Green Supply Chain Coordination Approach

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Operation Research Application

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Presentation Overview

Introduction

- The model is based on the paper Balancing price and green quality in presence of consumer environmental awareness by Heydari, et al. (2021).
- The model is a two-echelon supply chain with one manufacturer and one retailer.
- The manufacturer produces a product with a certain amount of green materials.
- The manufacturer and the retailer sign a revenue sharing contract.
- The manufacturer and the retailer make decisions on the wholesale price, the retail price, and green quality.

The Model

Model Description

- Single Period Settin: The channel operates within a single period.
- Environmental Awareness of Customers: Customers in the channel possess environmental tendencies and the ability to recognise the environmental quality of the offered products.
- Customer Sensitivity to Price: The sensitivity of customers to price is known.
- Symmetric Information Sharing: For simplicity reasons it is considered that all the model parameters are known to both channel members.
- Deterministic Demand Function: The demand function is deterministic and assumed to follow a linear relationship with the selling price and the greenness level of the product.
- Static Pricing Scheme: Due to the nature of the product and the business environment, a static pricing scheme is employed in the studied Supply Chain (SC).

Lists

Bullet Points and Numbered Lists

- Lorem ipsum dolor sit amet, consectetur adipiscing elit
- Aliquam blandit faucibus nisi, sit amet dapibus enim tempus
  - Lorem ipsum dolor sit amet, consectetur adipiscing elit
  - Nam cursus est eget velit posuere pellentesque
- Nulla commodo, erat quis gravida posuere, elit lacus lobortis est, quis porttitor odio mauris at libero

1. Nam cursus est eget velit posuere pellentesque
2. Vestibulum faucibus velit a augue condimentum quis convallis nulla gravida

Blocks of Highlighted Text

Block Title

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer lectus nisl, ultricies in feugiat rutrum, porttitor sit amet augue.

Example Block Title

Aliquam ut tortor mauris. Sed volutpat ante purus, quis accumsan.

Alert Block Title

Pellentesque sed tellus purus. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos.

Suspendisse tincidunt sagittis gravida. Curabitur condimentum, enim sed venenatis rutrum, ipsum neque consectetur orci.

Multiple Columns

Subtitle

Heading

1. Statement
2. Explanation
3. Example

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer lectus nisl, ultricies in feugiat rutrum, porttitor sit amet augue. Aliquam ut tortor mauris. Sed volutpat ante purus, quis accumsan dolor.

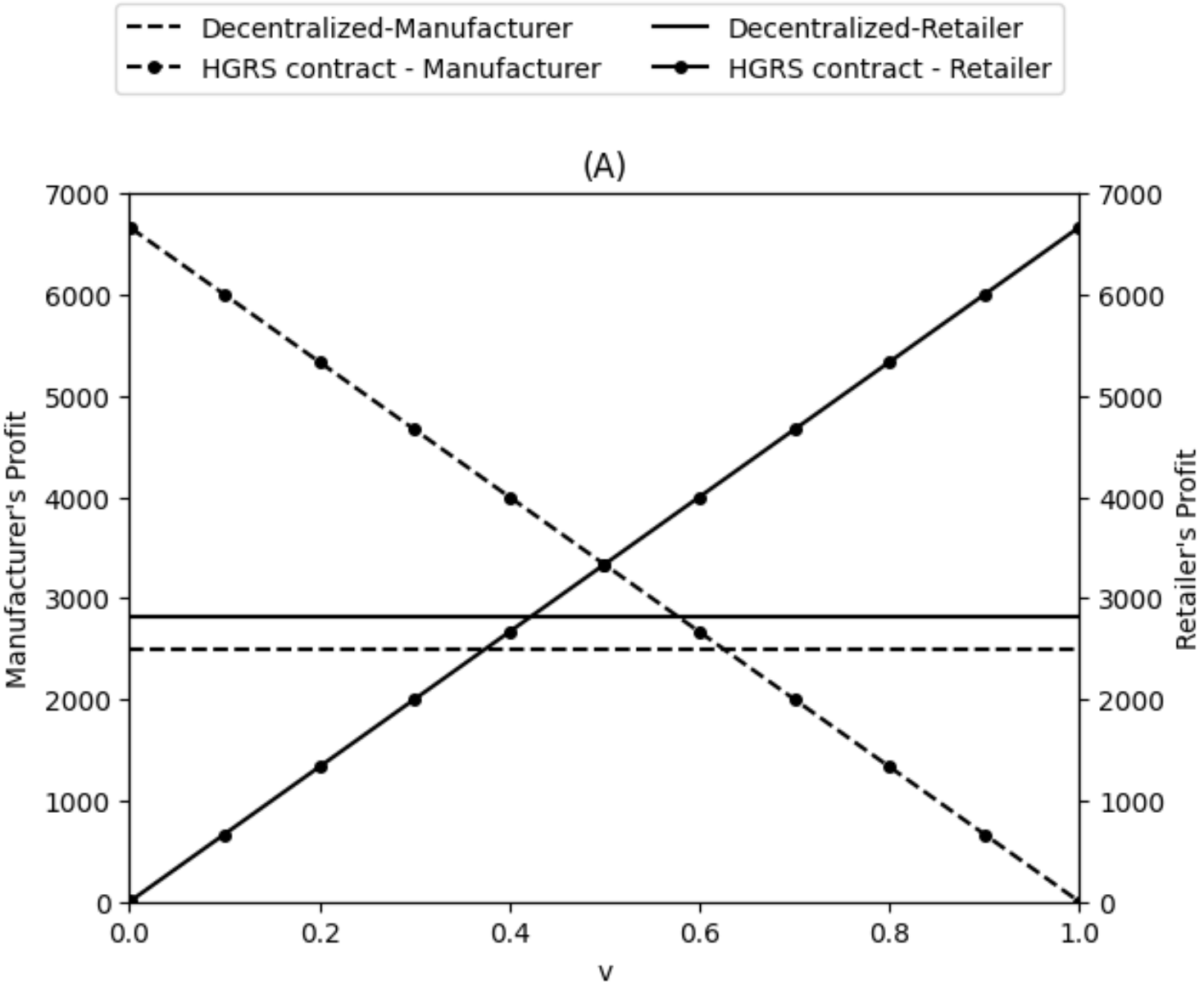
Table

Subtitle

Treatments	Response 1	Response 2
Treatment 1	0.0003262	0.562
Treatment 2	0.0015681	0.910
Treatment 3	0.0009271	0.296

Table: Table caption

Figure


Decentralized-Manufacturer
HGRS contract - Manufacturer
Decentralized-Retailer
HGRS contract - Retailer
(A)
Manufacturer's Profit
Retailer's Profit
v
0
1000
2000
3000
4000
5000
6000
7000
0.0
0.2
0.4
0.6
0.8
1.0

Definitions & Examples

Definition

A prime number is a number that has exactly two divisors.

Example

- 2 is prime (two divisors: 1 and 2).
- 3 is prime (two divisors: 1 and 3).
- 4 is not prime (three divisors: 1, 2, and 4).

You can also use the theorem, lemma, proof and corollary environments.

Theorem, Corollary & Proof

Theorem (Mass–energy equivalence)

$E = mc^2$

Corollary

$x + y = y + x$

Proof.

$\omega + \phi = \epsilon$ □

Equation

$$\cos^3\theta = \frac{1}{4}\cos\theta + \frac{3}{4}\cos 3\theta \tag{1}$$

Verbatim

Example (Theorem Slide Code)

```
^^I^^I^^I\begin{frame}
^^I^^I^^I^^I\frametitle{Theorem}
^^I^^I^^I^^I\begin{theorem}[Mass--energy equivalence]
^^I^^I^^I^^I^^I$E = mc^2$
^^I^^I^^I^^I\end{theorem}
^^I^^I\end{frame}
```

Slide without title.

Citing References

An example of the \cite command to cite within the presentation:

This statement requires citation [Smith, 2022, Kennedy, 2023].

References


John Smith (2022)
Publication title
Journal Name 12(3), 45 – 678.


Annabelle Kennedy (2023)
Publication title
Journal Name 12(3), 45 – 678.

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The End

Questions? Comments?