1.19 The Poverty Trap and the Equity-Efficiency Trade-Off in Redistribution

Total Marks

AQA 7136 · Calculators not allowed · about 75 minutes · Write-in edition

Name: _____ Date: ____ / ____ / _____

Answer all questions. Full sentences are required for explanations and the essay. Time guidance: 75 minutes total.

1 Numeric follow-up: Using the same starting EMTR components as Question 5, suppose the government reduces the means-tested benefit taper from 50% to 30% while income tax remains 20% and national insurance 12%. Calculate the new EMTR and the net extra disposable income from an extra £1 of gross pay. State whether this reduces the disincentive compared with the original EMTR, briefly.

(Total for Question 1 is 3 marks)

2 Data extract, small case comparison: Two fictional households, Household A and Household B, face the following marginal deductions on each extra £1 earned: Household A: income tax 20%, NI 12%, benefit taper 30%. Household B: income tax 20%, NI 12%, benefit taper 60%. Explain how the data show that Household B faces a larger disincentive to increase earnings than Household A. Use the figures in your explanation.

(Total for Question 2 is 9 marks)

3 Evaluate whether reducing benefit withdrawal rates is the best way to help households escape the poverty trap.

(Total for Question 3 is 25 marks)

4 State what is meant by the marginal rate of benefit withdrawal (taper rate) for a means-tested benefit in a UK context.

(Total for Question 4 is 2 marks)

5 Numeric calculation: A low-income household faces the following marginal deductions on an extra £1 of gross pay: income tax 20%, employee national insurance 12%, and means-tested benefit withdrawal at a taper rate of 50%. Calculate the household's effective marginal tax rate (EMTR) on that extra £1, showing each step and the resulting net extra disposable income. Whole-number percentages are used and no calculator is allowed.

(Total for Question 5 is 4 marks)

6 Explain two reasons why the poverty trap tends to be concentrated among households with part-time or intermittent work patterns rather than those in continuous full-time employment.

(Total for Question 6 is 4 marks)

7 Explain briefly how progressive income tax and generous means-tested benefits together can reduce incentives to save.

(Total for Question 7 is 3 marks)

Mark scheme · 1.19 The Poverty Trap and the Equity-Efficiency Trade-Off in Redistribution

Question 1

sum deductions: 20% + 12% + 30% = 62% EMTR	**M1**
net extra disposable income = £1 - £0.62 = £0.38	**A1**
states that this reduces the disincentive compared with the original EMTR of 82%, since the household now keeps £0.38 rather than £0.18 of the extra £1	**B1**

Answer: New EMTR = 62%, net keep £0.38; this reduces the disincentive compared with the original EMTR of 82% (keeps £0.18).

Question 2

Level 1 Basic statements using the data: identifies that Household B has a higher taper and therefore higher deductions, with limited or no quantitative comparison. **1-3**

Level 2 Clear quantitative comparison: calculates EMTRs and net gains, and explains that Household B keeps less of each extra £1, reducing incentive to work. **4-6**

Level 3 Detailed quantitative analysis and applied evaluation: computes EMTRs and net extra income for both households, explains behavioural implications for labour supply, and considers the broader context such as fixed costs of work or non-monetary factors. **7-9**

Indicative content:

- Compute EMTR for Household A: 20% + 12% + 30% = 62%, net keep £0.38 of each extra £1
- Compute EMTR for Household B: 20% + 12% + 60% = 92%, net keep £0.08 of each extra £1
- Compare: Household B keeps 8p per extra £1, Household A keeps 38p, so B faces a much smaller marginal reward for extra work
- Behavioural implication: with only 8p net gain, B is less likely to increase hours, move to paid work, or accept overtime, compared with A
- Contextual evaluation: mention fixed costs such as childcare or transport which make tiny net gains especially unattractive, and note distributional fairness and fiscal cost considerations of reforms

Question 3

Level 1 Basic and general statements about reducing withdrawal rates with limited analysis or development, little or no evaluation, and no clear judgement. **1-5**

Level 2 Clear explanation of effects of lower withdrawal rates on EMTRs and incentives, some analysis of public cost or distributional consequences, limited evaluation of alternatives and tentative judgement. **6-10**

Level 3 Well developed analysis with quantitative reasoning and reasoned evaluation: examines incentive effects, fiscal costs, equity-efficiency trade-offs, compares alternatives and offers a supported judgement that balances effectiveness, cost and fairness. **11-15**

Level 4 Thorough and balanced evaluation that includes detailed analysis of behavioural responses, fiscal and administrative feasibility, distributional outcomes, likely magnitude of effects and possible unintended consequences; reaches a well-argued conclusion. **16-20**

Level 5 Excellent evaluation: integrates quantitative examples (such as EMTR changes and likely net income gains), considers time lags, labour market heterogeneity, political and practical constraints, and provides a nuanced, evidence-based conclusion on whether lowering withdrawal rates is the best approach or part of a package. **21-25**

Indicative content:

- Lowering taper rates reduces EMTRs and increases the net gain from extra earnings, directly improving work incentives for benefit recipients; example: reducing taper from 50% to 30% lowered EMTR from 82% to 62% in Questions 1 and 5
- Fiscal cost: lower withdrawal rates increase benefit outlays or reduce savings from withdrawals, requiring higher taxation or reallocation of spending; consider the budgetary trade-off
- Equity-efficiency trade-off: lower tapers improve incentives (efficiency) but may reduce progressivity if targeted poorly; discuss how lower tapers could be combined with higher top rates or alternative funding
- Alternatives: in-work subsidies or targeted tax credits increase net pay for workers without permanently raising benefit bills for non-workers; childcare support reduces fixed costs of work; training raises employability and earnings potential
- Universal basic income: removes tapering and simplifies administration but is costly and less targeted, with different incentive effects depending on design
- Behavioural and administrative issues: potential for people to game the system, stigma reduction with simpler schemes, and the importance of fixed costs which taper reduction alone may not address
- Magnitude and timing: supply-side policies like training take time; taper reduction can act quickly but may have limited impact if fixed costs remain large; assess which households are most affected
- Supported judgement could argue that reducing withdrawal rates is a useful and direct tool, but not necessarily the best sole policy; a package combining lower tapers with childcare, in-work support and training is likely more effective and cost-efficient

Question 4

statement that the marginal rate of benefit withdrawal is the proportion of an extra pound of income that is lost due to reduced benefit entitlement	**B1**
explicit statement of units, e.g. a 50% taper means 50p of benefit is withdrawn for each extra pound earned	**B1**

Answer: The marginal rate of benefit withdrawal is the percentage of each extra pound earned that is taken away by a reduction in means-tested benefits, for example a 50% taper withdraws 50p of benefit for every extra £1 of gross earnings.

Question 5

20% of £1 = £0.20 tax deducted	**M1**
12% of £1 = £0.12 national insurance deducted	**M1**
50% of £1 = £0.50 benefit withdrawn	**M1**
EMTR = 20%+12%+50% = 82%, net extra disposable income = £1 - £0.82 = £0.18	**A1**

Answer: Tax £0.20, NI £0.12, benefit withdrawal £0.50; total deductions £0.82, so EMTR = 82% and the household keeps £0.18 of the extra £1.

Question 6

reason 1: means-tested benefits are designed to taper as earnings rise, so small increases from part-time to slightly-more hours can cause large benefit losses	**M1**
development: part-time workers often cross thresholds where benefits withdraw quickly, so each additional hour reduces net income substantially	**A1**
reason 2: intermittent workers face fixed costs of work, such as childcare and travel, which make the net gain from extra hours smaller	**M1**
development: these fixed costs combined with high EMTRs can make additional paid hours financially unattractive for those with unstable hours	**A1**

Answer: Part-time and intermittent workers often face rapid benefit withdrawal for small earnings increases, so small extra hours can cut benefits sharply and reduce net gains. They also incur fixed work-related costs like childcare and travel which further reduce the net benefit of extra hours, making them more susceptible to the poverty trap.

Question 7

progressive income tax reduces after-tax returns to additional income, lowering the reward to saving from current income	**M1**
means-tested benefits may be withdrawn as assets or additional income rise, reducing the incentive to accumulate savings	**M1**
combined effect: lower after-tax returns and risk of losing means-tested support make saving less attractive, reducing capital accumulation and long-run growth incentives	**A1**

Answer: Progressive tax reduces the after-tax return on income, while means-tested benefits that are withdrawn when income or assets rise reduce the payoff from saving. Together they lower the incentive to build savings, which can reduce capital accumulation.