# Development of the Social Network Usage in Germany in 2012 – Part1

*Authors: Benjamin Schiller, Irina Heimbach, Prof. Dr. Thorsten Strufe & Prof. Dr. Oliver Hinz*

*A Study by the P2P Networks Group and the Chair of Electronic Markets at the TU Darmstadt*

--- Version 22.08.2012 ---

## Introduction and Methodology

The big incumbent Facebook reached the first 100 Million users in August 2008 and is expected to reach 1 Billion users in 2012. Twitter is said to have 500 Million active users as of 2012. According to reports by Google, the proprietary Google+ reached 100 Million active users in March 2012, 170 Million users in April 2012 and 250 Million users in June 2012.

The number of registered users that social networks use to report is however only a very bad proxy for the activity in social networks as the high number of unused and fake profiles in social networks shows. Further the definition of "active user" is often kept vague. To examine the social network usage we therefore monitor the TOP18 media websites in Germany and examine the number of Facebook Likes, Twitter Tweets and Google +1 (PlusOnes) [1] per article and follow this development over time. Although we also collect the intra-article-development over time, we only use the maximum number of recommendations per article for the analyses in this report.

We started to collect data from the following media websites in February 2012 and the collection process is still ongoing. The data will be used for scientific purposes but we believe that some of the more exploratory results are also of general interest.

| Key | Name | URL |
|---|---|---|
| bild | Bild.de | http://www.bild.de/ |
| bunte | bunte | http://www.bunte.de/ |
| chip | Chip | http://www.chip.de/ |
| faz | FAZ | http://www.faz.net/ |
| focus | Focus | http://www.focus.de/ |
| gmx | GMX | http://www.gmx.net/ |
| handelsblatt | Handelsblatt | http://www.handelsblatt.com/ |
| heise | Heise | http://www.heise.de/ |
| ntv | N-TV | http://www.n-tv.de/ |
| spiegel | Spiegel | http://www.spiegel.de/ |

---

[1] We use the term "recommendation" for Facebook Likes, Twitter Tweets and Google +1 (PlusOnes).

| sport1 | Sport1 | http://www.sport1.de/ |
| --- | --- | --- |
| stern | Stern | http://www.stern.de/ |
| sueddeutsche | Süddeutsche | http://www.sueddeutsche.de/ |
| tagesschau | Tagesschau | http://www.tagesschau.de/ |
| tonline | T-Online | http://www.t-online.de/ |
| web | Web.de | http://www.web.de/ |
| welt | Welt | http://www.welt.de/ |
| zeit | Zeit | http://www.zeit.de/ |

**Table 1: Indexed Websites**

## Results

Overall we collected information on over 380k articles between February 2012 and August 2012. For this report we draw upon the data from the period February 2012-August 20th 2012. The articles on the TOP18 media in Germany generated between 8k-20k Tweets, 14k-134k Likes and 400-2k PlusOnes per Day. Overall we gathered over 1.1 Million recommendations. The main fraction was generated by Facebook (73.98% on avg), followed by Twitter (24.25% on avg) and Google+ (1.76% on avg). Figure 1 illustrates the daily market shares based on these values. Google+ is still of minor importance in Germany when we look at the usage for recommending media content. However, there are some interesting growth dynamics in some niches which we will highlight later on. Facebook is still the incumbent but the number of tweets compared to Facebook Likes is already impressive.
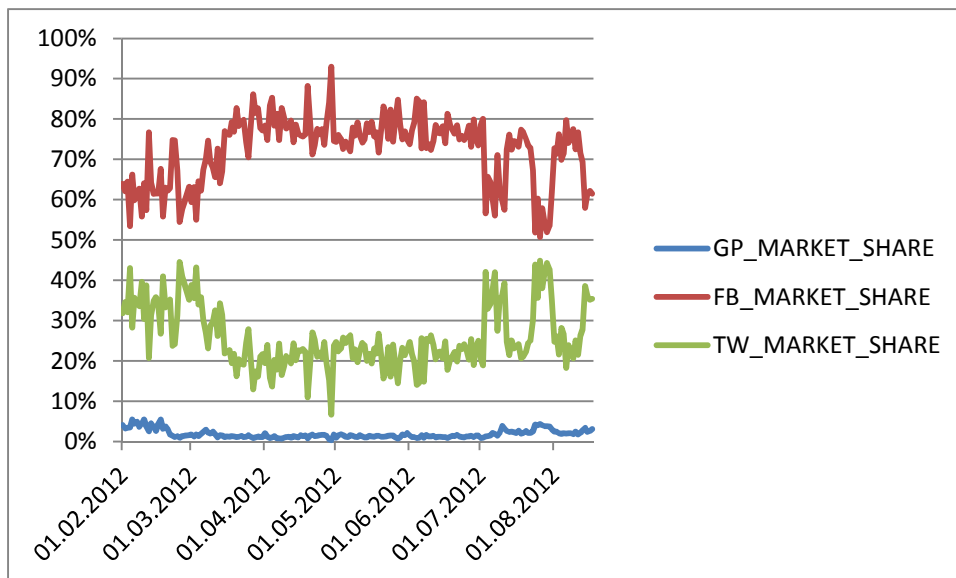


**Figure 1: Daily Market Share based on Number of recommendations (Likes, Tweets, PlusOnes) made**

Based on the data that we collected upon today we derive the following results: We observe that every article on the TOP18 media in Germany receives on average about 48 Likes on Facebook. There is however a clear downward trend for Facebook starting in the summer months of 2012. This could be caused by an overall lower tendency to spend time on the Internet. Furthermore we recommend interpreting the averages carefully since the average is not very robust with respect to outliers.

We do however not observe this trend for Twitter and Google+. The number of tweets (average per article=7.5) and PlusOnes (average per article=0.5) are by orders of magnitude smaller than the Facebook Likes (GP and TW on secondary scale) but the two networks show a clear tendency for growth in the last two months. Figure 2 summarizes these findings[2].
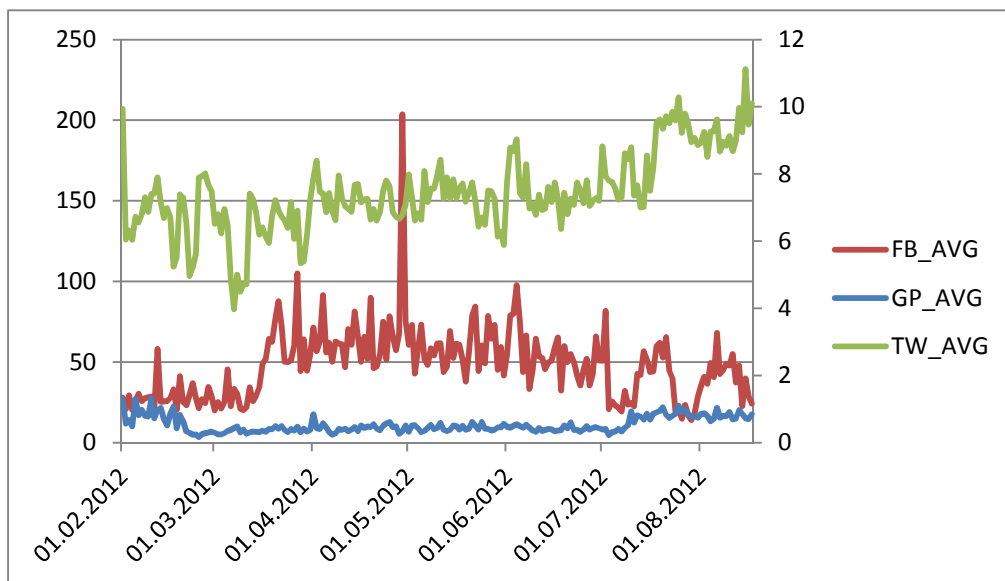


**Figure 2: Average Number of Likes, Tweets and PlusOnes (Twitter and Google+ on secondary scale)**

An examination of the fraction of articles that receive any recommendation at all (see Figure 3) illustrates that more than 50% of all articles in the TOP18 media receive Facebook Likes or are tweeted. The fraction of articles that are discussed on Google+ is significantly lower and jumped from 10% in the first half of the year to 20% in July and August 2012. Interestingly there are now more articles tweeted than liked on Facebook. However, the total number of recommendation is still substantially lower for Twitter than for Facebook.

Based on these descriptive results we conduct a number of regression analyses to yield more insights. We summarize some of these findings below:

- Facebook is mainly used to discuss articles on Spiegel.de
- Twitter grows especially in the domain of science (+16.395 Tweets on avg per day, p<.01) and economy (+9.294 Tweets on avg per day, p<.01)
- Twitter is mainly used to discuss articles on Heise.de and Spiegel.de
- All networks are mainly used Monday-Thursday to recommend articles

---

[2] Differences to the market share depicted in Figure 1 are due to the fact that not all articles allow recommendations in all three examined networks.

- Sunday is the weekday with the highest number of recommendations per article for all three networks though the number of articles published is significantly lower on Sundays
- Google+ grows especially in the domain of technology (+1.007 PlusOnes on avg per day, p<.01) and science (+.747 PlusOnes on avg per day, p<.01)
- Google+ grows faster in the domain of technology and science than Facebook and Twitter (p<.01)
- Google+ is mainly used to discuss articles on Heise.de and Chip.de (technology oriented articles)
- All networks are decreasingly used to discuss articles in the domain of sports (p<.01)
- Assuming the growth rates of Facebook and Twitter of the last two months to be constant, Twitter could catch up with Facebook with respect to media recommendation within this year
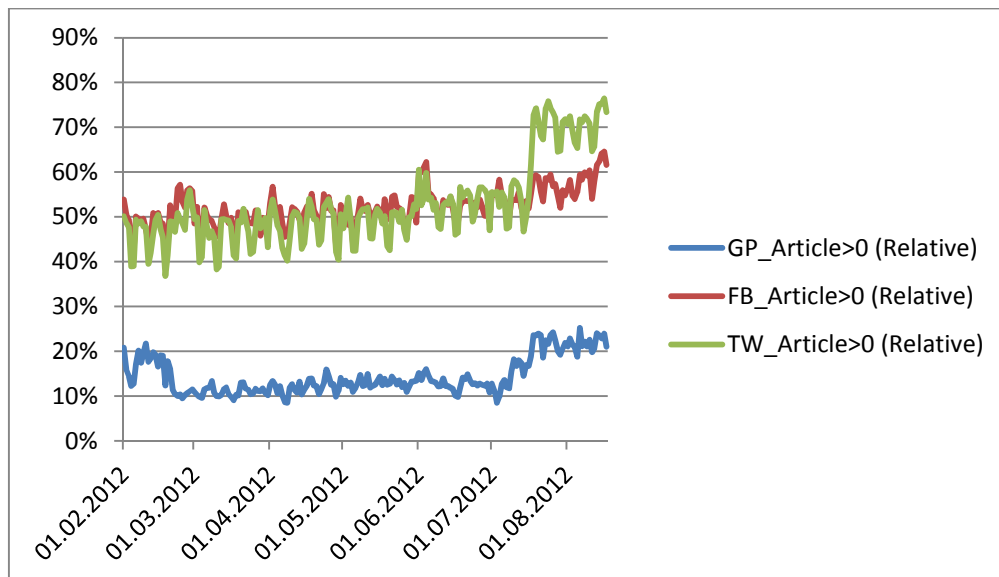


**Figure 3: Fraction of Articles that receive more than 0 Likes, Tweets, PlusOnes**

## Outlook

These findings are of exploratory character and need to be interpreted carefully. We are continuing the analyses and will keep reporting these figures because we believe the recommendations of media content is a much better proxy for activity in social networks than the plain number of registered users that social network operators keep reporting.

*Contact: Prof. Dr. Oliver Hinz, [hinz@wi.tu-darmstadt.de](mailto:hinz@wi.tu-darmstadt.de), Phone +49 6151 16-75220, Fax +49 6151 16-72220, Chair of Electronic Markets, Hochschulstr. 1, TU Darmstadt, 64289 Darmstadt, Germany.*