

Topic # 1: Defining “modern economic growth”.

(\* ) Van den Berg (2001), “Economic Growth Throughout History”, in Economic Growth and Development, Pg. 35-82.

- Question: What is “modern economic growth” and how do we distinguish it from “pre-modern economic growth”?
- Theory: Growth accounting.
- Evidence: Income per capita growth over time and across nations.

What are we measuring and how do we measure it?

- The welfare – income relationship.
- Measuring income over time and across nations.
- Good data – bad data – no data.
- Growth accounting (derivation).

$$\dot{y} = \dot{A} + \beta \dot{k} + \delta \dot{m}$$

- Defining MEG:
    - (i) rapid increases in  $y$
    - (ii) persistent increases in  $y$
    - (iii) welfare improving increases in  $y$
- ∴ key determinant  $\Rightarrow$  total factor productivity  
(A)

- Some evidence (calculating growth rates):

	UK real $y$ (1990 USD)	% $\Delta y$	Manu Share	Urban Share
1700	\$532		0.20	0.17
1760	\$809	0.7%	0.20	0.21
1800	\$1205	1.0%	0.19	0.34
1840	\$2559	1.9%	0.32	0.48

UK  $y$  in 1820 = 100.0

	<u>1820</u>	<u>1840</u>	<u>1860</u>	<u>2003</u>
UK	100	145.7	199.2	1719.8
France	57.7	95.3	127.7	1925.2
US	69.6	107.6	150.2	2185.2

## Calculating UK Solow Residuals (% $\Delta A$ )

	<u>1760-1800</u>	<u>1800-30</u>	<u>1830-60</u>
% $\Delta Q$	1.0	2.8	2.5
% $\Delta L$	0.8	1.4	1.4
% $\Delta K$	1.0	1.4	2.0
% $\Delta M$	0.75	1.2	1.2
$\alpha$	0.55	0.53	0.50
$\beta$	0.25	0.32	0.40
$\gamma$	0.20	0.15	0.10
% $\Delta A$	0.16	1.43	0.88

Maddison's (2010) GDP per Capita

