In-store Logistics: an Analysis of On-shelf Availability and Stockout Responses for Three Product Groups

Professor Alan McKinnon and Ms. Danila Mendes

Logistics Research Centre

Heriot-Watt University

LRN 2006 Conference
In-store Logistics: the ‘last 50 metres’

- Not traditionally regarded as part of the supply chain
- Concern about cost and product availability
- In supermarket retailing:
  - *in-store logistics accounts for 40-50% of total supply chain costs*
  - *7-10% of SKUs out of stock at any given time*
  - *for many on-shelf stockouts - product is available in storeroom*
  - *much publicised failure of shelf-replenishment systems*
Sainsbury: response to availability failure
Sainsbury: crisis measure

marquees at the back of supermarkets

Source: Sainsburys
Availability Levels across the FMCG Supply Chain

Need to overhaul in-store logistics

Manufacturer’s depot to retailer’s distribution centre (DC)
Retail DC to back store
Back store to shelf

Loss of grocery sales in Europe: €4 billion per annum (ECR Europe)
Research Objectives

• Examine differences in the availability of 3 product groups:
  - dairy products
  - frozen food
  - health and beauty products
• Investigate factors causing variations in OSA for these products
• Analyse consumer reactions to stockouts in these products
• Recommend methods of improving OSA for these products
Methodology

- Analysis of Matador quarterly survey data: monitors OSA of 200 large-selling items in 400 supermarkets
- Semi-structured interviews with managers of 10 supermarkets
- 20 consumer interviews at each of these 10 supermarkets
- Observation of the in-store shelf replenishment process
On-Shelf Availability: Retail Differentiator

Source: ECR UK – Matador OSA Survey
Results of the Matador Surveys: Average OSA %

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Importance of Factors Influencing OOS Level

- Promotional activity
- Rate of sales
- Reliability of staff
- Timing of replenishment
- Availability of staff
- Location of product on shelf
- Shrinkage
- External merchandising
- Nature of packaging
- Colour coding

Importance Index

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Higher Incidence of OOS for Items on Promotion

Source: ECR UK  LRN 2006 Conference
Consumer Reaction by Retailer: *Dairy Products*

A bar chart showing consumer reactions to dairy products: Buy another size, Buy another brand, Buy another product, Buy in another store, Postpone purchase, Do without. The percentages are displayed for each option.
Reaction to Retail Out-of-Stock by Product and Age Group

Dairy products

Health and beauty products

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Reaction to Retail Out-of-Stock by Product and Gender

Health and Beauty Products

- Buy another size
- Buy another brand
- Buy another product
- Buy in another store
- Postpone purchase
- Do without

Frozen Food

- Buy another size
- Buy another brand
- Buy another product
- Buy in another store
- Postpone purchase
- Do without

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Ways of Improving On-Shelf Availability

ECR Europe 7 Improvement Levers

1. Measurement
2. Management attention
3. Replenishment system
4. Merchandising
5. Inventory accuracy
6. Promotion management
7. Ordering system

Coherent consumer-centric business system

Source: ECR Europe
Recommendations

• Improve measurement and analysis of the OOS problem
Root Cause Analysis of Retail Out-of-Stock Problem

Source: Tesco

- Manufacturer delivery to DC, 30%
- Retailer DC to shop, 15%
- Shelf replenishment in shop, 35%
- Inventory accuracy, 15%
- Other, 5%

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Recommendations

• Improve measurement and analysis of the OOS problem

• Raise level of management attention
Example of a Supermarket Planogram
Recommendations

• Improve measurement and analysis of the OOS problem
• Raise level of management attention
• Motivate shelf-stackers to achieve ‘zero-gaps’
Steps to satisfy the Shopper

- See a gap - make a note to fill as soon as you can.
- Always follow the planogram, check the shelf and adjust regularly
- Take damaged items off the shelf
- If there is no shelf edge label - get one printed
- Shelf Ready Packaging – make sure you use it
- Fill the shelf with longest dates at the back

You make the difference!

Source: ASDA

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Recommendations

- Improve measurement and analysis of the OOS problem
- Raise level of management attention
- Motivate shelf-stackers to achieve ‘zero-gaps’
- Overhaul the shelf replenishment process
Retrieving products in the back store
Layout and Management of Back Storeroom: Sainsbury's
Recommendations

• Improve measurement and analysis of the OOS problem
• Raise level of management attention
• Motivate shelf-stackers to achieve ‘zero-gaps’
• Overhaul the shelf replenishment process
• Make greater use of retail ready packaging
Effect of Packaging Design on On-Shelf Availability

- Retail-ready packaging
- Easy to identify
- Clear instructions
- Easy to open
- Product differentiation
- Easy to shop
Recommendations

- Improve measurement and analysis of the OOS problem
- Raise level of management attention
- Motivate shelf-stackers to achieve ‘zero-gaps’
- Overhaul the shelf replenishment process
- Make greater use of retail ready packaging
- Improve the accuracy of in-store inventory records:
  - picking of online orders yields a ‘dot-com’ measure (-2%)
Recommendations

- Improve measurement and analysis of the OOS problem
- Raise level of management attention
- Motivate shelf-stackers to achieve ‘zero-gaps’
- Overhaul the shelf replenishment process
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- Improve the accuracy of in-store inventory records:
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- Rationalise product range: reduce ‘range density’
In the longer term.....

Use of RFID to Improve Availability across Supply Chain

Wal-Mart study

Claims that RFID reduced retail out-of-stocks by 16%

Source: Unilever
Conclusions

• Disaggregation of OSA by product group reveals
  – underlying complexity
  – danger of relying on store averages
  – wide variations in consumer response

• Some causes of OOS specific to particular product groups

• Need to adapt ‘improvement levers’ to product groups
Contact details

Logistics Research Centre
Heriot-Watt University
EDINBURGH UK

A.C.McKinnon@hw.ac.uk

http://www.sml.hw.ac.uk/logistics