

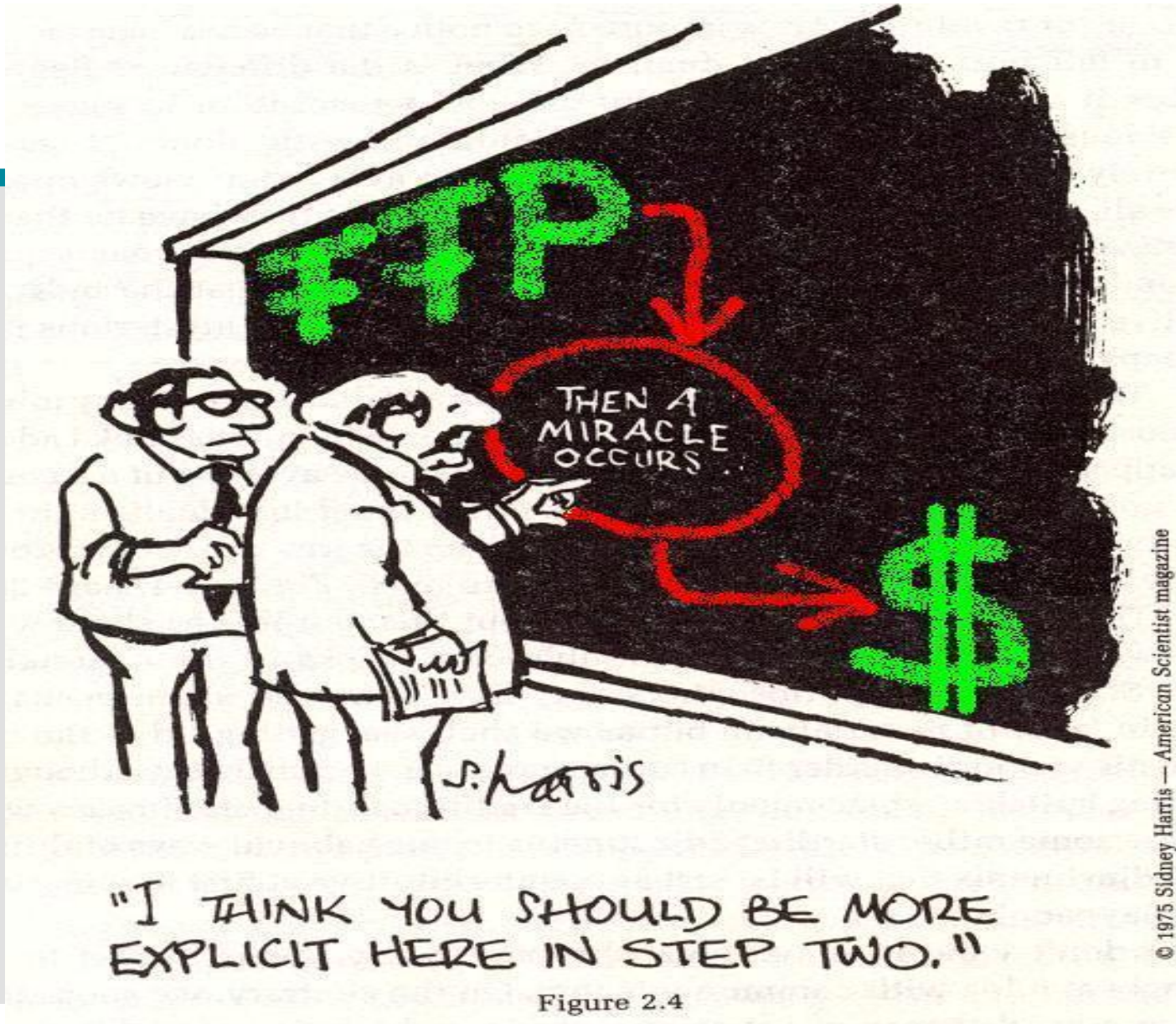


-Frequent Flyer Programs- Viewed through the Eyes of An Economist

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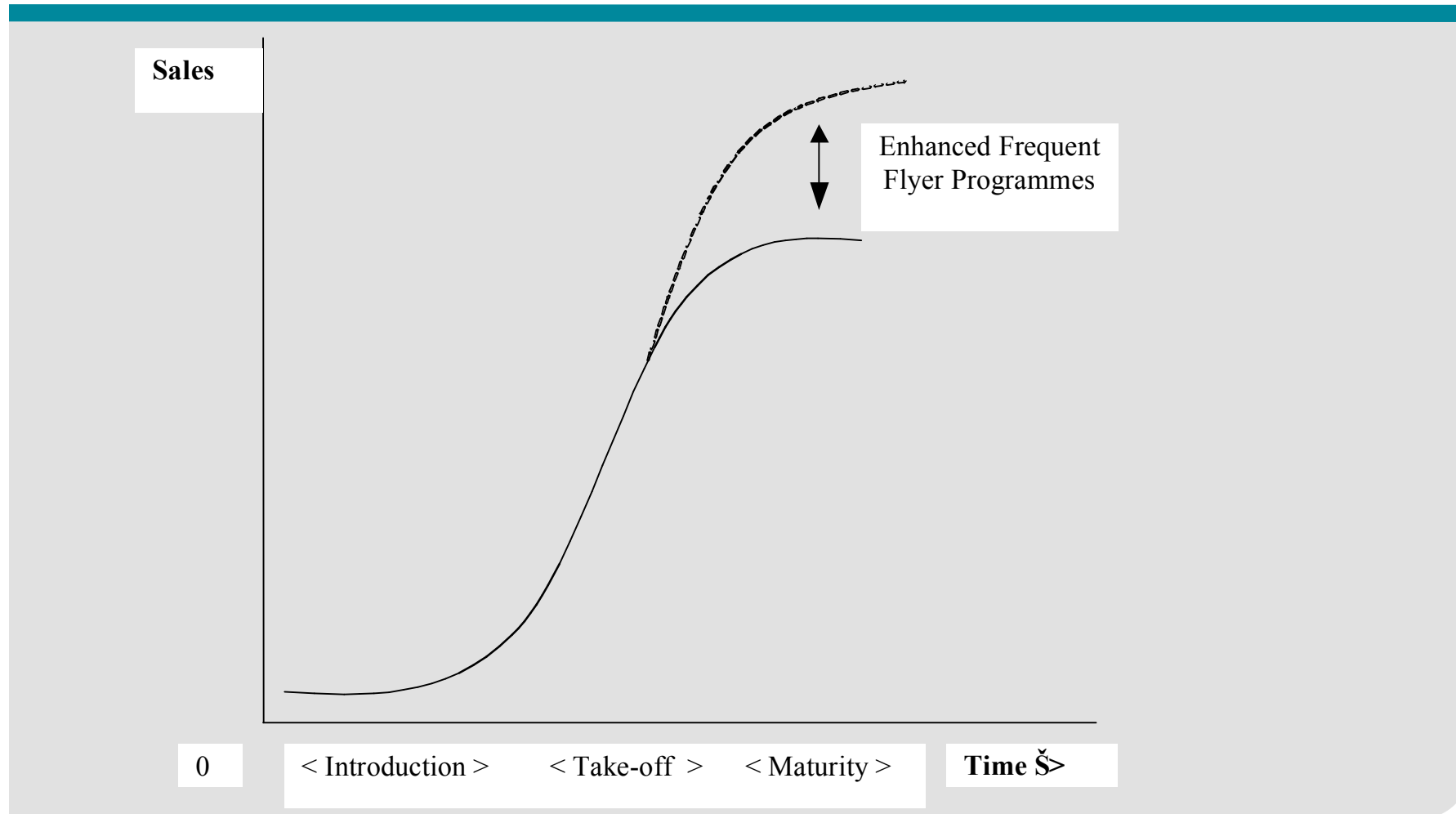
Outline

- **Economic Context**
 - FFPs are products
 - Why is the airline industry pre-disposed to FFPs?
 - FFPs change incentives
- **Economic Purpose**
- **The FFP- Dilemma**
- **Concluding Remarks**

Economic Context: Definition of FFP

- **FFPs are simply products with special features**
 - Demanded and bought indirectly by consumers
 - Features are manipulated by suppliers
 - Supply and demand analysis applies
- **FFPs have a life cycle**
 - Life cycles can be artificially extended

Economic Context: FFP Life Cycle



Economic Context: Airline Industry

Q: Why does the airline industry appear pre-disposed for FFPs?

A: Because of the perishable nature of their services and the incentives of their target audience.

- Once a plane has taken off any unsold seat has perished
- Current average load factors <80%, hence ~20% of seats remain empty at take-off
- In theory giving away these empty seats to loyal customers carries a marginal cost tending towards zero.

Economic Context: Incentives

- Economic Assumptions:
 - Human beings behave rationally
 - > Rational consumers are more easily manipulated
 - Human beings respond to incentives (*Mankiw (2007) 'Principles of Economics', p.7*)
- FFPs are purchase incentive plans rewarding repeat patronage
- Target Customer: Business traveller, but why?
 - A: FFPs build on an underlying “principal-agent” relationship, which leads to a lower price elasticity of demand of business travellers.

Economic Context: Incentives

- **Principal-Agent Relationship**
 - Used in Economics to explain the strong incentive changing impact of FFPs
 - > Principal = Employer
 - > Agent = Employee
- **Core of the problem: “Asymmetric Information”**
 - FFPs exploit the principal-agent relationship between the employer who pays for the business trip and the employee booking the trip and collecting the loyalty payment from the airline
 - Agent’s incentives are NOT = principal’s incentives

Economic Context: Summary

- FFPs products with life cycles and derived demand
- Due to its innate demand patterns the airline industry is pre-disposed to FFPs
- FFPs change incentives, especially where the principal-agent problem applies

Q: What drives economic research on FFPs?

Three Overarching Questions

- *Competitive Implications:* Do FFPs enhance an airlines market power and/or increases profits?
- *Ethical Implications:* What are distributional effects of FFPs?
- *Regulatory Implications:* Should regulatory agencies and organisations aiming at protecting consumers interests be concerned about these programs?

Outline

- 😊 Economic Context
 - Economic Purpose
 - Barriers to Entry
 - Switching Costs
 - Price Discrimination
 - The FFP- Dilemma
 - Concluding Remarks

Three Economic Purposes of FFPs

1. Erection of „*Barriers to Entry*“
2. Maintaining Customer Loyalty through increased „*Switching Costs*“
3. A sophisticated „*Price-Discrimination*“ Tool

First Economic Purpose: *Barrier to Entry*

- Idea: make a commodity less substitutable
 - provides an airline with quasi-monopoly power
 - > large network airlines have a competitive advantage due to increased accrual and redemption opportunities
 - > more destinations on offer increases the value of FFP miles without increasing the costs of providing benefits
- But examples can be found which both strengthens and weakens the barrier to entry argument:
 - Airlines increase mileage awards on very competitive routes or when entry is threatened
 - After deregulation: small airlines and new entrants without FF-base were at a competitive disadvantage
 - Southwest successfully entered markets dominated by UA and AA
- Q: Why is there no clear cut answer?

Second Economic Purpose: *Switching Costs*

- **Definition:**
 - Costs that a consumer incurs from switching to a competitor's product even when the products of two firms are functionally equal.
- **Switching costs can only occur if purchases are repeated.**
- **Switching costs are rarely of direct monetary value**
 - Learning and transaction costs
 - Strong *habit formation* results in large switching costs.
- **Special Case: FFP**
 - Switching = forgone points for the member.
 - Points have a quantifiable economic value to customers.
 - Value of points is an increasing function of certainty and flexibility
 - Points = options whose value can be estimated.

Second Economic Purpose: *Switching Costs* (contd.)

Q: Does evidence that FFPs introduce switching costs exist?

A: Yes!

- The net effect of FFPs for the **flag carrier** is ~ 12% of the average ticket price (Carlson and Löfgren, 2004)

Q: Do any problems exist?

A : Yes!

- **Not all** FFPs create switching costs
- The structure **and** the rewards critically affect switching costs
 - > Bulk discounts DO NOT create switching costs but are most attractive to low-mile travellers
 - > Non-linear reward schemes with rewards carrying a tangible economic value influence the incentives of high-mile travellers.

Third Economic Purpose: *Price Discrimination*

- FFPs are used to further segment the market
 - ‘Price discrimination’
- Definition:
 - A firm price discriminates when the ratio of prices is different from the ratio of marginal costs for two goods offered by a firm.
- Conditions:
 - (i) firms have some market power,
 - (ii) consumers can be segmented either directly or indirectly,
 - (iii) arbitrage across differently priced goods is impossible.

Q: In whose favour do FFPs discriminate?

A: In favour of the customer with the higher willingness to pay

Third Economic Purpose: *Price Discrimination* (contd.)

Q: Is there any evidence by economists that FFPs change customer willingness to pay?

A: Yes!

- **Prousaloglou and Koppelman (1999)**
 - > Premiums between \$US 7 and \$US 72.
- **Hess (2005)**
 - > Premiums between \$US 11.50 and \$US 125.
- **Lederman (2006)**
 - > Premiums between \$US 7 and \$US 25.

Economic Purpose: Summary

- *Barriers to Entry* are of relevance, but seem to apply more to airlines with large networks
- *Switching Costs* are of relevance to explain the influence of FFPs on customer incentives
- FFPs are a way to *price discriminate* between price sensitive and insensitive consumers

Q: Can economists model the possible effects of price discrimination on airline profits?

A: YES!

Outline

- 😊 Economic Context
- 😊 Economic Purpose
 - The FFP- Dilemma
 - Positive Scenario
 - Negative Scenario
 - Elasticities of Demand
 - Overlooked Benefit: The Tax Effect
 - Concluding Remarks

The FFP Dilemma

- The 'stylized' Aviation Market -

Assumption: Monopolistic Airline without FFP

Diagram Suppressed

The FFP Dilemma : The 'Insider-Outsider' Situation

Suppressed

The FFP Dilemma:

1) FFP Positive Impact – Small Costs

Diagram Suppressed

The FFP Dilemma:

2) FFP Negative Impact – Large Costs

Diagram Suppressed

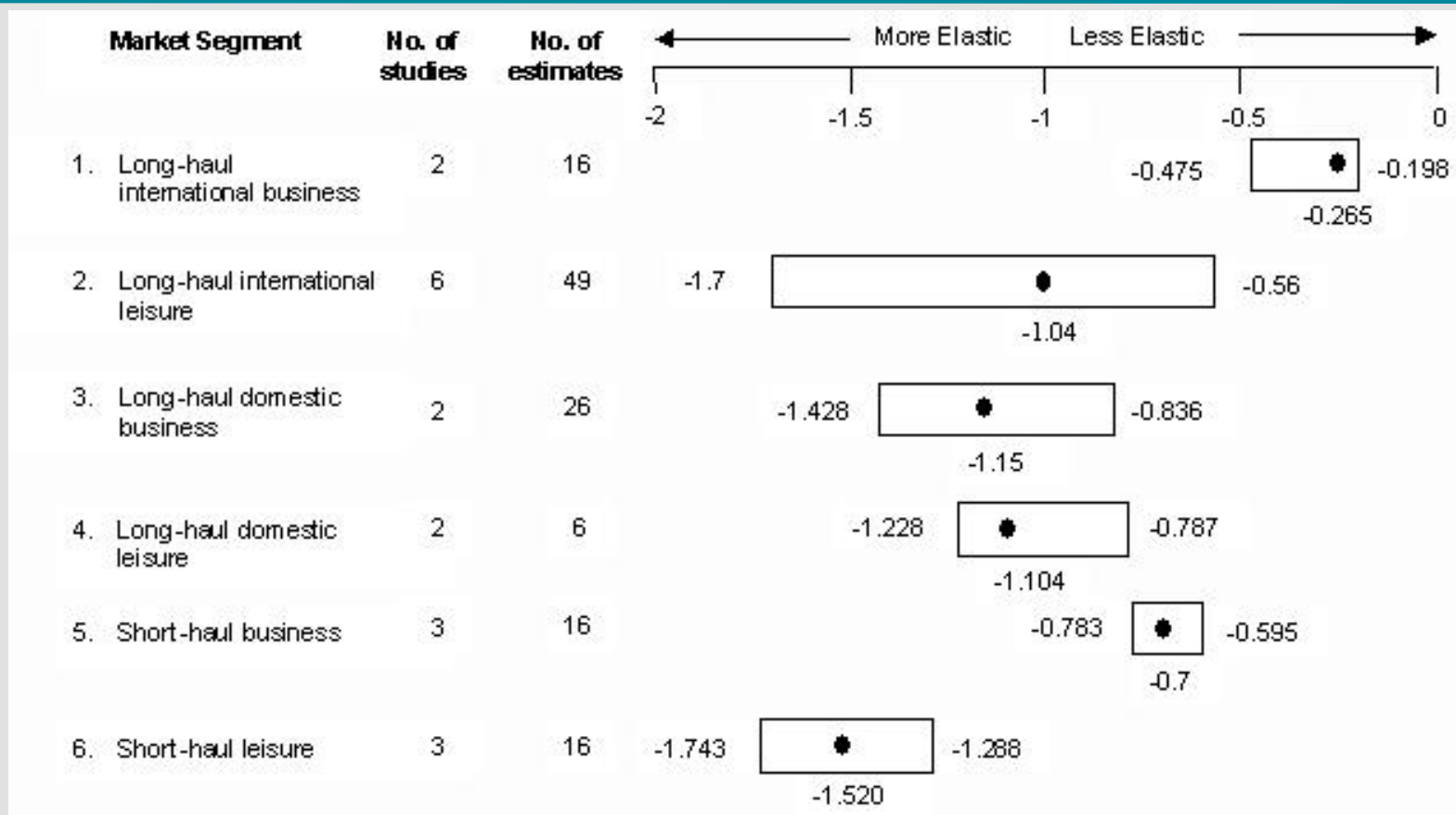
The FFP Dilemma: Influencing Factors

- If a FFP is effective, then $OX_{Mkt}^* > OX_{Mkt}$
 - net positive impact
- If a FFP introduces substantial costs the balance is affected by :
 - Competitive Landscape
 - Costs of the FFP
 - Elasticities of demand
 - Benefit to business travellers

The FFP Dilemma: Elasticities of Demand

- Demand is a function of:
 - Price, quality, tastes, levels of consumer income, price and quality of other services etc.
 - Law of Demand: *When other things remain unchanged, a higher price results in a lower quantity demanded.*
- Own-price elasticity of demand
 - Percentage change in quantity demanded resulting from a given percentage change in price.
- Elasticity values differ significantly by:
 - Type of traveller,
 - Travel distance,
 - Domestic and international routes.

The FFP Dilemma: Own-Price Elasticities of Demand (contd.)



Source: Department of Finance Canada, Authors: David Gillen, William Morrison and Christofer Stewart. http://www.fin.gc.ca/consultresp/Airtravel/airtravStdy_e.html

The FFP Dilemma: Own-Price Elasticities of Demand (contd.)

- **Elasticity values confirm:**
 - existence of distinct air travel markets.
 - expectations that the demand for air transport should be:
 - > less elastic for business than for leisure travellers
 - > less elastic for flights of longer distances (international travel).
- **Problem:**
 - NO estimations regarding insiders and outsiders.

The FFP Dilemma: Own-Price Elasticities of Demand

- **Implicit assumption of price discrimination models:**
 - demand of insiders is less price elastic than that of outsiders.
- **Traditional price discrimination:**
 - to favour the more price driven customer.
- **Traditional Airline FFPs:**
 - target less price sensitive business flyers.

Q: Why?

The FFP Dilemma: Not a dilemma after all?

Suppressed

Conclusion

- What economists conclude about FFPs:
 - Proves the ‘*incentive premise*’
 - But effects on airlines revenue and profits are unclear. Effectiveness depends on:
 1. Competitiveness of the market
 2. Costs of the FFP
 3. Elasticities of demand
 4. Size of the Benefits
- 2-4 are of an empirical nature, which airlines and economists are in the position to answer!

Thank you very much!

Questions, Comments, Suggestions?

All very welcome!

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