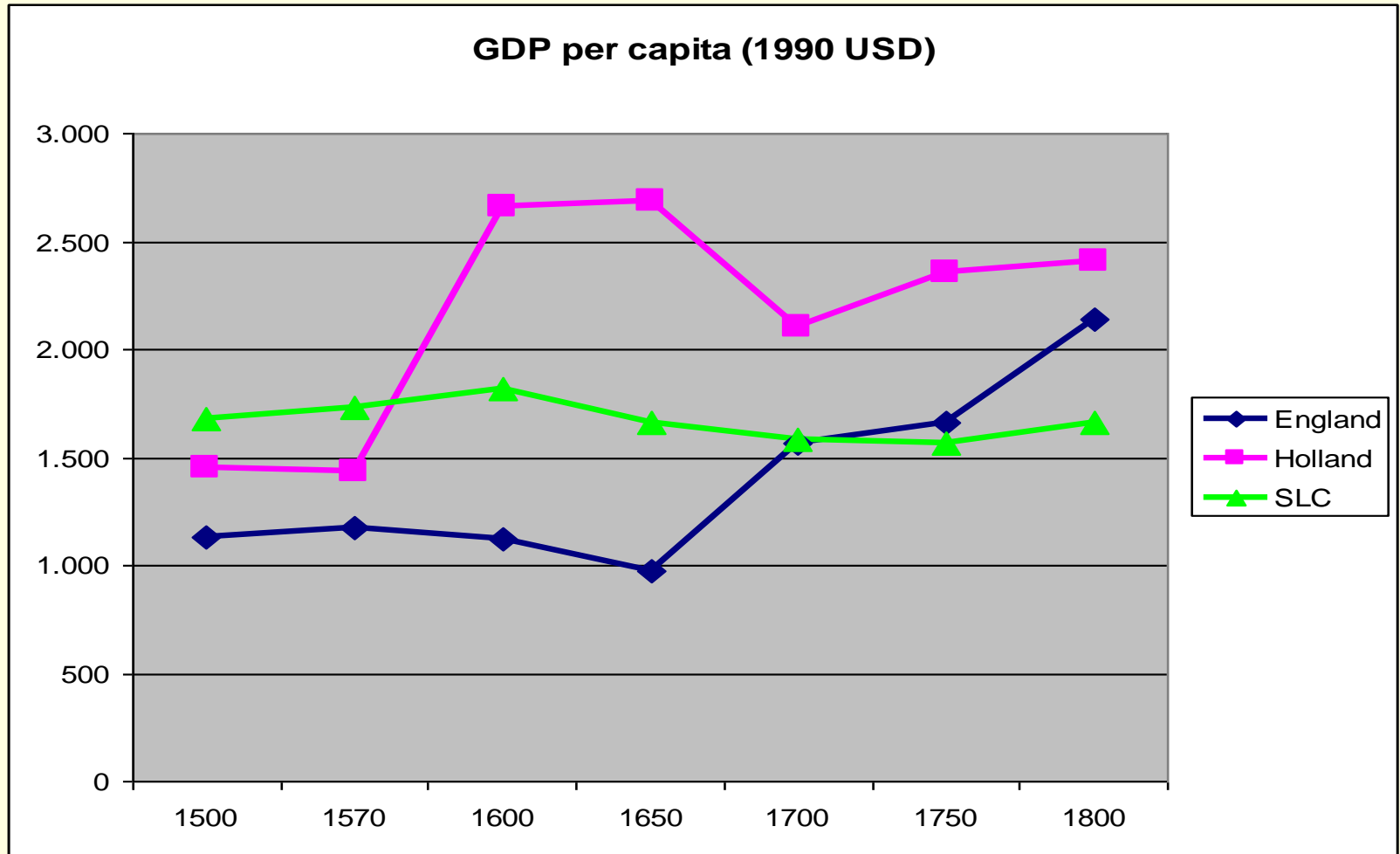
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1. Introduction

- Southern Low Countries (SLC) = borders of present-day Belgium: excludes Lille and other parts annexed by France or the United Provinces in the 17th century
- Structure
  - Critical analysis of existing data
- Needs to be tested for other early industrializers, such as Belgium or Switzerland. Structure

2. Critical analysis of existing data

- Original plan
  - Blomme and Van der Wee (1994) reconstructed the physical product of Flanders & Brabant in the 1500-1812 period
  - I would add estimates of the tertiary sector to obtain GDP figures
- Problem
  - My services sector figures evolve very differently compared to Blomme's data
  - Who is right?

2. Critical analysis of existing data

GDP per capita (1990 USD)

2. Critical analysis of existing data

Agricultural productivity in Europe, 1300–1800   21

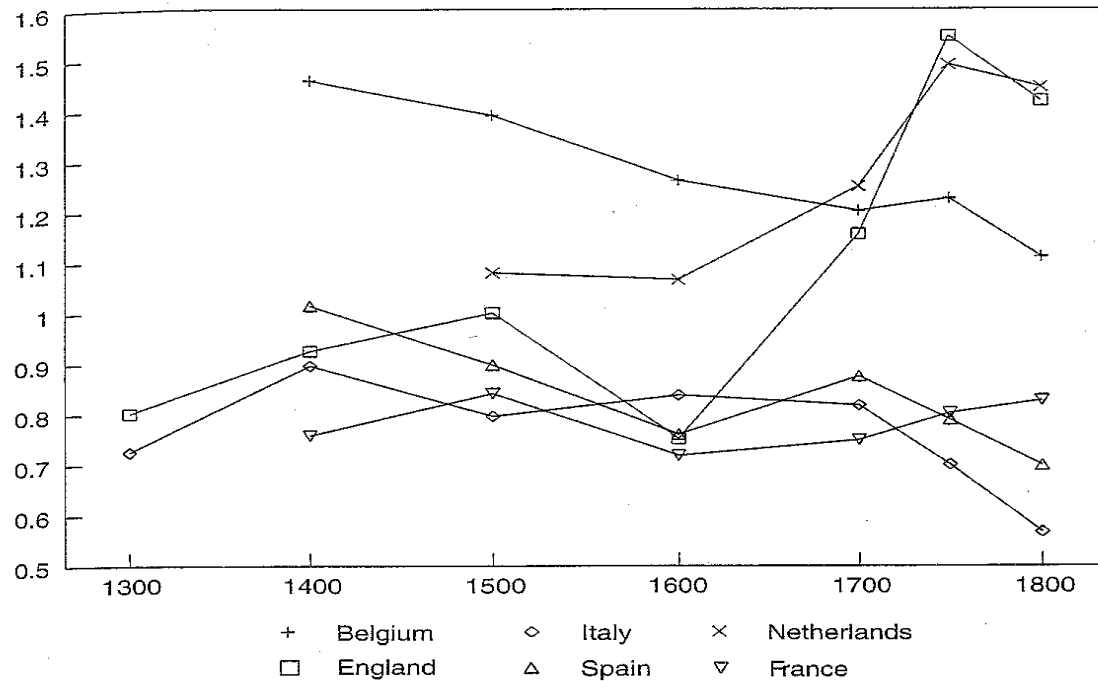|		
+ Belgium	◇ Italy	× Netherlands
□ England	△ Spain	▽ France

Figure 3. *Output per worker in agriculture, 1300–1800 (England in 1500 = 1.00).*

2. Critical analysis of existing data

- International comparison of Blomme's data (Broadberry et al., 2011)
  - Large contrast with Allen's (2000, 2009) results
  - Literature: Golden age of Antwerp in 16th century, e.g. Malanima, 2009; Van der Wee, 1963
  - Hypothesis: Blomme's physical product per capita for the 16th century is too low, because his growth rates for the subsequent centuries are too high.

2. Critical analysis of existing data

- Comparison with detailed studies about the Southern Low Countries supports hypothesis
  - Annual growth rate of livestock production, 1760-1812 (in 1812 prices)

Blomme (1994)	Dejongh (1999)
0,35	-0,11

2. Critical analysis of existing data

- Dejongh's PhD dissertation on agricultural output in the second half of the 18th century is based on a careful analysis of a wide range of sources

- Confirms the results of Vandenbroeke, 1975

- Blomme overestimated growth rate of livestock production because he ignored that in periods of rapid population growth the production of fodder stagnates or even declines

2. Critical analysis of existing data

- Annual growth rate of crop production in the 17th century

	Blomme (1994)	Degryse (2006)
1600-1650	0,34	0,55
1650-1700	0,20	-0,01

2. Critical analysis of existing data

- Blomme underestimated the volatility of crop production
  - He used per capita consumption of grains for bread as an indicator
- Industry: Food processing is severely underweighted, only 2 to 4% of total industrial output

3. An alternative approach

- Broader in scope
  - Not just Flanders & Brabant, but the Southern Low Countries – includes Walloon provinces.
  - Include the tertiary sector
- Starting year = 1846
  - Population, agricultural and industrial censuses
  - Agriculture: Goossens, 1992
  - Industry: Census; Briavoinne, 1839; Mommens, 1993; Pluymers, 1992

3. An alternative approach

- Tertiary sector
    - Transport: Van der Herten, 2004
    - Ports & merchant shipping: Van Isacker, 1966; Loyen, 2008
    - Personal & domestic services: Segers, 2003
    - Finance: Annual reports Société Générale
    - Retail & wholesale: Hannes, 1976, 1981, Liste des patentables, 1833
    - Government: Clement, 2000
    - Housing services: Duchêne & Segers, 2000

3. An alternative approach

In % of GDP	UK (1841)	SLC/BE (1846)
Agriculture	**24,3**	**36,2**
Industry	**34,1**	**33,1**
Mining & quarrying	7,4	13,5
Food processing	25,4	19,8
Textiles & clothing	40,6	33,1
Metal	6,8	8,6
Building	9,9	7,3
Services	**41,7**	**30,8**

3. An alternative approach

- Agricultural output, 1510-1846
  - Grain production is derived from information on land use and yields (e.g. tithes)
  - Potatoes: becomes only important from late 18th century onwards
  - Livestock production: estimates of per capita meat consumption
  - Industrial crops: flax output derived from linen production statistics

3. An alternative approach

Annual output growth in agriculture, constant prices in%		
	Cereals	Total
1510-1560	0,12	0,23
1560-1610	-0,18	-0,18
1610-1660	0,52	0,55
1660-1710	-0,05	0,06
1710-1760	0,31	0,36
1760-1812	0,28	0,31
1812-1846	0,92	0,85

3. An alternative approach

- Industrial output, 1510-1846
  - Linen & woollen industry: number of pieces sold on various markets.
  - Food processing: beer consumption per capita
  - Building: brick production
  - Mining: partial production figures and qualitative information
  - From 1760 the number of sectors covered increases rapidly

3. An alternative approach

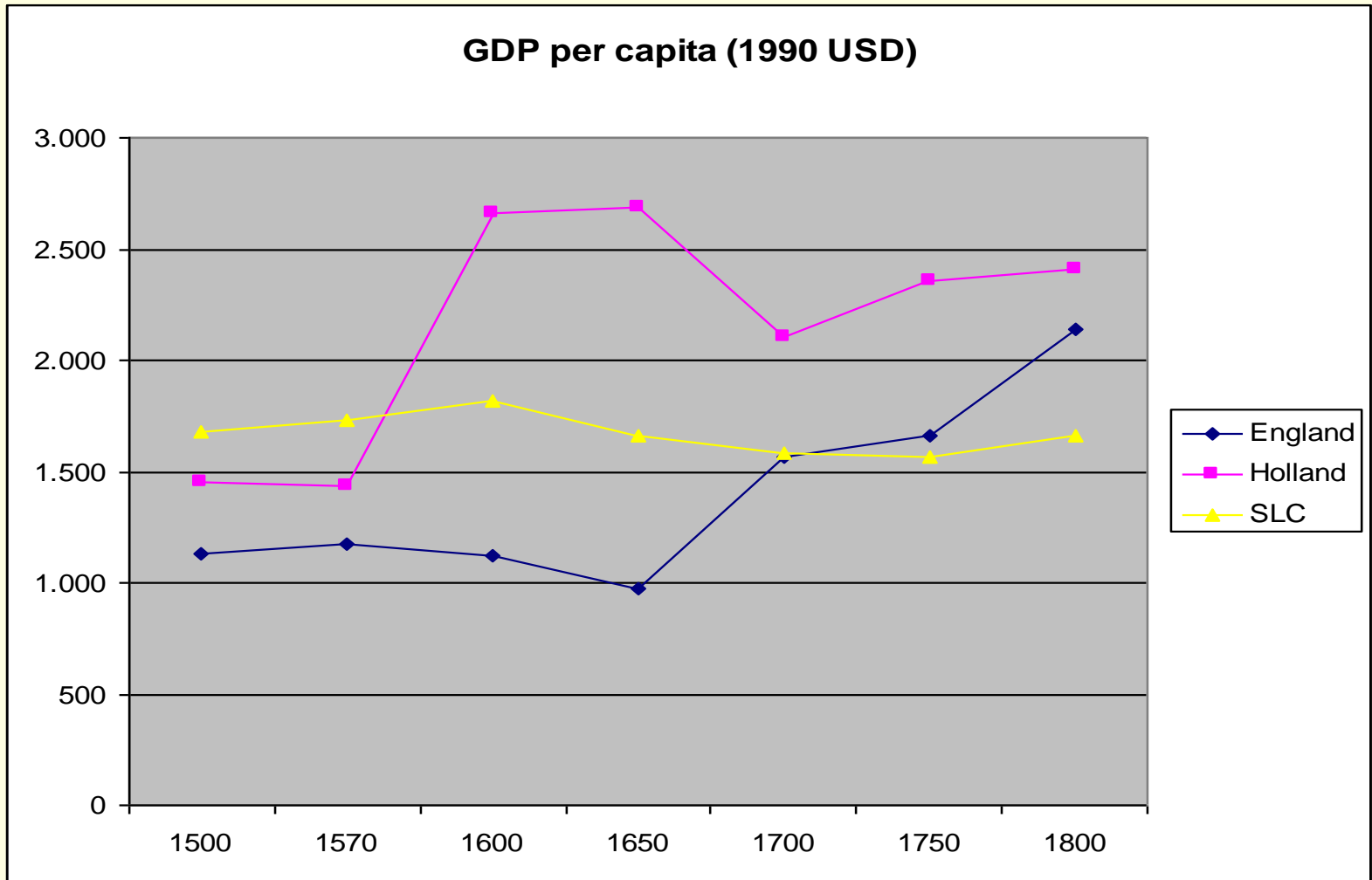| Annual output growth in industry, constant prices in %			
	Woollen	Linnen	Total
1510-1560	0,98	1,40	0,94
1560-1610	-0,05	-0,53	-0,33
1610-1660	-1,10	0,79	0,00
1660-1710	-1,98	0,32	-0,18
1710-1760	0,20	0,66	0,51
1760-1812	1,23	0,92	0,99
1812-1846	2,42	-0,05	1,99

3. An alternative approach

- Tertiary output, 1510-1846
  - Transport: only available for post-1710 period
  - Retail & wholesale: 1/3 volume growth agriculture; 2/3 idem industry.
  - Public expenditure: tax receipts
  - Housing services: number of households (1760-1846) and population growth (1510-1760)
  - Other services: urban population (> 5000 inh.)

4. Results

	Annual growth rate		
	Real GDP	Population	GDP/head
1510-1560	0,60	0,54	0,06
1560-1610	-0,32	-0,43	0,10
1610-1660	0,38	0,57	-0,19
1660-1710	0,01	0,11	-0,10
1710-1760	0,34	0,36	-0,02
1760-1812	0,69	0,53	0,16
1812-1846	1,31	0,91	0,40

4. Results

GDP per capita (1990 USD)

Legend: England, Holland, SLC

5. Conclusion

- New estimates are more in line with literature: same level as Italy in 1500.

- Antwerp's golden age in 16th century does show up now, but threat of rapid population growth (Thys & Soly, 1979)

- Failed revolt against Spain at the end of 16th century leads to massive emigration

- Followed by a strong economic recovery around 1600

5. Conclusion

- From the second quarter of the 17th century collapse of traditional export oriented urban industries

  - Mercantilist policies in neighbouring countries
  - France becomes the new centre of fashion in Europe
  - Wars of Louis XIV

- First decades 18th century: de-urbanization

5. Conclusion

- Linen industry flourishes on the countryside (Mendels: proto-industry)

- Strong growth of coal mining in 18th century announces industrial revolution