RAFFLES INSTITUTION
2018 YEAR 6 PRELIMINARY EXAMINATIONS
Higher 2

ECONOMICS 9757/01

Paper 1 Case Study

28 August 2018

2 hrs 15 minutes

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write your name, index number and civics class on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use a soft pencil for diagrams, graphs or rough working.
Do not use paper clips, highlighters, glue or correction fluid.

Answer **all questions**.

The number of marks is given in brackets [ ] at the end of each question or part question.

This document consists of **8** printed pages.

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Question 1: Madagascar – The Story of Vanilla

Table 1: Madagascan Exports of Vanilla to the US

Year	Price of Vanilla (USD$/kg)	Volume (kg)	Export Revenue (USD$)
2008	21.5	1,300,000	27,950,000
2009	23	1,150,000	26,450,000
2010	21	-	-

Source: www.datamnye.com

Extract 1: Background Knowledge of Vanilla

Vanilla is an essential ingredient used in sweet foods, alcohol, scented perfumes as well as cosmetics. It is a difficult spice to cultivate and a vanilla vine takes three to four years to mature, before it could be harvested.

One of the world's most popular spices, vanilla is also the second most expensive spice in the world. Today, vanilla accounts for approximately 20% of Madagascan exports, worth $600m at current prices, and is a significant contributor to Madagascar's GDP. In fact, Madagascar is the main exporter of vanilla in the world. Together with the fishing industry, the agriculture sector, being the largest sector in the Madagascan economy, employs 82% of its labour force and accounts for 30% of the country's GDP.

Vanilla farmers, like farmers all over the world, face dramatic fluctuations in the price of the crops they produce. In the early 1900s, the Madagascar government imposed a fixed price on vanilla and also intervened in the market through a buyback programme that ensured the surplus stocks were purchased and kept as inventory. Such intervention ensured price stability and equity in the distribution of gains from vanilla farming to all. Price fixing succeeded in keeping the price high and brought about positive results for the farmers for a limited period.

In the end, sustained government intervention meant that the cost of keeping exploding inventories escalated beyond what could be financed. This led to stocks of inventories being burnt ultimately, which was an extraordinary waste, given the high unit value of vanilla and the extreme poverty of the farmers whose output was thus destroyed.

Madagascar's agriculture performance has also been hindered by problems such as low productivity and high vulnerability to climatic conditions. A recent cyclone in 2017 destroyed a number of vanilla plantations and dented supplies from Madagascar. This accelerated an upswing in prices which had been caused by food manufacturers promising to use real vanilla rather than synthetic flavourings as well as speculative hoarding by traders in Madagascar. Vanilla pod producers are now frantically planting more, but it could be several years before harvesting can take place, allowing prices to subside.

In the meantime, challenges continue to plague the Madagascar economy. The emphasis on the agriculture sector – dominated by vanilla crops – has resulted in major threats such as deforestation and soil erosion, and this, together with the lack of investments in new farming practices and diversification to other crops, had in turn compromised the productivity levels in farming. In addition, several periods of civil unrest and political uncertainties have disrupted the economy and made investments scarce.

Source: Adapted from Various Sources

Extract 2: The History of Madagascar's Vanilla Industry

Throughout history, the vanilla market had been marred by price instability and low incomes. In a bid to bring more stability and equity in the distribution of gains from vanilla farming, the Government of Madagascar created a vanilla stabilization fund where prices were guaranteed, and a cartel, named the "Vanilla Alliance", was formed with two neighbouring countries, the Comores and the Réunion.

The creation of Vanilla Alliance initially brought about positive results, with the world market expanding rapidly and Madagascar exports swelled. However, the region's huge market power in vanilla production and export led to the cartel's price being significantly higher than the welfare-maximizing level. The inefficiencies associated with the over-pricing of vanilla culminated in the flourishment of illegal vanilla trade, while the cartel's high prices encouraged the entry of Indonesia into the vanilla market.

Source: http://documents.worldbank.org

Extract 3: The High Price of Madagascar's Vanilla dependency

Vanilla, like most commodities grown in developing countries, is a fickle crop, which depended heavily on natural as well as man-made conditions. It is highly labour-intensive and hand-pollination had to be carried out before the crop could be harvested. The market for vanilla is also characterised by low entry and exit costs. This had caused the French colonialists to shift the production of the crop around the world, but only to have production take off when the method of hand-pollination of the vanilla orchid was devised. Production eventually settled in Madagascar, where not only was the climate perfect, but it was also "one of the only places on earth poor enough to make the laborious process of hand pollination worthwhile".

Today, while over 80 per cent of the world's fine-quality natural vanilla is exported from Madagascar, its price volatility has made it difficult for farmers to make a stable living. Prices over the past five years have whiplashed from US$20 a kilo to a peak of US$600 earlier this year.

Herein lies the common curse of commodity dependency, whether crude oil, copper, cocoa or vanilla: heavy dependency on exporting a small number of commodities correlates with poverty, high mortality rates, low "human development" performance, poor education, corruption and high levels of income inequality.

But it is Madagascar and its vanilla that tells the depressing story most consistently: its 25 million people share a GDP per capita of barely US$400 – 13 times lower than South Africa, 20 times lower than China and 143 times lower than the US. Seventy-seven per cent of the population live below the World Bank's poverty line of US$1.90 a day, with a Human Development Index in the bottom 30 of countries worldwide.

Against the backdrop of such depressing statistics, it is important to note that when vanilla prices fell below US$40 five years ago, while India's farmers simply left the market, Madagascar's farmers, were unable to do the same. This is because if they do, they will end up starving as the economy is not as well-diversified.

So, while times for Madagascar's 80,000 vanilla farmers are comparatively good at present, the reality of the commodity curse means that it is only a matter of time before the next crash. Ever since the development of synthetic vanilla, there has been an inevitable shift away from the "real thing" to synthetic vanillin. More recently, however, a glimmer of hope has arisen from a surge among leading vanilla users, which include General Mills, Hershey's, Kellogg and Nestle, for "all-natural" ingredients. This being the case, the commitment from these firms must be regarded as precarious, given the current high price of vanilla.

Source: https://www.scmp.com

Questions

(a) With reference to Table 1,

(i) Using the data from 2008 and 2009, calculate the PED value of vanilla. [2]

(ii) To what extent can your answer in (ai) allow predictions to be made to total export revenue as prices decreased between 2009 and 2010? [4]

(b) Using a diagram, identify and explain **two** factors that will affect the size of the government's expenditure in its price fixing programme, in which surplus stocks were purchased. [6]

(c) Extract 2 mentions that the Government of Madagascar created the "Vanilla Alliance" with two neighbouring countries.

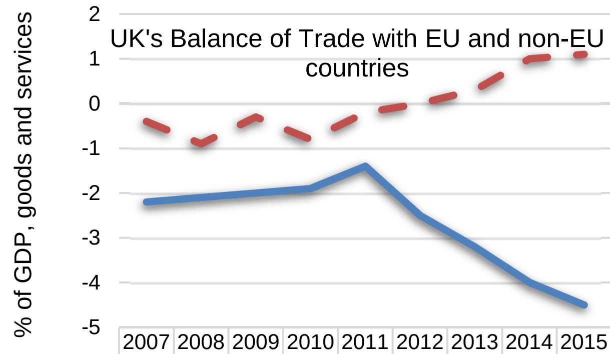
Discuss the view that having prices that are "significantly higher than the welfare-maximizing level" outweigh any benefits from the existence of cartels. [8]

(d) Assess whether a country like Madagascar should continue to focus on exporting vanilla just because it has a comparative advantage in producing vanilla. [10]

[Total: 30 marks]

Question 2: The post-Brexit[1] British economy

Figure 1
UK's BOT



	2007	2008	2009	2010	2011	2012	2013	2014	2015
EU	-2.2	-2.1	-2	-1.9	-1.4	-2.5	-3.2	-4	-4.5
Non-EU	-0.4	-0.9	-0.3	-0.8	-0.2	0	0.3	1	1.1

EU Non-EU

Source: House of Commons Website

Table 2
EU's Tariffs on Agriculture Products

Average EU tariff by product type (%)	
Animal Products	15.7
Dairy Products	35.4
Fruit, vegetables and plant	10.5
Cotton	0.0
Sugars and confectionery	23.6
Other agricultural products	3.6

Source: WTO
World Tariff Profiles 2017

[1] Brexit is an abbreviation for "British exit," referring to the UK's decision in a June 23, 2016 referendum to leave the European Union (EU), an economic union of 28 member states in Europe. The EU is guided by policies that ensure free movement of labour, goods and services and capital within the union. Post-Brexit, the UK will no longer be bounded by EU policies.

Extract 4: UK food sector faces enormous challenges post-Brexit

Leaving the EU without a trade deal in place could put up to 97% of British food and drink exports at risk, according to a House of Lords report that lays bare the UK's agricultural industry's overwhelming reliance on EU's domestic markets.

As negotiations between the EU and British government appear to take a turn for worse, concerns are growing that failure to reach an exit deal could leave many industries facing steep tariff barriers in future – something government ministers hope could be offset by opportunities in other international export markets.

It is the impact on farmers that is giving policymakers most cause for concern, and the report warns of a possible quadruple whammy from Brexit as they lose access to EU farm subsidies, European export markets, access to European workers and protection from cheap imports from outside the EU.

"Post-Brexit, the UK's agriculture and food sectors face enormous challenges," said Robin Teverson, the chair of the committee. "Life after the EU's common agricultural policy will not be easy for the many UK farmers who rely on its financial support." In other evidence to the committee, Peter Hardwick, head of exports at the Agriculture and Horticulture Development Board, a statutory industry body, said: "If we look at our agricultural exports, they are currently very dependent on trade with the EU and, on average, about 80% of our agricultural exports go to the EU."

The government insists it is still confident of striking a comprehensive new free trade agreement with the EU as well as many new bilateral deals that can replace and expand those already in place.

Source: *The Guardian, 3 May 2017*

Extract 5: A free-trading Britain can prosper after Brexit

As the UK leaves the EU, for the first time in more than 40 years it will be in charge of its own trade policy. As it begins to negotiate new free trade agreements around the world, it is imperative that all of the UK's current and future trading partners, particularly developing countries, are assured that they will not be worse off as a result of Brexit.

Success in trade and investment is vital for national prosperity. And, contrary to many predictions, UK's exports continue to grow year on year after the referendum. Countries such as South Korea and Japan are now fast-growing markets for UK exports. The tectonic plates of the world economy are shifting. With an independent trade policy, Britain can put itself in a strong position to benefit, opening up access to fast-growing markets across the world.

Now is not the time to pull up the drawbridge and retreat into the failure of protectionism. Trade drives prosperity, which in turn underpins political stability and security. This commitment to free trade has played a central role in British economic and foreign policy for decades and that will continue.

Source: Financial Times, 12 November 2017

Extract 6: Britain should brace for weaker economic growth if fewer immigrants come to its shores after Brexit

The "Brexodus," as it is called, is being felt particularly acutely in the agriculture industry, which relies heavily on manual labourers, especially from poor European countries like Romania and Bulgaria. A government committee said that the UK economy will "very likely" grow more slowly if immigration from the EU is drastically restricted. Employers were "fearful" over how their businesses would be affected by tighter restrictions with many planning to relocate to Asia or other parts of Europe where the operational cost will be lower.

Recruitment of British workers is also difficult because unemployment is already low in farming regions. Some employers reported that they hire Europeans because those workers have skills that are scarce in the native workforce, commenting that these European workers are also more reliable, flexible and willing to do work that Brits find unappealing. However, those who voted for leave still hold the view that a drop in immigration could mean more jobs for the people who remained.

The UK food industry is facing a dearth of workers amid the Brexit vote. There are worries that the production of fresh produce could eventually shift to major competitors in the Netherlands, Poland and Ireland, or that supermarkets will increasingly turn to imports. Farmers interviewed said that they were already raising wholesale prices as a result of increased labour costs.

Hospitals are also struggling to hire doctors and nurses. Almost half of doctors were trained overseas meaning the National Healthcare System (NHS) workforce is particularly vulnerable, a sign of the system struggling to keep pace with growing demand and an ageing population. The construction sector last month warned that British infrastructure faced "severe setbacks" if Britain did not train enough workers to stem a shortfall in labourers from EU countries. The Brexit vote also gave rise to concerns that minorities and immigrants would be more vulnerable to hate crimes.

Sources: Adapted from various sources

Extract 7: Building up the skills we need post-Brexit; a prompt for innovation?

A lot of attention has been paid to the problems of low-skilled workers – the “left-behind” who voted for Brexit in the first place. A more pressing issue is the fact that for too long a substantial proportion of UK’s skilled labour has been coming from outside the UK.

The UK has long lagged our competitors on the training of technical skills. Pro-Brexit campaigners say Britain needs to reduce its reliance on EU workers. “Our sights should be firmly set on raising the skill level of our own domestic workers, employing domestic whenever we possibly can and automating,” said Owen Paterson, a member of parliament for the ruling Conservatives.

The Agriculture and Horticulture Development Board (ADHB) suggested that labour shortages might be the catalyst for structural and other change: the loss of affordable labour may be the catalyst that forces the industry to achieve productivity increases, in order to remain competitive in a global market post-Brexit. Increased capital investment and automation is a possibility, along with apprenticeship and raising incentives for the economically inactive to work.

Meanwhile, the Enterprise Minister announced a joint government and industry funding to improve skills for the NHS’s support workers. The funding will also be used to establish new ‘Excellence Centres’ across England to direct the development of new national e-learning resources to give more flexible skills training. The new skills training for support workers will help the NHS become more efficient and create productivity gains. It will also support the creation of apprentices and trainees, all with a high skills level, to create a more versatile and robust NHS.

Source: Adapted from various sources

Questions

(a) Describe the trend in the balance of trade position of the UK with EU countries between 2007 and 2015 shown in Figure 1. [2]

(b) With the help of a diagram, explain the impact on the total expenditure and welfare of EU consumers given a tariff on UK's dairy products. [4]

(c) "Post-Brexit, the UK's agriculture and foods sectors face enormous challenges." (Extract 4 Paragraph 4).

Comment on the likely "challenges" on profits faced by British agriculture and foods producers post-Brexit. [6]

(d) Discuss the view that the UK economy has more to lose than gain from a more restricted immigration flow post-Brexit. [8]

(e) Post-Brexit, the UK policymakers have begun to negotiate new free trade agreements (Extract 5) with non-EU countries and focus more on supply-side measures to improve productivity of the British workforce (Extract 7) in light of a more restricted immigration flow.

Discuss whether the above policies are effective in achieving sustained and inclusive economic growth in the UK. [10]

[Total: 30 marks]

Copyright Acknowledgements:

Table 1	© www.datamnye.com
Extract 1	© Various Sources: Madagascar Case Study - World Bank Group
Extract 2	© http://documents.worldbank.org: The Elimination of Madagascar's Vanilla Marketing Board, Ten Years On
Extract 3	© https://www.scmp.com
Figure 1	© House of Commons Website: https://www.parliament.uk/business/commons/
Table 2	© WTO World Tariff Profiles 2017
Extract 4	© The Guardian, 3 May 2017
Extract 5	© Financial Times, 12 November 2017
Extract 6	© Telegraph UK, 20 February 2018; CNN, 27 March 2018; New York Times, 16 December 2017; Independent UK, 19 December 2017; International Business Times, 3 November 2016
Extract 7	© McKinsey Report 2016; https://ahdb.org.uk/documents/Horizon_Brexit_Analysis_20September2016.pdf; http://ukandeu.ac.uk/building-up-the-skills-we-need-post-brexit/ ;Reuters, 7 December 2017