• one of the first (and most obvious) applications of the internet

• take a well-established business model with long history, catalog/mail-order sales, and put it online (with a few important differences)

• in the next couple of lectures, I’m going to try to accomplish a few things:
  – history of mail-order
  – background on Amazon
  – look at costs and benefits of mail-order (catalog and internet) vs traditional retail, examples of markets where one or the other makes sense
  – in-depth look at two traditional advantages of mail-order and limitations to these
    * price discrimination
    * tax-advantaged sales
  – limitations to mail-order
  – what lessons can we draw about e-retail from the history of catalog sales, and what’s different?

• current market caps of large retailers:
  
<table>
<thead>
<tr>
<th>Company</th>
<th>Market Cap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alibaba</td>
<td>$207 billion</td>
</tr>
<tr>
<td>Walmart</td>
<td>$248 billion</td>
</tr>
<tr>
<td>Amazon</td>
<td>$148 billion</td>
</tr>
<tr>
<td>TJX</td>
<td>$42 billion</td>
</tr>
<tr>
<td>Kroger</td>
<td>$26 billion</td>
</tr>
<tr>
<td>Sears</td>
<td>$3 billion</td>
</tr>
<tr>
<td>Buy.com</td>
<td>went from $4 billion → $23 million → $250 million, and then bought by larger Japanese retailer in 2010</td>
</tr>
</tbody>
</table>
Brief history of retail in U.S.

19th century
- U.S. predominantly rural, very sparsely populated compared with most of Europe
- transportation difficult, dangerous, expensive
- railroads made transportation much easier and cheaper, especially for goods
- innovations in efficient transportation of people lagged (automobiles, paved roads, etc.)

1872 Aaron Montgomery Ward founded first mail-order house to use catalogs as its primary promotional tool – located in railroad hub of Chicago
1875 US Postal Service introduced favorable rate for bulk mailings
1885 bulk mailing rate lowered again
1893 Rival Richard Sears began offering a general merchandise catalog (which was soon as large as 786 pages) – operations also located in Chicago
1890s USPS starts rural free delivery
1907 United Parcel Service founded, focuses on package delivery for stores
1913 parcel post system (rural deliveries previously handled by private express companies)
1925 golden age of mail order:
- Sears + MW sold over $400 million of goods annually
- Sears alone accounted for >2% of total farm cash income
- Sears opened first store
1931 Sears store sales eclipse catalog sales
1933 Sears had 400 stores
1990-1950 two changes:
- demographic shift towards urban living
- transportation costs for people falling relative to that for goods
1973 Federal Express begins air shipments
1975 ICC granted UPS authority to ship to every address in contiguous 48 states
1992 Supreme Court decision solidifying the right of mail-order businesses to not collect and pay sales tax for out-of-state customers (these sales had been de facto tax-free before)
1993 Sears discontinued publishing big book catalog
late 1990s Mail-order dominated by specialty retailers, not general merchandizers
1995 Amazon opens for business, selling books online with searchable database of 1,000,000 titles
1997 1 million customers
1999 expands product line dramatically, uses online reviews and customer recommendations widely
2000 Amazon engaged in “pricing experiments,” apologized
2001 makes first profit
2006 21 fulfillment centers
2008 - 2012 Amazon currently collects state tax from 5 U.S. states, under pressure to collect more, agreements in process
2012 59 fulfillment centers (30 in U.S.), worth $110 billion

This timeline suggests a few things:

- there are differences between mail order and traditional retail in costs and benefits, changing over time, across products
- there are differences between ordering from catalogs and ordering from websites
- government policy can matter a lot
Comparison across retail modes

customer value (where 1 is the highest value and 3 is the lowest value):

<table>
<thead>
<tr>
<th></th>
<th>catalog mail-order</th>
<th>online mail-order</th>
<th>traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>consumer travel time</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>consumer product search time</td>
<td>3</td>
<td>1 (easy searches)</td>
<td>1 (quick visual scans)</td>
</tr>
<tr>
<td>verification of quality</td>
<td>3</td>
<td>1 (reviews)</td>
<td>1 (inspection)</td>
</tr>
<tr>
<td>shopping experience</td>
<td>?</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>ease of returns</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>selection</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>waiting time</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

cost (where 1 is the cheapest and 3 is the most expensive):

<table>
<thead>
<tr>
<th></th>
<th>catalog mail-order</th>
<th>online mail-order</th>
<th>traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>facilities cost (retail outlets, inventory)</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>tax costs</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>shipping</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>processing</td>
<td>2 (not automated fully)</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

- cost and customer value can vary by product type and can also vary in importance by product type
- overall, due to ease of price search, online-mail order has the most price competition, followed by catalog mail-order, with traditional retail in last as the least competitive.
- online mail-order is most able to price discriminate, followed by catalog mail order, with traditional retail being much less able to price discriminate.
- but how do we know the relative importance of these cost and benefit differences? look at numbers from balance sheets.