INTRODUCTION TO THE ECONOMICS OF DEVELOPING COUNTRIES
(ECO 2117B, FALL 2012)
Instructor: Fernanda Estevan

MIDTERM EXAM – VERSION A

Date and time: 12 October 2012 from 8:30 am to 9:45 am
Location: TBT333

VERSION	A (mention this on the optical answer sheet under 'course code' as ECO2117B**A**)
STUDENT NAME	
STUDENT ID	

Grading and Instructions:

The midterm exam determines 35% of the final grade and it consists of the following components:
- Part 1 – multiple choice: 50% of midterm exam grade (50 points, 2.5 points per question)
- Part 2 – short answer: 50% of midterm exam grade (50 points)

During the exam:
- You are NOT allowed to make use of the textbook, lecture slides, personal notes, a pocket calculator, or any other sources of information.
- Language dictionaries are allowed but should be free of personal notes. Your dictionary may be subject to inspection and the right to use it can be withdrawn if the above condition is not met.
- You have 1 hour and 15 minutes to complete the exam. When you finish, bring your exam and answer forms to the front table. You will be asked to identify yourself by means of your student ID or another official ID document (driver's licence, passport, health insurance card) and sign a student list.

After the exam:
- The answer key will be posted on the website 24 hours at the latest after the midterm exam.
- Complaints about exam questions should be communicated to the professor in writing within 10 working days after the midterm exam (emails are accepted).
- Preliminary grades are posted through grade book on the course website within 10 working days after the midterm exam.
- Review of your exam with the professor is only possible on the following dates and times: Monday 29 October from 5:30 pm to 6:30 pm and Wednesday 31 October from 8:30 am to 9:30 am. You are expected to inspect the answer key closely before making an inquiry about the number of points awarded.

Part 1	**/50**
Q1	**/16**
Q2	**/18**
Q3	**/16**
Total Part 2	**/50**

Part 1: Multiple-Choice Questions

Grading: 20 questions, 2.5 points per correct answer (maximum total score: 50 points)
Instructions: Mark your answer on the optical marking form.

1. The core values of development include:

a. increasing income per person.
b. reducing the inequality of income.
c. the ability to meet basic needs.
d. all of the above.
Answer: C

2. According to Amartya Sen's capability approach:

a. Information on the consumption of commodities is not relevant.
b. Everyone should have the same capabilities.
c. A functioning is the freedom a person has to choose a capability.
d. None of the above statements is correct.
Answer: D

3. The following indicator is **not** a component of the new human development index (NHDI):

a. under five mortality rates.
b. mean years of education.
c. life expectancy at birth.
d. real per capita GNI in purchasing power parity.
Answer: A

4. The use of a geometric mean in the new human development index (NHDI):

a. gives more weight to the education component of the NHDI.
b. accounts for diminishing marginal utility of income.
c. ensures that poor performance in any dimension directly affects the overall NHDI.
d. allows for perfect substitutability between the three dimensions.
Answer: C

The following question is related to Table 2.4:

Table 2.4 Human Development Index for selected countries (Todaro & Smith, p. 53)

Country	Relative Ranking (lowest to highest)	Human Development Index (HDI)	Real 2004 GDP Per Capita (PPP, U.S. $)	GDP Rank Minus HDI Rank
Low Human Development				
Niger	177	0.311	779	−7
Ethiopia	170	0.371	756	+1
Malawi	166	0.400	646	+10
Tanzania	162	0.430	674	+13
Angola	161	0.439	2,180	−32
Guinea	160	0.445	2,180	−30
Nigeria	159	0.448	1,154	−1
Medium Human Development				
Bangladesh	137	0.530	1,870	+7
Pakistan	134	0.539	2,225	−6
India	126	0.611	3,139	−9
South Africa	121	0.653	11,192	−66
Turkey	92	0.757	7,753	−22
Peru	82	0.767	5,678	+12
China	81	0.768	5,896	+9
Saudi Arabia	76	0.777	13,825	−31
Brazil	69	0.792	8,195	−5

5. If Malawi's HDI rank is 166 and Malawi's "GDP minus HDI rank" is 10 then:

a. Malawi's per capita GDP rank is 176. This means that the per capita GDP ranking *overestimates* socioeconomic development in Malawi.
b. Malawi's per capita GDP rank is 156. This means that the per capita GDP ranking *overestimates* socioeconomic development in Malawi.
c. Malawi's per capita GDP rank is 176. This means that the per capita GDP ranking *underestimates* socioeconomic development in Malawi.
d. Malawi's per capita GDP rank is 156. This means that the per capita GDP ranking *underestimates* socioeconomic development in Malawi.

Answer: C

6. Low-Income Countries (LIC) today differ from developed countries in their earlier states in the following sense:

a. Many LIC's have higher population growth rates but in today's globalized world the possibility of migration relieves national population pressures.
b. LIC's tend to have lower physical and human resource endowments.
c. Both statements are correct.
d. Neither statement is correct.

Answer: B

7. Which of the following statements about convergence of living standards is correct?

a. For living standards of developed and developing countries to converge, developing countries must grow faster.
b. Empirical evidence indicates that living standards between developed and developing countries converge.
c. Technological transfer may lead to divergence in living standards.
d. Neither statement is correct.

Answer: A

8. According to the literature on the long-run causes of economic development, extreme inequality:

a. leads to less investment in human capital.
b. leads to more investment in public goods.
c. leads to more movement toward democratic institutions.
d. is unrelated to economic development.

Answer: A

9. Which model attributes development to the use of biased and unrealistic models?

a. Solow model.
b. Lewis model.
c. False Paradigm model.
d. Harrod-Domar model.

Answer: C

10. According to neoclassical growth theory, output growth results from:

a. increased labour, quantity, and quality.
b. increased capital.
c. improvement in technology.
d. All of the above.

Answer: D

11. Which of the following statements is **not** an assumption of the Lewis model?

a. There is surplus labour in the agricultural sector.
b. Wages in the modern sector are constant.
c. There is an informal sector in the modern urban sector.
d. Industrial profits are re-invested in capital accumulation.

Answer: C

12. The table below presents data on employment elasticity of growth, i.e., the percentage change in employment due to a 1% change in economic growth. Using this data, one can conclude that:

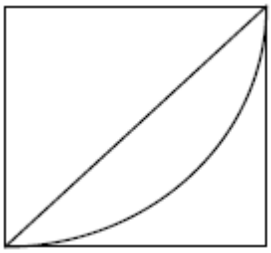
Employment elasticity of growth, Vietnam 1992-2001

	Total	Agriculture	Industry	Services
1992-1997	0.26	0.37	0.22	0.52
1998-2001	0.37	-0.13	0.89	1.78

a. there was a productivity increase in agriculture over the period 1998–2001.
b. there was a productivity decrease in agriculture over the period 1992–1997.
c. there was a productivity increase in services over the period 1998–2001.
d. there was a productivity decrease in industry over the period 1992–1997.

Answer: A

13. In the picture below, the diagonal line is representative of:



a. inequality.
b. high inequality.
c. low inequality.
d. perfect equality.

Answer: D

14. According to Table 1, which of the following statements comparing poverty in these countries is correct?

Table 1: Poverty measures in selected countries (2002)

	Headcount index (%)	Poverty gap index (%)
Cote d'Ivoire	23.34	6.82
Guatemala	12.65	3.83
Honduras	18.19	5.00

Source: Todaro & Smith (2012), Table 5.6, p. 233.

a. In Cote d'Ivoire, relatively fewer people are poor.
b. In Guatemala, poor people have the smallest average shortfalls.
c. Both statements are correct.
d. Neither statement is correct.

Answer: B

15. Extreme poverty may reduce economic growth since:

a. it may lead to a larger savings rate.
b. it increases political participation.
c. it decreases access to credit markets.
d. it increases productivity.
Answer: C

16. With modern sector enrichment growth, inequality will:

a. first rise and then fall.
b. first fall and then rise.
c. remain about the same.
d. None of the above.
Answer: D

17. According to Kuznets, in the process of development, inequality in an economy will normally:

a. first rise and then fall.
b. first fall and then rise.
c. remain about the same.
d. show no definite pattern.
Answer: A

18. A characteristic of population trends in developing countries is that:

a. fertility rates are declining much faster than mortality rates.
b. population age structure is much younger than in developed countries.
c. individuals tend to live longer than in developed countries.
d. Neither statement is correct.
Answer: B

19. A criticism of the Malthusian model is:

a. it does not take technological progress into account.
b. it assumes that population increases are negatively related to changes in national income levels.
c. it only studies the microeconomic theory of fertility, not the aggregate.
d. None of the above.
Answer: A

20. According to the microeconomic theory of fertility, we would expect that:

a. demand for children rises when income declines.
b. demand for children rises when the costs of having children decreases.
c. demand for children rises when the cost of other goods decreases.
d. none of the above.
Answer: B

Part 2: Short Answer Questions

Grading: The maximum score for a correct answer is indicated for each question below (maximum total score: 50 points)

Instructions:

- **Read the questions carefully**
- **Use the accompanying blank papers to make notes before you answer the questions**
- **Write your answer exclusively in the indicated space**
- **Make sure that your handwriting is legible**
- **Make sure that you address all (sub)questions**

Question 1: Comparative Development

The table below presents data on GNI per capita for several countries:

	GNI Per Capita (U.S. $)	
Country	Exchange Rate	Purchasing Power Parity
Argentina	7,190	13,990
Bangladesh	520	1,450
Brazil	7,300	10,070
Burundi	140	380
Cameroon	1,150	2,170
Chile	9,370	13,240
China	2,940	6,010
Costa Rica	6,060	10,950
Ghana	630	1,320
Guatemala	2,680	4,690
India	1,040	2,930
Indonesia	1,880	3,590
Kenya	730	1,550
Malawi	280	810
Malaysia	7,250	13,730
Mexico	9,990	14,340
Nicaragua	1,080	2,620
Sierra Leone	320	770
South Korea	21,530	27,840
Sri Lanka	1,780	4,460
Thailand	3,670	7,760
Uganda	420	1,140
United Kingdom	46,040	36,240
United States	47,930	48,430
Venezuela	9,230	12,840
Zambia	950	1,230

Source: Data from World Bank, *World Development Indicators, 2010* (Washington, D.C.: World Bank, 2010) tab. 1.1.

a. Explain the difference(s) between the GNI per capita measures calculated in columns (2) and (3). (4 points)

Answer: Todaro & Smith pp. 44–45

The GNI per capita calculated in column (2) corresponds to the GNI per capita in local currency converted to US$ using the official exchange rate. It does not take into account differences in the prices of non-traded goods and services that are typically cheaper in developing countries. The GNI per capita PPP calculated in column (3) corrects for these differences, adjusting for the different prices in different countries by using an international price basket.

b. For which countries are values in column (2) larger than in column (3)? Why? (4 points)

Answer: Todaro & Smith p. 45

Only for the United Kingdom, because prices of non-traded goods and services are larger in the UK than the benchmark prices considered. For developing countries, it is the opposite and for this reason, the GNI per capita in PPP is larger than the GNI per capita using the exchange rate method.

c. If you had to compare development levels across different countries, would you use the data in column (2) or (3)? Why? (4 points)

Answer: Todaro & Smith p. 45

One should use the data in column (3) since it takes into account differences in the prices of non-traded goods and services across different countries and therefore reflects different standards of living in different countries.

d. Is GNI per capita a good measure of development? Justify your answer. (4 points)

Answer: Todaro & Smith pp. 44–47

GNI per capita, when measured in PPP, indicates differences in standards of living in different countries, which is an important aspect of development. However, GNI per capita is not perfectly correlated with other development indicators. Therefore, it has to be combined with other socioeconomic indicators in order to allow for an assessment of development levels in different countries.

Question 2: Economic Growth

The Harrod-Domar growth model is one of the oldest economic growth models; it was developed in the 1950s. Below, the model is summarized in equations.

$S = sY$ (1)
$I = \Delta K$ (2)
$\Delta K = c\Delta Y$ (3)
$S = I$ (4)

Equations (1) to (4) can be linked to each other as follows:

$S = sY = c\Delta Y = \Delta K = I$ (5)

Let us focus on the middle part:

$sY = c\Delta Y$ (6)

Which can be rewritten as follows:

$$\frac{\Delta Y}{Y} = \frac{s}{c} \quad (7)$$

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Clarification terms:
Δ = change
S = net savings, $ amount
s = net savings ratio, % of income that is saved
Y = national income
K = capital stock, $ amount
c = K/Y = capital – output ratio, $ amount of capital needed to produce 1$ of output
I = net investment

a. Explain what drives economic growth according to the Harrod-Domar growth model. Focus on the intuitive logic of the argument; do not refer to the equations. (6 points)

Answer: Todaro & Smith pp. 111–115

In the Harrod-Domar model, capital accumulation plays a central role:
– To grow, economies must save part of their income and invest it by increasing the stock of capital in the economy.
– The more an economy saves, the more it can invest and the faster it can grow

Domestic savings are thus considered a pre-condition for take-off into self-sustaining economic growth.

b. Use the equations to explain the specific mechanism that drives economic growth in the Harrod-Domar growth model. Make sure that you discuss equations (1) to (4) and equation (7). (6 points)

Answer: Todaro & Smith pp. 111–115

Equations (1) to (4) explain that the stock of savings (S) measures the resources available for investment (I) in new capital (ΔK). Savings (S) are defined as a certain percentage of national income (Y): on average, every household saves s percentage of its income. It is further defined that each dollar of output (Y) is produced using a fixed dollar amount of capital (K) — this so-called capital–output ratio (c= K/Y) is assumed to be constant. If the capital stock grows (ΔK), this implies that output will grow as well (cΔY). Equation (7) states that the growth of national income is determined by the savings ratio and the capital–output ratio; since the capital–output ratio is assumed constant, economic growth is only determined by national savings.

c. In this model, what can developing countries do if they want their economies to grow faster? (3 points)

Answer: Todaro & Smith pp. 111–115

- *increase the domestic savings rate*
- *get capital from abroad (foreign investment, foreign aid)*

d. Which two sources of economic growth are "assumed away" in the Harrod-Domar model? Also, explain briefly how they are "assumed away." (3 points)

Answer: Todaro & Smith pp. 111–115 & 142–146

- *Population growth, and thereby labour, force growth — labour is assumed to be abundant, there are always enough hands to employ new capital*
- *Technological progress — the capital–output ratio is assumed to be constant*

Question 3: Inequality and Poverty

The table below presents data on India's income distribution in 1983 and 2005.

	Share of total income	
Quintile	1983	2005
1	8%	9%
2	13%	12%
3	17%	16%
4	22%	21%
5	40%	42%

a. Carefully graph the Lorenz curves for 1983 and 2005 in the same graph, labelling the axes. (6 points)

Answer: Todaro & Smith pp. 206–207

b. Did inequality in India increase or decrease over the period 1983–2005? Explain your answer carefully. (5 points)

Answer: Todaro & Smith pp. 206–207

One cannot provide an unambiguous answer to this question since the Lorenz curves cross. In 2005, the poor are better off than in 1983, but the rich are also better off in India. Consequently, the income share of the middle class decreased. The issue of whether the situation in 1983 or 2005 is considered to be better depends on a value judgment of whether it is preferable to have a middle class that controls more income, or poor people with a relatively larger share of income in a society.

c. Did absolute poverty increase or decrease in India over the period 1983–2005? Explain your answer carefully. (5 points)

Answer: Todaro & Smith pp. 211–215

By looking at data on income distribution (quintiles or Lorenz curves), one cannot conclude what happened in terms of absolute poverty. This will depend on the location of the poverty line and the income levels of individuals in the different income groups.

Scrap paper 1

Scrap paper 2