Wireless Telecommunications Industry

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Industry at a Glance

Key Snapshot:

- **Revenue**: $255.9bn
- **Annual Growth 11~16**: 2.7%
- **Annual Growth 16~21**: 3.2%
- **Profit**: $64.7bn
- **Wages**: $19.0bn
- **Businesses**: 748
Major Players

at&t  verizon  Sprint  T-Mobile
Market Share Concentration

• Concentration in The Wireless Telecommunications industry is **high**

• $HHI = 3042$
<table>
<thead>
<tr>
<th>Key External Drivers</th>
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<tbody>
<tr>
<td><strong>Number of mobile internet connections:</strong></td>
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<tr>
<td>- the greatest driver of demand</td>
</tr>
<tr>
<td>- expected to <strong>increase</strong></td>
</tr>
<tr>
<td>- slower rate of increase is a threat to industry expansion.</td>
</tr>
<tr>
<td><strong>Percentage of services conducted online:</strong></td>
</tr>
<tr>
<td>- reflects and encourages demand</td>
</tr>
<tr>
<td>- expected to <strong>increase</strong></td>
</tr>
<tr>
<td><strong>Per capita disposable income</strong></td>
</tr>
<tr>
<td>- encourage consumers to purchase devices requiring mobile internet connections</td>
</tr>
<tr>
<td>- expected to <strong>increase</strong></td>
</tr>
<tr>
<td><strong>Price of semiconductor and electronic components</strong></td>
</tr>
<tr>
<td>- decreases the cost of smartphones</td>
</tr>
<tr>
<td>- increases demand</td>
</tr>
<tr>
<td>- expected to remain <strong>stagnant</strong></td>
</tr>
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</table>
The Wireless Telecommunications industry has performed well over the past five years, generated strong revenue growth and profitability due to infrastructure investments and advancements in technology.
Industry Life Cycle

- The Wireless Telecommunications industry is mature

  - Strong consumer demand continues for wireless telephony services
  - The industry is consolidating
  - The industry’s economic contribution is expanding slower than GDP
Barriers to Entry

- Barriers to entry in the Wireless Telecommunications industry are **high** and are **increasing**.
Major Markets

- General consumers: price, service reliability, next-generation applications
- Small and medium (SMB) businesses: local wired network
- Large corporations: long-term contracts, more predictable usage patterns
Products and Services

- Operates and maintains switching and transmission facilities to provide direct communication through radio-based cellular networks.
- One-way radio applications: paging
- Two-way applications: cellular telephone services, personal communication services (PCS).
- Total: $255.9bn
Basis of Competition

- Competition in this industry is **high** and the trend is **steady**
### Industry Cost

- **Profit**
  - High cost: updating the technology
    - Upgrading infrastructure to keep up with consumer demand
    - Subsidizing smartphones
  - Consolidate market share
  - Boost margins through economies of scale
  - Cut prices, offered greater flexibility in services

### Industry Cost Table

<table>
<thead>
<tr>
<th>Industry Cost</th>
<th>Profit</th>
<th>Wages</th>
<th>Purchases</th>
<th>Depreciation</th>
<th>Marketing</th>
<th>Rent &amp; Utilities</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25.30%</td>
<td>7.40%</td>
<td>10.80%</td>
<td>45.70%</td>
<td>3.50%</td>
<td>4.90%</td>
<td>2.40%</td>
</tr>
</tbody>
</table>
Purchases

- the largest operating expense
- services expenses: operating and accessing the wireless network, roaming and long-distance costs
- equipment expenses: offering subsidized smartphones
Industry Cost

- Depreciation
  - wireless networks
  - spectrum licenses
AT&T

- Largest Advertising Budget
- Market Share: 32.7%
- Total Number of Subscribers: 126.4 M
- Concentrates on TV Advertisement
Buzz Words: Network, Data, & Switch

- Named Phone by Brand: 60%
- Average Times “AT&T”: 3.2
- Emotional Appeals: 66%, 80%
  - Humor
    - Launched “It Can Wait”
- Informational Advertising: 33%
- Ad Celebrity

Store Manager “Lily”
- Second Largest Advertising Budget
- Largest Market Share: 37.9%
- Total Number of Subscribers: 137.6 M
Verizon

“A Better Network as Explained by a Door”

- **Buzz Words:** Network, Reliability & Switch
- Average Times “Verizon”: 2.46
- Competitive Advertisement: usually does not name competitor but eludes to a specific one
- Exceptions:
  - “A Better Network as Explained by Colorful Balls”
  - Old AT&T rivalry (2010 Coverage Maps)
- Uses Celebrities in Advertisement
- Used to have “Ad Celebrity”: Test Man from Can You Hear Me Now?
T-Mobile

- Lowest Advertising Budget in the Wireless Telecommunication Carrier Industry
- Market Share: 14.1%
- Total Number of Subscribers: 61M
### T-Mobile

- **Buzz Words**: Unlimited Data & Price
- Average Times “T-Mobile”: 3.6
- Named Phone by Brand: 40%
- Competitive Advertisement: usually against Verizon
- Replied to “A Better Network as Explained by Colorful Balls”
- Advertises to a younger audience

#### Annual Volume of Mobile Wireless Traffic in US, by type

<table>
<thead>
<tr>
<th>Year</th>
<th>Minutes of Use (in billions)</th>
<th>Text messages (in billions)</th>
<th>Megabytes of data usage (in trillions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>2241</td>
<td>2052</td>
<td>368</td>
</tr>
<tr>
<td>2011</td>
<td>2296</td>
<td>2304</td>
<td>867</td>
</tr>
<tr>
<td>2012</td>
<td>2300</td>
<td>2190</td>
<td>1468</td>
</tr>
<tr>
<td>2013</td>
<td>2618</td>
<td>1910</td>
<td>3230</td>
</tr>
<tr>
<td>2014</td>
<td>2455</td>
<td>1921</td>
<td>4061</td>
</tr>
</tbody>
</table>
Sprint

- Smallest Market Share: 12.9%
- Total Number of Subscribers: 58.1 M
- 6th Largest Newspaper Advertiser
Sprint

- **Buzz Words**: Price, Speed
- **Average Times “Sprint”**: 4.7
- **Competitive Advertisement**: 70% directly compared Sprint’s Price or Speed to at least one competitor
- **Replied to “A Better Network as Explained by Colorful Balls”**
- **25% of Advertisements were in Spanish**
Q4 Advertisements: Deals

T-MOBILE IS THE BEST PLACE FOR HOLIDAY DEALS

If you’re struggling to find the perfect gift for family and friends, relax. We’ve got you covered.
Prisoner’s Dilemma

**Number of subscribers to wireless carriers in the U.S. from 1st quarter 2013 to 4th quarter 2015, by carrier (in millions)**

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Verizon Wireless</th>
<th>AT&amp;T</th>
<th>Sprint</th>
<th>T-Mobile USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 '13</td>
<td>54.67</td>
<td>46.89</td>
<td>50.27</td>
<td>39.71</td>
</tr>
<tr>
<td>Q2 '13</td>
<td>55</td>
<td>47.67</td>
<td>51.72</td>
<td>38</td>
</tr>
<tr>
<td>Q3 '13</td>
<td>55.57</td>
<td>47.49</td>
<td>51.5</td>
<td>45.38</td>
</tr>
<tr>
<td>Q4 '13</td>
<td>55.46</td>
<td>47.58</td>
<td>50.94</td>
<td>44.51</td>
</tr>
<tr>
<td>Q1 '14</td>
<td>55.78</td>
<td>45.98</td>
<td>50.67</td>
<td>44.38</td>
</tr>
<tr>
<td>Q2 '14</td>
<td>55.42</td>
<td>43.41</td>
<td>50.19</td>
<td>44.1</td>
</tr>
<tr>
<td>Q3 '14</td>
<td>55.52</td>
<td>43.71</td>
<td>49.28</td>
<td>44.32</td>
</tr>
<tr>
<td>Q4 '14</td>
<td>54.15</td>
<td>42.04</td>
<td>48.03</td>
<td>43.5</td>
</tr>
<tr>
<td>Q1 '15</td>
<td>52.72</td>
<td>40.78</td>
<td>46.73</td>
<td>42.45</td>
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<td>Q2 '15</td>
<td>51.55</td>
<td>41.07</td>
<td>45.94</td>
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<td>40.19</td>
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<td>Q4 '15</td>
<td>48.95</td>
<td>38.78</td>
<td>44.1</td>
<td>43.3</td>
</tr>
</tbody>
</table>
Industry-wide trends
- Low spending during summer months and holiday season
- High spending in February, April, September, and October

Firm-level trends
- Verizon spends the most ($334.3mm), followed by Sprint ($263.4mm), AT&T ($228.0mm), and T-Mobile ($165.8mm)
- AT&T advertises especially heavily in February
- Verizon advertises especially heavily in April, September, and October
Industry-wide trends
- High ad count in summer months
- Moderate ad count in January-May, September-October
- Low ad count during holiday season

Firm-level trends
- Verizon advertises the most (2,722 ads), followed by AT&T (2,096), Sprint (2,074), and T-Mobile (1,640)
- AT&T advertises especially heavily in January-February, July, and September
- Verizon advertises especially heavily in April and June-August
- Ad count increases during summer months due to lower ad prices.
- Ad prices are highest during February-April and September-October, possibly times of year when many cell phone contracts end.
- Back-to-school months are a period of heavy consumption.
- Ad count and ad dollars drop significantly in holiday months, ads are likely expensive, consumers likely focused on other consumer goods.
Ads by Time of Day

**Industry-level trends**
- Patterns follow logical trends
- Lightest advertising during 7pm-8pm hour
- Heavy advertising from 8pm-10pm
- Slightly lighter advertising from 10pm-11pm

**Firm-level trends**
- Little to no variation from industry means at firm level

**Ad duration trends**
- 96.5% of all ads are 30-second ads
- Remaining 3.5% are 15-second ads
Industry-level
- Heavy advertising on “family” programs
- Logical considering target market

Firm-level
Verizon advertises more heavily than other firms
- Especially during drama/adventure programs, Reality TV shows, and Sit-Coms
AT&T advertises slightly more heavily than Verizon during sporting events
All firms advertise on same types of programs
- No clear differences between AT&T/Verizon and Sprint/T-Mobile in terms of audience
- Differences lie in advertising strategies
Investment Recommendations

Verizon and AT&T

• Safe investments with moderate returns
• Heavy advertising should allow them to maintain large market shares
• Pay consistent dividends to stockholders

Sprint and T-Mobile

• More risky investments, but with higher potential returns
• Solid foothold in the market
• Advertising to steal market share from Verizon and AT&T
Verizon and AT&T Recommendations

Market is saturated and competition is fierce
- Firms would all be better off cutting back on advertising
- But they cannot because they risk losing market share (prisoner’s dilemma)

Verizon
- Continue to advertise heavily on “family” programs during prime time hours
- Continue heavy use of combative advertising emphasizing superior coverage and reliability
  
  Establishes dominance over AT&T and other providers

AT&T
- Continue strong use of humor, but don’t overdo it
  
  Grabs attention during “family” programs
  
  Better strategy than engaging in excessive combative advertising with Verizon
  
  Be careful not to overdo it, as humor is not universal and can get stale quickly
- Emphasize strengths of network without being overly comparative or combative
Sprint and T-Mobile Recommendations

Sprint
• *Continue targeting unhappy Verizon and AT&T customers through comparative advertising*
  Emphasize low prices, flexible plans, and lack of hidden fees

T-Mobile
• *Continue targeting customers of the other firms as “The Un-Carrier”*
  Shows strong awareness of industry maturity and advertisements align well with market position
  Emphasize low prices, flexible plans, and lack of hidden fees
• *Recent use of comparative/combative advertising coupled with humor could prove to be effective*