

# 8.1 Poverty, the state and development

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

Total: 30 marks

**KEY WORDS** Gini coefficient • Human Development Index

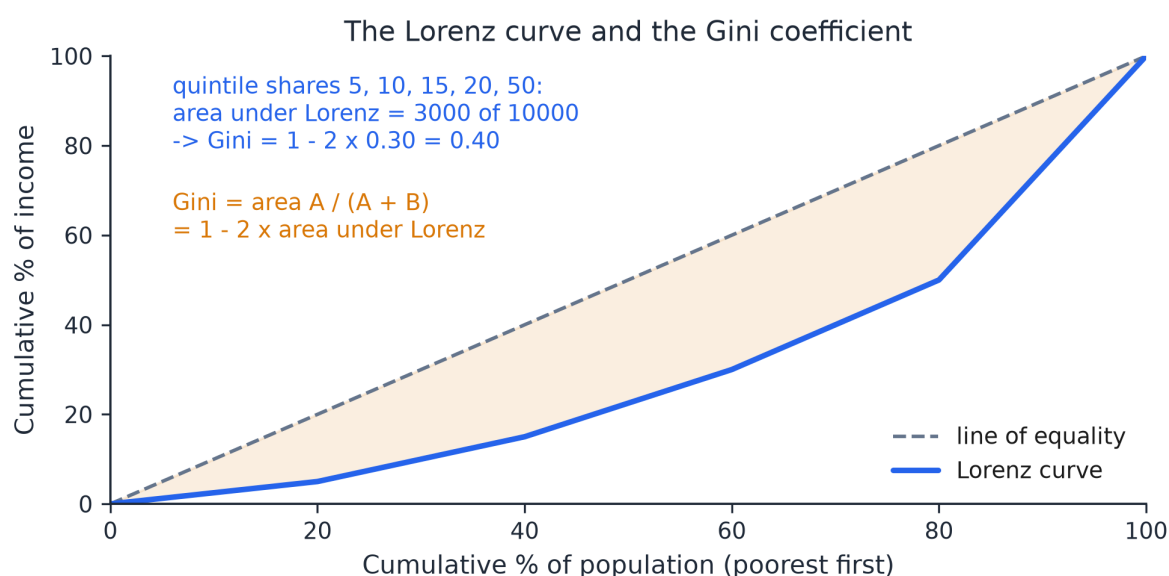
## Poverty, the state and development

### Objective

Distinguish and measure poverty and inequality (Lorenz curve, Gini), classify tax systems, explain deficits, debt and the HDI, and apply the development constraints and strategies (spec 4.3.4–4.3.6, rows shared with the essay-standard sheet 8.2).

### 1 Key knowledge and worked examples

**Measuring the state and development.** Quintile shares 5, 10, 15, 20, 50 give a Lorenz curve with  $Gini = 1 - 2 \times 0.30 = 0.40$ . Taxes 1k/8k/30k on incomes 10k/40k/100k are progressive (10/20/30 percent average rates). The Laffer curve  $R = t(1 - t) \times 400$  peaks at 100 when  $t = 50\%$ . The HDI geometrically combines education, health and income indices. Deficit is a flow; national debt a stock.



*Original data; the 0.40 calculation is worked in the solutions.*

## 2 Practice

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**2.1** Distinguish absolute from relative poverty, with one measure of each. [2]

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**2.2** Wealth quintile shares are 5, 10, 15, 20 and 50 percent. State the Lorenz curve's cumulative points and compute the Gini coefficient. [4]

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**2.3** Taxes of 1k, 8k and 30k are paid on incomes of 10k, 40k and 100k. Compute the average rates and classify the system. [3]

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**2.4** State the three components of the HDI and how each is measured. [3]

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**2.5** Distinguish a fiscal deficit from the national debt. [2]

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**2.6** Distinguish structural from cyclical deficits. [2]

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**2.7** Name any four of the eleven economic constraints on development. [2]

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### 3 Exam-style questions

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**3.1** (*Original.*) On the Laffer model  $R = t(1 - t) \times 400$ : calculate revenue at  $t = 20\%$  and  $t = 60\%$ , find the revenue-maximising rate, and explain what the two equal answers imply for tax policy. [4]

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**3.2** (*Original.*) Explain the savings gap (Harrod–Domar) and primary product dependency (Prebisch–Singer) as constraints on development, with one policy response to each. [4]

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**3.3** (*Original.*) Compare one market-orientated and one interventionist development strategy, giving one strength and one weakness of each. [4]

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## Solutions

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**2.1** Absolute poverty: inability to meet basic needs. An international measure is the World Bank's 3.00 international dollars per person per day line at 2021 PPP, introduced in June 2025. Relative poverty: deprivation relative to society, measured using a stated share of median household income. State the measure and its basis rather than treating a historical dollar line as current.

**2.2** Cumulative points: (0,0), (20,5), (40,15), (60,30), (80,50), (100,100). Area under the Lorenz =  $50 + 200 + 450 + 800 + 1500 = 3000$  of the 10000 square, so  $Gini = 1 - 2 \times \frac{3000}{10000} = 0.40$ .

**2.3** Average rates:  $\frac{1}{10} = 10\%$ ,  $\frac{8}{40} = 20\%$ ,  $\frac{30}{100} = 30\%$  – rising with income, so PROGRESSIVE.

**2.4** Education (mean and expected years of schooling); health (life expectancy at birth); income (GNI per capita at PPP, log-scaled). Each is an index from 0 to 1, combined by geometric mean.

**2.5** A fiscal deficit is ONE YEAR's shortfall of spending over revenue (a flow); the national debt is the accumulated stock of past deficits.

**2.6** A structural deficit persists even at full employment (a policy choice); a cyclical deficit exists only because output is below trend and vanishes as the cycle turns.

**2.7** Any four of: commodity-price volatility; primary product dependency; savings gap; foreign-currency gap; capital flight; demographic factors; debt; access to credit; infrastructure; education and skills (eleven listed in the handout incl. their sub-variants).

**3.1** At  $t = 0.2$ :  $R = 0.2 \times 0.8 \times 400 = 64$ . At  $t = 0.6$ :  $R = 0.6 \times 0.4 \times 400 = 96$ . The revenue maximum sits at the symmetric point  $t = 50\%$ , where  $R = 0.25 \times 400 = 100$ . Rates equally spaced either side of 50% raise equal revenue ( $t = 0.4$  and  $t = 0.6$  both give 96): beyond 50% the tax base shrinks faster than the rate rises, so very high rates collect no more than moderate ones.

**3.2** Savings gap (Harrod–Domar): growth  $g = s/v$  (savings ratio over the capital–output ratio); poor economies save too little to fund the investment growth needs, so the gap persists – policy: aid or FDI to fill it. Primary product dependency (Prebisch–Singer): primary prices trend downward against manufactures over time, so export earnings buy less and less – policy: diversify into manufacturing (industrialisation, Lewis model) or commodity-processing industries.

**3.3** Market-orientated (e.g. trade liberalisation): strength – exports grow and resources follow comparative advantage; weakness – infant industries may be destroyed before they mature, worsening the trade balance. Interventionist (e.g. human-capital development): strength – attacks the skills constraint at the root of low productivity; weakness – slow, costly and vulnerable to government failure. (Any valid pairing.)

Local review guidance: the Gini shows the area computation before the final figure; both revenue values and the 50% peak computed; (R1 3.3) strengths and weaknesses must be tied to the NAMED strategy. This is authored classroom guidance.