FACULTY/COLLEGE	College of Business and Economics
SCHOOL	School of Economics
CAMPUS(ES)	APK
MODULE NAME	Macroeconomic Issues in Development
MODULE CODE	MAD9X02
SEMESTER	First
ASSESSMENT OPPORTUNITY, MONTH AND YEAR	Final Summative Assessment Opportunity May 2019

ASSESSMENT DATE	27 May 2019	SESSION	08:30 – 11:30
ASSESSOR(S)	Prof Kevin Nell		
MODERATOR(S)	Prof Yoseph Getachew (external); Dr Magda Wilson (internal)		
DURATION	3 hours (180 min)	TOTAL MARKS	100

NUMBER OF PAGES OF QUESTION PAPER (Including cover page)	5

INFORMATION/INSTRUCTIONS:
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- This is a closed-book assessment.
- There are 5 questions. Answer ALL the questions.
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SURNAME	
INITIALS	
STUDENT NUMBER	
CELL NUMBER	

Mark schedule

|	Mark		Mark		Mark		Mark		Mark
Q1		**Q2**		**Q3**		**Q4**		**Q5**	
(a)(10)		(10)		(a)(10)		(a)(12)		(a)(10)	
(b)(15)				(b)(3)		(b)(10)		(b)(10)	
				(c)(10)					

Total mark :

QUESTION 1 (The Solow Model and Investment)

(a) Suppose a developing economy experiences a permanent <u>decrease</u> in its saving/investment rate at time $t = 0$. Assuming that the economy is in an initial steady-state position, use the Solow (1956) diagram to model the effect of a decrease in the saving/investment rate. In addition, sketch a graph of how the natural logarithm (ln) of output per worker evolves over time with and without the decrease in the saving/investment rate. Does the decrease in the saving/investment rate permanently affect the growth rate or level of output per worker? (**Hint:** The Solow diagram has the output-technology ratio (y) on the vertical axis and the capital-technology ratio (k) on the horizontal axis).   **(10 points)**

(b) Policy-makers, in general, view physical investment as a key determinant of growth and industrial development. Yet, the empirical literature is ambiguous on the effect of investment on growth. Critically evaluate the importance of investment (capital accumulation) with specific reference to Jones (1995); Easterly and Levine (2001); Bosworth and Collins (2003); and Bond et al. (2010).   **(15 points)**

QUESTION 2 (Convergence & Growth)

The Figure below plots the per capita incomes of a group of industrialised countries over the period 1870-2008.
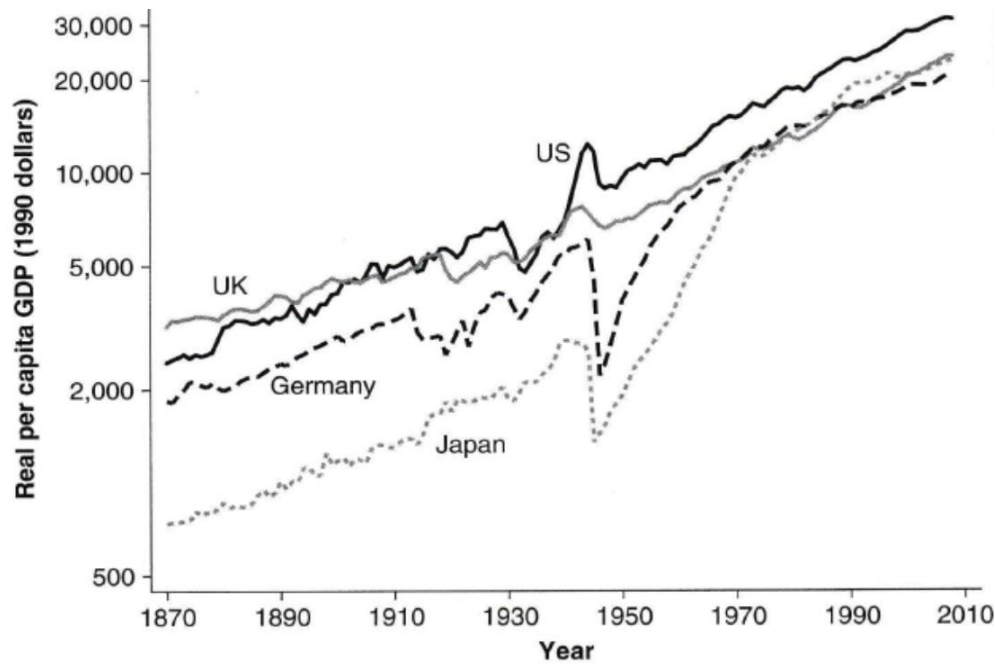
Use Solow's diagram of transition dynamics to illustrate and explain the empirical observation that the per capita incomes of the United Kingdom (UK) and Japan have been converging from 1870 until 2008. [**Hint:** the relevant equation for the transition dynamics diagram is $\dot{k}/k = s(y/k) - (n + g + \delta)$]   **(10 points)**

QUESTION 3 (Inflation & Growth)

Consider Kaldor's model of 'forced' saving:

$$\frac{\partial(S/Y)_t}{\partial p} = (\alpha - 1)t\left(\frac{W_0}{Y_0}\right)e^{p(\alpha-1)+at}(s_w - s_r) \tag{1}$$

where $(S/Y)_t$ is the saving to income ratio at time t; p is the inflation rate; α is the wage-price coefficient; W_0 is the initial wage bill; Y_0 is the initial income level; a is autonomous wage growth; s_w is the marginal propensity to save out of wages; and s_r is the marginal propensity to save out of profits.

Assume the following values for a specific country:

$\alpha = 0.6$

$W_0/Y_0 = 0.8$

$e^0 = 1$

$s_w = 0.1$

$s_r = 0.9$

$t = 1$

(a) Provide a verbal explanation of Kaldor's model of forced saving. **(10 points)**

(b) Use the assumed values above and calibrate Kaldor's model in equation (1) to determine the amount of inflation required to increase the saving ratio by one percentage point. In this country scenario, do you think it is worthwhile to pursue a policy of inflationary finance? Discuss. **(3 points)**

(c) Survey the empirical evidence in Sepheri and Moshiri (2004) (*"Inflation-Growth Profiles Across Countries: Evidence from Developing and Developed Countries"*) and Pollin and Zhu (2006) (*"Inflation and Economic Growth: a cross-country nonlinear analysis"*) to discuss the relevance of Kaldor's model. What are the main implications for monetary policy? **(10 points)**

QUESTION 4 (Geography & Growth)

(a) Provide a detailed explanation why Sachs *et al.* (2004) {*Ending Africa's Poverty* Trap} regard geography rather than institutions as the binding constrained on growth and development in sub-Saharan Africa (SSA) countries. **(12 points)**

(b) According to Sachs *et al.* (2004), foreign aid can play an important role to lift SSA out of its poverty trap. Use the arguments in Easterly (2006) {*Reliving the 1950s: the big push, poverty traps, and takeoffs in economic development*} to provide a critique of the Sachs *et al.* (2004) view.   **(10 points)**

QUESTION 5 (Centre-Periphery Models)

(a) With reference to the diagram below, explain Kaldor's (1970) model of regional growth rate differences. [**Hint:** the export demand equation is $x_t = \eta(p_{dt} - p_{ft}) + \varepsilon(z_t)$] **(10 points)**
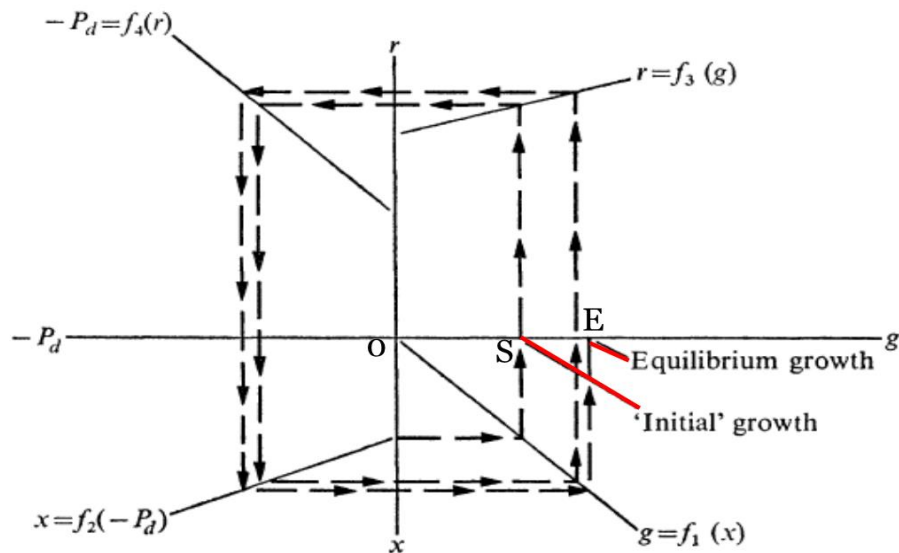
(b) Based on Thirlwall's (2014) review and Setterfield's (1997) extension, provide a critique of Kaldor's regional growth rate model in question 5(a). You may use some historical and/or modern day examples to illustrate your answer. **(10 points)**