DELL’s Popularity in Social Media

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# Introduction

The PC market has been changing rapidly in the past few years. The market leaders take different actions to expand their business and maintain their market positions. Dell was successful in this industry relying on its direct-sales model and "build-to-order" approach. It had the biggest shipment number among all PC companies until 2006. However, its market share keeps decreasing after that, and its leading position has been surpassed by HP and Lenovo today.

Based on market share data from industry statistics, we target to analyze the popularity of Dell and its products in social media. We want to know if its social media influence has a correlation with market performance, also we would like to see if we can identify any weakness or opportunities from social media analysis for Dell’s future business. In this report, we analyze Dell’s popularity by comparing it with other three major market players including HP, Apple and Lenovo.

# Market Statistics

From the industry statistics we know how each company performs in the PC market. Dell’s market share has decreased from 15.9% to 10.7% with 32.7% decrease in 7 years.



From [wikepedia.org](http://en.wikipedia.org/wiki/Market_share_of_leading_PC_vendors)

There is market position analysis according to Revenue in 2012. Dell is number one in desktop market, followed by HP. However, there is no separated data for its notebook market revenue, only notebook and tablet revenue together.



# Social Media Data Source

We selected two most popular social media as our data sources. One is twitter, the other is YouTube.

***Twitter***

We extracted real time stream from twitter with company and their PC product brands as key words for 12 hours. We retrieved different amount of tweets related to these key words. Based on tweets data, we have done some sentiment analysis to show positive and negative reactions of the public. Here is a list of our key words for each company.

* DELL: dell, Inspiron, XPS, Alienware, Latitude
* HP: HP, Pavilion, ENVY, Elitebook, Hp2000, Spectre
* Apple: Mac, iMac, Macbook
* Lenovo: Lenovo, Thinkpad, Ideapad, Essential

We collected 9634 tweets mentioning Dell PC products, 15305 about HP, 10,350 about Apple Mac series PC, and 1623 tweets for Lenovo products.

***YouTube***

We selected one official YouTube channel for each company which is related to PC products. We compared their total subscriber, video views and video comments. We collected top 100 viewed videos of each channel, and pulled out all comments for these video.

# Data Analysis

***Tweets***

We calculated number of words which mentioned different product brands to know popularity of each product. There is huge difference for mentioning Apple Mac brands than products from other 3 PC companies. This is a reflection of Apple’s popularity at least in twitter users. Pavilion from HP is the brand discussed the most in all other PC brands. However, other products from HP are not mentioned that much. From total mention of each product, Dell’s products do not gain more popularity than other brands in twitter users.

***YouTube***

On YouTube official channels, Apple apparently gains the most attention than other three companies. Apple published the least video with 46 in total, but its total views are 67% more than Lenovo which ranks the second of views with 658 video. More significantly, Apple has about 1 million subscribers, which is almost 70 times more than each of three PC companies. This shows users are very interested in Apple’s news. Dell published the most videos, which may indicate the company takes social media as its important marketing strategy. It has more views and comments for top 10 popular videos. When we look into sentiment analysis to top 100 viewed video excluding Apple (no comments), the difference is very small in percentage of negative words to positive plus negative words. Dell is slightly higher with 13.68% than HP and Lenovo with 12.1%.

# Limitations

There are some limitations in the data collection and analysis process. These limitations are important to properly interpret analysis result.

When we choose key words, it is hard to tell if HP mentioned in a tweet means the company or something else. Actually we did not put “Apple” in a key word to avoid too much irrelevant match. Another problem for key words is we target to compare the PC products. Some brands refer to a series of product with desktop, notebook and tablet. Moreover when a company name is mentioned, it could refer to the company’s other services and products. With all tweets we extracted, some of them are not decoded or translated to English as meaningful words in our analysis. This is visible in our sentiment analysis with big portion as neutral since there are neither positive nor negative words detected. Another well-known problem for sentiment analysis is context. In this analysis, we did not put specific context into consideration.

When working with YouTube, we selected one official channel for each company. Actually some companies have more than one channel, with each one target to different products or services. When we analyze data, we did not categorize it to different product. For example, the channel for Dell may publish video for PC plus other products, while the one of HP links to PC products only.

There are other differences which could impact a company’s performance in social media, including market strategy, product categories, and user group of each social media. In this analysis with data from twitter and YouTube, we did not take such factors into account.

# Findings

There are some preliminary findings which is hard to be interpreted as determined conclusion. In general, there is no indication that users in these two social media have consistent preference to three PC companies: Dell, HP and Lenovo. The popularity of Apple in social media is far more than any other companies. The information could be a reference in Dell’s business decision. A more in depth investigation may reveal more useful message and help to improve Dell’s business.

* DELL’s positive comments percentage in all comments from twitter is lower than other competitors.
* YouTube Positive / Negative Comments have no significant difference to different brands.
* User engagement of Dell’s YouTube is high.