2. Money Flows:

According to the flow diagram for cable TV and consumer Internet eco systems, in order to annotate it with real dollar figures, I searched some data, such as annual cable revenue, retransmission consent fees, reverse compensation fees, annual advertising revenue. And all statistics I have found are from the companies listed on flow diagram. All data and sources are shown below:

1. Cable TV:
   1) Annual Cable Revenue (MSO/MVPD)

<table>
<thead>
<tr>
<th>Company</th>
<th>Annual Cable TV Revenue (million)</th>
<th>Year</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMCAST</td>
<td>$68.775</td>
<td>2014</td>
<td>Comcast Corporation 2014 Annual Report</td>
</tr>
<tr>
<td>CABLE VISION</td>
<td>$6460.946</td>
<td>2014</td>
<td>Cable Vision 2014 Annual Report</td>
</tr>
<tr>
<td>TIME WARNER CABLE</td>
<td>$22,812</td>
<td>2014</td>
<td>Time Warner Cable 2014 Annual Report</td>
</tr>
<tr>
<td>Total</td>
<td>$98,047.946</td>
<td>2014</td>
<td>/</td>
</tr>
</tbody>
</table>

2) Retransmission consent fees

3) Reverse compensation: I did a estimation according to SNL Kagan’s prediction. SNL Kagan predicts that by 2015, total reverse compensation revenue for the four major networks will reach $1.3 billion, resulting in a staggering 224% compound annual growth rate from 2010. (Source: Reverse Compensation: Broadcaster To Networks, http://www.bondpecaro.com/images/Retransmission_Fees-Reverse_Compensation.pdf) So, I estimated that total 2010 reverse compensation is about $0.580357 billion, which equals $580.36 million.
4) Annual advertising revenue

4.1) Annual advertising revenue of cable channels:

<table>
<thead>
<tr>
<th></th>
<th>Annual Advertising Revenue (million)</th>
<th>Year</th>
<th>Sources</th>
</tr>
</thead>
</table>

4.2) Annual advertising revenue of local channels: $19.17 billion (2013)

4.3) Advertising revenue of broadcast TV: $47.88 billion (2013)


2. Internet eco system:
1) Annual ISP revenue: $55 billion (2014)


Some companies’ annual net income details:

<table>
<thead>
<tr>
<th>Company</th>
<th>Annual Revenue (million)</th>
<th>Year</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version</td>
<td>$9,625</td>
<td>2014</td>
<td>Verizon 2014 Annual Report</td>
</tr>
<tr>
<td>Comcast</td>
<td>$8,592</td>
<td>2014</td>
<td>Comcast Corporation 2014 Annual Report</td>
</tr>
<tr>
<td>Century Link</td>
<td>$5,188</td>
<td>2014</td>
<td>Century Link 2014 Annual Report</td>
</tr>
<tr>
<td>AT&amp;T</td>
<td>$6,518</td>
<td>2014</td>
<td>AT&amp;T 2014 Annual Report</td>
</tr>
</tbody>
</table>
3. Newspapers

a. Research the relative contributions of different parts of advertising (display, inserts, classified, etc.) in the traditional paper versions to the income of newspapers, along with subscription revenues. Where possible, plot a graph that expands on slides 16 and 19 in the introductory slides.

57% advertising, 36% circulation 6% other (such as from events or research) in 2014.

Source: the Pew Research Center.

- Print Advertising Revenue [in Millions] [in 2010]:
  - National: 4,221
  - Retail: 12,926
  - Classified: 5,648
  - Total Print Advertising Revenue: $22,795
  
  Source: Part one of the “Media Landscape” report by the FCC

b. What fraction of the collapse of newspaper income are due to loss of subscriber income vs. the loss of advertising?

For newspapers, the most ads revenue come from the retail ads. In 2011, the revenue of retail ads is about $11 billions, while the classified ads revenue is about $5 billions, and national ads revenue is $4 billions. As in 2011, the retail revenue take 55% of the total ads revenue, while classified ads take 25%, and national ads take 20%.

loss of subscriber income vs. the loss of advertising.

There is not dramatic change on the subscriber income from 1980 to 2009. The subscriber income (which shows as circulation revenue in the picture) is gradually increasing from 1980 to 2003, from $6 billions to $11 billions. The advertising revenue decrease dramatically after 2005-2006. At 2005, the ads revenue is about $50 billions, and decreased by 54% to $23 billions in 2011. However, although the revenue of ads loss a lot, it is still the major revenue of newspapers, 68% of the newspaper revenue is from advertising.
3. Newspapers: (cont.)

Compare the cost of a display ad in a typical newspaper (list prices are often listed online) on a per-subscriber basis to digital advertising.

<table>
<thead>
<tr>
<th>WSJ Edition (Reach)</th>
<th>PER COLUMN INCH RATE</th>
<th>BLACK &amp; WHITE FULL-PAGE</th>
<th>COLOR FULL-PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global (1,495,108)</td>
<td>$2,431</td>
<td>$306,423</td>
<td>$398,147</td>
</tr>
<tr>
<td>Est CPM</td>
<td>$0.0016</td>
<td>$0.20</td>
<td>$0.26</td>
</tr>
<tr>
<td>National (1,356,201)</td>
<td>$2,135</td>
<td>$269,125</td>
<td>$344,488</td>
</tr>
<tr>
<td>Est CPM</td>
<td>$0.0015</td>
<td>$0.19</td>
<td>$0.25</td>
</tr>
</tbody>
</table>

*Online Video $75-$100 CPM

*non-verified data ca. 2009

Wall Street Journal – GENERAL ADVERTISING RATE CARD 2015

For Online Ad Costs, I attempted to use the Wall Street Journal’s Online Estimate Calculator but was unable to get accurate results:
https://classifieds.wsj.com/ad/Estimate?initialCategory=Automotive

Supplied data for CPM was taken from an online news source:
4. Payments

In order to estimate the cost per user for a particular website, one would need to figure out the revenue acquired from advertisements and divide it by the total number of users. The total revenue of a particular website may not be required in this calculation because companies do get additional revenue from other domains such as research, for which the users shouldn’t be charged.

Facebook

Facebook generates mostly all its revenue from advertisements and fees associated with payments structure. Therefore, the total revenue is used and divided by the total number of users.

Total Revenue (2014) [2]: $12,466 million
Total Number of Users (2014) [1]: 1,393 million
Therefore, yearly cost per user would be $(12,466m/1393m) = $89.49
Monthly cost would be $7.45.

Google

Consolidated revenues for Google increased 18.9% to $66.0 billion, which was primarily driven by an increase in advertising revenues generated by Google websites as well as other revenues. To a lesser extent, an increase in advertising revenues generated by Google Network Members' websites also played a role in the increase.

Advertising Revenue (2014) [3]: $59,056 million
Number of Unique Users per month [4]: 1.17 billion
[Assuming that the number of unique users per month and per year would be about the same.]
Therefore, yearly cost per user would be $(59,056m/1.17b)=$50.47
Monthly Cost would be $4.21.

New York Times

Due to continuing secular trends, advertising revenues remained under pressure during 2014. Total advertising revenues decreased by a percentage of 0.7% in 2014 as compared to 2013, reflecting a 4.7% decrease in print advertising revenues. However, there was an 11.9% increase in digital advertising revenues.

Number of unique visitors (2015) [7] = 53.82 million
[calculating based on unique visitors who do not subscribe as the later are already paying for their subscription]
Therefore, yearly cost per user would be $(42.3m/(53.82m-957,000)) = $1.02


5) Mention the tool used for getting the cookies – Privacy Badger, Ghostery etc. Document the results of visiting each site. Differentiate between the types of trackers.

Sample results using Ghostery

News:

www.nytimes.com: 12 trackers (advertising, beacons, analytics, social)
www.wsj.com: 22 trackers (advertising, beacons, analytics, social, widgets)
www.cnn.com: 19 trackers (advertising, beacons, analytics, social, widgets)

E-commerce:

www.amazon.com: 1 tracker (advertising)
www.cars.com: 37 trackers (advertising, beacons, analytics, social, widgets)
www.target.com: 16 trackers (advertising, beacons, analytics, social, widgets)

Social Media:

www.facebook.com: 0 trackers
www.twitter.com: 3 trackers (advertising, analytics, social)
www.instagram.com: 2 trackers (advertising, social)

Financial:

www.bankofamerica.com: 2 trackers (analytics, beacons)
www.citibank.com: 19 trackers (advertising, beacons, analytics, social, widgets)
www.chase.com: 7 trackers (advertising, analytics, beacons)

Corporate:

www.dow.com: 3 trackers (analytics, beacons, widgets)
www.coned.com: 6 trackers (advertising, analytics, widgets)
www.ge.com: 12 trackers (analytics, advertising, social, widgets)
6) Give the number of ads, dimensions and its classification (sponsored content, Google text adds, pop ups etc) for all the sites visited.

<table>
<thead>
<tr>
<th>Site</th>
<th>300x250</th>
<th>300x600</th>
<th>970x250 970x350</th>
<th>728x90</th>
<th>Other display</th>
<th>Google text</th>
<th>Sponsor content</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wired</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>links box</td>
<td></td>
<td>Video overlay</td>
<td></td>
</tr>
<tr>
<td>Ars Technica</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PC Mag</td>
<td>2</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>Links x4</td>
<td></td>
</tr>
<tr>
<td>Gizmodo</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td>970x100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slashdot</td>
<td>1-4</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>Links box</td>
<td></td>
</tr>
<tr>
<td>TechCrunch</td>
<td>4</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PC World</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2-6</td>
<td></td>
<td>Links box</td>
<td></td>
</tr>
<tr>
<td>The Register</td>
<td>3</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anandtech</td>
<td>3</td>
<td></td>
<td>1</td>
<td></td>
<td>150x600</td>
<td></td>
<td>Fixed side ads</td>
<td></td>
</tr>
<tr>
<td>MacRumors</td>
<td>3</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7) Cite data from the PEW to justify your conclusions. Sample charts which can be used to derive conclusions given below. Points deducted if data is not cited or if there was no reasoning about which parameter is the dominant parameter among income, education and rural vs. urban (even though they might be correlated). Note that there might be no right answer and might depend on the data that you use and the corresponding interpretation. One possible sample is as follows:

From the charts, Internet adoption looks to be most dependent on educational attainment followed by household income and finally urban and rural divide.

Only 66% of American’s without a high school degree use the Internet, and In contrast, 95% of people with college degrees use the Internet. This is a difference of 29% between the extreme groups. However an interesting trend seems to be the rapid rise in internet adoption among the Americans with lower educational attainment in recent times. The difference between the extreme groups was 55% in 2000, while only 29% today. This could be because internet applications have become easier to use with time as well as the rise of social media.

Only 74% of people with household incomes lower than $30k per year while 97% of people with household incomes greater than $75k. The difference between the extreme groups in 23%. However, recent trends show that difference band has plateaued after a rapid shrink in the 2010-2012 period. Hence, in the future, this metric might become the more dominant one.

There is a slight difference between urban and rural Internet adoption, with suburban and urban families reporting a 7% difference in Internet adoption compared to rural families (85% vs 78%). However, this difference is dwarfed by the difference resulting from income and education levels.
Sources:
