

Online Retail Performance Optimization

Objective: Leverage engagement and conversion data to improve website performance

Data capturing retailer's website metrics over a year, July 2012 to June 2013, provides insight to trends, patterns, anomalies, and relationships between variables that can be utilized to improve businesses outcomes through data-driven decision making.

The following variables were utilized to track and measure performance:

Dim_browser= Browser used

dim_deviceCategory= device type (tablet, mobile, desktop)

Dim_date= Date users accessed

Sessions=Number of website visits

Transactions= Number of purchases

QTY= Number of items purchased

AddToCart=Number of times user added item to cart

EC R (e-commerce conversion rate): the percentage of the total number of visits to a website that result in a conversion action

Data highlights:

Increase in activity over the year

Metric differences among device type may have implications for next steps.

Mobile device has potential for optimizing transactions.

Desktops appear to be a strong device for positive website performance

While desktop dominates in terms of website performance, tablets and mobile devices have successfully improved performance over the last 12 months.

Differences in website performance among device type

dim_deviceCategory	07/2012	08/2012	09/2012	10/2012	11/2012	12/2012	01/2013	02/2013	03/2013	04/2013	05/2013	06/2013
ECR												
desktop	3.2%	3.3%	3.3%	3.1%	3.2%	3.7%	3.5%	3.9%	3.4%	3.3%	3.5%	3.5%
mobile	0.9%	1.1%	1.1%	1.0%	1.1%	1.3%	1.3%	1.1%	1.2%	1.0%	1.3%	1.4%
tablet	3.1%	2.1%	2.6%	2.3%	2.3%	2.1%	2.1%	2.2%	2.3%	2.4%	2.1%	2.5%
QTY												
desktop	18,547	23,316	16,507	17,675	18,778	19,947	25,424	18,437	17,362	34,200	33,208	35,146
mobile	4,557	5,572	4,050	4,446	3,407	5,672	7,257	3,915	6,455	7,752	9,790	13,017
tablet	8,700	5,760	7,869	4,505	5,947	9,133	6,165	4,696	8,265	12,994	8,631	13,728
Transactions												
desktop	10,701	12,912	8,898	9,373	10,350	11,613	13,793	9,699	9,679	18,868	18,176	19,370
mobile	2,576	3,165	2,381	2,418	1,994	3,158	4,360	2,071	3,644	4,280	5,413	7,412
tablet	4,884	3,202	4,379	2,484	3,183	5,158	3,407	2,396	4,481	7,221	4,800	7,756
Sessions												
desktop	335,429	392,079	272,771	302,682	320,717	309,718	393,723	247,632	287,837	567,510	526,330	554,940
mobile	274,443	275,556	220,689	238,849	178,828	234,481	341,668	194,996	304,832	429,864	409,796	526,481
tablet	158,717	154,858	169,193	107,108	138,235	245,435	164,601	107,599	196,151	299,239	228,513	307,413

The QTY totals and Transaction totals among desktops are greater than that of the mobile and tablet totals combined.

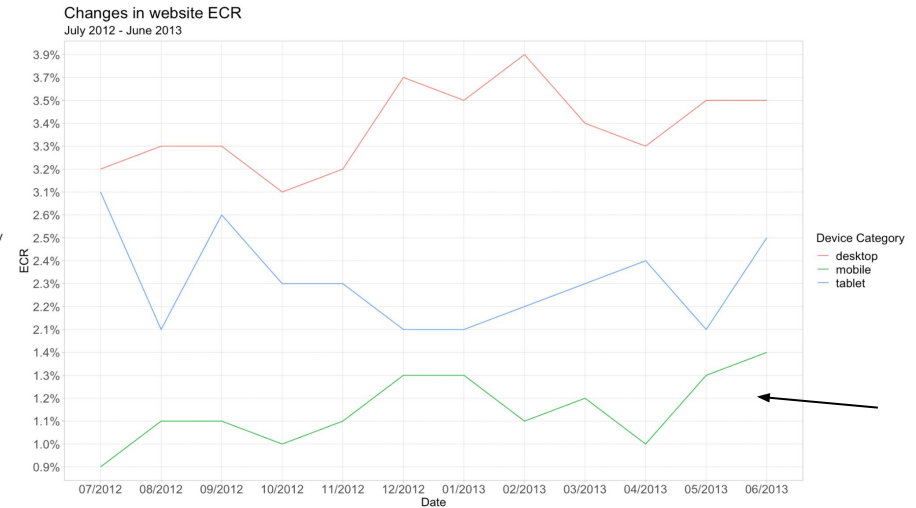
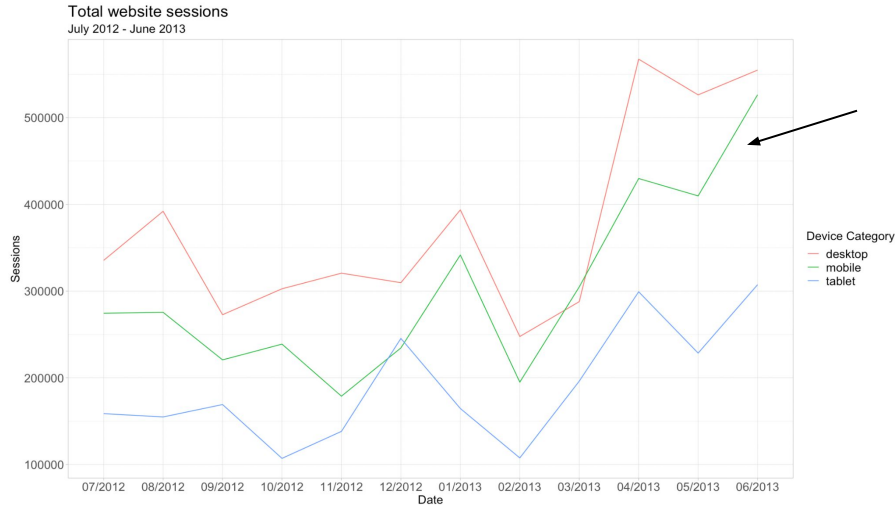
The total sessions among mobile devices nearly doubled from 07/2012 to 06/2013.

Additionally, the total sessions at the end of the year was relatively close among mobile and desktop devices.

Over the year, sessions, transactions and QTY had an upward trend among all device types.

There is an opportunity to maximize sales based on the changes in sessions among devices

- While mobile sessions increased, the mobile device had the lowest ECR rates over the year
- The mobile device was heavily utilized to access the website, however of among those sessions there were very few transactions.
- Desktops dominated in both sessions and transactions, thus had a significantly higher ECR over the year.



Next steps and future analysis

- Mobile device usage is likely to continue to increase in the future, thus more resources should be allocated to invest in growing and improving mobile device website access, user-friendliness, and site navigation.
- Taking advantage of the high volume of website sessions on the mobile device and editing the site may improve ECR, and ultimately increase transactions and profits.
- App development for the mobile and tablet device would be highly beneficial to improve user experience on these particular devices.
- Desktops are a strong device for online site visits and will likely continue to be heavily utilized considering the small size and more advanced abilities of tablets/mobile devices. The simplistic and familiar nature of a desktop may continue to support the site.

Additional analysis could further explain the current data and assist in decision making:

- Forecasting would provide insight to where metrics per device are projected to go
 - Desk research may help explain spikes and dips in line graphs (i.e. 02/2013 has a dip)
 - Were there any website changes at this time? What was environment like (i.e. economy)?
 - Market research would be incredibly beneficial to gain consumer insight to preferences, interests and thoughts on retailer's website, thus allowing company to make adjustments to meet consumer demands.
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