



Website Features and Online Shopping: How Technology Usage Impacts Consumer Demand

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Overview

- Introduction
- Research Design
- Empirical Results
- Conclusions

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Introduction

- Firms invest in different technologies
 - Search
 - Recommendation system
 - etc..
- Consumers gather information.
- Consumers utilize information that has been gathered
 - Expanded set of products; compare them and make evaluations.

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My Account | Shopping Bag | Live Help

HOME CLOTHING SWIMWEAR COLLECTIONS NEW ARRIVALS BEST SELLERS SHOP BY CATALOG SALE

Clothing > Dresses > Dressy > Z7591

> Clothing
 Sweaters
 Tops
 Jumpsuits
 Dresses
 Casual
 Dressy
 Pants
 Jeans
 Skirts & Shorts
 Jackets & Blazers
 Shoes
 Accessories
 Activewear
 Suits & Separates
 Sleepwear

> Swimwear
 > Sale
 > Clearance

< Previous | Next >

 Alternate View Zoom

Sleeveless Empire Dress \$59

- V neck
- 100% Viscose
- Front length: xs-40" s-40 1/2" m-41" l-41 1/2"
- Imported
- Style #Z7591
- [More Details](#)

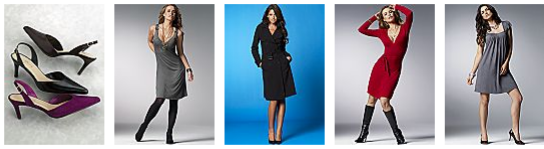
Size Chart

Size Black Qty

[Select Multiple Sizes >](#)

QUESTIONS ?

You may also like



Mid-heel Leather Sling Pump Knot Front Knot Dress Double Breasted Long Jacket Wrap Sweater Dress Pleated Front Mini Dress

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Website Features Usage Varies

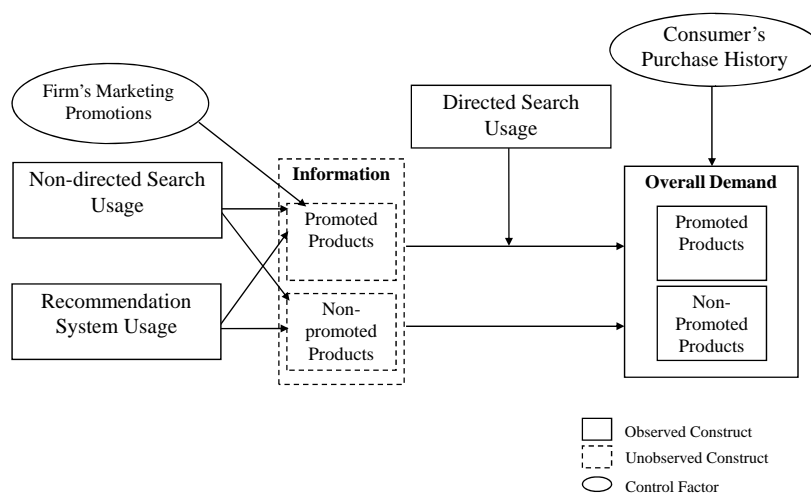
- Using website just as an ordering medium
- Using search with/without prior information
 - Directed search vs. non-directed search
- Responding to recommendations
 - Expanded consideration set
 - Access to non-promoted products

Research Questions

- Do consumers use search and recommendation technologies?
- Does consumers' usage of these technologies have an impact on consumer demand?
- How does this impact vary across different products?

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Conceptual Model



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Study Design

- A large Internet retailer of women's clothing
- Transactions (March 2006)
- Server logs (March & April 2006)
 - 52 millions lines of logs
 - About 850,000 client requests/day
- Catalog mailings
- "Promoted" Products
 - promoted in the catalog at least once
 - rest considered "non-promoted"

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Consumer Sample

- Transactions: April 2006
- Only consumers who have received all catalogs
- Purchase history as control for consumer heterogeneity
- Browsing and purchasing sessions

- Sample size: 8,199

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Descriptive Statistics of Consumer Demand

	Mean	Standard Deviation
Overall Demand	2.97	2.87
Promoted Products	2.36	2.49
Non-promoted Products	0.61	1.31

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Descriptive Statistics of Technology Usage

	Mean	Standard Deviation
Directed Search Usage	0.72	1.85
Non-directed Search Usage	0.36	1.31
Recommendation System Usage	3.63	8.82

- Consumers who used the following technology at least once
 - directed search: 26%
 - non-directed search: 17%
 - recommendation system: 47%

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Effect of Technology Usage on Internet Demand

Overall (1)	
Directed Search Usage	2.409**
Recommendation	2.103**
Purchase	(0.008)
Internet Experience	0.049** (0.016)
Intercept	0.959** (0.055)
Log Likelihood	-17,754.40
Sample Size	8,199

A consumer with 3.5% *Directed Search Usage* has an overall demand that is 8.4% more than that of a consumer with zero usage.

Having 4.2% *Recommendation System Usage* instead of zero increases the overall demand by 8.8%.

** significant at 1%

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Effect of Technology Usage Across Products

	Promoted (1)	Non-promoted (2)
Directed Search Usage	5.325**	-17.989**
Recommendation	1.662**	3.267**
Internet Experience	0.026 (0.018)	0.141** (0.035)
Intercept	0.683** (0.062)	-0.424** (0.119)
Log Likelihood	-16,403.91	-8,228.88
Sample Size	8,199	8,199

Compared to a consumer with zero *Directed Search Usage*, a consumer with 3.5% usage has 18.6% more demand for promoted products and 63.0% less demand for non-promoted products.

Similarly, an increase of *Recommendation System Usage* from zero to 4.2% increases the demand for promoted products by 7.0% and the demand for non-promoted products by 13.7%.

** significant at 1%

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Key Results

- Directed search usage
 - increases online demand
 - biased toward promoted products
- Non-directed search usage
 - insignificant impact
- Recommendation system usage
 - increases online demand
 - biased toward non-promoted products

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Managerial Implications

- Directed search technology may enhance/supplement marketing initiatives.
- Recommendation systems mitigate the effect of marketing initiatives, e.g., catalogs.
- A firm needs to consider consumers' technology usage.
 - Customize marketing strategy.
 - Design website properly.

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Thank you!
Questions?

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