2024 EJC H1 Economics Prelim Exam Paper 1 SAMS

Question1: Towards Sustainable Fashion

(a)	Using Table 1, explain how the world price of cotton would change from 2021 to 2022. [2]
	The production of cotton has increased while its consumption has fallen over the period. This results in a surplus of cotton [1], suggesting that the price of cotton fell [1] from 2021 to 2022.
	Or
	In 2022, there is a surplus as production is more than consumption [1]. A surplus result in a downward pressure on price hence overall price of cotton in 2022 fell [1].
(b)	Explain why cotton produced in Brazil is not likely to be a public good. [3]
	The key characteristics of a public good are non-excludable and non-rivalrous. Cotton is not likely to be a public good as it is excludable and rivalrous [1].
	Excludability \Box it is possible to exclude non-payers from consuming the good after it has been provided. If consumers are not willing or able to pay for cotton, then they can be excluded from purchasing the good. [1]
	Rivalrous □ having another additional consumer of the good diminishes the quantity and/or quality available to other consumers. With a finite amount of cotton sold in the market, a consumer who purchases cotton leaves less quantity of cotton available for purchase. [1]
(c)	With reference to Extract 1 and using a diagram, explain how a change in one supply factor might account for a rise in cotton production in Brazil.[3]
	Price of cotton Po P1 P1 Q0 Q1 SS0 SS1 Quantity of cotton
	Diagram [1]
	 Low prices for corn have pushed farmers in Brazil to plant cotton instead (Extract 1): Fall in demand for corn Falls in both price of corn and its quantity supplied Rise in supply of cotton since corn and cotton are goods in competitive supply [1] Rise in cotton production in Brazil Equilibrium quantity of cotton increases from Qo to Q1 [1]
(d)	Using the concent of price elasticity of demand, discuss the view that 'establishing a minimum support
(u)	price in the cotton market is desirable for farmers' (Extract 2). [8]

Desirable for farmers \Box cotton farmers earn a higher total revenue. R1: Establishing a minimum support price in the cotton market is desirable for farmers. Rise in TR for farmers (case of PED<1) Price SS Pf Price floor F Ρ DD Q1 Q Q₂ 0 Quantity A price floor is a legally established minimum price. A price floor is only effective if it is set above the equilibrium price. With the implementation of price floor, price of cotton increase from P to Pf. Quantity demand fell from Q to Q_1 and quantity supplied increases from Q to Q_2 . There is a surplus of Q_1Q_2 . Initially the farmers income is OPEQ. Considering that the demand of cotton is generally price inelastic when cotton is regarded as an essential or key resource in manufacturing fabrics, The increase in price, because of the price floor, decreases quantity demand less than proportionately. Overall income of farmers will increase to $0P_{f}AQ_{1}$. [Optional: Furthermore, assuming the government buys back the surplus $Q_{1}Q_{2}$, the income of farmers increases to 0P_fBQ₂.] R2: Establishing a minimum support price in the cotton market might not be desirable for farmers. Fall in TR for farmers (case of PED>1) • However, if there is a large availability of substitutes for cotton such as 'polyester and other man-made petroleum products' for manufacturing fabrics, the demand for cotton might be price elastic in reality. The increase in price due to the price floor would lead to a less than proportionate decrease in its quantity demand, such that overall income of farmers falls instead. [Accept other possible reasons for why farmers might be worse off.] Conclusion

The extent of desirability of a minimum price support for cotton farmers depends on how price elastic the demand for cotton is. The more price elastic demand for cotton is, due to the increasing number of man-made substitutes for cotton due to firms' R & D efforts, would mean a more significant fall in total

revenue, which is thus undesirable for farmers when the minimum price support is imposed in the cotton market.

Marks Scheme:

		Level	Descriptor	Marks	
		L2	For an answer that provides rigorous and coherent explanation on the possible changes in farmers' total revenue using the PED concept and in view of a price floor in the market for cotton.	4 – 6	
		L1	For an answer that shows a smattering of points displaying some recognition of how a price floor could be desirable for cotton farmers due to a change in their total revenue.	1 – 3	
			For an underdeveloped answer that provides a superficial analysis or one lacking in scope.		
			Inaccuracies are present.		
		E2	One evaluative statement that is reasoned OR two unsupported evaluative statements	2	
		E1	One unsupported evaluative statement Unexplained or not supported by arguments in answer	1	
(a)	(i)	With refere	ance to Figure 1, explain how one component of aggregate demand r	night be	
(0)	affected by the change in private funding for sustainable fashion. [2]				
	The rise in private funding for sustainable fashion as shown in Fig. 1 [1] could reflect a rise in investment spending (I) as fashion firms are more able to engage in R&D to lower costs in manufacturing environmentally friendly clothing[1].				
	(Note: Accept alternative answers that are correctly explained. Rise in G is not acceptable as Figu shows change in private funding.)				
	(ii) Comment on the likely impact on unemployment in India if the country develops into 'a hub for sustainable fashion' (Extract 3).			ops into 'a global [6]	
	One of key macroeconomic aims of Indian government achieve low unemployment rate.				
	R1: I	Positive im	pact on UNN [2]		
	India [develops ir Rise in firms in	to 'a global hub for sustainable fashion' price and/or non-price competitiveness of sustainable clothir India	ng produced by	
	 Rise in DD for India's sustainable clothing Rise in X (India's ambitious target of 100 billion USD for cotton and textile ex 2025-26 (Extract 3)) 				

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	 Rise in AD Unplanned fall in firms' inventories Firms hire more factors of production (including labour) to produce more output Rise in demand for workers in the sustainable fashion industry Fall in demand-deficient UNN, assuming that sustainable fashion is a key industry in 				
	India				
	R2: N	legative impact on UNN [2]			
	 R & D, technological developments are important aspects of sustainable manufacturing (Extract 3) Rise in demand for skilled workers in sustainable clothing sector Less skilled workers who become unemployed in the contracting non-sustainable clothing sector are not find alternative employment in the expanding sustainable clothing sector due to a skills mismatch Rise in structural UNN in India 				
	Conc	lusion [2]			
	The on the prom and india.	overall impact on unemployment as India becomes a 'global hub in sustainable fashion' depends the ability of the Indian government to manage the problem of structural unemployment via oting upskilling programmes for its unemployed workers due to a skills mismatch. A more intense relevant upskilling programme is likely to more effectively reduce structural unemployment in			
(f)	(i)	Explain why the production of sustainable clothing might be less than socially optimal. [6]			
	The produuncoi	production of sustainable clothing might be less than socially optimal due to positive externality in Inction □ benefits enjoyed by third parties due to the production of sustainable clothing, mpensated for. [1]			
		Cost/benefit			
		B MPC=MSC			
		A C MEB			
		МРВ			
		Q _P Q _s Quantity of sustainable clothing			
	Diagr	am [1]			
	Wher and e Howe purch	n firms produce sustainable clothing, they incur private costs such as the manufacturing costs onjoy private benefits such as revenue earned from the sale of sustainable clothing. ever, it does not take into account the fact that third parties, such as individuals who do not ase sustainable clothing, would enjoy external benefits such as improved health conditions and			

hence lower medical bills [1] due to lower incidence of lung related illnesses as the environment becomes less polluting, since sustainable clothing is produced from "eco-friendly materials". Due to the positive externality in production, the social benefits of R&D are higher than the private benefits (MSB>MPB) by the MEB [1] as shown in above figure. Assuming no negative externalities, the marginal private costs is equal to marginal social costs (MSC). Assuming that profit-maximising firms consider only their private benefits and costs when producing sustainable clothing: Market equilibrium output occurs at QP, where MPB=MPC Socially optimal output is given by QS, where MSB=MSC • QP<QS [] firms under-produce sustainable clothing [] under-allocation of resources [1] Between QP and QS, MSB >MSC
societal welfare could have been gained by increasing quantity of sustainable clothing to $QS \square$ deadweight loss (area ABC) [1] (ii) Discuss whether cost-saving technological solutions (Extract 4) adopted in India is the best method to achieve a socially optimal outcome in the market for sustainable clothing. [10] 'Best method'
most appropriate policy to achieve allocative efficiency in the market for sustainable clothing. R1: Cost-saving technological solutions could lead to allocative efficiency in the market for sustainable clothing. Cost/benefit MPC=MSC MPC1 MEP MSB MPB QP Qs Quantity of sustainable clothing [H] Government promotes cost-saving technologies I India □ Fall in unit COP □ Fall in MPC (i.e. MPC shifts rightwards to MPC1) DWL is eliminated Qs is achieved □ Allocative efficiency in the market for sustainable clothing is achieved [L] The Indian government may incur a budget deficit via increased spending to promote and adopt cost-saving technological solutions. If the government borrows to finance such increased spending, then a rise for the demand for loans could drive up interest rates. Firms would then reduce their loans for investment spending due to the higher cost of borrowing, which might have a negative impact on growth in India instead.



	L2	For an answer that provides rigorous analysis of cost-saving technological solutions (Extract 4) and an alternative policy works to achieve a socially optimal outcome in the market for sustainable clothing. Case study context is considered.	4-7
	L1	For an answer that shows a smattering of points displaying some recognition of how cost-saving technological solutions and/ or an alternative policy works to achieve a socially optimal outcome in the market for sustainable clothing.	1-3
		For an underdeveloped answer that provides a superficial analysis or one lacking in scope.	
	E3	One developed evaluative decision/judgements that is well explained and reasoned OR one unsupported evaluative statement and one evaluative decision/judgement that is reasoned. An evaluative statement that is supported by the arguments presented in the answer and linked to the context of the question.	3
	E2	One evaluative statement that is reasoned OR two unsupported evaluative statements	2
	E1	One unsupported evaluative statement Unexplained or not supported by arguments in answer	1

[Total: 40]

Question 2: Economies of Brazil and the Philippines

(a)	With	reference to Table 2:				
	(i)	Calculate the real GDP per capita of Brazil and the Philippines in 2022. [2]				
		Brazil: LISD8 827 24 [4]: the Dhilippings: LISD2 517 24 [4]				
	(ii)	Explain the meaning of 'real' in the term ' real gross domestic product (GDP)' [1]				
		Data has been adjusted / removed for the effects of for price changes/inflation. [1] Or Data is expressed in terms of base year prices so that it measures the changes in the quantity of output produced. [1]				
	(iii)	Discuss whether sufficient information is provided to determine if Brazil has a higher standard of living than the Philippines. [8]				
		SOL refers to both material and non-material aspects of living standard.				
 SOL refers to both material and non-material aspects of living standard. R1: There is sufficient information: Indicator of material SOL can be derived from the data (as calc real GDP per capita reflects the average real incomes of th Brazil has higher real GDP per capita than Philippines h power of the average resident higher ability to cons services produced in the economy Higher material SOL in Brazil than in Philippines. Gini coefficient measures the spread of income and is used limitation of using real GDP per capita real GDP per capita is only an average value and does actual income earned by each individual. Brazil has higher Gini than Philippines Brazil has hig income distribution. Consequently, the increase in real GDP per capita is onl few rich and not the majority others, or some people grew others are left behind, so overstating the material SOL in B 		 R1: There is sufficient information: Indicator of material SOL can be derived from the data (as calculated in part ai) real GDP per capita reflects the average real incomes of the residents Brazil has higher real GDP per capita than Philippines higher purchasing power of the average resident higher ability to consume goods and services produced in the economy Higher material SOL in Brazil than in Philippines. Gini coefficient measures the spread of income and is used to assessed the limitation of using real GDP per capita real GDP per capita is only an average value and does not reflect the actual income earned by each individual. Brazil has higher Gini than Philippines Brazil has higher inequality in income distribution. Consequently, the increase in real GDP per capita is only enjoyed by the few rich and not the majority others, or some people grew very rich while others are left behind, so overstating the material SOL in Brazil. 				
		 Air quality indicator can be used to assess non-material SOL Brazil has lower PM2.5 than Philippines PM2.4]5 captures the quality of environment, ie pollution and global warming Brazil has better air quality and environment and thus higher non-material SOL than Philippines. 				
		 R2: There is insufficient information (choose 1 or 2 indicator): Other indicators for non-material SOL might provide a better assessment, eg adult literacy rates, life expectancy, working and leisure hours 				

		 Life expectancy at birth and mean years of schooling/literacy rates basic access to good quality healthcare and schools/education will incepople's longevity and adult literacy rate so higher non-material SOL. Average working hours. When real GDP per capita is higher in Brazil, translate to more production of output produced as a result, people working harder or longer hours and have little leisure so lower not SOL. The Human Development Index (HDI) is a more broadly based / wider of standard of living because it includes three variables – real GDP (Purchasing power parity adjusted), education and health. Composite HDI is a more holistic measure as it takes into account different aspect to produce a single index. This makes it very convenient to compactors countries, rather than having to monitor multiple measures at compactors. 	Havi brease t it is like le may n-mater r measu per cap e indicat obs of SC pare SC once.	ng he ely be fial ure ita tor OL
		Conclusion [2]:		
		Overall, Table 2 at best provide sufficient information to assess material SC non-material SOL. Furthermore, for material SOL it may not be an accurate a because when comparing real GDP per capita across countries , it would accurate to use purchasing power parity (PPP)-adjusted real GDP per cap because of the differences in the cost of living . It appears that Brazil has a h with real GDP per capita and air quality performing better than that of the F Nonetheless, there is insufficient/inadequate information to compare the non-material setween the two countries.	DL but r ssessme bita figur igher SC Philippine aterial Se	not ent ore res DL, es. OL
				1
		 Consider the relevance of indicators for both material and non-material SOL. Appropriate economic indicators are suggested to better assess SOL. 	4 – 6	
		 L1 • Addresses only some question requirements accurately. • Addresses only indicators provided. • Some errors are present. 	1 – 3	
		Evaluation		
		E2 One evaluative statement that is reasoned OR two unsupported evaluative statements	2	
		E1 One unsupported evaluative statement Unexplained or not supported by arguments in answer	1	
(4)	- ما م	- Extract 5 and Figure 9, evaluin why Pro-We field helphon were static from 90		00
(a)	and c	omment on why it might be a concern to the government.	21 to 20 5]	23

	e e	exceeded tax revenue collected.						
	● - □	[1].						
	• ¹	This will worsen the fiscal deficit [1].						
	• A worsening fiscal deficit is a concern to the Government as it restricts their ability							
		n addition. Brazil has been in a prolonged fiscal deficit which will worsen confidence						
	i	the Government's ability. [1]						
	• 1	able 1 shows that the government debt is at 83.9%, this is a clear sign of concern						
	r i	epayment. [1]						
(c)	With	reference to Extract 6:						
	(i)	Using a demand and supply diagram, explain how 'the recovery in services and employment' led to 'rapid increases in commodity prices' in Brazil. [5]						
		- Deceivery in convince and employment \Box improves suffects on economy						
		 Recovery in services and employment □ improves outlook on economy, consumers are likely to spend more on goods and services □ Rise in DD for 						
		commodity [1]						
		• Supply of commodity experiences bottleneck difficulty in sourcing for factors						
		of production PES is likely positive and less than 1 [1]						
		• Diagram (1)						
		Prices						
		\uparrow \checkmark \checkmark						
		P2						
	P1							
		Shortage D2						
		/ D1						
		Q1 Q2 Qd Output						
		Market for commodity						
		 at P1, increase in demand resulted in shortage as Qd>Qs [1] 						
		• As price increases, Qd falls and Qs increases, until new equilibrium with higher						
		P2 and Q2.						
		• Since supply is price inelastic, the fall in DD led to a more than proportionate						
	(11)	Evaluin how the innovigion of first subsidies to machineses?						
	(11)	can tackle inflation.						



production capacity of the Brazil economy
Increase LRAS In figure 1, LRAS curve shifts right
Potential growth

Supply-side policies allow / accommodate higher increases in AD arising from increases in exports revenue (Brazil is a big agricultural and food exporter) \Box Actual growth

Rising productivity means getting more out of existing resources so fewer resources are wasted so lesser depletion of resources eg conserving resources, especially non-renewable ones like the Amazon rainforest for future generations.

Collectively: supply policies can achieve sustainable growth: Actual growth + potential growth + environmental conservation.

Figure 1: Effect of supply-side policies on LRAS



Limitations of supply-side policies:

- o Brazilian govt incurred high fiscal debt (Table 1), and has conflicting macro problems to attend to, including high unemployment and high inflation.
- o Infrastructure development takes time, may not be able to address current concerns.
- o Development of infrastructure may result in further spending by the government over time □ sustained G>T, likely to worsen deficit
- o over-relying on productivity gains in agricultural which have negative impact on X and environment

R2: Philippines would be successful in its pursuit of sustainable growth (How + Lim of digitalization and retraining)

Philippines' education policy should have a similar effect on the economy in achieving sustainable growth.

Upskilling as the supply-side policy aims to enhance factor mobility via retraining To increase the quality and the productivity of workers, govt promote skills training / upgrading. By deepening skills, a more skilled and productive workforce Labor productivity increases production duction capacity of the economy increases LRAS increases Potential growth Since potential growth is a pre- requisite for sustained growth / allows for higher AD Secondary effects: if G spending on infrastructure/broadband services, investment in constructure and industry, it allows for higher actual growth. Environment: Rising productivity means getting more out of existing resources so fewer resources are wasted so lesser depletion of resources

Limitations of supply-side policies:

- Success of supply-side policies depends on the receptiveness of firms and workers
 --> difficult to change mindsets. Workers may not want to upskill, workers lack motivation / commitment which keep them from embarking on upskilling.
- o From Table 1, it appears that the government of the Philippines is in debt too, albeit smaller than that of Brazil. So not able to upgrade broadband infrastructure
- o From Ext 8, it appears that the Philippines' effort is restricted by the stage of development of its infrastructure too.
- o Therein, the education policy may yield less desired outcomes.
- Philippines seems to be plagued by more problems compared to Brazil, a lack of sustained effort to overhaul infrastructure may indeed curtail the success of the education policy.
- o Lacking in sustainable agricultural sector

Conclusion [3]

Brazil is likely to be more successful in the pursuit for sustainable growth, especially if the Brazilian government can foster confidence in their policies, in particular policies to combat inflation and unemployment. If successful, the economy will ride on renewed confidence to generate growth in the future and sustained the effort to conserve resources.

	Departmentere		
Level	Descriptors	Marks	
L2	 Question requirements are interpreted accurately. Considers both supply-side policies conducted by Brazil and the Philippines. Assess the effective of the respective policies in attaining sustainable growth. 	4-7	
L1	 Addresses only some question requirements accurately. Considers only supply side policy by 1 country. Some economic concepts, theories and principles are used. Some errors are present. Attempts to address the context of the question but is incomplete. 	1-3	
E3	One developed evaluative decision/judgements that is well explained and reasoned OR one unsupported evaluative statement and one evaluative decision/judgement that is reasoned. An evaluative statement that is supported by the arguments presented in the answer and linked to the context of the question.	3	
E2	One evaluative statement that is reasoned OR two unsupported evaluative statements	2	

E1	One unsupported evaluative statement Unexplained or not supported by arguments in answer	1
		[Total: 40]