

Online Appendix A.

A.1 Instructions given to subjects prior to the play of the newsvendor game (translated from German).

Briefing

You are a retailer who buys and sells a single generic product. In each period of the game, you will order the product from an external supplier at a purchase price of

$$\text{Purchase Price} = 3 \text{ TALERS/unit.}$$

You will sell the product to customers at a sales price of

$$\text{Sales Price} = 12 \text{ TALERS/unit.}$$

You will play 100 periods with identical activities:

1. Determination of purchase order quantity: At the beginning of each period you determine the order quantity. You can choose the order quantity freely. When you place the order, you do not know the customer demand of the period.

2. Generation of customer demand: The computer generates a customer demand. The graph on the following page shows the demands of the 50 previous periods.

3. Calculation of profit: The demand is filled and the profit for the period is computed. There are two different cases:

a. Customer demand is less than or equal to order quantity: All customer demand can be filled. The profit is

$$\text{Profit} = \text{Sales Price} * \text{Customer Demand} - \text{Purchase Price} * \text{Order Quantity}$$

$$\text{Profit} = 12 \text{ TALER/unit} * \text{Customer Demand} - 3 \text{ TALER/unit} * \text{Order Quantity}$$

Example: If the customer demand is 60 units and you ordered 80 units, each demand can be filled and the profit is

$$\text{Profit} = 12 \text{ TALER/unit} * 60 \text{ units} - 3 \text{ TALER/unit} * 80 \text{ units} = 480 \text{ TALER}$$

b. Customer demand is greater than order quantity: Only customer demands up to the order quantity can be filled. The profit is

$$\text{Profit} = \text{Sales Price} * \text{Order Quantity} - \text{Purchase Price} * \text{Order Quantity}$$

$$\text{Profit} = 12 \text{ TALER/unit} * \text{Order Quantity} - 3 \text{ TALER/unit} * \text{Order Quantity}$$

Example: If the customer demand is 60 units and you ordered 40 units, only 40 units can be filled and the profit is

$$\text{Profit} = 12 \text{ TALER/unit} * 40 \text{ units} - 3 \text{ TALER/unit} * 40 \text{ units} = 360 \text{ TALER}$$

4. Clearance of leftover inventory: If your order quantity was greater than the demand, the remaining stock is disposed of at no cost. In other words, remaining inventory is worthless and is not carried over to following periods.

The roadmap of the game is as follows:

1. Playing of 40 periods
2. Short break during which the player receives information
3. Playing of another 40 periods
4. Short break during which the player receives information
5. Playing of another 20 periods
6. Calculation of average profit per period and compensation of participant: The exchange rate is 1 Euro = 11 TALER

A.2 Computer interface screen shots¹


Input screen

Bestellmengenmanagement UH

Bestellmenge

Rechner

Logout



Benutzerkennung	99	
Verkaufspreis	12.00	
Einkaufspreis	3.00	
Bisheriger durchschnittlicher Gewinn 376.20		
Runde	6 von 100	

Bestellmenge

Ihre Bestellung:

Ihre Transaktionsgeschichte:

Runde	Ihre Bestellung	Die Nachfrage	Gewinn dieser Runde
5	75.00	45	315.00
4	66.00	57	486.00
3	76.00	91	684.00
2	34.00	10	18.00
1	50.00	44	378.00


Feedback screen

Bestellmengenmanagement UH

Bestellmenge

Rechner

Logout



Benutzerkennung	99	
Verkaufspreis	12.00	
Einkaufspreis	3.00	
Bisheriger durchschnittlicher Gewinn 426.00		
Ihre Bestellmenge war	75	
Die Nachfrage war	85	
Gewinn dieser Runde	675.00	

¹ Translation: Bestellmengenmanagement = order-quantity management; Bestellmenge = order quantity; Rechner = Calculator; Benutzerkennung = User ID; Verkaufspreis = selling price; Einkaufspreis = purchase price; Bisheriger durchschnittlicher Gewinn = average profit so far; Runde = Period; Ihre Bestellung = your order; Ihre Transaktionsgeschichte = your transaction history; Die Nachfrage = demand; Gewinn dieser Runde = profit in the period.

A.3 Distributions of mean orders (bin intervals of 10)

