AFRICAN ECONOMIC RESEARCH CONSORTIUM

Collaborative Masters Programme in Economics for Anglophone Africa (Except Nigeria)

JOINT FACILITY FOR ELECTIVES (JFE) 2013

JUNE – SEPTEMBER

HEALTH ECONOMICS I

First Semester: Final Examination

Duration: 3 Hours **Date: Tuesday, August 6, 2013**

INSTRUCTIONS:

1. Attempt a total of **FOUR (4)** questions.
2. Section B is **COMPULSORY**.
3. Budget your time well i.e. 45 minutes per question.
4. Be clear, precise and concise.

SECTION A:

Attempt THREE (3) QUESTIONS Only from this Section

Question 1

(a) Using examples from your country, describe any five implications of climate change for global human health (**15 marks**)

(b) Suggest any five strategies to mitigate the adverse effects of climate change on human and animal health in your country. (**5 marks**)

(c) Suggest any five strategies to adapt to climate change in your country. (**5 marks**)

Question 2

By means of an illustration and examples from your country, clearly identify and explain as many distinct, and potentially causal, relationships as you can between: **Health**, **Healthcare** and **Economic Performance**. (**25 marks**)

Question 3

(a) Using real-life examples, explain any five sources of market failure in healthcare markets in your country. (**15 marks**)

(b) Suggest five possible policy responses to market failures in healthcare markets in your country. (**10 marks**)

Question 4

(a) "Medical care is not different from other goods analyzed in economics." Using any four examples, critically examine the validity of this statement. (**8 marks**)

(b) Using any three real-life examples from your country what are medication errors? (**4 marks**)

(c) Explain any five causes of medication errors in your country. (**8 marks**)

(d) Suggest any five strategies to minimize the occurrence of medication errors in your country. (**5 marks**)

Question 5

(a) Briefly, describe any five forms of inefficiencies that characterize referral hospitals in your country. (**5 marks**)

(b) With reference to your country, explain any ten approaches to improve efficiency or value for money in referral hospitals and/or to address the inefficiencies highlighted in (a) above. (**20 marks**)

SECTION B:

This Section is COMPULSORY

Question 6

Qian et al. (2009)[1] examine the determinants that influence health care demand decisions in rural areas of Gansu province, China. They estimate a Mixed Multi-Nomial Logit (MMNL) model. The self-treatment alternative is kept as the base alternative in the estimation and hence the coefficient estimates for the other four alternatives should be interpreted relative to self-treatment. The parameter estimates of the MMNL model are presented in Table 1.

Table 1 Healthcare Demand Models

Variable	Health care providers			
	Public village clinic	Private village clinic	Township health centre	County hospital
Constant	0.5131 (1.88)*	0.2609 (0.87)	−0.2833 (−0.75)	−1.2127 (−1.64)
Married	0.2924 (1.41)	0.2270 (1.02)	0.2485 (0.79)	0.8025 (1.90)*
NCMS	0.4263 (2.19)**	−0.1494 (−0.66)	−0.2897 (−0.95)	−0.0460 (−0.14)
Age	−0.0124 (−2.30)**	−0.0119 (−2.06)**	−0.0150 (−2.01)**	−0.0358 (−3.40)***
Chronic illness	0.5739 (1.80)*	0.9238 (2.59)***	1.3085 (2.90)***	2.7439 (4.11)***
Other illness	1.0833 (3.50)***	1.6850 (5.09)***	1.7748 (4.15)***	3.6390 (5.58)***
Illness time	−0.9605 (−3.22)***	−0.8707 (−2.70)***	−0.9816 (−2.43)**	−0.3511 (−0.86)
Bed-days	0.0622 (3.88)***	0.0657 (3.77)***	0.0757 (3.61)***	0.1175 (6.88)***
DIST2_M	−0.3531 (−1.95)**	−0.3531 (−1.95)**	−0.3531 (−1.95)**	−0.3531 (−1.95)**
DIST3_M	−0.8447 (−2.02)**	−0.8447 (−2.02)**	−0.8447 (−2.02)**	−0.8447 (−2.02)**
DIST4_M	−1.1694 (−2.83)***	−1.1694 (−2.83)***	−1.1694 (−2.83)***	−1.1694 (−2.83)***
lnC	1.0211 (8.35)***	1.0211 (8.35)***	1.0211 (8.35)***	1.0211 (8.35)***
$(\ln C)^2$	−0.0566 (−4.52)***	−0.0566 (−4.52)***	−0.0566 (−4.52)***	−0.0566 (−4.52)***
SD of parameter distributions				
DIST2_S	0.2871 (0.25)			
DIST3_S	1.1769 (1.75)*			
DIST4_S	0.0084 (0.00)			
N	1015			
Log likelihood	−1384			
Adjusted Estrella R^2	0.3613			

Notes: t-statistics in parentheses.
***significant at 1%; **significant at 5%; *significant at 10%.

NCMS = insurance status

(a) Interpret the results in Table 1 above. (**15 marks**)

(b) Briefly explain any five adjustments you would make to the explanatory variables or set of healthcare providers to appropriately investigate the determinants which influence health care demand decisions in your home district. (**10 marks**)

[1] Qian, D., R.W. Pong, A. Yin, K.V. Nagarajan and Q. Meng (2009) Determinants of Health Care Demand in Poor, Rural China: the Case of Gansu Province, *Health Policy and Planning, Volume 24 pages 324–334.*