

19 July 2021 ①
Mon MKH

$$p_{\text{coal}, 1800} = 33 \text{ shillings/ton London } 1800$$

$$p_{\text{coal}, 1800} = \left(33 \text{ shillings/ton}^{1800} \right) \frac{1 \text{ £}_{1800}}{20 \text{ shillings}_{1800}} = 1.65 \frac{\text{£}_{1800}}{\text{ton}}$$

$$p_{\text{coal}, 1800} = \left(1.65 \frac{\text{£}_{1800}}{\text{ton}} \right) \left(\frac{79.62 \text{ £}_{2017}}{1 \text{ £}_{1800}} \right) = 131.37 \frac{\text{£}_{2017}}{\text{ton}}$$

Bank of England deflator

$$p_{\text{coal}, 1800} = \left(131.37 \frac{\text{£}_{2017}}{\text{ton}} \right) \left(\frac{\$_{2017 \text{ PPP}}}{0.685 \text{ £}_{2017 \text{ PPP}}} \right) = \boxed{191.785 \frac{2017 \$ \text{ PPP}}{\text{ton}}}$$

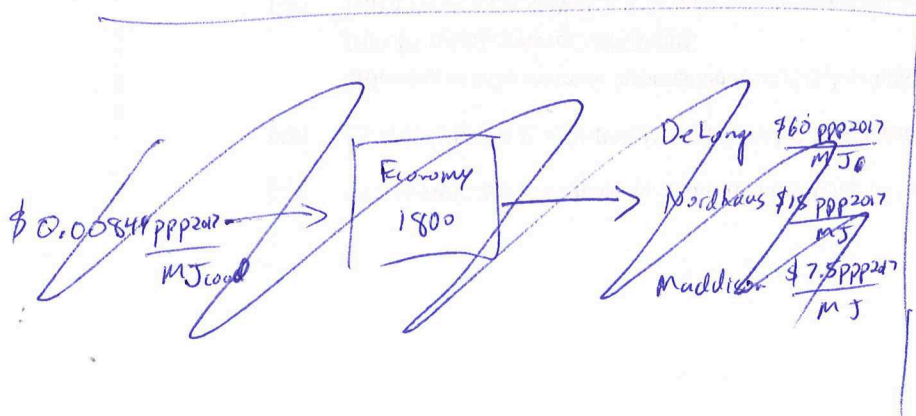
today's price

OECD PPP website

$$\text{today's UK coal price} = \left(70 \frac{\text{£}_{2020}}{\text{tonne}} \right) \left(\frac{1 \text{ tonne}}{1.1023 \text{ ton}} \right) = \boxed{63.5 \frac{\text{£}_{2020}}{\text{ton}}}$$

$$\left(191.785 \frac{2017 \$ \text{ PPP}}{\text{ton coal}} \right) \left(\frac{\text{ton coal}}{2565} \right) \left(\frac{1000 \text{ kg}}{1 \text{ tonne}} \right) \left(\frac{22 \text{ lbm}}{1 \text{ kg}} \right) \left(\frac{\text{short ton}}{2000 \text{ lbm}} \right) =$$

UK DUKES A-1

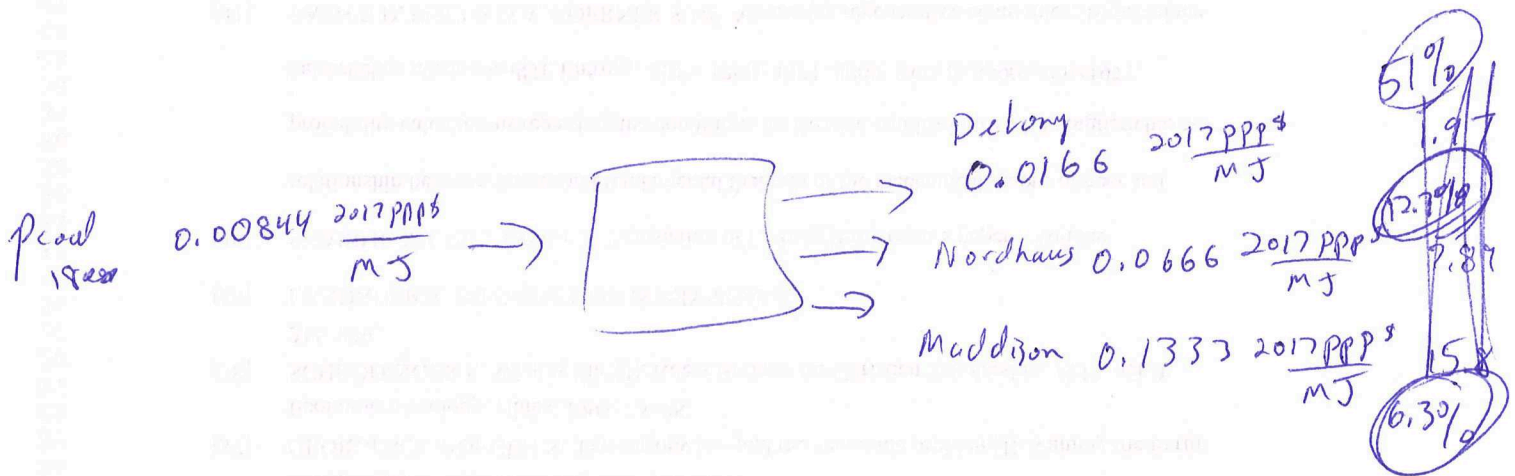
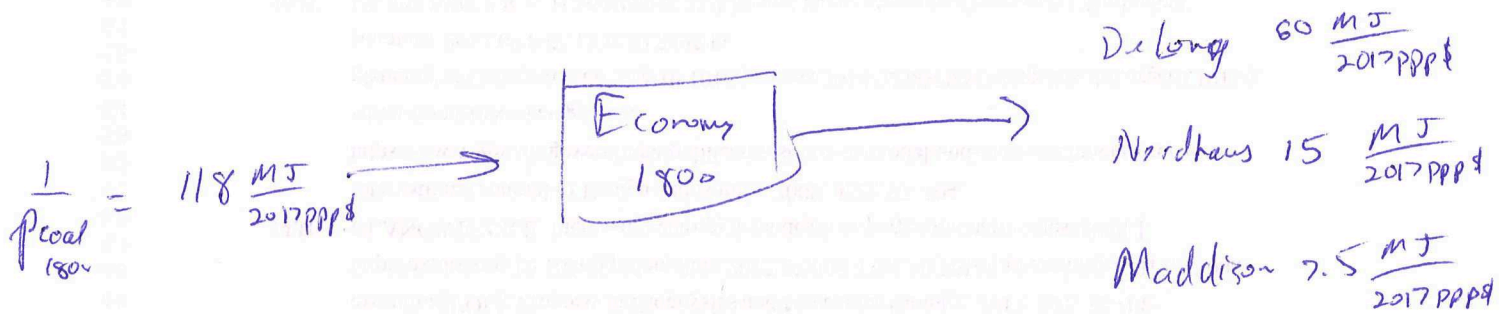


$$p_{\text{coal}, 1800} = \frac{8.4 \text{ } 2017 \text{ PPP } \$}{65 \text{ (coal)}} \cdot \frac{165}{1000 \text{ mt}}$$

$$p_{\text{coal}, 1800} = 0.00844 \frac{2017 \text{ PPP } \$}{\text{MJ coal}}$$

$$\frac{1}{p_{\text{coal}, 1800}} = 118 \frac{\text{MJ coal}}{2017 \text{ PPP } \$}$$

19 July 2021 (2)
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De Longy 51% : Way too large

Nordhaus 12.3% : reasonable and in 1800 close to top limit of Bashmatkov (15%), preventing economic growth

use Nordhaus graphs

Maddison 6.3% : too small. Would have already kicked off economic growth, but that didn't happen until ~1860 or so.