Solutions

2.1

- $\Delta A/A = 5.5 - 0.3(7.0) - 0.7(1.5) = 5.5 - 2.1 - 1.05$.
- $= \mathbf{2.35}\%$.

2.2

- $70/2.5 = \mathbf{28}$ years.
- $70/7 = \mathbf{10}$ years.

2.3

- $10{,}000 \times 1.97 = \mathbf{19{,}700}$.
- Nearly a doubling in ten years – the rule of 70 in action.

2.4

- $\Delta Y/Y = 0.4 + 0.3(6) + 0.7(2) = 0.4 + 1.8 + 1.4$.
- $= \mathbf{3.6}\%$.
- Largest contributor: capital deepening (1.8 points), then labour (1.4) – not TFP.

2.5

- (a) Proximate – capital (and its efficiency lands in TFP).
- (b) Fundamental – institutions.
- (c) Proximate – labour input.

2.6

- Run growth accounting: attribute the 3% to $0.3\Delta K/K + 0.7\Delta L/L$ and inspect the residual.
- Only if inputs explain little is it a technology story; the residual also carries measurement error, so say "TFP", not "technology".

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