

ECON1056 Price Theory

Industry Analysis

Melbourne, Semester 2, 2019

1 Introduction

Decision-makers in government rely on the advice of experts when formulating policy or discharging their statutory responsibilities. In this assignment you will take the role of an expert economist, employed by a government department. An expert economist's role in the government decision-making process is two-fold:

- **Analysis:** Experts use specialist knowledge and skills to analyse the likely outcomes of different policy options. Experts then evaluate the policies against the government's objectives and statutory obligations.
- **Communication:** Experts must communicate their findings to ministers and senior public servants, who, in many instances, do not share the expert's specialised knowledge.

This assignment will assess your aptitude in both of these domains. You will analyse a policy scenario detailed in section 2. Your *Industry Analysis* will form the basis for a *policy brief*—a short report—summarising your recommendations and rationale.

The policy question is open-ended. This is extremely typical of the tasks you will encounter in the workplace. The challenge is to approach an open-ended question in a systematic and logical manner, drawing on your technical expertise as an economist.

1.1 Formatting requirements

Your assignment must be typed using Microsoft Word, or a similar word processor. Both parts of the assignment should be included in the same document with the brief placed before the industry analysis. The document should have a professional appearance, appropriate to a government workplace. Format your assignment as follows:

- Use A4 sized paper with all margins at least 2.5cm.
- Body text to be 12pt and black. (There is no minimum line spacing.)
- All pages to be numbered.
- DO NOT include a cover sheet or table of contents.

1.2 Grading

There are a total 100 marks available in this assignment (50 marks for the industry analysis and 50 marks for the brief), and the assignment contributes 40% of your grade for Price Theory. The marks allocated to each step of the industry analysis are detailed in section 3. The marking criteria for the brief can be found in the rubric detailed in section 5.

2 Scenario

Lowlands Forest ("Lowlands") is an ecologically sensitive forest. For the last thirty years the government has been carefully rehabilitating the forest, which provides rare habitat for vulnerable species of flora and fauna. As part of the rehabilitation program, members of the public have been banned from walking through the forest.

A recent ecological survey found that the forest is flourishing and many species have returned. The Department of Environment and Natural Resources (DENR) has decided to issue a single annual *Ecological Tourism Licence*, which will grant permission for a single tourism operator to organise carefully-managed walking tours through Lowlands Forest. The tourism operator will decide how many tickets to make available, and will be the sole seller of tickets.

The department will charge an annual licence fee, which will generate government revenue and help cover ongoing environmental protection and rehabilitation costs for Lowlands.

There are two groups of people who would like to buy tickets for walking tours through Lowlands: locals and tourists. The DENR is weighing up two different pricing policies:

- A "single-price policy", in which all visitors are charged the same price for a ticket.
- A "two-price policy", in which tourists and locals are charged different ticket prices.

The *Local Bushwalkers' Association* (LBA) supports a two-price structure. The LBA argues that many locals have chosen to live in the area because they appreciate the Lowlands Forest, and they are worried that tourism will "crowd out" locals' access to tickets. The *Tourism Association* (TA) supports a single-price structure, because they feel that tourists often get "ripped off" under a two-price structure.

2.1 Your task

You work for the Department of Environment and Natural Resources (DENR). The Minister for the Environment is aware of the LBA and TA's concerns, and wants you to:

- Evaluate the likely market outcomes under a single-price and a two-price policy (i.e. uniform pricing and price discrimination).
- Recommend whether the department should introduce a single-price policy or a two-price policy for the *Ecological Tourism Licence*.
- Recommend the price that the government should charge for the annual *Ecological Tourism Licence* fee.

You need to evaluate the policies and make your recommendations based on the minister's *policy priorities*. The minister's office informs you that these priorities are:

1. To ensure that the *Ecological Tourism Licence* creates benefits for stakeholders; and
2. To use the annual *Ecological Tourism Licence* fee as a source of government revenue.

The relevant stakeholders are tourists, locals, and the tourism operator. Note that the licencing policy prevents the government from imposing any other form of market regulation, such as price caps.

2.2 Estimated consumer demand

Tourists' demand in the market is estimated to be,

$$Q_T(P) = 1500 - P$$

Locals' demand in the market is estimated to be,

$$Q_L(P) = 4000 - 4P$$

where P represents the price of a ticket in dollars.

It is easy to identify locals, who can present proof-of-address to qualify for cheaper tickets. There is no danger of re-sale between groups. It is estimated that it will cost the tourism operator \$20 to make each ticket available, and that there will be no fixed costs apart from the annual *Ecological Tourism Licence* fee.

3 The industry analysis

For your industry analysis you must complete each of the steps detailed below. When completing the steps you must:

- Type all equations using the 'Insert Equation' function in Microsoft Word (or equivalent).
- Show all of your working.
- Include sufficient written description for the reader to follow your process. (Use the lecture notes and worked solutions in the study guide as an indication of the required level of detail.)
- Use appropriate economic terminology, understandable by an expert economist.

Failure to follow these instructions will result in lost marks. There is no page limit for the Industry Analysis.

3.1 Required steps

Steps 1 – 8 describe the equilibrium in the market under uniform pricing.

Step 1: Derive the combined demand function for the market.

(5 marks)

Step 2: Using the information provided in the scenario, derive the tourism operator's total cost function. Exclude the cost of the annual licence fee.

(2 marks)

Step 3: Assume that the profit-maximising price is above the "choke-price" for locals. Find the profit-maximising quantity and price (Q and P). Is this price consistent with the assumption?

(9 marks)

Step 4: Assume that the profit-maximising price is below the "choke-price" for locals. Find the profit-maximising quantity and price (Q and P). Is this price consistent with the assumption?

(9 marks)

Step 5: What is the level of producer surplus under uniform pricing?

(3 marks)

Step 6: How many tickets will be available to locals, and what is the level of local consumer surplus (CS_L)?

(3 marks)

Step 7: How many tickets will be available to tourists, and what is the level of tourist consumer surplus (CS_T)?

(3 marks)

Steps 8 – 10 describe market conditions under price discrimination.

Step 8: What is the profit-maximising quantity and price for the local market (Q_L and P_L)? What is the level of consumer surplus in the local market (CS_L)?

(10 marks)

Step 9: What is the level of consumer surplus in the tourist market under price discrimination (CS_T)? Clearly reference any results or calculations from previous steps.

(3 marks)

Step 10: What is the level of producer surplus under price discrimination?

(3 marks)

4 The brief

The purpose of the brief is to communicate your recommendations to the decision-maker who commissioned your analysis. You need to make sure that your brief clearly:

- Refers to the relevant policy priorities.
- Uses the results from your Industry Analysis to evaluate the proposed policies.
- Recommends a course of action for the minister, based on your evaluation.

Senior government officials are extremely busy, so you need to make sure you write clearly and stay on-topic. Do not assume that the decision-maker knows anything about the policy issue—your brief is the only information they have, and your goal is to make it easy to understand the topic and your recommendation.

- The maximum length for your brief is 2 pages.
- Any content in excess of 2 pages will not be read or graded.

Remember that the brief is for a non-expert audience. You must avoid technical terminology and state everything in 'plain English'. For example:

- Terms such as consumer surplus, producer surplus, price discrimination and uniform pricing have little meaning outside of economics and should be avoided. (Note: This is not a comprehensive list.)
- Terms such as price, revenue, and profit are generally well understood outside of economics.

The brief should not include any equations or diagrams. Tables and dollar amounts may be included as appropriate.

4.1 Template

You must compose your brief according to the template detailed on the following pages. Instructions for each element of the brief are included within this template.

These instructions are reflected in the requirements of the rubric detailed in section 5. Ensure that your brief includes each of the elements detailed in the template, and that you do not reorder, rename, or omit any of these elements.

Briefing for the (insert decision-maker's title here)

Subject: Include a brief but descriptive subject line.

Maximum length 1 line.

Hint: The subject is, in effect, the title of your brief.

Prepared by: Your name here.

Core Message

Write an executive summary of the brief. Your core message should consist of three-four sentences: a summary of the scenario; a summary of the key rationale for your recommendations; a summary of your recommendations.

Maximum length 5 lines.

Hint: The reader should be able to understand the core message without referring to the scenario or the rest of the brief. Provide specific information and avoid generalities.

Recommendations

- a) Concisely state your principal recommendations.
- b) Optional: State any additional recommendations on subsequent lines.

Hint: Each recommendation should be stated as a clear course of action for the government. Be precise and avoid ambiguous statements.

Do not: explain or justify your recommendations; describe the consequences of your recommendations; state conditions or caveats for your recommendations.

Key Information

Begin your key information section with 1–2 paragraphs of background information: describe the policy context and the purpose of the brief. Outline your framework for comparing policies and developing recommendations.

Do not use these paragraphs to foreshadow or explain your recommendation(s).

Use the remainder of the key information section to present the rationale behind your recommendations. You should highlight any trade-offs involved in your recommendations, and address any additional issues raised in the scenario.

Your rationale should be presented as follows:

- Use subheadings to concisely state the key *findings* of your industry analysis.
The maximum length for a subheading is 2 lines.
Do not: use subheadings to introduce or explain broad concepts.
- Write a short paragraph following each subheading to briefly explain the finding.

Taken together, the findings stated in the subheadings should form a logical argument supporting your recommendation(s).

Hint: Incorporate all the information required to support your recommendations in the key information section, regardless of whether or not the same information has been included elsewhere in the brief.

Do not assert facts that are not supported by either the scenario or your industry analysis.

Financial Implications

Briefly summarise any direct financial implications of your recommendation(s) (if any) for the Government. Include precise dollar amounts derived from your analysis and the policy context.

Hint: The financial implications section should provide the reader with easy access to any financial cost and/or benefit of your recommendations to the government, e.g. changes to government expenditure or revenue. This section must be included even if there are no direct financial implications from your recommendation(s).

Begin your industry analysis on a new page following the brief.

Hint: Use the 'Insert Page Break' function in Microsoft Word to ensure the page break displays correctly.

5 Rubric

Criteria	Ratings			
Subject line	<p>Excellent (5 marks)</p> <p>The subject is brief and appropriately descriptive.</p>	<p>Satisfactory (3 marks)</p> <p>The subject is overlong and/or insufficiently descriptive.</p>	<p>Unsatisfactory (1 mark)</p> <p>The subject is inappropriate for the scenario addressed in the brief.</p>	<p>Not present (0 marks)</p> <p>The subject line is absent.</p>
Core message	<p>Excellent (5 marks)</p> <p>The core message succinctly and accurately summarises the brief as required by the template. The language used is appropriate for a brief. The core message does not exceed 5 lines.</p>	<p>Satisfactory (3 marks)</p> <p>The core message partially summarises the brief. There may be a lack of clarity, omissions, and/or inaccuracies. The core message does not exceed 7 lines.</p>	<p>Unsatisfactory (1 mark)</p> <p>The core message does not effectively summarise the brief and/or the core message exceeds 7 lines in length.</p>	<p>Not present (0 marks)</p> <p>The core message and/or the core message section are absent.</p>
Recommendations	<p>Excellent (5 marks)</p> <p>The recommendation(s) address the requirements of the scenario. Each recommendation is clearly and concisely stated, and contains no extraneous information.</p>	<p>Satisfactory (3 marks)</p> <p>The recommendation(s) substantially address the requirements of the scenario. The recommendation(s) may be lacking in clarity, and/or contain some extraneous information.</p>	<p>Unsatisfactory (1 mark)</p> <p>The recommendation(s) are insufficient to address the requirements of the scenario, and/or substantially deviate from the requirements of the brief.</p>	<p>Not present (0 marks)</p> <p>The recommendation(s) and/or the recommendations section are absent.</p>
Key information	<p>Excellent (20–25 marks)</p> <p>The key information begins by providing the context for the brief. Sub-headings accurately summarise the findings of the industry analysis, with each finding explained in a subsequent paragraph. The findings are logically ordered and, taken together, justify the recommendation(s). Any additional issues raised in the scenario are also addressed. The key information is presented clearly and concisely, with few if any incidences of non-technical language. All significant assertions are supported by findings in the industry analysis.</p>	<p>Satisfactory (13–19 marks)</p> <p>The key information provides the context for the brief. The rationale for the recommendation(s) is present and supported by the findings of the industry analysis. Any additional issues raised in the scenario are addressed. The logic of the argument justifying the recommendation(s) may lack the appropriate structure and/or omit a necessary step. The key information may lack clarity, include extraneous elements, and/or use language inappropriate for a brief.</p>	<p>Unsatisfactory (1–12 marks)</p> <p>The key information fails to support the recommendation(s). The arguments presented may contain significant assertions unsupported by the industry analysis, significant logical flaws, and/or substantially misrepresent the findings of the analysis.</p>	<p>Not present (0 marks)</p> <p>The key information section (or equivalent) has not been included in the brief.</p>

Criteria	Ratings			
Financial implications	<p>Excellent (5 marks)</p> <p>The financial implications of the recommendation(s) to the government have been correctly detailed. The accompanying explanation is brief, informative, uses appropriate language, and contains no extraneous elements.</p>	<p>Satisfactory (3 marks)</p> <p>The financial implications of the recommendation(s) to the government have been detailed with few (if any) inaccuracies. The accompanying explanation may be overlong, lack clarity, contain inaccuracies, or utilise language inappropriate for a brief.</p>	<p>Unsatisfactory (1 mark)</p> <p>The financial implications of the recommendation(s) to the government, and/or the accompanying explanation, contain significant errors or omissions.</p>	<p>Not present (0 marks)</p> <p>The financial implications and/or financial implications section are absent.</p>
Structure	<p>Excellent (5 marks)</p> <p>All elements required by the template are present and in the correct order. The industry analysis has been placed on a new page following the brief. No required section has been relabelled, and no additional sections have been included in the brief.</p>	<p>Satisfactory (3 marks)</p> <p>There are a maximum of two deviations from the template with respect to the existence, labelling, and placement of the required elements.</p>	<p>Unsatisfactory (1 mark)</p> <p>The brief deviates substantially from the template with respect to the existence, labelling, and placement of the required elements.</p>	<p>Not present (0 marks)</p> <p>The document does not contain a brief (or equivalent).</p>
Industry analysis	<p>Excellent (40–50 marks)</p> <p>The analysis follows the correct methodology with few (if any) errors. All (or almost all) required working is present, and the steps taken are clearly and succinctly explained. Economic terminology is employed correctly throughout.</p>	<p>Satisfactory (25–39 marks)</p> <p>The analysis is generally consistent with the correct methodology. The working may contain several errors or omissions, and the accompanying explanation is generally sufficient to allow the reader to follow the process.</p>	<p>Unsatisfactory (0–24 marks)</p> <p>The analysis deviates substantially from the requirements of the scenario. See the grader's comments for more details.</p>	