

# Growth: Aggregate Characteristics

EBH24, LECTURE 2

## 1. A Theory for Growth



A Theory for  
Growth

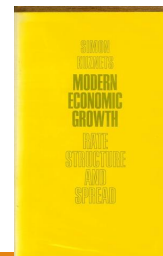


## Modern Economic Growth: the Basics

### GROWTH CHARACTERISTICS



Simon Kuznets,  
1901-85



#### A. Aggregate growth

1. High rates of increase in per capita product, accompanied by substantial rates of population growth
2. High rates of increase in output per unit of all inputs

#### B. Structural transformation

3. A high degree of structural transformation, encompassing a shift from agriculture to industry and services
4. Changes in the structure of society and its ideology, including urbanisation and secularisation

#### C. International spread

5. Opening up of international communications
6. A growing gap between developed and under-developed nations

## Modern Economic Growth: the Theory (2)



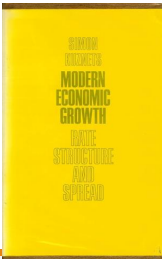
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The most important growth characteristics are A1 and A2:

A1. High rates of increase in per capita product, accompanied by substantial rates of population growth

A2. High rates of increase in output per unit of all inputs

Ultimately, this theory derives from Classical Theory and Adam Smith's *The Wealth of Nations*



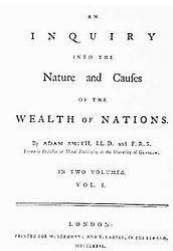
## An Inquiry into the nature and causes of the Wealth of Nations (1776)



The founding book of Economics

Along with theory, this treatise contains many concrete observations about the major world economies at the time (v.g. China, India, UK, Netherlands, Portugal, Spain, Germany...)

Its publishing coincides with the period in which Great Britain was experiencing sustained growth, whilst her continental rivals were not)

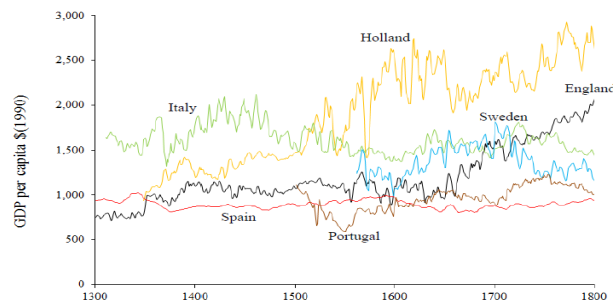


## England: the cradle of MEG

The book is also an explanation of why Great Britain edged above his rivals, in the world's most advanced region.

As estimates show, England/GB ("England" data are for GB since 1706) experienced **sustained growth** since c. 1650, as per capita GDP did no go back.

For explaining GB's edging above the other countries, Adam Smith describes what happens in the a **Pin Factory**



Sources: England (Broadberry et al. 2011); Italy (Malanina 2011); Holland (van Zanden and van Leeuwen 2012); Sweden (Schon and Krantz 2012); Spain (Alvarez-Nogal and Prados de la Escosura 2013); Portugal: (Reis et al. 2013; Palma and Reis 2014). \* 3-year average; Spain: 11-year average.

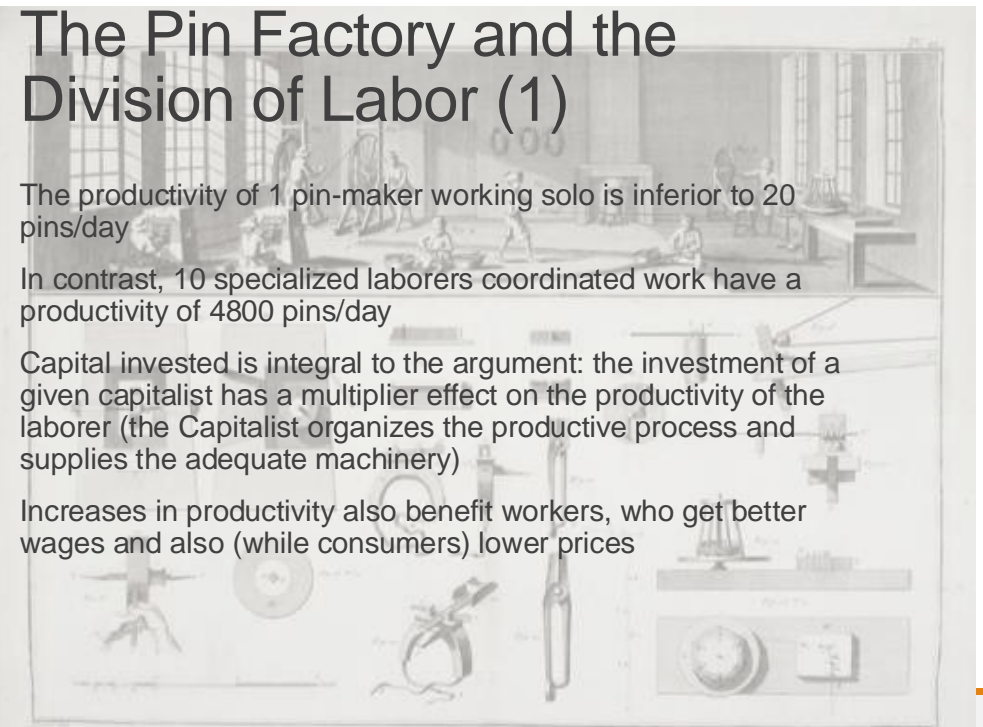
## The Pin Factory and the Division of Labor (1)

The productivity of 1 pin-maker working solo is inferior to 20 pins/day

In contrast, 10 specialized laborers coordinated work have a productivity of 4800 pins/day

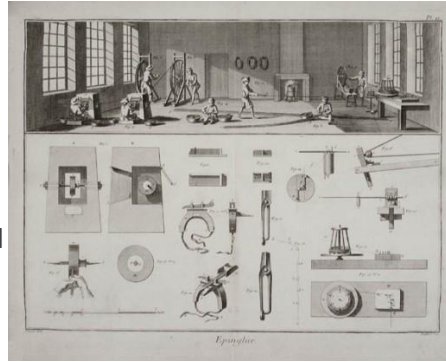
Capital invested is integral to the argument: the investment of a given capitalist has a multiplier effect on the productivity of the laborer (the Capitalist organizes the productive process and supplies the adequate machinery)

Increases in productivity also benefit workers, who get better wages and also (while consumers) lower prices



# Growth = Growth in Labour Productivity

- Economic growth implies the increase of output per worker (or hour worked)
- The increase in labour productivity is typically the result of more (physical or human) capital per worker)
- Thus, growth is a consequence of more capital per worker (be it technological improvements, better organization or better training)



A 18th-cent. pin factory, Adam Smith's example of how the division of labour multiplied productivity by a very large factor ... in the **industrial** sector

## Division of Labour (2)

Adam Smith extrapolates the pin factory for an economy as a whole:

- *The separation of different trades and employments from one another, seems to have taken place, in consequence of this advantage.*
- *This separation too is generally carried furthest in those countries which enjoy the highest degree of industry and improvement. The work of one man in a rude state of society [is] that of several in an improved one.*

As such,

- *Wealthiest nations are those in which the division of labour is furthest advanced*

## Division of Labour (3)

Adam Smith also remarks that the scope for the specialization of labour is stronger in the industry than in the other sectors:

- *The most opulent nations, indeed, generally excel all their neighbours in agriculture as well as in manufactures; but they are commonly more distinguished by their superiority in the latter than in the former.*
- *Their lands are in general better cultivated, and having more labour and expence bestowed upon them, produce more in proportion to the extent and natural fertility of the ground. But this superiority of produce is seldom much more than in proportion to the superiority of labour and expence.*