



STRATHMORE INSTITUTE OF MATHEMATICAL SCIENCES

Bachelor of Business Science in Financial Economics

END OF SEMESTER EXAMINATION

BSE 4120-Development Economics

DATE: 25th July 2024

Time: 2 Hours

Instructions

1. This examination consists of FIVE questions.
2. Answer **Question ONE (COMPULSORY)** and any other **TWO** questions.

QUESTION ONE [30 marks]

Below is an extract from an article that was written on The Brookings Institution website by Hippolyte Fofack - January, 2019.

Overcoming the colonial development model of resource extraction for sustainable development in Africa

The end of the last commodity boom from 2000-2014 and recent swings in world oil prices have once again brought to the fore one of the most important binding constraints to long-term growth and economic development in Africa—the lingering effects of colonialism on Africa’s patterns of trade and the dynamics of world markets. Several decades after independence, little has changed with Africa’s patterns of growth and trade. They are still largely driven by primary commodities and natural resources, reflecting the persistence of the colonial development model where natural resource-endowed nations served as feedstock to advanced economies.

Because manufactured goods with increasing technological content account for much of global trade, the continued reliance on colonial-era “extractivist” development models has marginalized Africa in the global economic and trading environment. It has also markedly increased the region’s exposure to global volatility and risks associated with long-term deterioration of commodity terms of trade—the ratio between a country’s export prices and its import prices...

Exports of primary commodities are highly income inelastic. The growth of world incomes is therefore not always associated with a proportionate increase in demand for primary commodities. In this context the extractivist development model, where primary commodities are exported for greater value addition along global commodity value chains, has been costly for natural resource-rich countries not just in terms of trade but also incomes and welfare. It is largely responsible

for the widening income gap between Africa and other regions of the world and has sustained the exodus of Africans looking for economic opportunities outside the continent...

In addition to stemming the outflow of migrants, extracting more value from natural resources could help align the growth of natural resource-rich African countries' national incomes with the world's incomes, and perhaps narrow the widening income gap with the rest of the world. At the same time, developing the capacity to process primary commodities and natural resources could create a virtuous cycle of inclusive growth and expansion of intra-African trade...

- a) The article mentions that *“The end of the last commodity boom from 2000-2014 and recent swings in world oil prices have once again brought to the fore one of the most important binding constraints to long-term growth and economic development in Africa—the lingering effects of colonialism on Africa’s patterns of trade and the dynamics of world markets...”*
 - i) Distinguish between economic growth *and* economic development. In your discussion, explain how each can be measured. (4 marks)
 - ii) Further, why do you think an understanding of the meaning and measure of economic development is important for policy formulation in developing nations? Provide a discussion of two key reasons. (4 marks)
 - iii) This article mentions the *“the lingering effects of colonialism on Africa’s patterns of trade and the dynamics of world markets...”*. In your opinion, do you think colonialism has had an effect on the economic development of African countries? If so, discuss in detail two specific effects of colonial legacy. (4 marks)
- b) A key objective of work carried out by development economists, is to identify causality following a certain programme or policy. For example, the research by Melissa Dell, which we discussed in class, assessed the long-run impact of the forced labour system by the Spanish colonialists in Peru and Bolivia. To establish the causal effects of the forced labour system, Dell used the Regression Discontinuity Design (RDD). Explain how RDD can be used to evaluate development programmes or policies. (3 marks)
- c) This article goes on to state that *“In this context the extractivist development model, where primary commodities are exported for greater value addition along global commodity value chains, has been costly for natural resource-rich countries not just in terms of trade but also incomes and welfare. It is largely responsible for the widening income gap between Africa and other regions of the world.”*. In your opinion, explain whether or not at present, we should expect convergence or divergence of living standards between African countries and developed countries. In your discussion, define the terms 'convergence' and 'divergence'. (5 marks)
- d) The article further states that *“Because manufactured goods with increasing technological content account for much of global trade, the continued reliance on colonial-era “extractivist” development models has marginalized Africa in the global economic and trading environment.”* Discuss the “Neocolonial Dependence Model” and explain whether or not you find this model applicable for developing countries in Africa today. (5 marks)
- e) The author of this article mentions that ... *“developing the capacity to process primary commodities and natural resources could create a virtuous cycle of inclusive growth and expansion*

of intra-African trade...”. Briefly explain the key concepts of the Big Push Theory and specifically highlight how African governments could employ concepts from this theory to bring about economic development in their countries. (5 marks)

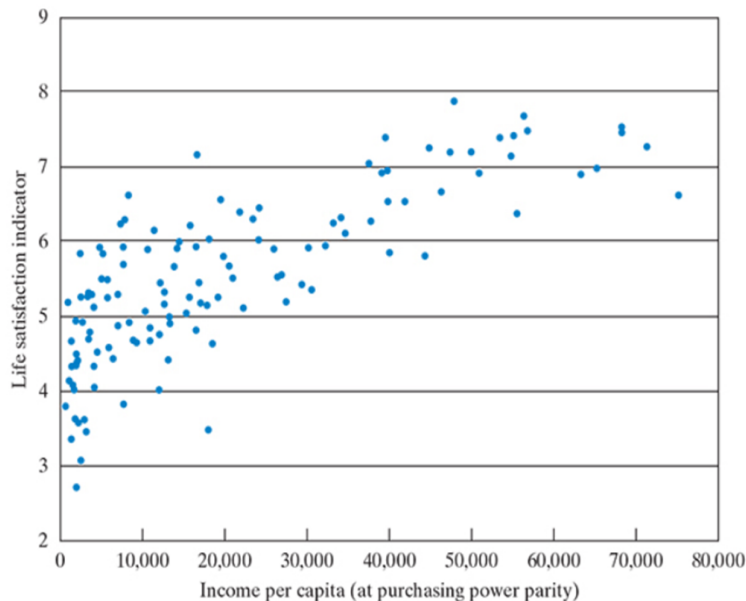
QUESTION TWO [15 marks]

- a) Below is an extract from an article written on the Our World in Data website by By Esteban Ortiz-Ospina and Max Roser- Revised February 2024.

Happiness and Life Satisfaction

How happy are people today? Were people happier in the past? How satisfied with their lives are people in different societies? And how do our living conditions affect all of this? These are difficult questions to answer, but they are questions that undoubtedly matter for each of us personally. Indeed, today, life satisfaction and happiness are central research areas in the social sciences, including in ‘mainstream’ economics...

Figure 1 below shows the relationship between life satisfaction and income per capita.



Note: The data on the x-axis is drawn from the World Bank World Development Indicators. The y-axis uses the Cantril Self-Anchoring Striving Scale from the Gallup World Poll, asking respondents to imagine a ladder with steps from 0 (worst possible life for you) to 10 (best possible life for you) and answer. On which step of the ladder would you say you personally feel you stand at this time?

- i) Is it reasonable to infer that the causal mechanism behind the correlation in figure 1 above is that high levels of income cause high levels of happiness? Provide a detailed discussion. (3 marks)
- ii) Additionally, do you think that happiness a sufficient indicator of measuring the economic development for a country? Justify your answer. (3 marks)

- b) Table 1 below shows the Human Development Index (HDI) rankings for selected developing countries, together with the Gross national income (GNI) per capita rank minus the HDI rank.

Table 1: Rankings for selected developing countries

HDI Rank	Country	GNI per capita rank minus HDI rank
119	Venezuela (Bolivarian Republic of)	14
120	Bolivia (Plurinational State of)	3
120	Morocco	4
122	Nauru	-38
123	Gabon	-18
124	Suriname	-25
125	Bhutan	-15
126	Tajikistan	18

- i) Explain what the number “-18” means for Gabon, in the column that shows the *Gross national income (GNI) per capita rank minus the HDI rank*. In your discussion, provide two potential reasons as to why there is a difference in ranking between the GNI per capita and HDI for Gabon (3 marks).
- c) Table 2 below shows the HDI dimensions for Gabon, while Table 3 shows the minimum and maximum values of the dimensions.

Table 2: HDI dimensions for Gabon

Indicator	Value
Life expectancy at birth (years)	65.7
Mean years of schooling	9.6
Expected years of schooling	12.4
GNI per capita (2017 PPP \$)	11,194

Table 3: Minimum and maximum values of the dimensions

Dimension	Indicator	Minimum	Maximum
Health	Life expectancy at birth (years)	20	85
Education	Expected years of schooling (years)	0	18
	Mean years of schooling (years)	0	15
Standard of living	GNI per capita (2017 PPP\$)	100	75,000

- i) Calculate the HDI for Gabon and explain what the index value enables you to conclude about the level of human development in Gabon. (6 marks)

QUESTION THREE [15 marks]

Below is an extract about Amartya Sen from The Harvard Gazette

Many economists focus on explaining and predicting what is happening in the world. But Sen, considered the key figure at the convergence of economics and philosophy, turned his attention instead to what the reality should be and why we fall short. “I think he’s the greatest living figure in normative economics, which asks not ‘What do we see?’ but ‘What should we aspire to?’ and ‘How do we even work out what we should aspire to?’” said Eric S. Maskin ’72, Ph.D. ’76, Adams University Professor and professor of economics and mathematics.

His work on famines and his novel view that in order to accurately evaluate people’s well-being, economists needed to consider information beyond just income has reshaped thinking in development economics and welfare economics...In 1998, Sen received the Prize in Economic Sciences in Memory of Alfred Nobel for his theoretical, field, and ethics work in welfare economics and for his research advancing the understanding of social-choice theory, poverty, and the measurement of welfare.

- a) Discuss Amartya Sen’s Capabilities approach, explaining the importance of this approach in the field of development economics. (4 marks)
- b) Explain what the Sustainable Development Goals are, including the timelines for achieving these goals. In your discussion, provide an example of *one* Sustainable Development Goal (SDG). For *the specific* SDG you mention, describe *two* indicators used to measure whether or not countries are on target to meet the SDG you have mentioned. (4 marks)
- c) To what extent do you think the SDGs are aligned with Amartya Sen’s Capabilities approach? Justify your answer. (3 marks)
- d) Briefly explain what the Multidimensional Poverty Index (MPI) developed by the Oxford Poverty and Human Development Initiative (OPHI) and the United Nations Development Programme (UNDP), aims to capture. To what extent do you think the MPI is aligned with Amartya Sen’s Capabilities approach? Justify your answer. (4 marks)

QUESTION FOUR [15 marks]

Below is the abstract from the paper *Inequality does cause underdevelopment: Insights from a new instrument* by William Easterly in the Journal of Development Economics 84 (2007) 755–776.

Abstract

Consistent with the provocative hypothesis of Engerman and Sokoloff [Engermann, Stanley and Kenneth Sokoloff (1997), “Factor Endowments, Institutions, and Differential Paths of Growth Among New World Economies: A View from Economic Historians of the United States,” in Stephen Haber, ed. *How Latin America Fell Behind*, Stanford CA: Stanford University Press., Sokoloff, Kenneth L. and Stanley L. Engerman (2000), *Institutions, Factor Endowments, and Paths of Development in the New World*, *Journal of Economic Perspectives* v14, n3, 217–32.], this paper confirms with cross-country data that agricultural endowments predict inequality and inequality predicts development. The use of agricultural endowments – specifically the abundance of land suitable for growing wheat relative to that suitable for growing sugarcane – as an instrument for

inequality is this paper's approach to problems of measurement and endogeneity of inequality. The paper finds inequality also affects other development outcomes – institutions and schooling – which the literature has emphasized as mechanisms by which higher inequality lowers per capita income. It tests the inequality hypothesis for development, institutional quality and schooling against other recent hypotheses in the literature. While finding some evidence consistent with other development fundamentals, the paper finds high inequality to independently be a large and statistically significant barrier to prosperity, good quality institutions, and high schooling.

- a) In general, define the term “inequality”. Why might high levels of inequality lead to lower rates of growth and development? Further, explain why it might be difficult for a country to get out of this trap of inequality. (5 marks)
- b) After reading the abstract above, explain how Easterly measured “inequality” in his research. (1 mark)
- c) In order to establish the causal effect on inequality on development, Easterly needed to find a suitable instrumental variable to measure inequality in his research. Explain when it may be necessary for a development economist to use an instrumental variable in their research and how an instrumental variable helps to establish causality. (4 marks)
- d) In relation to income inequality, distinguish between size and functional distribution of income in a nation. (5 marks)

QUESTION FIVE [15 marks]

Below is an extract from an article by Muraya Kamunde on the Kenya Broadcasting Corporation (KBC) website- March 2024

Ruto outlines key projects in achieving Vision 2030

President William Ruto on Thursday outlined key policies and projects that his administration will implement to achieve Kenya Vision 2030. Speaking during the fourth Medium Term plan, Dr. Ruto noted that in the next phase his administration will focus on boosting production through a value chain approach targeting leather and leather products, textile and apparel, dairy, tea, rice, edible oils, blue economy, minerals, forestry, construction and building materials, among others. The fourth Medium Term Plan (MTP) launched by the President in State House, Nairobi, is a successor of the third MTP 2018-2022 and the second last phase of Vision 2030 and will set the momentum for transitioning to the next long-term development blueprint...

- a) Clearly outline the three pillars that the Kenya Vision 2030 is anchored on. (6 marks)
- b) Using a diagram, illustrate and briefly describe Kuznet's inverted-U hypothesis. Further, discuss one limitation of this hypothesis for developing countries in Africa today. (6 marks)
- c) As Kenya works on providing a high quality of life to all her citizens, do you think that rapid economic growth and a more equal distribution of income are necessarily conflicting objectives for Kenya? Provide two arguments to support your view. (3 marks)