The economic growth of Portugal, 1500-1850: Is there an "iberian model"?

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Como profesor y como orador académico ha mostrado siempre el Sr. Figuerola muy altas cualidades. Concibe con claridad las ideas, y del mismo tenor las expresa. No se agolpan a su cerebro introduciendo turbaciones ni desórdenes; proceden todas en correcta formación y están dispuestas a salir a la primera señal. No hay monotonía en sus discursos, aunque arrastre bastante la dicción, porque en todo tiempo y lugar su palabra es la expresión de un pensamiento vigoroso

Opening thoughts

- Traditionally, Spain and Portugal have lived **with their backs turned to each other** (except when fighting or engaging in dynastic alliances – pop say)

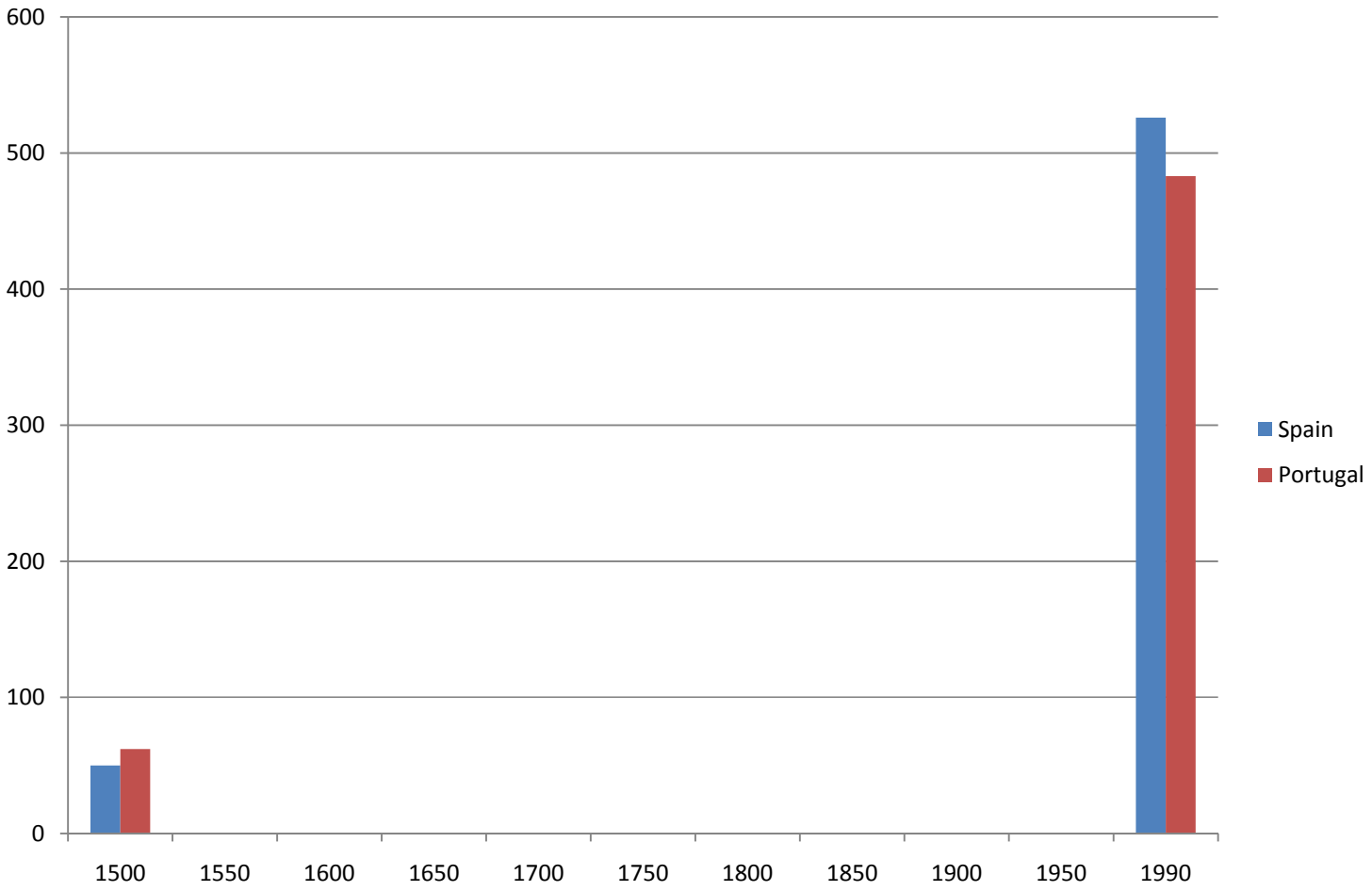
- **Our economic historians and their histories** have not escaped this rule

- **Two facets they have in common**:

1. A profoundly pessimistic view of national economic performance; this is founded on comparisons with the advanced economies (Britain or USA);
2. A lack of interest in looking for answers in the experiences of closer and more similar countries

- Are Spain and Portugal very different? Have their paths often diverged over the last 600 years? If not, why? The points of arrival and departure are known: **what about the paths followed in between**?

GDP pc: Spain and Portugal, 1500-1990



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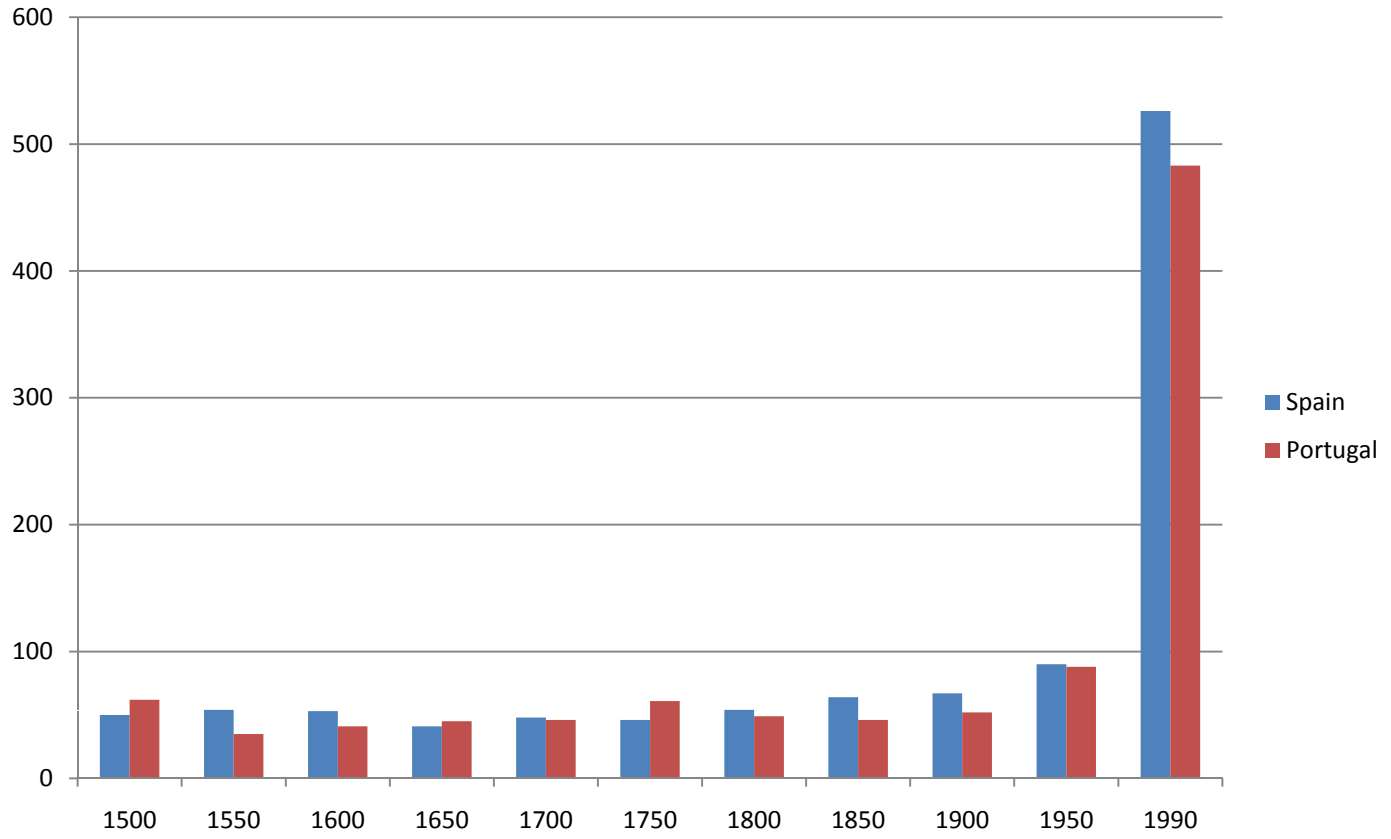


Objectives

- This lecture is a **modest attempt** to bring closer together these two economic historiographies, mostly from the Portuguese angle
- Good knowledge of these 2 economies in the 19th and 20th centuries: so we concentrate here on the shadowy but critical reality of an earlier period **– 1500-1850**
- The starting point is a recent effort to evaluate Portugal's GDP and GDP pc during these years; **this is the 1st part of my lecture**
- **The 2nd part:** to compare these results with the excellent Spanish benchmark provided by Alvarez-Nogal and Prados de la Escosura (2013)
- **Our aim is a trifle ambitious:** is there an **"Iberian model"** which can help explain patterns of long-term economic growth in our **Peninsula?**

The first step

- Much work recently on quantifying the macroeconomic performance of **Early** Modern nations: **several justifications**

1. It meets the concern to seek the roots of the **Industrial Revolution** in a very long run analysis, going back many centuries

2. It allows new empirical tests of **Unified Growth Theory** (Galor, 2000), a major field in **Growth Economics**, which has been excessively dependent on a single case study - **Britain**

3. It contributes a major debate in Economic History – **on the Great and Little Divergences** – remember the Figuerola lecture in 2012 by Steve Broadberry

4. **Very important:** quantifying GDP pc in the long run enables us to integrate the **multitude of micro studies** which are **difficult to interpret** outside a macroeconomic framework

Motivation: Why Portugal?

- At present, 6 estimates of long run national GDP (HL, GB, SP, IT, SW, GY); 3 more on the way (DK, FIN, NY); **do we need Portugal (PT) too?**

- **Specific reasons:**

1. One of cradles of Western overseas expansion: **what is the connexion?**

2. A case of long run stagnation or decline - **more representative** of pre-1800 performances than NL or GB

3. PT often (e.g. Maddison) identified with SP or IT – were they really so alike as **often (too often?)** assumed ? **The "Iberian model" question!**

The Portuguese economy, 1500-1850: State of the art

1. For most economic historians, Pt had a stagnant economy, no capacity for growth. **Why?? 3 main reasons**

2. **Semi-peripheral** status in capitalist world-system (Wallerstein) - stunted Portugal's development

3. Low-productivity **agriculture**: absence of technological change; incomplete property rights distorted incentives and discouraged investment

4. **Colonial empire:** drained population; prevented agricultural improvement; encouraged bloated, parasitic tertiary; prevented emergence of a national bourgeoisie

Estimating Portugal's Early Modern GDP (I)

The method:

- Standard, **indirect output** approach in two steps:

1. **Agricultural output** is derived from **food consumption**; problem of estimating income (wages, skills and rents)

2. **Non-agricultural output**: backcast from 1850 benchmark; instead of tying non-agriculture to urbanization we use a sliding **inter-sectoral productivity gap**

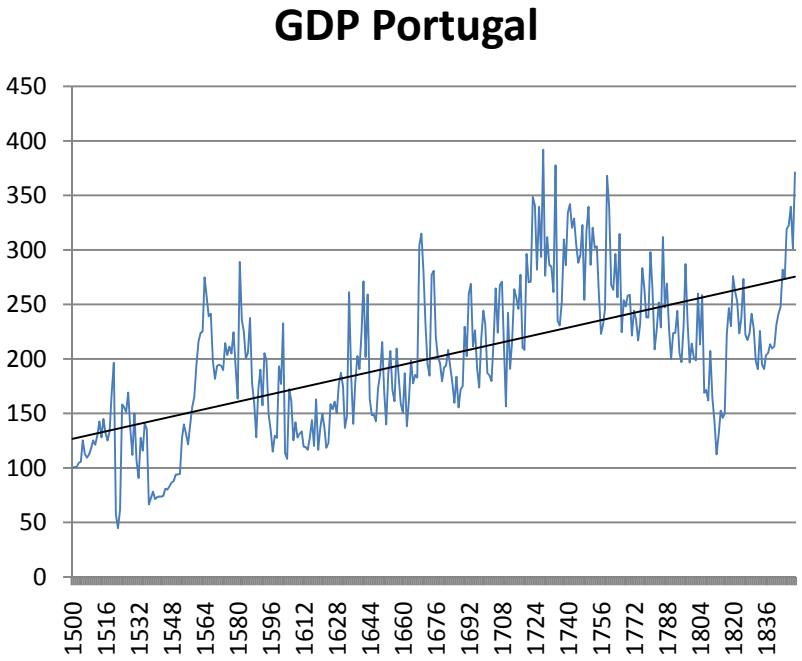
Estimating Portugal's Early Modern GDP (II)

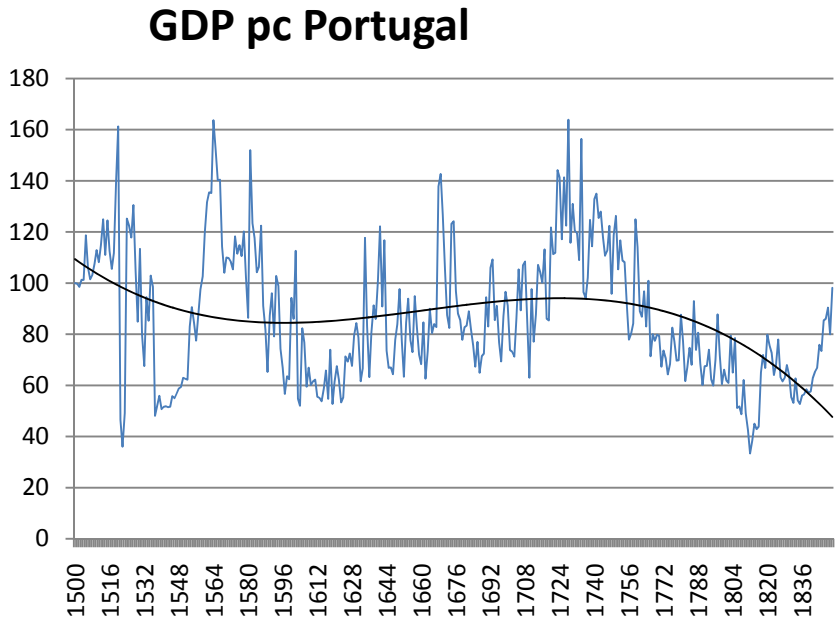
- **The raw materials**:
- a new data base in construction over the last 5 years with prices, wages and rents: **coverage of data**
- **Focus on Lisbon** – the issue of the "representativity" of the central city
- Population and occupational structure (*décima*)

The results, 1500-1850

- Portuguese economy f**ar from stagnant**: overall increase = 321 %
- But, population growth was **more vigorous**;

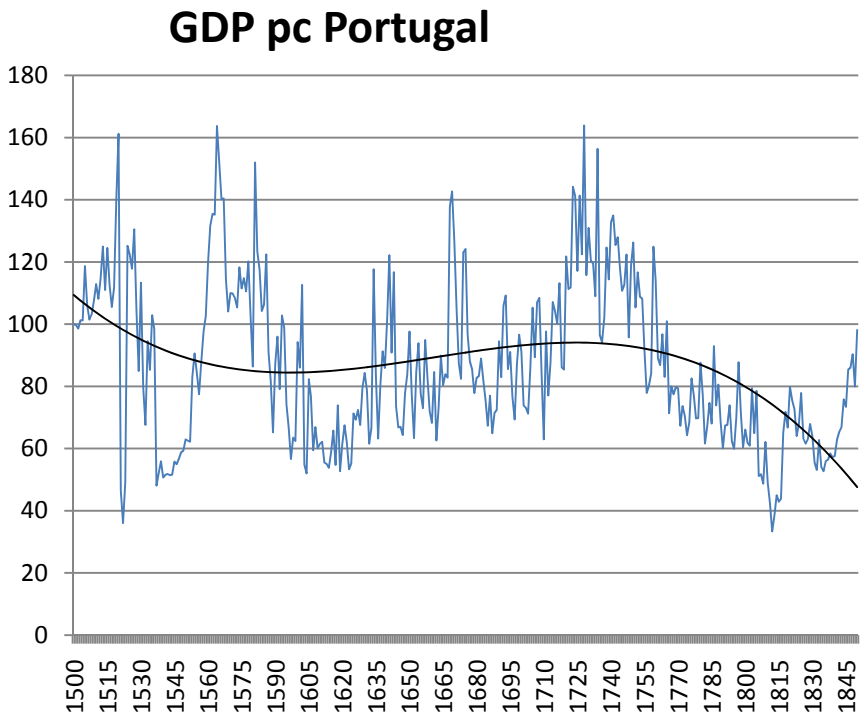
- GDP pc: mild downward very long run trend – 1850=85, 1500=100;
- **Traditional historiography is right! Maddison is wrong!!**



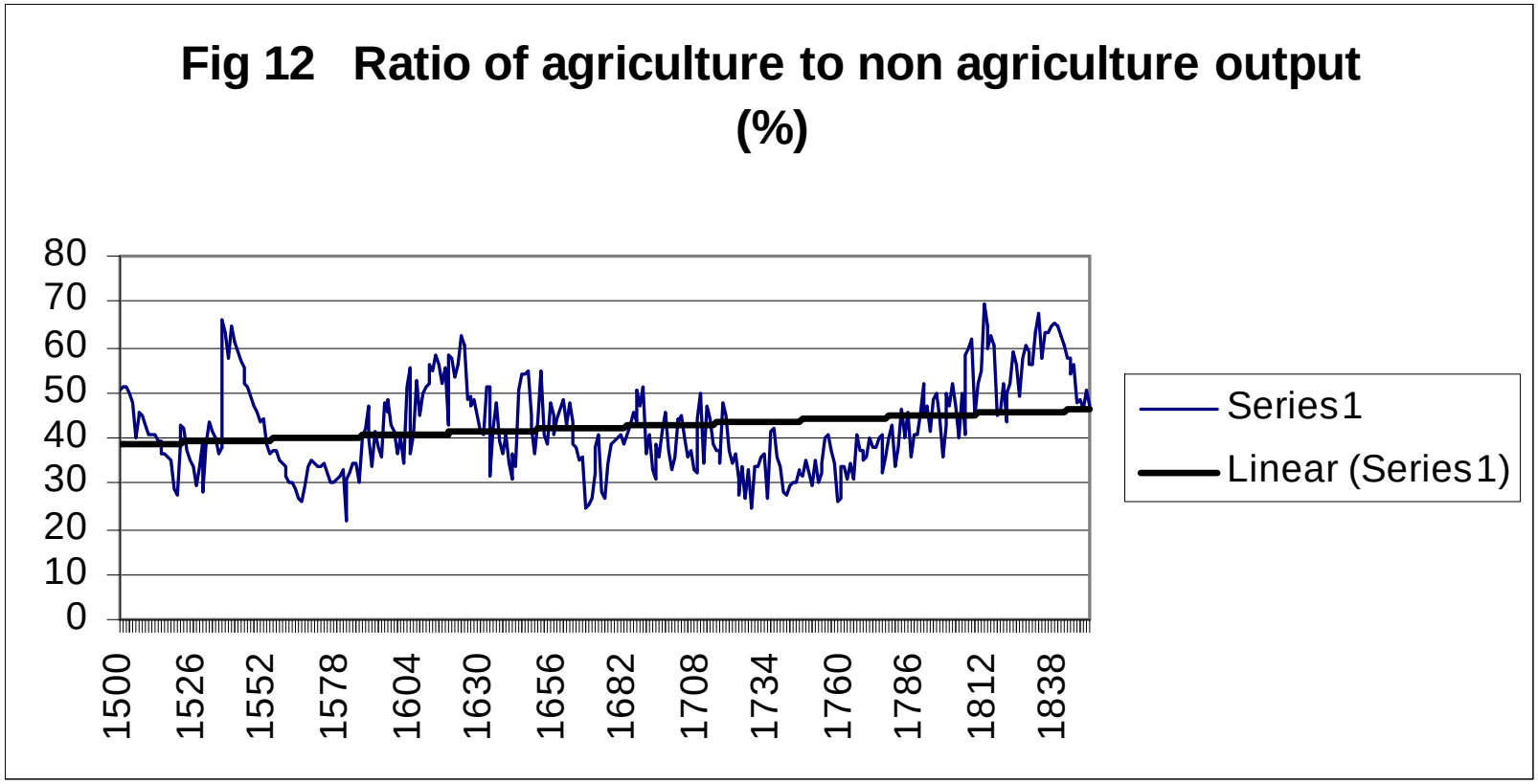


The profile of a 'typical' non-core Early Modern European country (cf. High-growth Holland - HL)

- Both had **growth episodes**: HL's were **persistent**; PT had clear **swings** of growth and recession
- Structural change; HL it was considerable; PT: **hardly any** ;
- Both had productivity increases: PT's apparently **concentrated** in agriculture, HL's in all sectors;
- Role of Middle Ages/ Black Death; (see fig)



Portugal: Structural change



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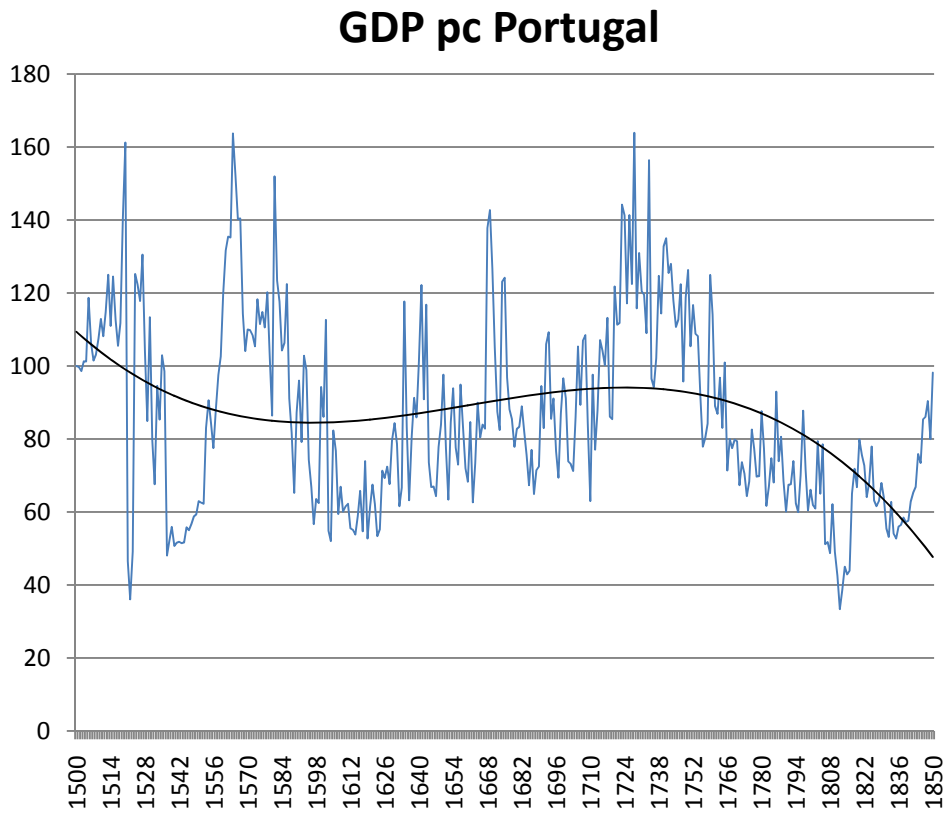
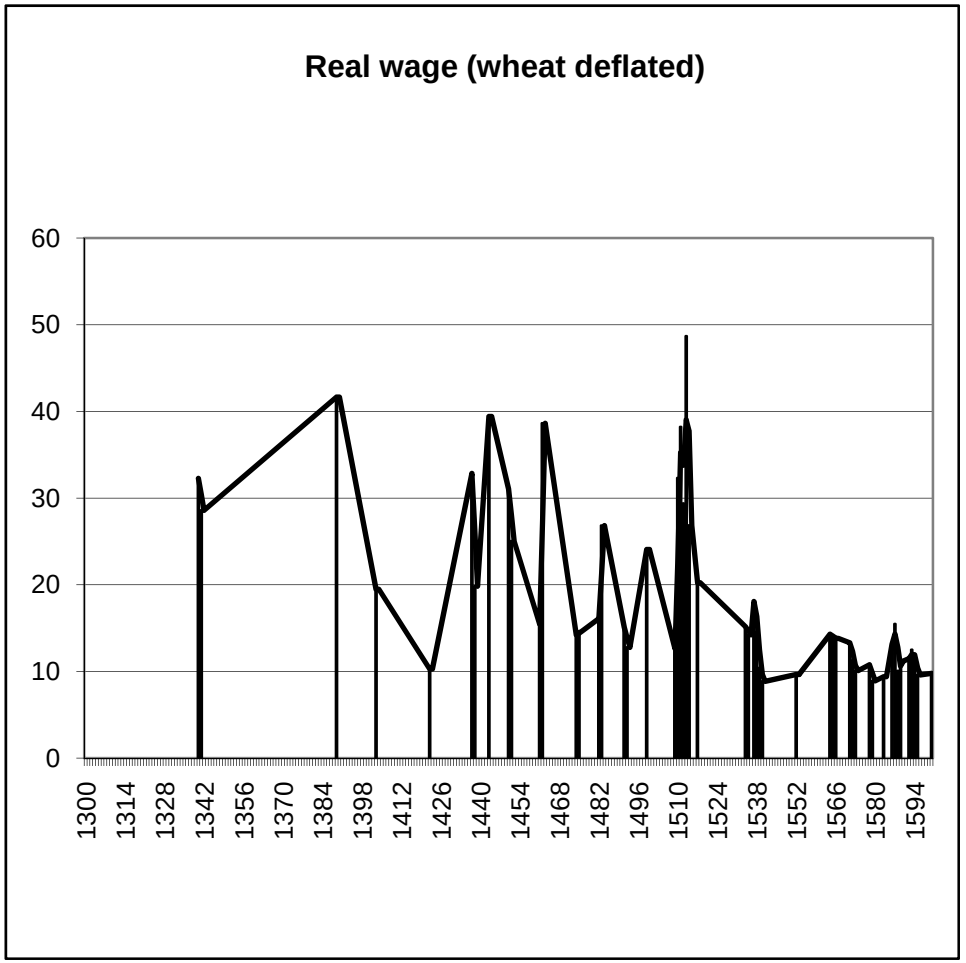


Medieval mystery?

- We can only consider real wages as a proxy
- Pre-BD level of income was high – higher than in all of the 16c.
- Immediate post Black Death strong increase (33%) due pop fall (extent unknown)
- Followed by **long real wage decline** in 15c. with wages in 1500=1347; population recovery: 1520= 1347
- HL's GDP pc had **doubled** by early 16 c. compared to pre-BD
- The 15 c. **wiped out for Pt** the income advantage of the pre-BD;
- Pt's level was by 16 c. below the pre-BD medieval level**; probably in 1340 > Sp**



Two questions about the Portuguese economy, 1500-1850

- **Can a Malthusian model explain satisfactorily Portugal's economic history? YES**

- **Was Portugal an outlier among the majority of European nations? No**

The (simplified) Malthusian regime

- In a **classical MR**, economic and demographic outcomes are **purely** determined by economic forces; the economy depends on a fixed factor of production **(land)**
- **In such pre-industrial economies**, when the pop level is low, Y pc is high because labour productivity is high;
- But as pop rises, Y pc gradually falls owing to DMR;
- ultimtely, **demographic checks** kick-in and the equilibrium **subsistence level** is reached; and so on…
- **Productivity shocks can exist too,** but the gains are always dissipated by population growth – higher Y pc, pop growth, downward pressure on the real wage
- In a **classical MR,** sustained (per capita) economic growth is not possible; in the long run welfare converges to a steady state at the subsistence level;

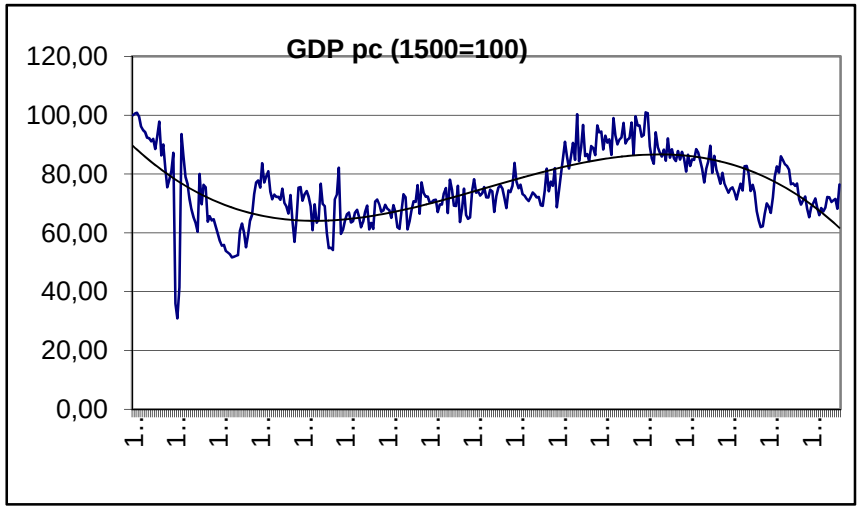
Does MR explain Portugal's economic history?

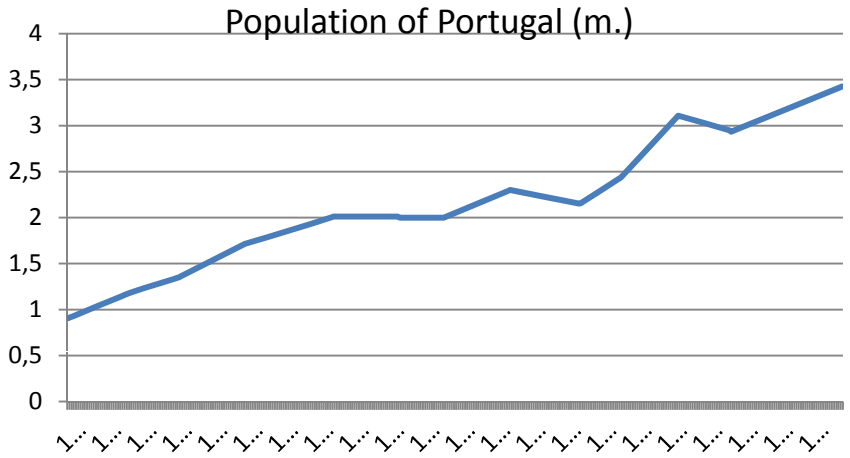
- **16th c.** : strong pop increase (0.7%), land clearances but stagnant technology;
- diminishing returns; GDP pc falls dramatically (-0.5% p.a.)

- **1600 to 1750**: pop growth much slower (0.13 vs 0.70%); long rise real wage and GDP pc (0,5%); technological + institutional shocks; colonial boom;

- **1750-1850**: pop growth (0,4%) responds to earlier high Y pc; technological progress and positive institutions exhausted? ; empire runs out; GDP pc declines for a century (-0.43%)

- Malthusian but **with modifications?** We return to this later





Two questions about the Portuguese economy, 1500-1850

- Can the Malthusian model explain Portugal's economic history? It does but the fit of model is not perfect

- Was Portugal an outlier among the majority of European nations? No

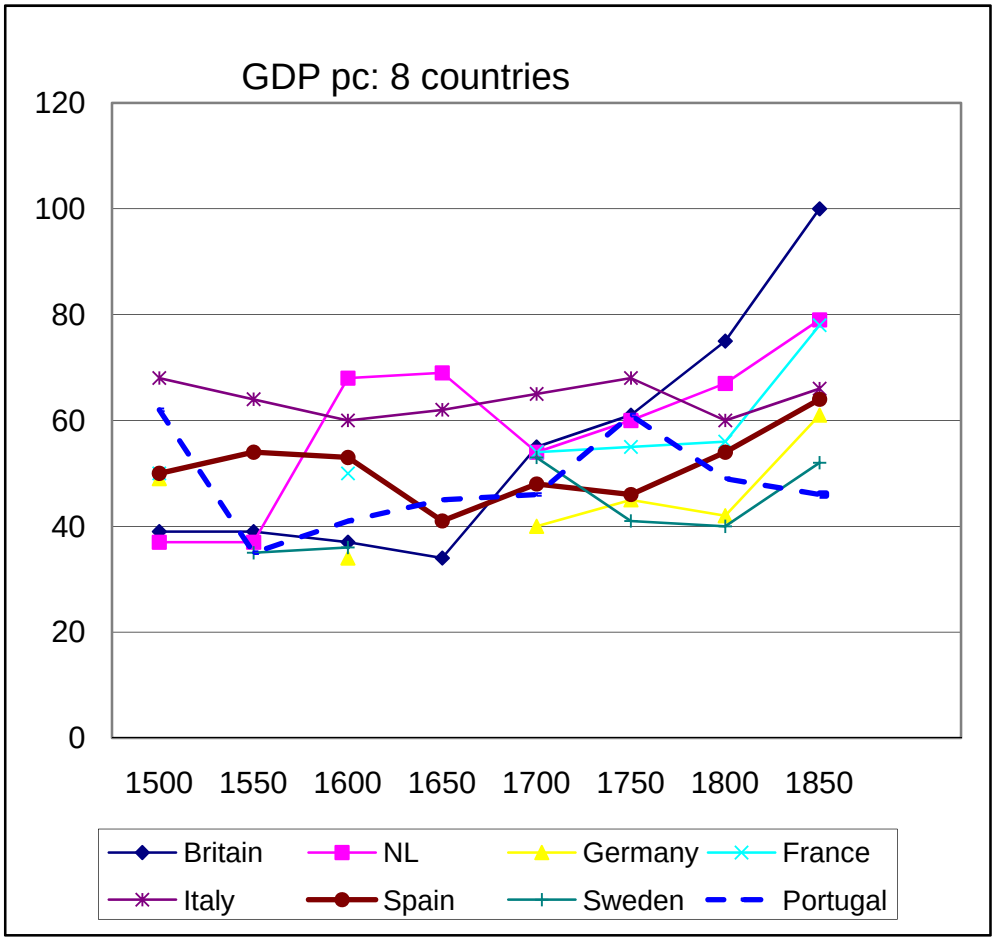
Was Portugal an outlier among European nations?

1. Portugal was a **“leader”** in early 16c. (and therefore a precocious colonizer?)!

2. Performance in long run not outstanding but **“normal”** among the majority of nations

3. 1750-1850, Portugal gets **detached from the rest of Europe**

4. **Presumably,** it fails to absorb the impact of 19c. MEG and globalization;



We turn now to part II of this lecture

- What **points in common** do we detect in the Spanish and the Portuguese economies of the pre-industrial era?

- Did the two countries have **similar cycles** ?

- What **determined these cycles** and how similar were they?

- In other words, were these 2 countries' economies, though barely integrated, like one?

Which structural features of the Iberian peninsula were relevant for growth patterns, 15 c.-19 c.?

1. **A common early history** – **Reconquista** : abundant land, free labour, strong towns, limited central power

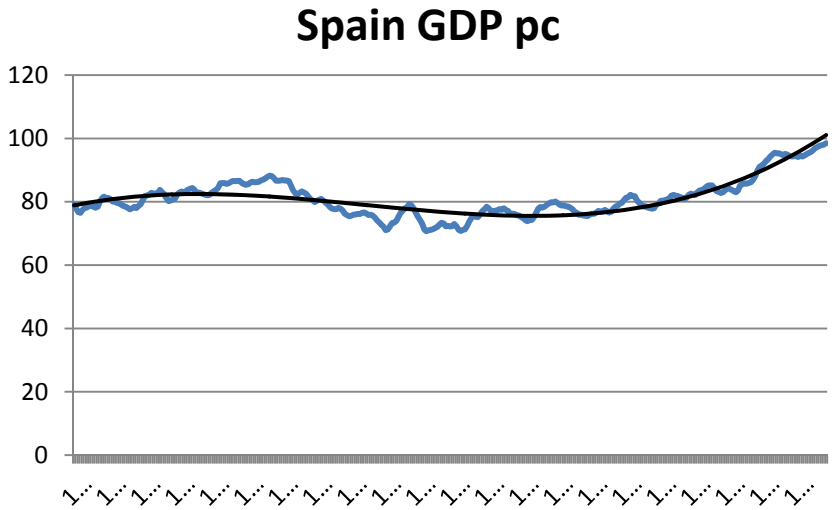
2. **Geography**: difficult internal communications, arid environment, opportunities for Medit. Agriculture and for international trade specialization in them

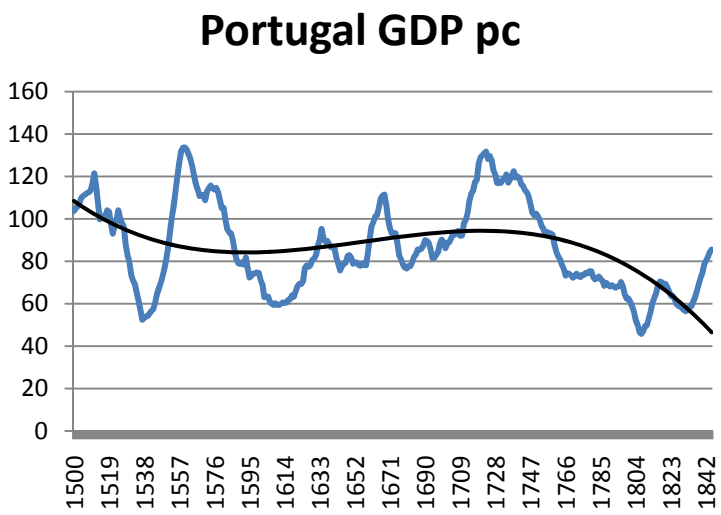
3. **A precocious seaborne empire**: gains to home country from a mercantilistic system based on forced occupation overseas

4. **Institutional framework**: state power centralised but constrained; peculiar forms of access to land ownership and use, with strong negative effects on efficiency

What followed? Two very (dis)similar secular macroeconomic profiles

- 3 **similar** cycles over 1500-1850; but **non-coterminous,** nor of **same length**
- Different from **traditional** periodization – eg. **Sp**
- **Long run outcomes:** over 350 years, **Sp** grew slightly, **Pt** declined slightly
- **Hypothesis**: both economies **Malthusian;** with **common origins** and similar **subsistence** levels (?)
- Both subject to large variety of **idiosyncratic shocks**
- The latter produced significant economic divergences and therefore **different histories**
- **It is the latter we need to explain**





The Malthusian model in Iberia: swings and deviances

(rates of change)

Portugal (Pt)

1500-1600	Population	0.7%
	GDP pc	-0.5%
	real wage	-0.7%
1600-1750	Population	0.1%
	GDP pc	0.5%
	real wage	0.4%
1750-1850	Population	0.4%
	GDP pc	-0,4%
	real wage	-0.4%

Spain (Sp)

1500-1590	Population	0.6%
	GDP pc	0.1%
	real wage	-0.5%
1590-1680	Population	0.2%
	GDP pc	-0.2%
	real wage	-0.1%
1680-1850	Population	0,5%
	GDP pc	0.2%
	real wage	0.0%

Iberia's first cycle: 15th -16th centuries

- The CAN and LPE (2013)'s challenge: **Sp in 14c.-15c.** was exceptional: sparse population; pastoral and trade oriented economy; **high wage and food consumption**; strong urban sector **= positive for growth**

- **Sp** circa 1500 therefore **wealthy** and **powerful enough** to build a seaborne empire and reap its benefits (?)

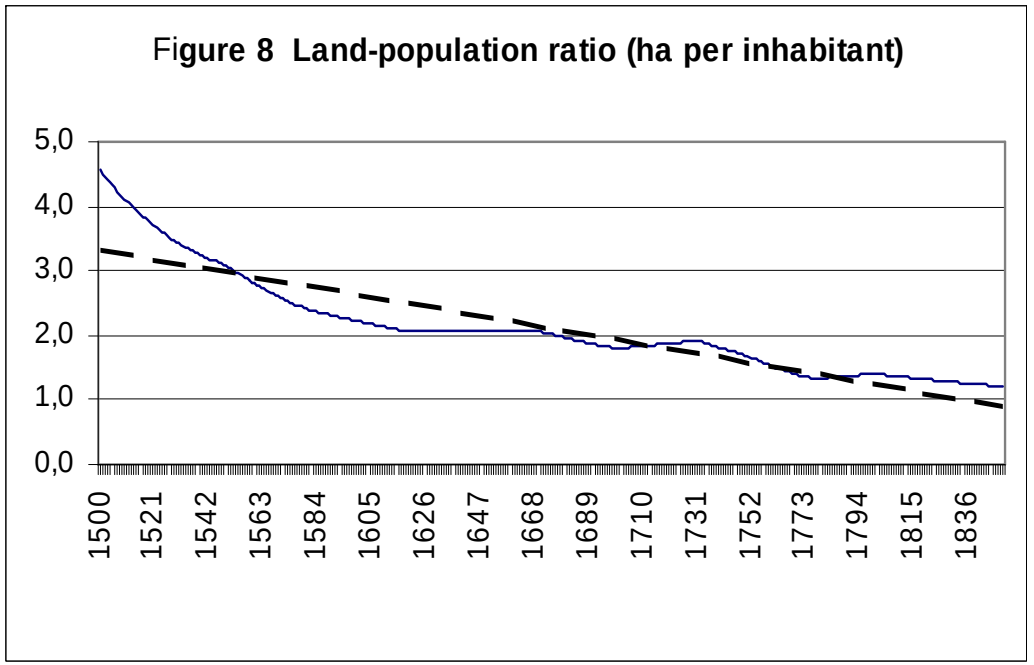
- However, by 1600, **sustained pop. growth** (0,6%?) caused **shift to a new regime**: high pop density, arable agriculture, low food consumption and low wages **- they became hallmarks of this 2 countries**

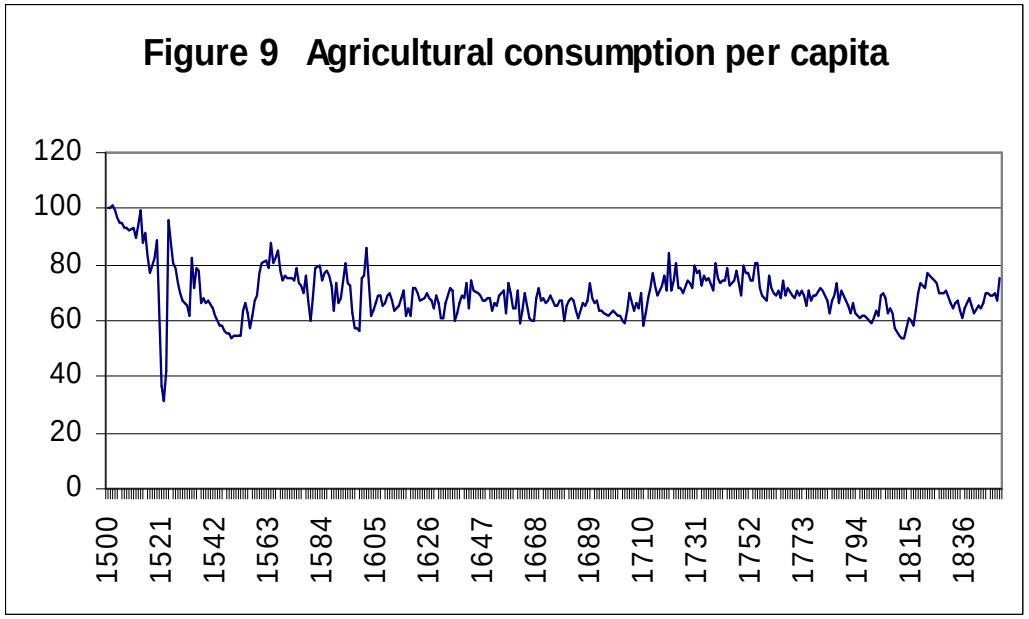
- 1500-1600 real wages **fell** but GDP pc **rose;** WHY? an "industrious revolution"? a massive income distribution shift? technological shocks**?** Urban sector recovery?

- Why did these effects end circa 1600 and allow the classical MR to reassert itself?

Does this model fit Portugal?

- **PT** had same **"frontier" economy** coming from 14 c. and **BD**
- shift to another regime in 16c.; **rapid pop growth–** like **Sp**
- Land-population ratio halved, 1500-1600; **agric productivity** fell despite land clearances
- Real wages fell **40-50 %**
- food consumption fell **40%,** but then stabilized**: is this the subsistence level?**
- **A canonical Malthusian process – no deviation from model!**





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Iberia's 2nd cycle : divergence again

- 1600-1760 - **PT** had a sustained **rise** in GDP pc and a **slowdown** in population; **PT regained leadership of the non-core group by 1750!**

- **Sp**, 1590-1680: sustained per capita **income decline** plus **slow population** growth; "little agricultural improvement and lack of investment by Church and Nobility"; vine/maize expanded but small scale

- **Determinants?** 1) **PT re-organized its agricultural** sector; **SP** did not 2) **PT colonial feedback** began to be **significant**; not in **Sp**

- **How did PT raise agricultural productivity? 1)**The usual land clearances and 2) continuous shifts from pastoral to arable production; but **mainly...**

Share (per cent) of the real wage attributable to empire, 1500-1800.

	Portugal		Spain		England	Holland	France
	with gold	without gold	with gold and silver	Without gold and silver			
1500	**0.9**	0.8	**0.4**	0	0	0	0
1600	**4.3**	4.2	**1.2**	0.3	0	0	0
1700	**7.4**	6.9	**1.4**	0.3	2.3	3.7	0.3
1750	**17.0**	13.0	**1.7**	0.8	2.9	6.5	0.1
1800	**22.8**	18.4	**1.9**	0.9	16.1	5.4	0

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The great agricultural "surge"in PT: wine and maize

- 2 major changes: 1) expansion of **commercialized wine** (200% - 1700-1770) 2) the "**maize revolution**"

- Both changes were **land and labour** enhancing (fig)

- Both required significant investments and coordination in field management, specialization, technical improvement and, in case of wine, marketing and trade

- **Special conditions for the success of these shocks**:

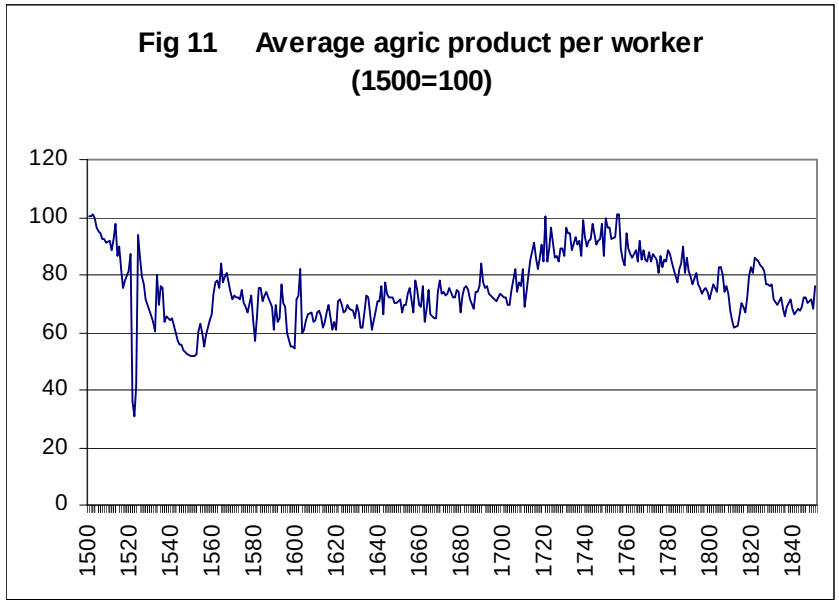
1) maize (millet) and wine well known to PT cultivators: a gentle learning curve

2) Land//water abundant (half country suitable for maize)

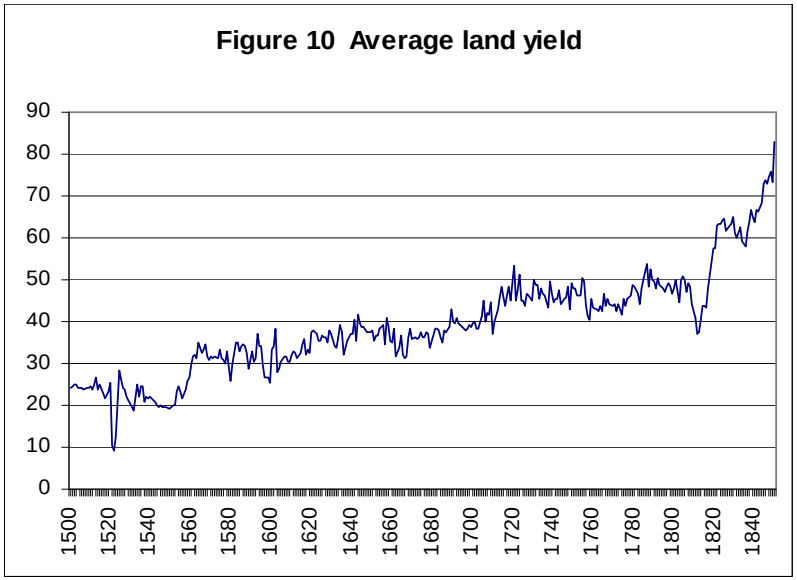
3) favourable institutional conditions for latter: Anglo-Portuguese political/trade partnership gave PT privileged access to British wine market (**Methuen)**

Rise of agricultural efficiency in Portugal

Agricultural output per worker



Land yield



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- Both required significant investments (**by whom?**) and coordination in field management, specialization, technical improvement and, in case of wine, marketing and trade

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John Methuen (1650-1706)

(father of the treaty, inspirer of Ricardo)

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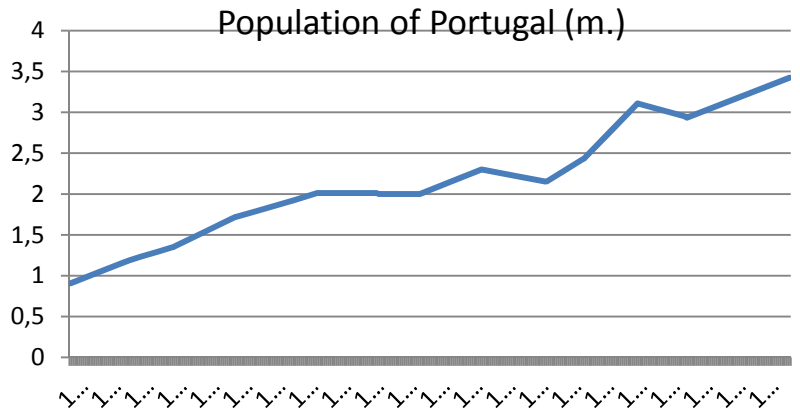
Iberia's third cycle, 1750-1850: the begining of PT's modern "backwardness"

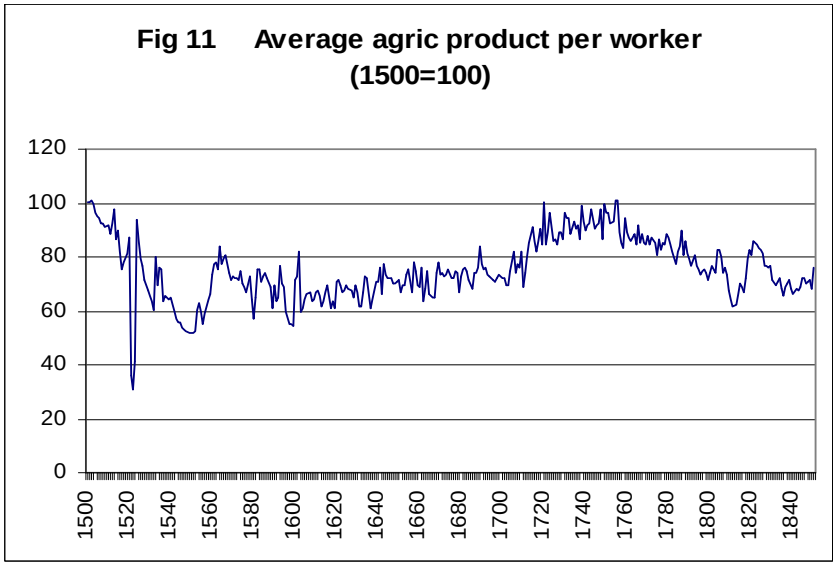
- Othe eve of Modern Economic Growth, GDP pc back to 16c, **PT** falls to tail of Europe in 1850. **Why?**

- **Malthusian explanation**: pop. growth rises strongly and land/labour ratio falls

- Agricult. productivity falls and high pre-1750 real wage is srongly eroded

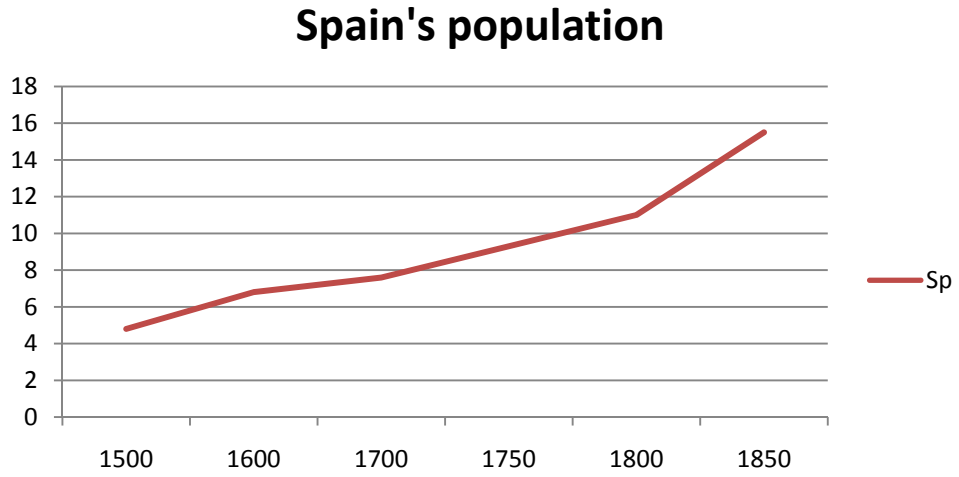
- **But 3 non-Malthusian shocks**: 1) loss of privileges in BR wine market 2) decline in availability of suitable maize land 3) loss privileged colonial market - 20 % of GDP after 1800.





Iberia's third cycle, 1680-1850: a puzzling but deviant growth in Sp?

- High pop growth but no overall sustained productivity decline
- Improvements in various sectors (pastoral; wine, fruit, rice) but too dispersed geographically or too limited?
- No signs of strong non-Maltusian shocks to counter rapid pop. increase
- **Exceptions:** release of large amounts municipal land, new Liberal institutions. **Significant productivity effect?**



Final thoughts

- The periodization of **Sp** and **PT**'s Early Modern economic histories: a case of "variations on a theme by Malthus"…
- **Sp** and **Pt** fit into a single model, but not an "Iberian" one
- The model is in fact the Maltusian model which prevailed all over Europe
- What made these 2 economic profiles both different and alike were common idiosynchratic shocks, differently distributed over time
- some were clearly exogenous (natural endowments, colonial location, geostrategic factor), others probably not (economic inequality, differences in institutions)

Final questions

- Why did respective levels of GDP pc not diverge in the long run?
- A question of similarity of endowment (a very difficult variable to quantify)?
- Was it because the Malthusian “subsistence levels” of **Sp** and **Pt** were the same, something likely but that we really do not know yet?

Thank you!

Fig 2 Inter-sectoral productivity gaps (p): agriculture vs non-agriculture

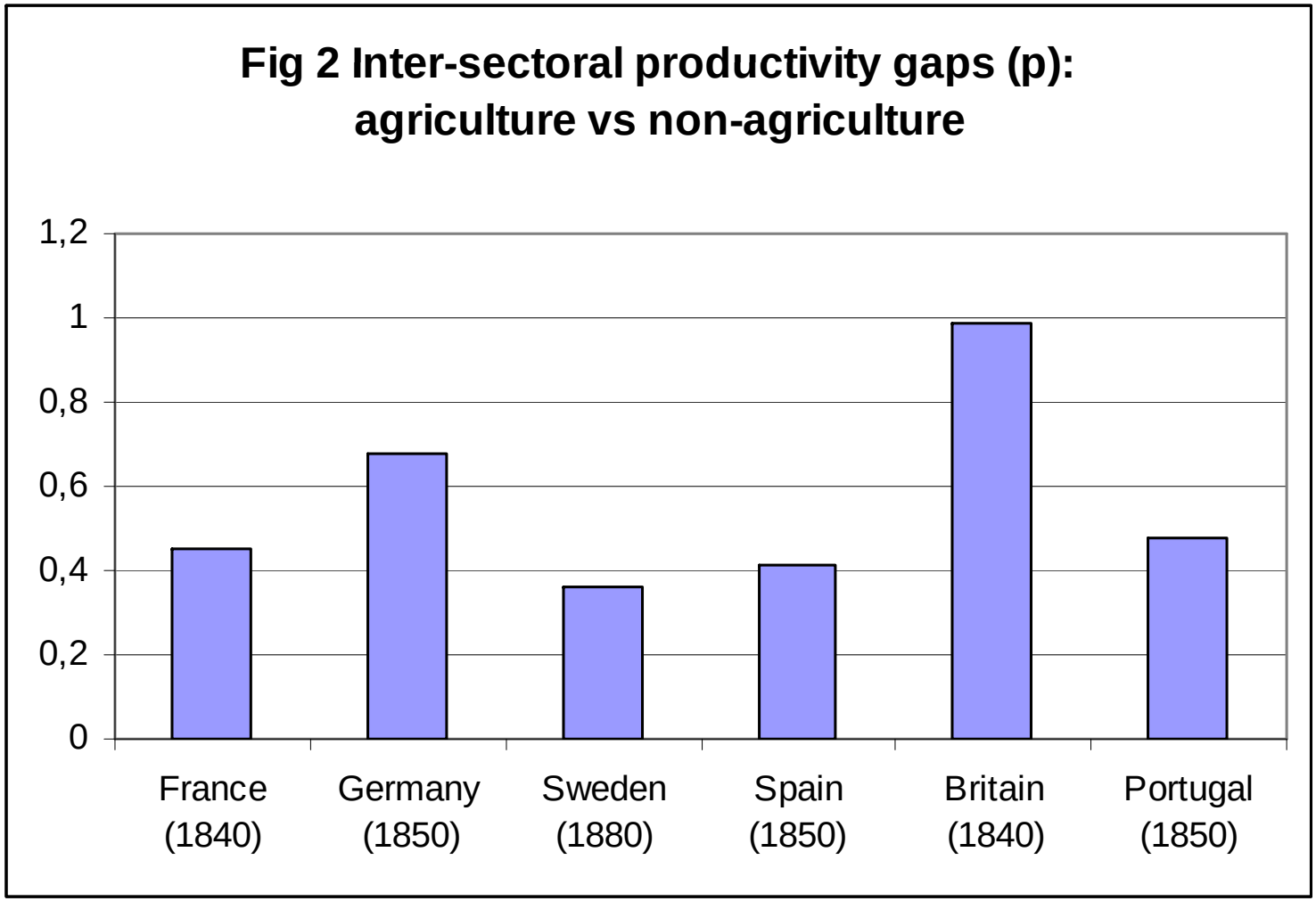
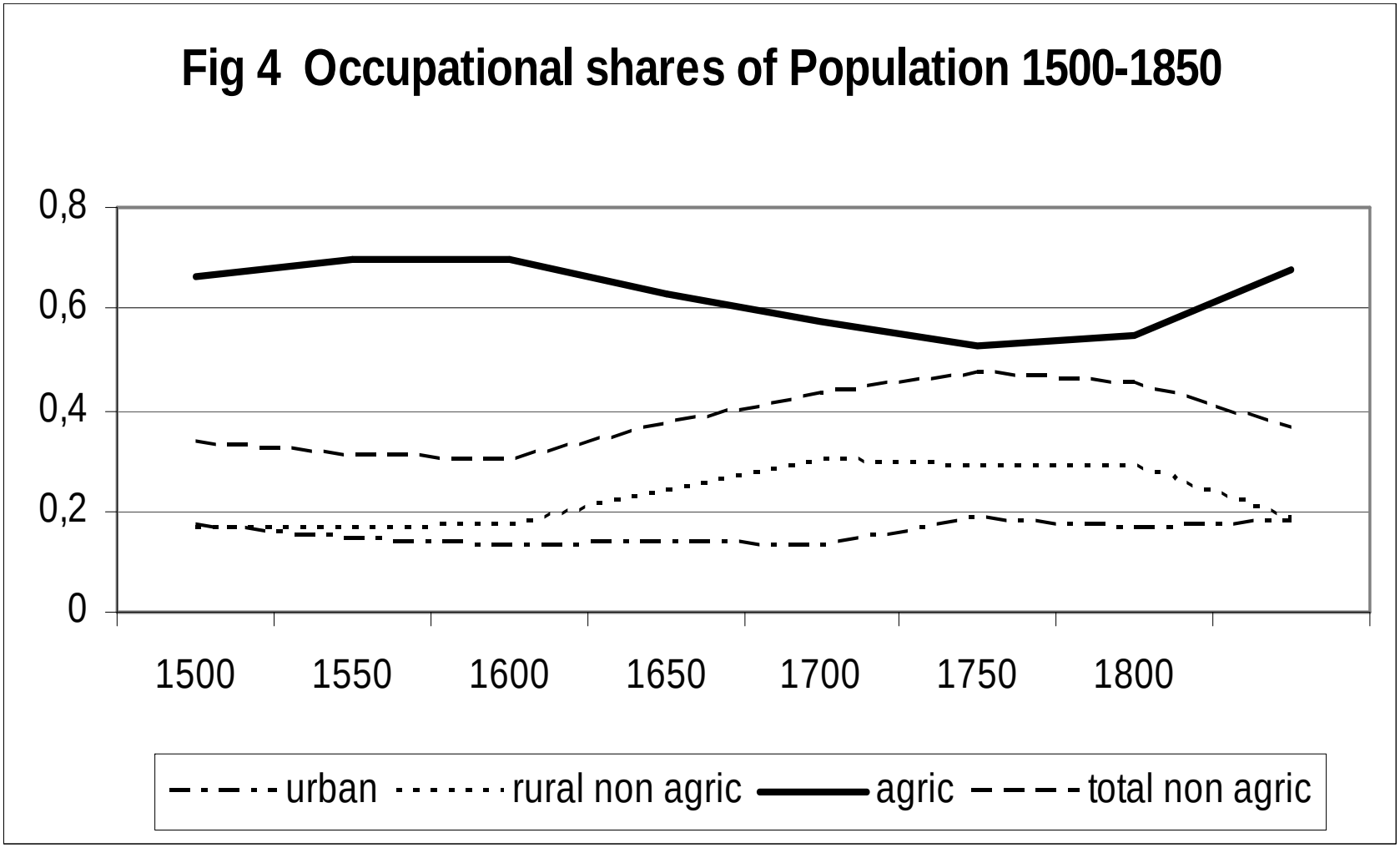
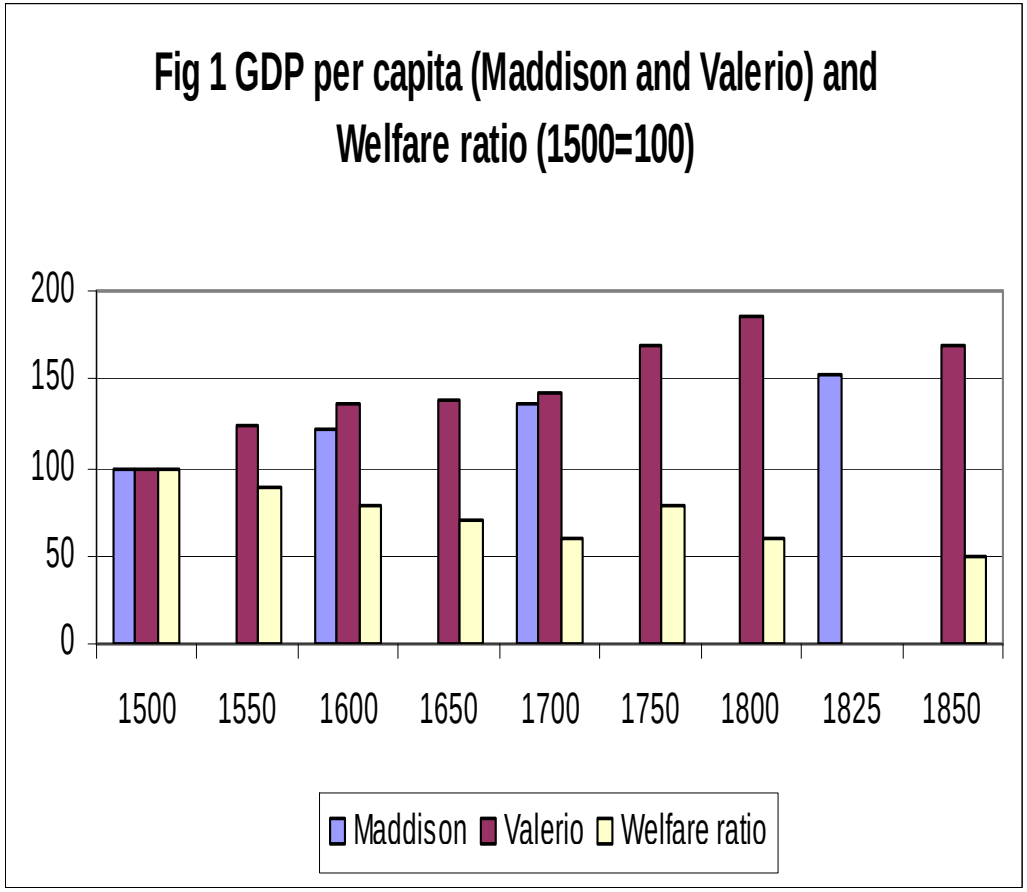


Fig 4 Occupational shares of Population 1500-1850



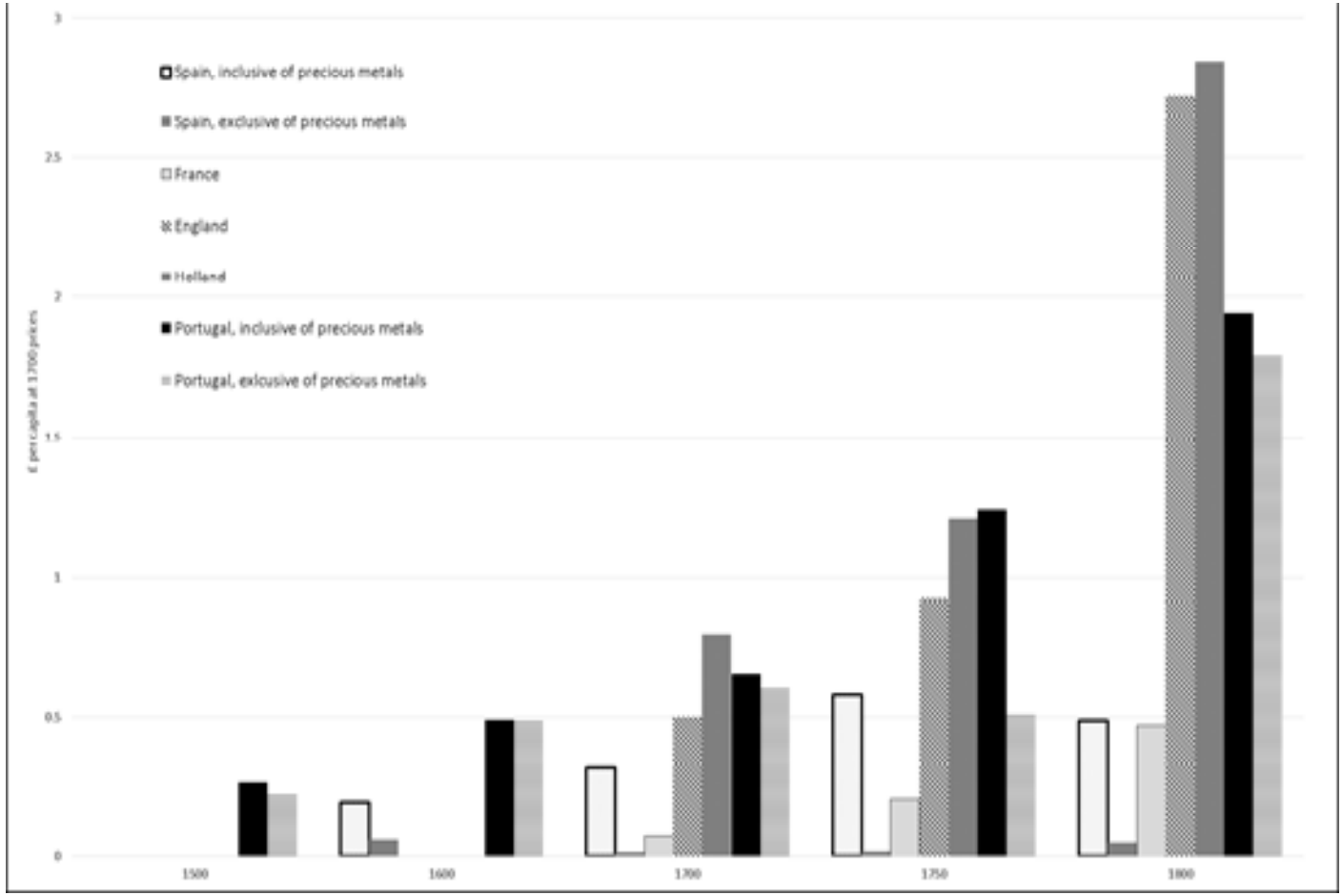
Recent revisions

- **Maddison and Valerio's** quantitative challenge using proxies
- Estimated a rise of **52-72 %** in long run GDP pc
- **Problems**: a) implausibly high result (PT=NL!) b) shaky empirics c) at variance with welfare ratios (pale yellow)



Share (per cent) of the real wage attributable to empire, 1500-1800.

	Portugal		Spain		England	Holland	France
	with gold	without gold	with gold and silver	Without gold and silver			
1500	0.9	0.8	0.4	0	0	0	0
1600	4.3	4.2	1.2	0.3	0	0	0
1700	7.4	6.9	1.4	0.3	2.3	3.7	0.3
1750	17.0	13.0	1.7	0.8	2.9	6.5	0.1
1800	22.8	18.4	1.9	0.9	16.1	5.4	0


Spain, inclusive of precious metals
Spain, exclusive of precious metals
France
England
Holland
Portugal, inclusive of precious metals
Portugal, exlcusive of precious metals
£ per capita at 1700 prices
3
2.5
2
1.5
1
0.5
0
1500
1600
1700
1750
1800

Our objectives

1. Describe the **methodology, data and sources** for estimating yearly GDP, GDP pc, etc.

2. Outline the long-run economic profile of Portugal as a **typical non-core member of the Early Modern European economy**

3. Show PT's economy as a clear Malthusian case where demography however was not the only determinant – but also show that Malthusian analysis can be more complex that its "canonical" version

4. Examine the **specificities** of Spain and Portugal: Were they a part of a single model? Or were their paths divergent? What caused these divergences? Structure+ exogenous shocks?

Was Portugal an outlier in Europe? GDP pc (ppp)

	Britain	NL	Germany	France	Italy	Spain	Sweden	Portugal
1500	39	37	49	50	68	50	na	55
1550	39	37	na	na	64	54	35	36
1600	37	68	34	50	60	53	36	40
1650	34	69	na	na	62	41	na	43
1700	55	54	40	54	65	48	53	43
1750	61	60	45	55	68	46	41	59
1800	75	67	42	56	60	54	40	38
1850	100	79	61	78	66	64	52	46