



Stockholm  
University

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Identification number

Department of Economics

Instructions:

Write your **identification number** on each paper.

Each answer should be submitted in a separate folder.

Course name: Intermediate Development Economics

Date: 27/10/2013

Exam result	
Total points	100
Grade	A

Question points: (4)

Question number: A1

FALSE

Correct statement:

→ The Solow model predicts conditional convergence in growth rates for countries in the long run.

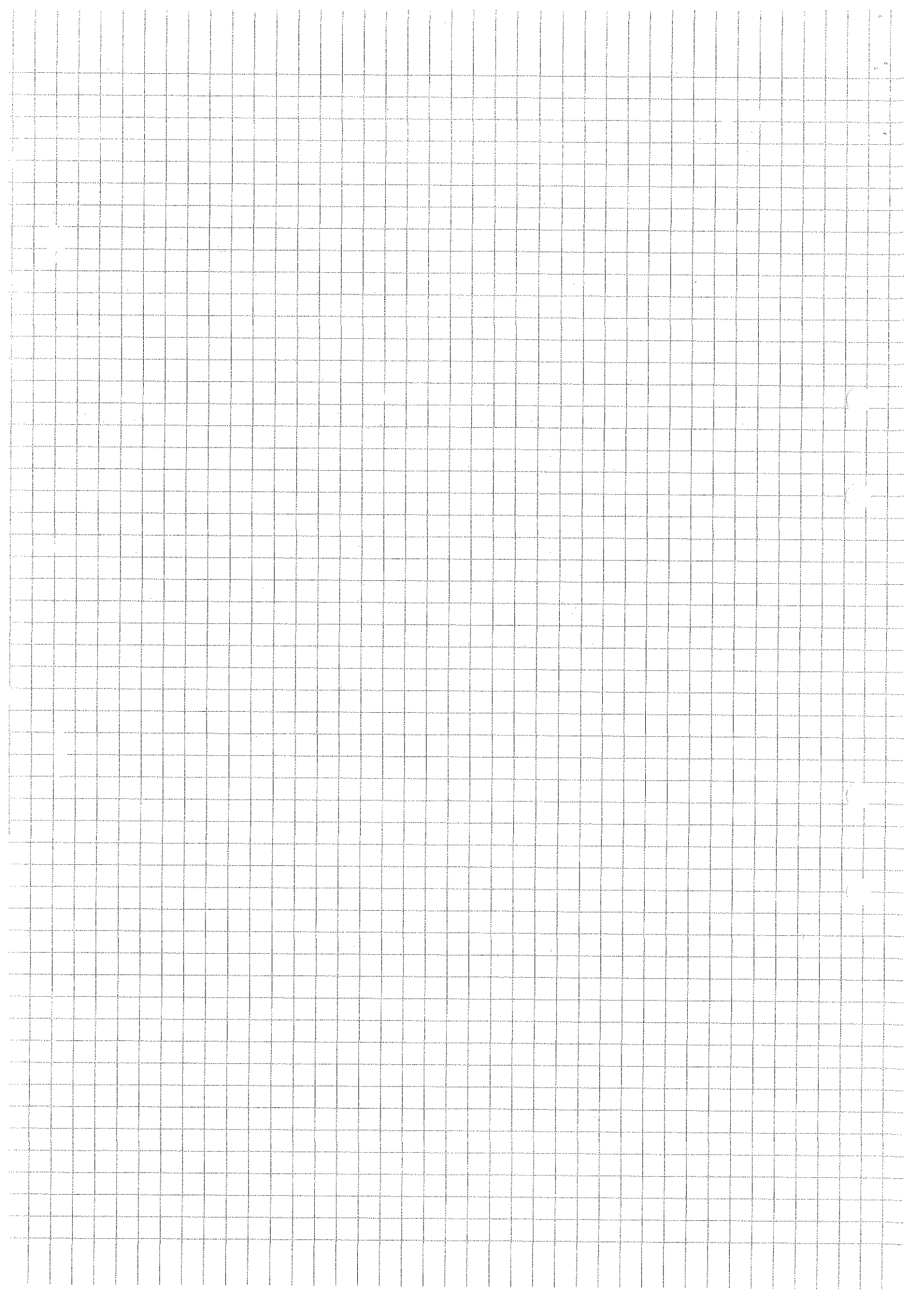
- Only countries with similar values for the explaining variables will have similar long-run growth.

- For example the values for population growth, capital per worker and savings must be comparable for countries to grow at the same rate.

\* - Long-run growth is affected by only \*  
2 things is the Solow model.

→ Technological Change

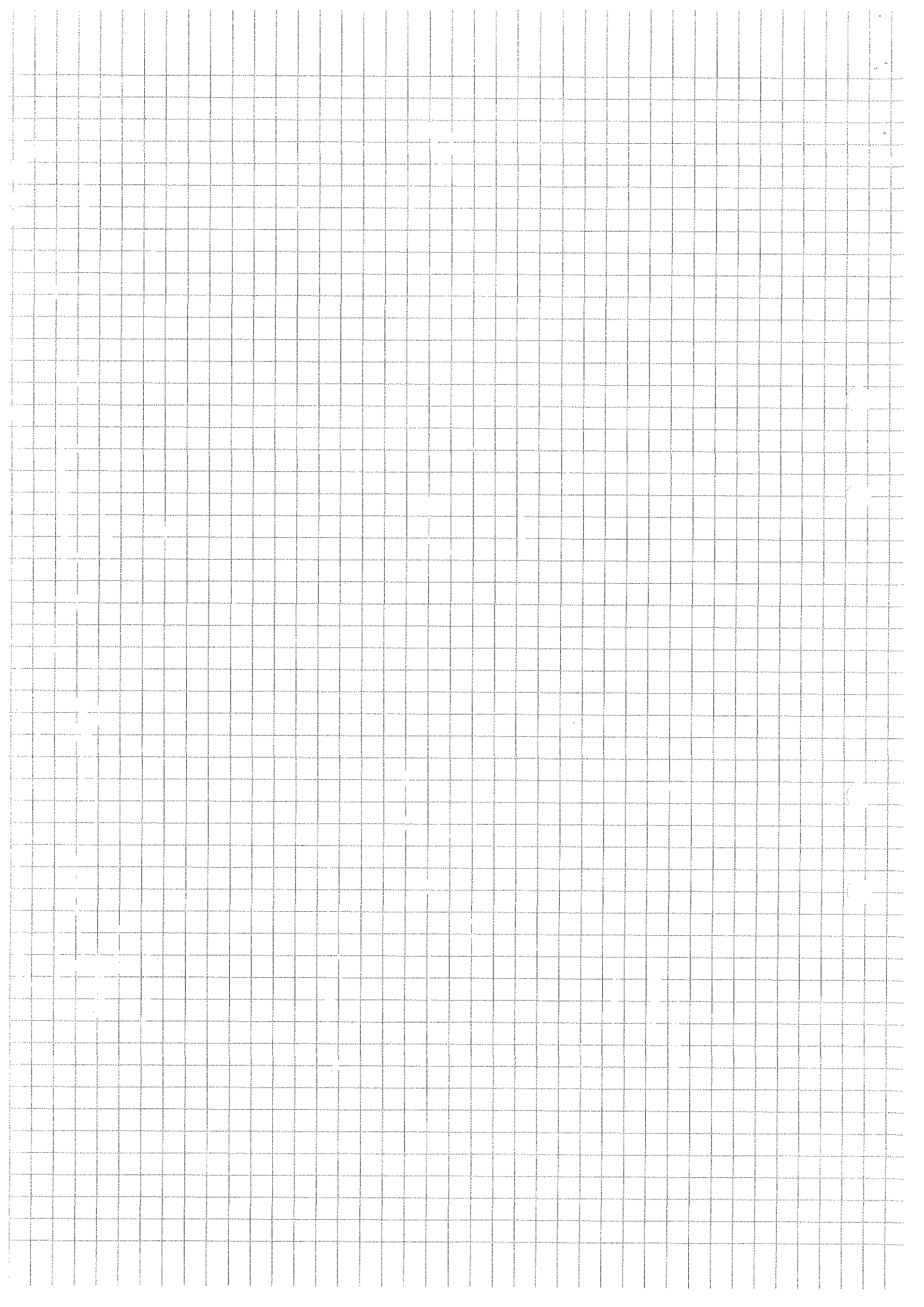
→ Population Growth ,



## Question 2 A

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- i) There are RISKY and SAFE borrowers, lenders simply cannot separate the 2. Thus, they have to charge a higher interest rate to all customers, to pay defaults from risky borrowers they cannot identify and refuse credit.
- ii) The high interest rates results in some SAFE borrowers opting out, leaving many high-risk borrowers who often default → HIGH DEFAULTS.
- iii) Many potential borrowers with attractive, safe investment opportunities are shut out of credit markets due to the high interest rates, previously shown to result from ADVERSE SELECTION!  
These people are credit constrained, and want to borrow, but not at the ~~the~~ high market interest rates!



## Question A.3

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→ Capital should be allocated where the marginal returns are the highest.

So why is it not? ✓

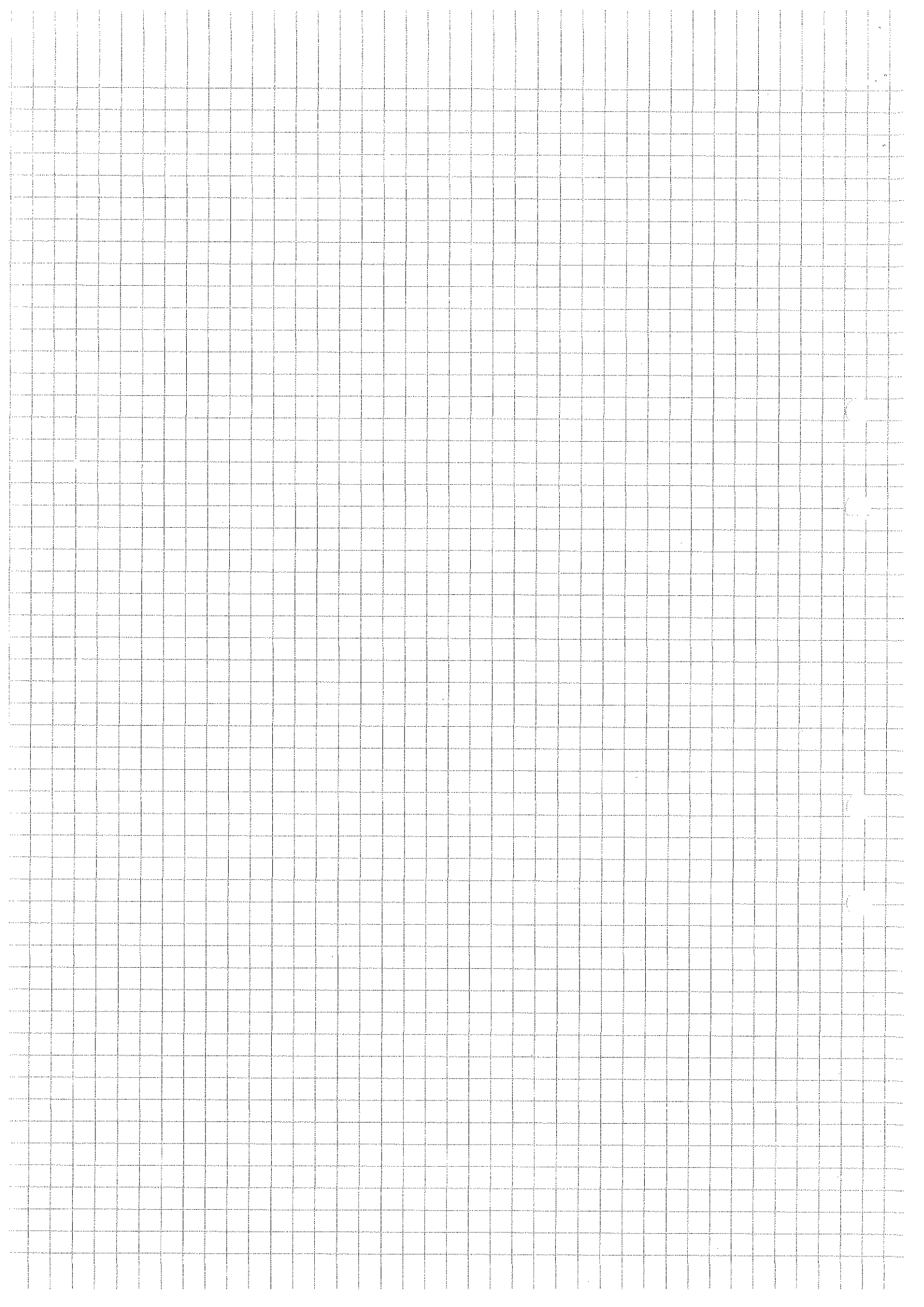
① Lack of ACCESS - In many poor areas, (where marginal returns have been proven to be from 40 to hundreds of %!) there are no serious financial institutions to borrow from. Local moneylenders in India often take up to 5%!

② Lack of Collateral → Many poor countries and potential borrowers lack the collateral needed to borrow at reasonable interest rate either due to poverty or lack of property rights.

③ Information disparities between borrower and lender makes it hard for lenders to identify attractive and high-yielding borrowers.

④ Ex-post Moral Hazard → Loans are costly and difficult to forcibly get repaid. Financial institutions may refuse borrowing to high-yielding customers because they cannot be sure the loan will be repaid, even if the borrower has money!

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# Question A.4

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→ Property Rights are important for credit markets because they open up the ability for people to borrow against COLLATERAL

→ With no/weak property rights, potential borrowers cannot prove ownership of Assets, AND Banks cannot forcibly take assets in case of default.

## Investment decision benefit

→ Collateralised loans remove much of the MORAL HAZARD problems found in uncollateralized loans. When posting collateral, the borrower has much larger costs associated with default. Thus, they will make wiser investment decisions and work harder to avoid costly defaults.

Collateral → Safer loans → lower interest rates

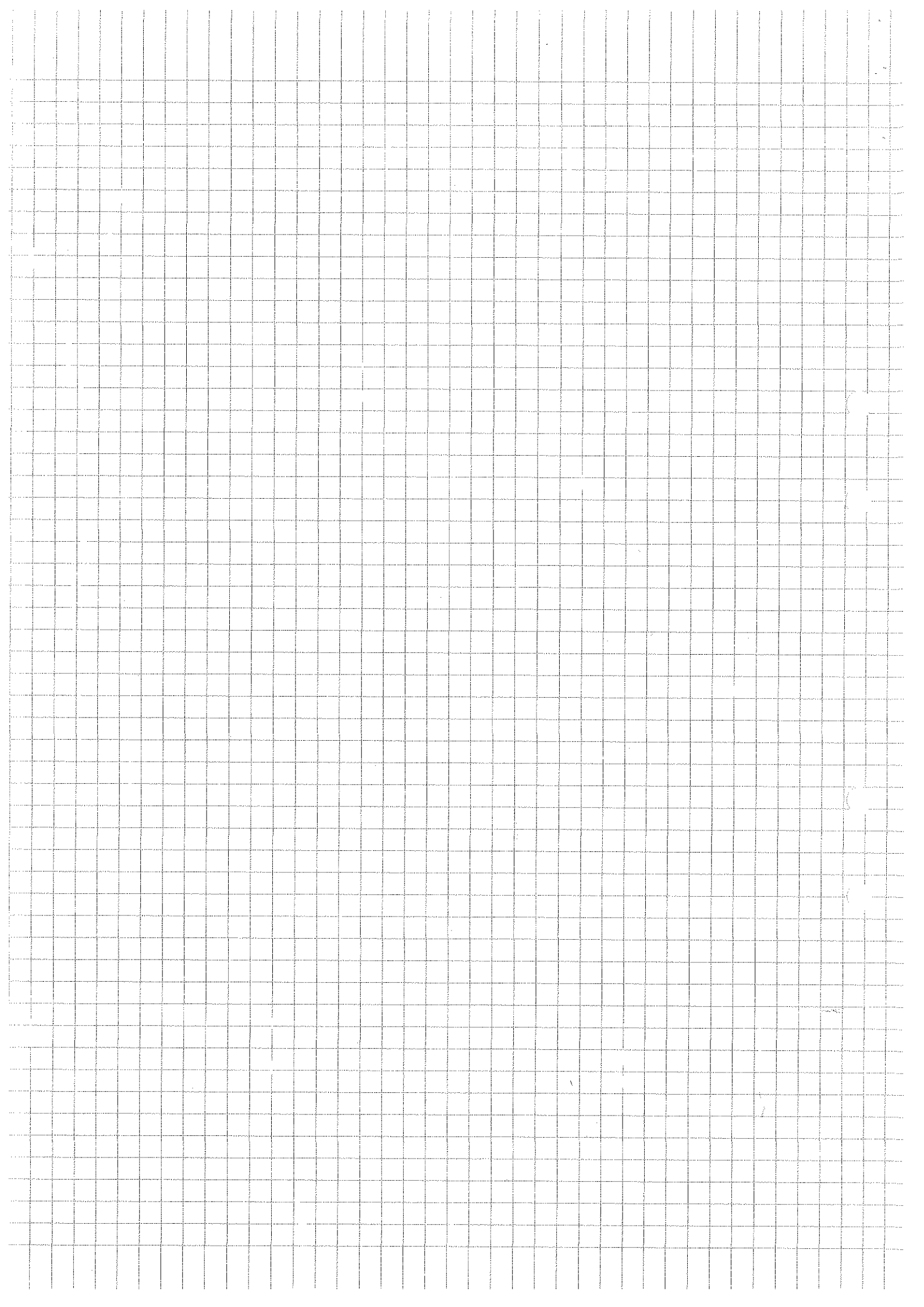
Gains from Trade

Lower defaults

More profit to  
Banks and Financial  
Institutions

Higher profit and more  
credit to borrowers!





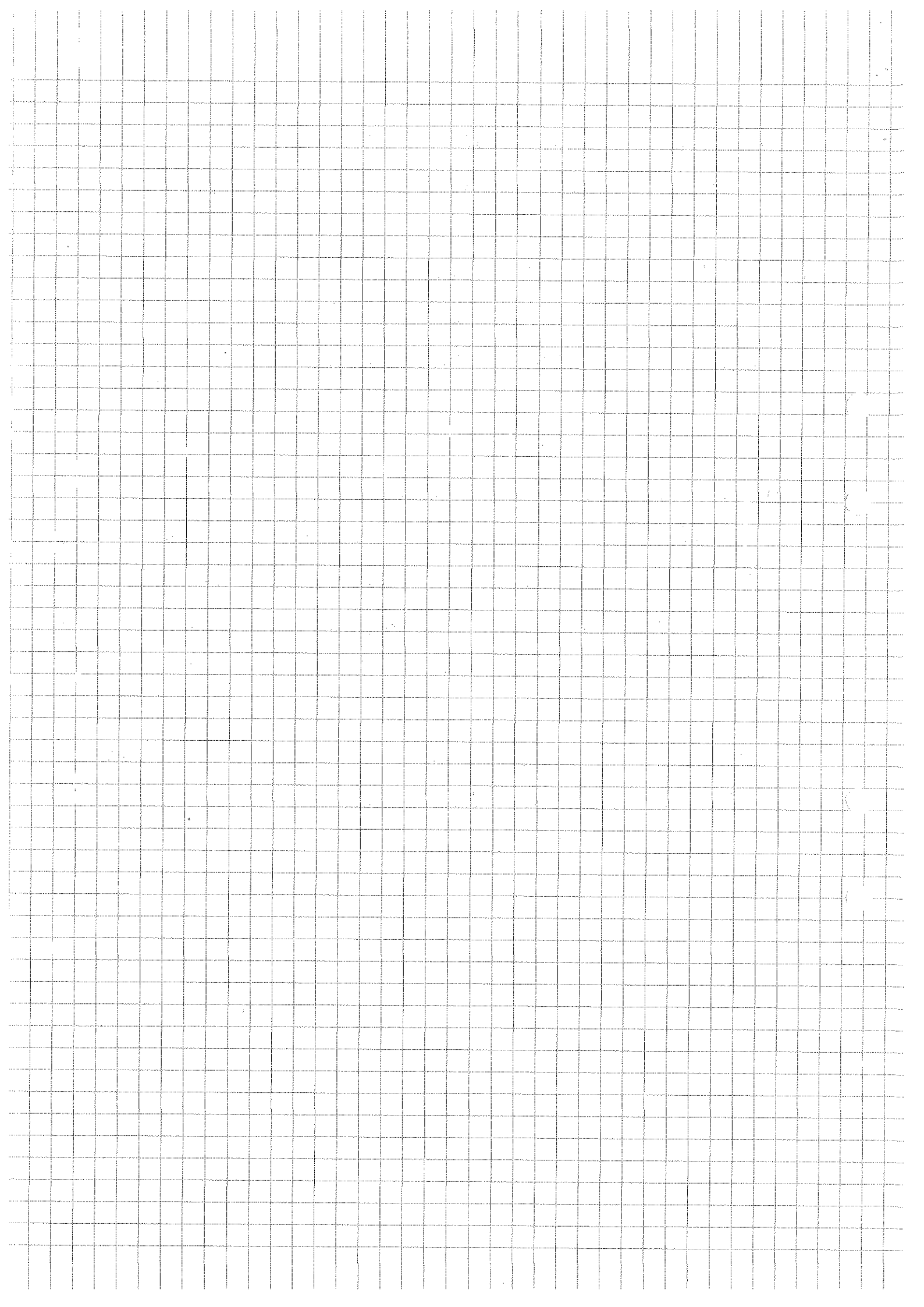
Question A.5

There is evidence in favour of the existence of Poverty traps regarding Education.

Parents want to send their children to school, but can in some cases not do without their children's working income/domestic help.

Evidence in MALAWI show that unconditional and conditional cash transfers are equally effective, decreasing dropout rates from 11% to 6%. This means that even when parents are not forced to use cash transfers to enable their kids to go to school, they still do!

The cash transfer has then shown that there are poverty traps that can be eliminated with transfers.

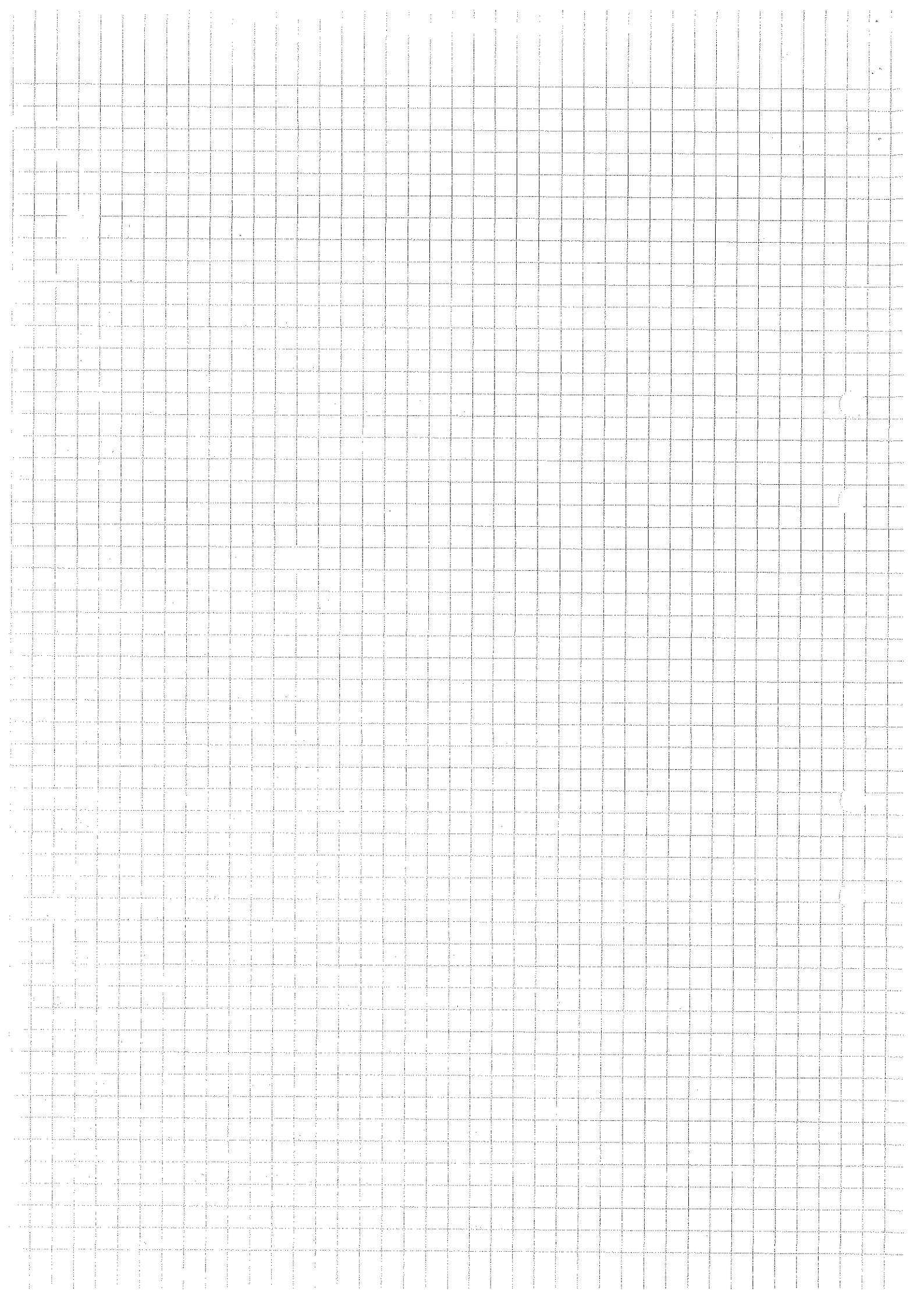


## Question A6

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Three problems with GDP measurement:

1. GDP says nothing of income DISTRIBUTION.  
→ Many poor countries have very high Gini coefficients, meaning large parts of GDP goes to the very rich. For example, Gabon has very high GDP per capita, but much goes to the ruling elite, leaving little for the poor.
2. GDP is not a good measure of welfare.  
In judging welfare, ~~you~~ you need to take health and educational attainment into consideration. For example, the Human Development Index (HDI), which takes factors such as life expectancy into account, is a much better measure of the lives of the poor.
3. GDP ignores PRICES. The poor populations are very sensitive to the movements of prices. Income should be compared to what it can actually purchase in a given country. Purchasing Power Parity (PPP) should be used to transform ~~the~~ GDP into a measure that can ~~explain~~ show the differences in purchasing power the poor actually have.



- Joint Liability → This means that a group of people, with individual loans, are forced to pay the loans of ~~the~~ remain any group member who cannot pay their own loan.

### Reduction of Moral Hazard:

- Theoretically ex-ante moral hazard of choosing risky, high-yielding investment options will be discouraged by other group members. This can said to close some of the information gap between borrower and lender. More 'safe' and socially optimal investment is encouraged.
- Moral Hazard's effect on work effort is reduced when group members will try to ensure that ~~ex~~ each member is doing their best they can to be able to repay the debt.
- Ex-post Moral Hazard, where borrowers can refuse to pay despite being able to, is reduced by the SOCIAL COST this would inflict upon the defaulting group member!

All these 3 ways of reducing Moral hazard will, in theory, increase a repayment rates. BUT, does it? \*\*\*TURN PAGE\*\*\* (↩)

# Proof Experiment in the Philippines.

→ • Research Goal → Investigate effect of Joint Liability

→ • Method → 56 lending groups with joint liability were chosen at random

→ These were told they would no longer be joint liable for loans.

→ These then compared to 2 <sup>kinds of</sup> groups

① Joint liable groups who remain ~~jointly~~ jointly liable.

② Groups who were separately liable, and remained so.

→ • Hypothesis: The group initially separately liable and the group that was MADE jointly liable should both have higher default than the group that stayed jointly liable.

→ • RESULTS: No difference between the 3 ~~gr~~ liability groups were found! This suggests that the joint liability clause of micro credit contracts is not the key to the high repayment rates! Maybe it is the regular repayment that is key? Nowadays microcredit is moving away from joint liability! (less than 50% now joint liable!).

# Question B2.

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Hyperbolic Discounting: when costs/benefits today are overvalued compared to later costs/benefits.

For example:  $I_t$  = Income today

$\alpha$  = discount rate in 1 period.  $0 < \alpha < 1$ .

A rational consumer ~~makes the difference between~~ values cost/benefits as below:

$I_t$  in term  $t$

$I_t \cdot \alpha$  in term  $t+1$

$I_t \cdot \alpha^2$  in term  $t+2$

$I_t \cdot \alpha^3$  in term  $t+3$ ... and so on.

**RATIONAL**

However, a hyperbolic discounter undervalues future cost/benefits as per below:

$I_t$  valued as  $I_t$  in term  $t$ .

$I_t$  valued as  $I_t \cdot \alpha \cdot \beta$  in term  $t+1$

$I_t$  valued as  $I_t \cdot \alpha^2 \cdot \beta$  in term  $t+2$

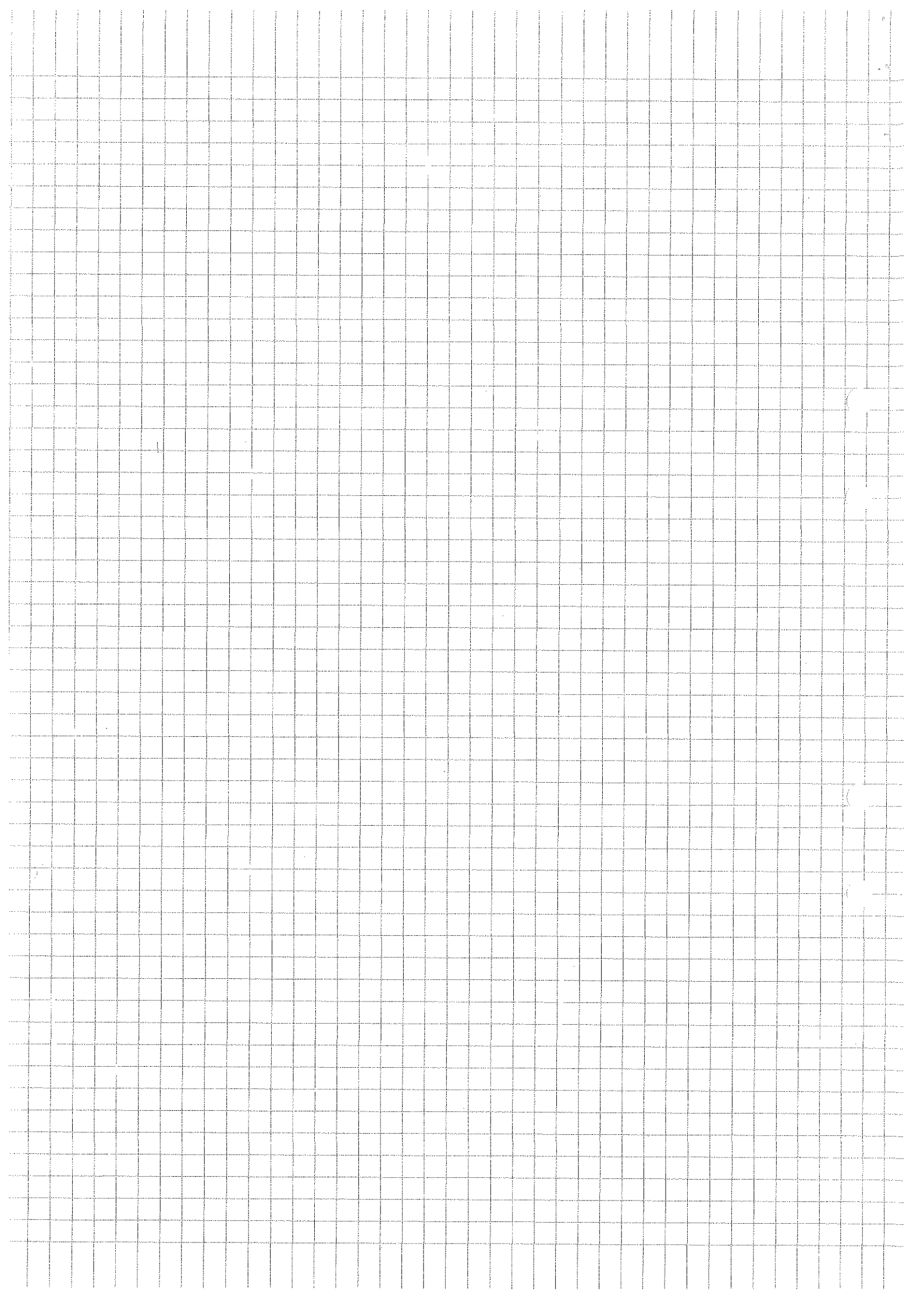
$I_t$  valued as  $I_t \cdot \alpha^3 \cdot \beta$  in term  $t+3$ .

**Hyperbolic Discounting**

\* Where  $\beta: 0 < \beta < 1$ . ( $\beta$  could be exponentially increasing)  
 $\Rightarrow \beta$  is an additional hyperbolic discounting factor.

The above can lead to time-inconsistent choices, when wise investment decisions are not taken.  
For example, a course in fertilizer use in Kenya ~~measured~~ had 97% of participants accepting that fertilizer was profitable and saying they would purchase fertilizer for their plots next season. Only 36% did!





## Question B.2 continued

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The return of the fertilizer had been estimated to be 70%. Therefore, for the majority of farmers  $70\% \cdot \alpha \cdot \beta < 0$ , meaning they valued the money the fertilizer cost less than the 70% they would get back after harvest. This is a clear indication of Hyperbolic ~~Discounting~~ Discounting. (HD)

Policy programme: Efforts can be made by governments and NGOs to take HD into consideration. Entrepreneurs can be offered discounts when ~~entering~~ entering contracts that oblige them to buy factory inputs at a future date. The hyperbolic discounter is more likely to invest when both costs and benefits are in the future. If given the chance to buy i.e. fertilizer when it needed to be used, many farmers in Kenya refused, blaming credit constraint. However, when offered a small subsidy (free delivery) after harvest for next season, many farmers subscribed. This is effective policy against HD.

### Disadvantages:

- ⇒ Very costly. subsidy + time for government representative
- ⇒ Some farmers are NOT Hyperbolic Discounters. The policy could cause them to overinvest, which is harmful in the case of fertilizer and at least inefficient!
- ⇒ Could create subsidy-reliance!

