The e-Commerce Industry

A case study of Amazon’s fulfillment system

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Introduction

- What is e-Commerce?

- Differences between e-Commerce & Traditional Retailing:
  - Display
  - Expense
  - Location
  - Communication
  - Technology
Advantages of e-Commerce

- Operates 24–7
- Access to global markets
- Increased speed and accuracy of info exchange
- Decreased transaction costs
- Catalog flexibility and Online fast updating
- Workflow automation
- Secure payment systems
Disadvantages of e-Commerce

- Inability to touch and handle the products
- It is more difficult to communicate with customers
- Technology is rapidly changing
- Lack of trust when dealing with unfamiliar sellers
- Shortage of skilled technical employees
- Concern over transaction security and privacy
Industry Overview

- The Internet is growing at an annualized rate of 18% and now more than one billion users

<table>
<thead>
<tr>
<th>Region</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>$3.5 trillion</td>
</tr>
<tr>
<td>Asia Pacific</td>
<td>$1.6 trillion</td>
</tr>
<tr>
<td>Western Europe</td>
<td>$1.5 trillion</td>
</tr>
<tr>
<td>Latin America</td>
<td>$81.8 billion</td>
</tr>
<tr>
<td>Rest of World</td>
<td>$68.6 billion</td>
</tr>
</tbody>
</table>

Source: Forrester Research

- Revenue from North America is expected to decrease as a percentage of Worldwide e-Commerce Revenues
Industry Overview

- e-Commerce business types:
  - Affiliate Program
    - Partnering with companies that will pay commission on items sold through your website
    - No control over prices and profit margins
  - Drop Shipping
    - The website collects orders and payment information from shoppers
    - Send the list of items ordered and delivery to the supplier who ships the items
    - You collect payment from the shoppers and pay the supplier for the goods plus handling and shipping fees
  - Full Business Service
    - Stock inventory, ship orders, and handle customer service
Industry Overview

- Top 10 e-Commerce businesses (2007)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>Web Sales Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Amazon.com Inc.</td>
<td>$10.7 B</td>
</tr>
<tr>
<td>2</td>
<td>Staples Inc.</td>
<td>$4.9 B</td>
</tr>
<tr>
<td>3</td>
<td>Office Depot Inc.</td>
<td>$4.3 B</td>
</tr>
<tr>
<td>4</td>
<td>Dell Inc.</td>
<td>$3.9 B</td>
</tr>
<tr>
<td>5</td>
<td>HP Home &amp; Home Office Store (Hewlett-Packard Co.)</td>
<td>$3.1 B</td>
</tr>
<tr>
<td>6</td>
<td>OfficeMax Inc.</td>
<td>$2.8 B</td>
</tr>
<tr>
<td>7</td>
<td>Sears Holding Corp.</td>
<td>$2.3 B</td>
</tr>
<tr>
<td>8</td>
<td>CDW Inc.</td>
<td>$2 B</td>
</tr>
<tr>
<td>9</td>
<td>SonyStyle.com</td>
<td>$1.7 B</td>
</tr>
<tr>
<td>10</td>
<td>Newegg.com</td>
<td>$1.5 B</td>
</tr>
</tbody>
</table>
Amazon.com

- The leading online shopping site
- Employs more than 14,000 people around the world
- Offers everything from books and electronics to tennis rackets and diamond jewelry
- Maintains over 20 fulfillment centers around the world which encompass more than 10 million square feet.
## Amazon.com SWOT Analysis

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Provides conforms to individual demand information. (customization service) *Up-to-date technology and software</td>
<td>*Since the internet is developing quickly, the electronic commerce market has significant potential. *Increased number of internet users and amount of purchases worldwide</td>
</tr>
<tr>
<td>*1-click ordering; select and purchase the products on line. *High brand name recognition</td>
<td></td>
</tr>
<tr>
<td>*Distribution centers – geographical coverage High inventory turnover</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weaknesses</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Customer can’t skim through the book before buying it. *Large inventory risk</td>
<td>*Aggressive competition *Ease of entry into the market *Prone to identity theft</td>
</tr>
</tbody>
</table>
Amazon.com – Strategy Shift

- **Pull System (1996–1999)**
  - The company did not have inventory. It relied on Ingram Book Group to meet its demand
- **Push–Pull System (1999–present)**
  - Has 23 warehouses worldwide
  - Keeps stock of the high selling products and partners up with a large number of suppliers
- **Why the switch?**
  - Margins, service
  - Increase in volume
Fulfillment Objectives

- To reflect an understanding of customers’ needs
- To offer both current titles and hard-to-find editions and copies through the use of wholesale suppliers and independent producers
- To provide a two-day delivery time limit on most orders through Amazon warehousing setup
- To enable the customers – through EDI – to query the status of their purchases and track their own shipments
- To align supply and delivery to the firm’s functions such as marketing sales and customer service
What customers value?

- Price
- Selection
- Convenience
Price

Nikon D40 SLR Digital Camera Kit with 18-55mm Lens 25420
"MOST TRUSTED" Internet Retailer. The Professionals Source since 1971! LIMITED TIME Rebate Offer Available (In stock)
Shipping from $9.25. Nikon D40 SLR Digital Camera Kit with 18-55mm Lens, 8.1 Megapixels, ISO 1600 Sensitivity, 2.5" LCD Monitor, 2.5 fps Burst, 8 Digits...
More at B&H Photo-Video-Pro Audio

Nikon D40 6.1 Megapixel SLR Digital Camera Kit - 18-55mm AF-S Lens
FREE SHIPPING "Offering Savings, Selection & Service Since 1971" (In stock)
Includes 18-55mm ED II AF-S Zoom Lens / SD Memory Slot / 2.5" LCD / Electronic Flash / Selectable Scene Modes / Focus and Exposure Modes / Pictbridge...
More at J&R Music and Computer World

Nikon D40 6.1MP Digital SLR Camera Kit with 18-55mm f/3.5-5.6G ED II AF-S DX...
Free Shipping: orders over $25 (In stock)
6.1-megapixel CCD captures enough detail for photo-quality 14 x 19-inch prints. Kit includes 3x 18-55mm 13.5-5.6G ED II AF-S DX Zoom-Nikkor lens, 2.5-in...
More at Amazon

Nikon D40 Outfit with Nikon D40 Body & Nikon 18-55 G DX Nikkor Lens
SKU# 25420. Package includes: Nikon D40 Digital SLR Camera Body, Nikon 18-55mm K3.5-5.6G ED II AF-S DX Zoom-Nikkor Lens, EN-EL9 Rechargeable LiVia...
More at Digital Foto Club

Nikon D40 6.1 Megapixel Digital SLR Camera 3X Zoom Kit Outfit, with 18-55mm...
SEE SITE FOR REBATE (In stock)
NIKON'S NEW D40 DIGITAL SLR CAMERA IS THE SMALLEST AND

$459.95
at B&H Photo-Video-Pro Audio

$479.88
at JR.com

$479.89
FREE SHIPPING at Amazon

$497.90
FREE SHIPPING with Shopping.com

$499.99
at Adorama

amazon.com®
Price

Discounts are frequent.
Selection

- Amazon.com has hundreds of product categories and sells millions of products
- Leverages on concept of *Long Tail*
Convenience

- Search Inside the Book
- Fast Track
- 1-Click ordering™
- Sales Rank

I give this to all parents to be! Garcia's approach is wonderful. Two of my three grandchildren sign, and they speak much earlier than by grandchildren not raised with signing.

Read more

Published 4 months ago by Rita G. Randolph
Fulfillment Process

Information Flow

Customer Order → Firewall → Amazon.com Data Warehouse → Firewall → Supplier → DC → 3PL

Physical + Information Flow

Internet | Intranet | Extranet
Information Management

- **Data Warehouses (HP)**
  - Order Data
  - Customer Data
  - Inventory Data
  
- **EDI**
  - Partnered with a number of software companies
    - BIT Inc., Direct EDI, 123EDI, etc.
  - Services include:
    - Security
    - Purchase order and invoice
    - Payment
    - Tracking the status of the product ordered

“What makes them so important – beyond the technology – is that HP has invested in Amazon.com and is really interested in our success.”
Locations of Fulfillment Centers

- **North America**
  - USA
    - Campbellsville, KY
    - Carlisle, PA
    - Chambersburg, PA
    - Coffeyville, KS
    - Dallas, TX
    - Fernley, NV
    - Hebron, KY
    - Lexington, KY
    - Louisville, KY
    - Lewisberry, PA
    - New Castle, DE
    - Red Rock, NV

- **Europe**
  - UK
    - Marston Gate, Milton Keynes
    - Swansea, Wales
    - Glenrothes, Fife, Scotland
    - Gourock, Inverclyde, Scotland

- **Germany**
  - Bad Hersfeld
  - Leipzig

- **France**
  - Boigny on Bionne (Orléans)

- **Asia**
  - China
    - Beijing
    - Guangzhou
    - Suzhou
  - Japan
    - Ichikawa
Locations of Fulfillment Centers
Amazon.com’s Fulfillment Center

- Each warehouse can deliver 200,000 or more pieces a day.
- To increase efficiency, items are combined into one shipment if they are small enough.
Amazon.com’s Fulfillment Center
Amazon.com’s Fulfillment Center
Outsourced delivery
Amazon.com’s SCM practices

- Customers can choose how their products are delivered
  - USPS
  - UPS, FedEx, DHL
- Practices “bulk packaging”
  - Products ordered by customers at the same location are delivered at the same time.
- Keeps inventory at a minimum
  - Stocked books are only the bestsellers
  - In 2002, Amazon.com had a 19.4 time inventory turnover while Wal-Mart only had 7 times.
- Some distribution centers carry only a few product categories in order to:
  - Increase efficiency – easier to manage inventory
  - Decrease inventory cost
Conclusion

- A large part of Amazon.com’s success is its ability to integrate the flow of information with the quality and speed of physical delivery

- Amazon.com’s management is committed to decreasing cost and increasing profitability
  - Bargaining with suppliers
  - Investing in technology to build capacity and capability
  - Continuous process improvements