

SOCIAL NETWORKS: USAGE INTENSITY AND EFFECTS ON PERSONALIZED ADVERTISING

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ABSTRACT

The increasing popularity of social media has significantly changed user behavior and companies' possibilities to engage in personalized advertising (targeted advertising based on user's personal characteristics and preferences). Accordingly, there is a growing interest in the subject for business and scientific research. While the body of literature about social media grows in general, it surprisingly lacks studies about personalized advertising in social media and the associated social networks. Based on uses and gratifications theory, the current study therefore investigates factors which influence Facebook members' usage intensity, as well as the relationship between this intensity and members' approval of personalized Facebook ads. Furthermore, it also examines members' word-of-mouth intention with regard to the advertised products or services, and examines how usage intensity and members' approval of personalized advertising impact this intention. Based on a survey of 201 Facebook members, the study finds that Internal Core Functions, Need for Data Privacy, Need for New Friends and Need for Social Self-Portrayal show significant positive effects on Usage Intensity. In addition, the structural equation modeling approach confirms the impact of Usage Intensity on Approval of Personalized Facebook Ads and Word-of-Mouth Intention, which mediates the relationship between Usage Intensity and Word-of-Mouth Intention.

Keywords: Social media; Social networks; Facebook; Personalized advertising; Structural equation modeling

1. Introduction

The advent of globalization, the emergence of innovative information and communication technologies as well as the spread of the Internet have all increased the use of available online-services [Hofacker and Murphy 2009; Ma and Agarwal 2007]. Recent developments include the rise of the Web 2.0 and social media in the beginning of the 21st century. The continuing evolution of the technologies is very dynamic in nature and constantly brings forth new platforms and applications, such as social media and associated social networks, e.g., Facebook and Flickr in 2004, Twitter in 2006, Tumblr in 2007, 9GAG in 2008, Instagram and Pinterest in 2010, Google+ in 2011, Pheed in 2012 and Ello in 2014 [cf. Turri et al. 2013]. In this context, this study uses the term social media to refer to internet-based applications that allow to create and exchange user-generated content [Kaplan and Haenlein 2010]. Social networking sites are built upon this computer-mediated communication technology [Stern and Taylor 2007] and offer a web-based service that connects members of the network, who are tied to each other through one or more relations [Boyd and Ellison 2007; Tuten and Solomon 2013].

In view of the significance of social media for society, it has become increasingly popular to discuss the topic in academia and scientific research in recent years, including in the field of economics and business administration

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[Khang et al. 2012; Wirtz and Göttel 2016]. This is not surprising given that social media heavily influence the broader economy and business world which, in turn, leads the actors involved to use them for their own purposes. Thus, while the practical relevance of social media for a broad range of organizations is beyond dispute [Kaplan and Haenlein 2010; Lai and To 2015; Wirtz 2016], companies have started to engage with this new media type in the past decade to identify opportunities to enhance corporate well-being. At the same time, there have also been critical voices suggesting that users do not necessarily welcome companies and brands in social media, and recommending a very cautious and deliberate approach to the field [Fournier and Avery 2011]. Within the broad range of existing approaches to use social media, social networks have so far emerged as one of the most helpful instruments for companies and especially their marketing activities [Kaplan and Haenlein 2010]. For example, Facebook, one of the most popular social networks with about 1.35 billion monthly active users worldwide [Statista 2014], offers companies a wealth of marketing possibilities. The most obvious ones include own fan pages and thus brand communities, ad placement, and more interestingly, personalized ads.

Although the body of literature about social media is growing in general (e.g., Barelka et al. 2013, El-Haddadeh et al. 2012, Lane and Coleman 2012, Shin 2013), surprisingly there is a lack of comprehensive studies about personalized advertising in social networks and the corresponding acceptance, approval, or usage of such advertisements by social network members [cf. Li et al. 2012]. In this regard, our study seeks to identify determinants that influence the general usage intensity by Facebook members in terms of average hours spent and average posts made on Facebook per week. Thus, usage intensity is understood as users' actual activity, or in other words, as the degree to which users actively engage in the social network [cf. Ellison et al. 2007; Vitak et al. 2011].

Further, we investigate the relationship between usage intensity and the users' potential approval of personalized advertising on Facebook, and examine how both of these constructs impact the users' word-of-mouth intention with regard to the advertised products or services. In this connection, we also propose a mediating role of users' approval of personalized advertising in the relationship between their usage intensity and word-of-mouth intention. Thus, we try to shed light on the potential benefits of members' usage intensity for companies and organizations. This research subject is especially relevant in light of Facebook's changes concerning its terms of use in 2015 and the corresponding possibilities for companies to make use of more personalized ads within the social network [Facebook 2014a].

The remainder of this study is structured as follows: we initially present the conceptualization and theoretical background of our research model. Based on the research overview presented in this section, we derive the determinants of usage intensity. Following this, we further develop our conceptual model and hypotheses, which we empirically analyze based on a survey of 201 Facebook users and structural equation modeling. We illustrate this analysis in the sections about data collection as well as method and results. Finally, the discussion and conclusion provide theoretical and managerial implications as well as avenues for future research.

2. Theoretical Background and Conceptualization

The complex empirical investigation of determinants of usage intensity, approval of personalized advertising and word-of-mouth intention on Facebook requires a suitable theoretical background. Based on this, we can develop a heuristic frame of reference, and thus our conceptual model. Yet, we can only identify an appropriate theory and accordingly derive influential factors for our model after compiling an overview of the current state of research in the field of social media usage, advertising, and word-of-mouth intention. In doing so, the next section presents the applied theoretical frameworks, the associated conceptualization of relevant independent variables, the investigated relationships with dependent variables and the corresponding results of related studies, where possible. Following this, we introduce uses and gratifications theory as the basis for our conceptualization and develop our research model accordingly. In this connection, we theoretically derive relevant determinants of Facebook members' usage intensity and argue its effects on approval of personalized advertising and word-of-mouth intention based on earlier research.

2.1 Research Overview

In a review of empirical studies connecting social media usage, advertising, and word-of-mouth intention, Khang et al. [2012] identify four articles that specifically deal with "social media advertising effectiveness" [p. 288]. Their analysis formed the starting point for our research overview. Although Facebook had been online for eight years at the time of the study [Yadav 2006] and there had already been a massive social media hype, researchers mention a lack of comprehensive empirical research concerning social media and users' attitudes towards related advertising [cf. Li et al. 2012]. This is surprising since researchers believe that "online advertising is the main business model for social networking sites" [Li et al. 2012, p. 119] and that "the role and impact of advertising in online social networking communities have the utmost importance for the long-term sustainability of these communities" [Zeng et al. 2009, p. 9].

For the current investigation, we briefly present important findings from related studies in this field. For example, Trusov et al. [2009] investigate differences between traditional and word-of-mouth marketing for the social network

itself. They also point out that the electronic invitation of friends by existing social network members brings financial benefits for the social network firm in terms of increased advertising revenue. However, while this study only provides earlier word-of-mouth marketing related research as a background and concerns the benefit for the social network firm itself (e.g., Facebook), it does not address actual benefits for the advertising companies (e.g., Procter and Gamble).

More related to our research subject, Zeng et al. [2009] propose a theoretical framework of social identity and group norms, and test the influences on group intention, ad relevance, value for members and their responses to advertising in different Chinese social networking sites. As the main result, the authors find that social identity and group norms positively influence social network members' group intention to accept local advertising. Kelly et al. [2010] investigate antecedents of ad avoidance in social networks based on earlier, related research about traditional media and the Internet. They find that members' expected negative experiences, perceived ad relevance as well as skepticism about advertising messages and the social network as an advertising medium impact their avoidance of placed ads. Similarly, Airs and Ang [2012] observe ad avoidance with regard to the specific social network Facebook. Yet, the authors cannot confirm influences of the content of corporate Facebook pages and the related members' age homophily on lesser ad avoidance or clicks on the respective ads. Further, Chu [2011] investigates, but cannot prove a "significant difference in viral advertising pass-on behavior between Facebook group members and nonmembers" [p. 35].

Taylor et al. [2011], in turn, apply uses and gratifications theory and confirm significant effects of informativeness, entertainment, self-brand congruity, peer influence, invasiveness and privacy concerns on attitude towards social network advertising. Chi [2011] bases her study on the same theoretical background and likewise confirms the influence of Facebook members' need for online bonding on their perceptions of and attitude toward social media advertising. More specifically, the respective dependent variables involve both whether members approve the local advertising and whether they would further recommend the advertised products or services.

In summary, the above-mentioned studies include effects of the respective ads' characteristics and social network members' commonalities, reciprocal influence, skepticism, affiliations, concerns, needs and, more generally, perceptions on the addressed dependent variables. However, we could not find any study that investigates the link between Facebook members' usage intensity and their approval and word-of-mouth intention with regard to personalized ads and the products and services involved. Apart from that, we could also not identify a common prevailing theory for dealing with social media advertising. Some studies do not provide a specifically designated theoretical background (e.g., Airs and Ang 2012, Chu 2011, De Vries et al. 2012, Kelly et al. 2010, Kim and Ko 2012) and the theory-based studies show a heterogeneous picture, applying different theories for dealing with social media usage, advertising or, more generally, marketing (e.g., Blanchflower and Watchravesringkan 2014, Chen et al. 2013, Chi 2011, Chu 2011, Lee et al. 2011).

While this makes the corresponding selection appear arbitrary, uses and gratifications theory is one theoretical approach that researchers frequently consult in the realm of social media and also with regard to social media usage, marketing and advertising (e.g., Blanchflower and Watchravesringkan 2014, Chen et al. 2013, Chi 2011, Cvijikj and Michahelles 2013, Tsai and Men 2013). More importantly, as we illustrate in more detail in the following subsection, it offers adequate reference points and support for our case. Therefore, we choose uses and gratifications theory for our study and develop our conceptual model in the next sections.

2.2 Uses and Gratifications Theory

Uses and gratifications theory originates from communication and media research, and represents a user-centered approach to mass communication [Severin and Tankard 1997]. It can be seen as a theoretical concept to understand "(1) the social and psychological origins of (2) needs, which generate (3) expectations of (4) the mass media or other sources, which lead to (5) differential patterns of media exposure (or engagement in other activities), resulting in (6) need gratifications and (7) other consequences, perhaps mostly unintended ones" [Katz et al. 1973a, p. 510]. Thus, it offers a promising transfer potential to the social media context. While earlier studies have included the theoretical approach with regard to traditional mass media like radio [Herzog 1944] or television [Rubin 1981], more recent research relates uses and gratifications theory to cellphones [Leung and Wei 2000], the Internet [Ko et al. 2005; LaRose et al. 2001; Stafford et al. 2004], and especially social media applications.

Social media studies include diverse technologies, e.g., instant messengers like ICQ [Leung 2001], microblogs like Twitter [Chen 2011], or review and recommendation portals like Yelp [Hicks et al. 2012]. Also, some researchers observe several social media applications within one single study [Lee and Ma 2012, Wang et al. 2012, Leung 2013]. Yet, most strikingly, studies focus on social networks and, above all, Facebook [Blanchflower and Watchravesringkan 2014; Chen et al. 2013; Cvijikj and Michahelles 2013; Park et al. 2009; Raacke and Bonds-Raacke 2008; Smock et al. 2011; Tsai and Men 2013]. Altogether, there exists a solid literature base that connects uses and gratifications theory with usage of social media, and particularly, social networks. More specifically, researchers try to find out what actually determines usage in the first place.

To this end, uses and gratifications theory offers an approach to understand why and in which way people actively choose certain media to satisfy particular needs [Severin and Tankard 1997]. Uses or gratifications that media consumers seek to obtain range from knowledge enhancement, relaxation, diversion, and escape to social interactions and companionship [Matei 2010; McQuail 2010; Severin and Tankard 2001]. In this way, the theory exceptionally discusses what people do with media, whereas other media effect theories simply deal with the question of the impact of media on people [Katz 1959].

In this connection, social media studies confirm the applicability of uses and gratifications theory in the social context by showing that people also use this novel media type to satisfy the aforementioned needs and discover further ones [Chen 2011; Leung 2013; Park et al. 2009; Raacke and Bonds-Raacke 2008]. Leung [2013, p. 998] goes even further by empirically confirming the suitability of uses and gratifications theory for investigating usage intensity in social media: “The more gratification internet users find in content generation using social media, the more they will use social media”.

This statement leads us to a further postulate of uses and gratifications theory, according to which the media to be chosen also compete against other providers that may be better or worse suited to satisfy the users’ needs. Again, here the users themselves evaluate the respective suitability [Katz et al. 1973b; West and Turner 2014]. In connection to these evaluations and beliefs or expectancies of the users, a specific extension of uses and gratifications theory comes to mind. In this regard, researchers of the field “distinguish between the motives for media consumption or gratifications sought (GS) and the gratifications perceived to be obtained (GO) from this experience” [Palmgreen et al. 1985, S. 27].

In line with expectancy-value approaches, this consideration suggests that users have particular gratification soughts from some media object X, which reflects their expectation concerning predicted rewards offered by the media use (see Figure 1) and that once individuals have used a specific medium, their perceptions of the gratifications obtained through the respective usage will again influence their beliefs and evaluations of the medium [McQuail 2010].

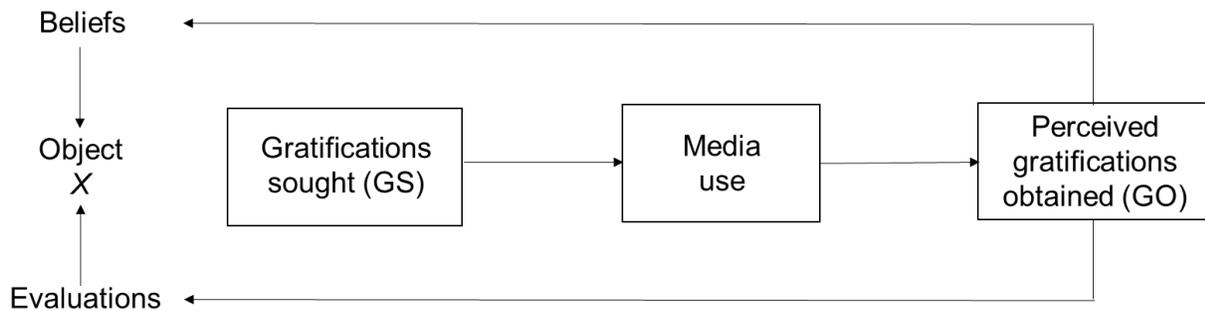


Figure 1: Expectancy-Value Model of GS and GO [McQuail 2010, p. 426]

Transferred to the context of usage intensity, this model leads us to the consideration that not only general usage but also the intensity of using specific media—for example, if used repeatedly or even frequently—depends on how well they can gratify the user’s needs and thus influence the latter’s beliefs and evaluations about the medium. In more detail, the beliefs and evaluations of the users concerning the particular media are newly recombined after each use, leading users to decide whether the specific media are worth reusing or if there are other sources which may better cater to their needs. This deliberation is in line with the inclusion of competition in uses and gratifications theory [Katz et al. 1973b; West and Turner 2014], and hence applying the concept to the social media context seems reasonable.

2.3 Determinants of Usage Intensity

Against the background of the above-illustrated theoretical approach, we first act on the assumption that there are certain uses and gratifications which people expect to obtain from using particular social networks. In this connection, we assume that—in line with uses and gratifications theory—people actively select and determine their usage of specific social networks according to particular needs and motivations, and thus the uses and gratifications expected from this usage. Secondly, we also suggest that the respective usage intensity depends on those influential factors or determinants. Accordingly, we derive relevant determinants of Facebook members’ usage intensity and develop the corresponding hypotheses for the conceptualization our research model in the following sub-section.

2.3.1 Internal Core Functions

Internal core functions refers to the set of services that is provided to the user of the social media platform, e.g., creating a profile, chat and messaging service, sharing pictures and videos, and so on. In light of Facebook’s still increasing number of monthly active users [Statista 2014], it stands to reason that the social network’s functionality

itself determines its popularity and thus also the member's usage intensity. A broad range of internal tools, instruments or functions are offered by social media and social networks—especially Facebook. Earlier research has shown that the use of these functions involves the fulfillment of certain desired uses or gratifications for the members [Lee and Ma 2012; Shao 2009; Smock et al. 2011].

Following up on these findings, if the use of Facebook's specific single functions outperforms competition in terms of the provided gratifications for members, the members will—according to uses and gratifications theory [cf. Katz et al. 1973b; West and Turner 2014]—make increasing use of these functions and, in the end, the social network itself. Thus, it can be argued that the internal functions of Facebook may at least partly determine members' usage intensity.

All the more it seems plausible that—if members decide to intensively use the social network to satisfy their needs through particular uses and gratifications—it makes sense that they especially do so because they are interested in Facebook's main or core functions, i.e., what actually constitutes it as a social network and what it is known or famous for. This notion also echoes Smock et al.'s [2011] work that likewise focuses on a similar, even though smaller and slightly different set of Facebook's core functions.

Therefore, we propose the *Internal Core Functions* of Facebook, measuring the extent of the perceived importance of Facebook's functionalities for the user, as the first determinant of its members' usage intensity in Hypothesis 1. In more detail, we imply the creation of a profile, the status update, the sending and receiving of personal messages, the chat or messenger function, the posting of pictures and videos, marking friends in such posts as well as liking and commenting on posts within this construct.

H₁: *The perceived importance of the functions of Facebook (Internal Core Functions) influences its members' usage intensity.*

2.3.2 External Service Quality

External service quality refers to the user perception concerning the level of excellence of services of integrated third-party tools and applications. In addition to the aforementioned determinant, the wealth of external applications offered by Facebook is striking [Letzing 2012]. Given their increasing popularity [Darwell 2012], our study focuses on co-operations of Facebook with other social media providers like Instagram, Pinterest or 9GAG to which users can log in with their already existing Facebook account. Thus, in these cases, the external service offered by the social network mainly lies in the uncomplicated linking to further websites of business partners, subsumed within Facebook under applications or apps [cf. Facebook 2014b].

Granted that Facebook attracts and also retains its members by means of the aforementioned core functions, research shows that after members have used the social network for a certain time, there may occur a sort of fatigue [Rosen 2014; Warner 2013]. Yet, one may again counteract this fatigue through external service offers, which will increase Facebook's potential to retain members by catering to further needs. This consideration is especially interesting against the background of the already denoted inclusion of relevant competitors in uses and gratifications theory. While this inclusion postulates that competitive sources may be better suited to provide the uses and gratifications desired [Katz et al. 1973b; West and Turner 2014], Facebook tries to avoid being outperformed in the long-term by entering into the co-operations mentioned or making acquisitions [cf. Jackson 2013]. Of course, to guarantee that this plan proves to be successful, the external services offered must have the quality to provide the additional uses and gratifications desired by the members. Thus, in connection with the basic assumptions of uses and gratifications theory according which users choose and repeatedly use a medium if it manages to satisfy their needs [Palmgreen and Rayburn 1985; Severin and Tankard 1997], the quality of the external services offered by Facebook may influence members' usage intensity. Accordingly, we propose *External Service Quality*, measuring the perceived quality of the external services provided by Facebook, as a further determinant of Facebook members' usage intensity in Hypothesis 2.

H₂: *The perceived quality of Facebook's external service provision (External Service Quality) influences its members' usage intensity.*

2.3.3 Need for Data Privacy

The need for data privacy, which is understood as the perceived security and secrecy regarding the storage/handling of individual user data, comes to mind when thinking of the general debate about security, protection and privacy of personal data. In light of recent incidents of data privacy violation and spying scandals, there is an ever-growing need for assuring user data privacy.

In particular, data privacy violation by Facebook can be associated with the dissemination of data to third-party businesses that use them for the placement of personalized advertising within the social network. In this connection, Facebook's data privacy policy is seen controversial and subject to fierce criticism [Luckerson 2014].

Representatives of Facebook have already reacted to these developments by responding to the European Commission's statement on personal data protection. They have informed the Commission about the company's

efforts to provide users with “industry leading controls over their data” [Allan 2014, p. 2]. Nevertheless, earlier scientific studies have already been concerned with differing privacy issues on Facebook [Boyd 2008; Brandtzæg et al. 2010; Debatin et al. 2009; Wang et al. 2011], which also has been associated with a decline in social network use [Rosen 2014].

Therefore, with regard to social networks and in particular, Facebook, it seems reasonable to consider how members assess the privacy aspect in handling their data and whether the expected corresponding high or low level of data privacy assurance may drive or decrease the members’ usage intensity. From the perspective of uses and gratifications theory [cf. Katz et al. 1973b; West and Turner 2014], we can also conceptually consolidate this consideration as follows. If an already popular social network like Facebook manages to gratify the need for data privacy better than its competitors and communicates this circumstance accordingly, members will notice. Consequently, they may use the social network even more intensely, more than other social networks, if not solely, given the expected use or rather the excluded risk in this case. To that effect, formulated in Hypothesis 3, the *Need for Data Privacy*, is expected to constitute a further determinant of Facebook members’ usage intensity in our study.

H₃: *The perceived need for data security and privacy (Need for Data Privacy) influences Facebook members’ usage intensity.*

2.3.4 Need for New Friends

Unlike the need for privacy, the next determinant identified as important in the context of Facebook members’ usage intensity, the need for new friends, is specific to social networks since it reflects the extent to which users have a need to build new relationships through social networks. The nature of social network platforms suggests that people engage in them for reasons of networking, for instance, getting in contact and building relationships with new people, who may be interesting and advantageous to them in some way. In this regard, researchers have addressed the corresponding benefits of Facebook friends in earlier studies [Ellison et al. 2007; Kim and Lee 2011].

Yet, to this effect the need for new friends on Facebook also seems to manifest itself in different facets. On the one hand, especially regarding more intense usage, it comes to mind that the option to send a multitude of friend requests on Facebook caters to the need for gathering more and more ‘friends’ per se—which does not necessarily connect to deep and long-lasting friendships. On the other hand, there may be an honest need for building actual, new, and, at the same time, fewer friendships with relatively unknown people. This may be particularly true for shy and less communicative people for whom it is problematic in real life to approach others [Orr et al. 2009]. In this case, we understand Facebook and the underlying information and communication technology as intermediary between the particular social network members.

While according to our theoretical perspective, these thoughts already explain the respective different gratifications sought by adding new friends in the social network, the earlier illustrated model of GS and GO (see Figure 1) seems to apply particularly to this potential determinant of Facebook members’ usage intensity. We account for this consideration since after members have used the social network and received new Facebook friends and thus obtained the corresponding gratifications, consuming the medium may positively influence their related beliefs and evaluations. These may in turn impact the members newly sought gratifications in terms of the desire for more of the previous positive experience, causing a repeated or more intense Facebook usage. Therefore, as described in Hypothesis 4, we identify the *Need for New Friends* as one further determinant of Facebook members’ usage intensity for our study.

H₄: *The perceived possibility to find new friends on Facebook (Need for New Friends) influences its members’ usage intensity.*

2.3.5 Need for Social Self-Portrayal

Last but not least, the next need of Facebook members, need for social self-portrayal, appears to be the most typical in the social media context. Social media and especially social networks are based on the concept of sharing and exchange between members and, more generally, people [Fournier and Avery 2011]. Again, given the overall popularity and acceptance of social media in society, people seem to largely subscribe to this concept. Yet, this concept only works out because users are willing to reveal themselves. While the related processes for self-portrayal can take many forms, we focus on members’ portrayal of the self through sharing information about one’s interests, opinions, thoughts, experiences, and feelings on Facebook. These efforts are mostly connected to the goal of gaining respect as well as rather superficial and deeper support of fellow social network members [Chi 2011; Ellison et al. 2007; Fournier and Avery 2011; Park et al. 2009; Vitak et al. 2011].

While Park et al. [2009] differentiate between self-status seeking and socializing needs, we adopt an integrated perspective. We assume that the search for status and acknowledgment in social networks is necessarily connected to the socializing aspect, for example, members socialize through portraying themselves and their self-concept to one another. Vice versa, they portray themselves through socializing efforts in the first place. This consideration also relates to the roles of narcissism as well as the needs for socialization, affection and recognition in social network use,

all of which have recently been investigated together [Leung 2013].

Against the background of uses and gratifications theory, Facebook's ability to satisfy users' need for self-portrayal in a social context play a significant role for repeated, frequent or even intense Facebook usage. Therefore, Hypothesis 5 summarizes the conceptualization of *Need for Social Self-Portrayal*, which reflects the importance of presenting oneself on Facebook, as our study's last determinant of usage intensity on Facebook.

H5: The perceived possibility to present oneself on Facebook (Need for Social Self-Portrayal) influences its members' usage intensity.

2.4 Usage Intensity

Having introduced the determinants of Facebook members' usage intensity based on uses and gratifications theory in the previous subsections, we now focus on the construct of *Usage Intensity* as the first dependent variable of our study. To conceptualize this construct, we draw on extant related research about virtual communities and social networks. In this regard, De Valck et al. [2007], for example, investigate visit frequency in virtual communities of interest. They initially state that "[...] patronage is dependent upon past experiences" [p. 245]. More specifically, and in line with our above-mentioned theoretical considerations about usage intensity's relevant determinants, the authors suggest that users "[...] act on their expectations about the performance of a service" [ibid.]. De Valck et al. [2007] have the notion that consumers will continue to use services if their expectations are fulfilled, thus depending on their earlier experience with those specific services. However, the authors' equation of visit frequency with general usage intensity seems to be too simplistic for the social media context.

Ellison et al.'s [2007] provide a broader conceptualization of usage intensity. They understand "Facebook Intensity" [p. 1150] as the degree to which members show active engagement in the social network in terms of friends and average use per day. From a more general viewpoint, they observe how much Facebook has become part of users' everyday life. Based on earlier definitions, we conceptualize the construct *Usage Intensity* as follows. First, typical for social networks, we believe that it does not particularly matter how often one simply browses the website. Instead, researchers should consider users' actual activity when studying usage intensity on Facebook, conforming to Ellison et al. [2007] and Vitak et al. [2011]. Therefore, we include average hourly use per week. Since social networks subsist on the posting activity of individual members, we include the average number of Facebook posts per week in our conceptualization of the usage intensity construct. This consideration is also in line with the suggestion that solely focusing on the overall time spent by users misses the point, especially when wanting to find out what motivates intense social network usage [Smock et al. 2011].

2.5 Effects of Usage Intensity

Since we are not only interested in the potential benefits of members' usage intensity for companies and organizations but also those of corporate presence in social networks, we included two further endogenous constructs in the structural model: *Approval of Personalized Facebook Ads* and *Word-of-Mouth Intention*. An examination of the relationship of these constructs with social media/network use has been suggested in several preceding research endeavors. For example, Chi [2011, p. 58] claims that "the relationship between social media consumption and user acceptance of marketing communication in the context of online social networking should be investigated more closely". Similarly Jahn and Kunz [2012] suggest further research efforts to investigate the effects concerning word of mouth in social media environments. Thus, we propose the relationships between Facebook members' *Usage Intensity* and both constructs.

The proposed relationships ensue from an integration of previously observed relationships in the literature, which include constructs similar to the two dependent variables mentioned and usage intensity on Facebook. We follow, to a large extent, the reasoning of Chi [2011] who includes Facebook members' perceptions of social media marketing and especially advertising. More specifically, the respective constructs involve both aspects, i.e. if members approve the personalized advertising and if they would further recommend the advertised products or services. In this context, Taylor et al. 2011 also use the construct social-networking advertising to investigate its effectiveness. They find that social-networking advertising may be effective if "users accept it, but the perception of excessive commercialization may lead to user abandonment" [p. 258]. This underlines the findings of Kelly et al. [2010] who already discovered that if social network members perceive ads as not relevant and if they are skeptical toward advertising messages and social networks as advertising media, they are more likely to avoid the placed ads. Connected to this observation, Airs and Ang [2012] investigate influences of corporate Facebook pages' contents and the related members' age homophily on lesser ad avoidance or clicking on the respective ads. In this context, Chu [2011] observes that there is "significant difference in viral advertising pass-on behavior between Facebook group members and nonmembers" [p. 35].

Concerning the relationship between *Usage Intensity* and *Word-of-Mouth Intention*, we mainly deduce our proposed relationship from the studies of Jahn and Kunz [2012], Hutter et al. [2013], and Pöyry et al. [2013]. Jahn and Kunz [2012] found a highly significant relationship between fan page usage intensity and word of mouth. The findings of Hutter et al. [2013] indicate that fanpage annoyance, which leads to a decline in usage, has a negative

impact on user commitment and word-of-mouth activities. Finally, Pöyry et al. [2013, p. 233] find an “interplay between different usage motivations and behaviors” that influence referral intention. Given these previously explained relationships, we thus try to investigate the potential benefits of members’ usage intensity for companies and organizations by integrating *Approval of Personalized Facebook Ads* and *Word-of-Mouth Intention*.

Therefore, we empirically investigate the impact of Facebook members’ *Usage Intensity* on their *Approval of Personalized Facebook Ads* and their *Word-of-Mouth Intention* regarding the advertised products or services via the following Hypothesis 6 and Hypothesis 7. Additionally, we propose *Approval of Personalized Facebook Ads* as a mediator between *Usage Intensity* and *Word-of-Mouth Intention* in Hypothesis 8. Figure 2 summarizes all relationships and hypotheses of our study within a conceptual model.

H₆: Facebook members’ *Usage Intensity* is positively related to their *Approval of Personalized Facebook Ads*.

H₇: Facebook members’ *Usage Intensity* is positively related to their *Word-of-Mouth Intention* regarding the advertised products or services.

H₈: Facebook members’ *Approval of Personalized Facebook Ads* mediates the relationship between *Usage Intensity* and *Word-of-Mouth Intention*.

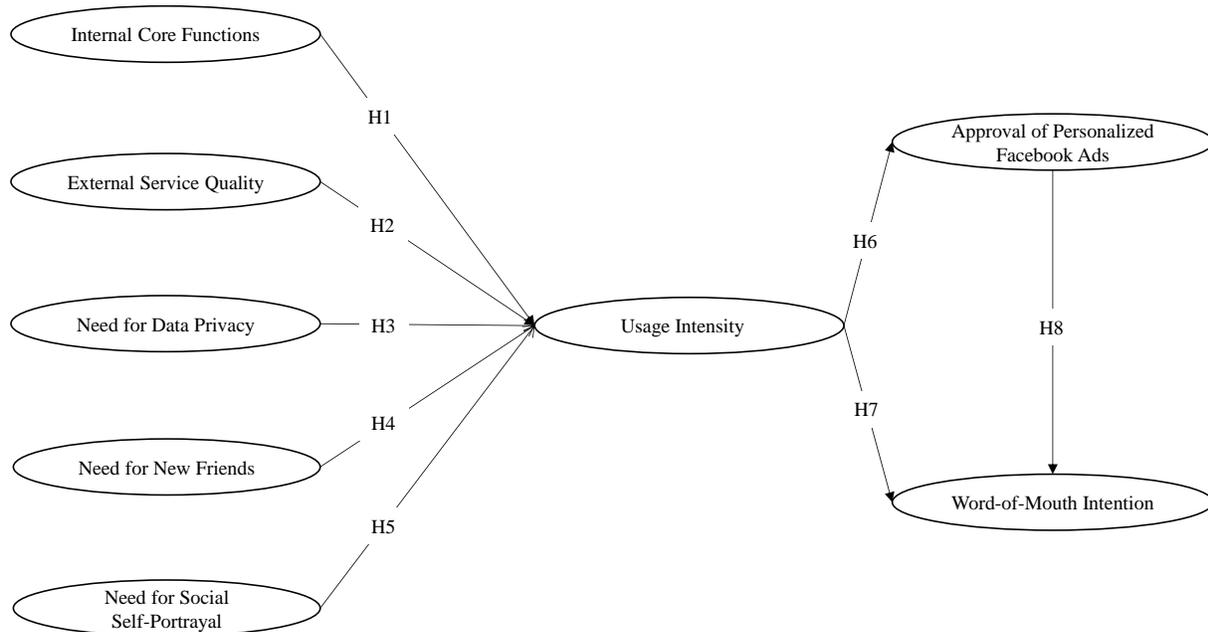


Figure 2: Conceptual Model

3. Data Collection and Method

Concerning the respondent sample used in this study, we are in line with the postulate of uses and gratifications theory, according to which users are self-aware enough of their media interests, motives and needs to be capable of providing researchers with an adequate representation of their user behavior [West and Turner 2014]. We follow a methodological confirmatory explicative approach by testing pre-specified relationships between different variables through investigations in reality [cf. Bhattacharjee 2012; Hair et al. 2010].

We conduct a quantitative survey and test the conceptual model proposed by using primary data generated from Facebook members. We used a standardized online questionnaire that we distributed to current and former students of the University of Administrative Sciences Speyer in Germany. We contacted all respondents via email, inviting them to participate in the survey via an embedded hyperlink and clarifying that using Facebook is a precondition for attending the study. The data collection was carried out from May to July 2014 and resulted in a return of 201 datasets, which equates to a response rate of 18.2%.

3.1 Description of the Sample

The final sample shows a nearly balanced gender ratio of the respondents (51.24% male and 48.76% female). The majority of the sample is younger than 29 years (73.13%), representing the common student age range desired in this study. Respondents use the Internet more than 11 hours per week (30.35% between 11 and 20 hours per week; 44.77% more than 21 hours per week). Approximately 75% have between 50 and 500 Facebook friends (33.33% have between 51 and 200 Facebook friends; 41.79 % between 201 and 500 Facebook friends). In summary, the sample indicates that

the respondents are familiar with the Internet and Facebook and thus seems suitable for our study's purpose. Table 1 provides an overview of the sample characteristics.

Table 1: Descriptive Statistics

Sample Characteristics		% (N=201)
Gender	Male	51.24%
	Female	48.76%
Age	Up to 29 years	73.13%
	30-39 years	23.88%
	40 years and older	2.99%
Internet Usage per Week	Up to 2 hours	2.49%
	3-10 hours	22.39%
	11-20 hours	30.35%
	21 hours and more	44.77%
Number of Facebook Friends	Up to 50 friends	13.93%
	51-200 friends	33.33%
	201-500 friends	41.79%
	501-1000 friends	9.95%
	1001 friends and more	1%

3.2 Testing for Bias

We further analyze the resulting data to ensure the sample's representativeness, reliability and validity. In this regard, we start by testing for non-response bias. To test non-response bias, building on the methodical literature [Armstrong and Overton 1977], we analyze whether there are substantial differences between the responses of early and late participants. Since the t-tests conducted do not show significant differences between the two groups, non-response bias does not seem to be a relevant concern.

Next, we test the data for common method variance. This risk may be present if researchers measure several constructs and the corresponding correlations by using the same key informant and the same method. To be more specific, in our study we collect the data on our dependent variable *Usage Intensity* from the same respondent as the information on its determinants and effects. In such cases, common method variance may occur if the key informants' answers with regard to the observed constructs are distorted in a unidirectional way. Such effects can arise due to social desirability, consistency and acquiescence motives and include the risk of receiving the particular correlations because of the systematic distortion instead of the actual causal relationships [Podsakoff 1986; Podsakoff et al. 2003].

To minimize this risk, we initially follow the advice of Podsakoff et al. [2003] and Chang et al. [2010] by assuring the respondents of the confidential and anonymous treatment of their data on the survey welcome page and by listing the exogenous and endogenous variables in mixed order. Moreover, given that the methodical literature provides ex-post statistical analyses for dealing with the common method problem, we conduct Harman's single factor test that allows an analysis of all survey items by means of an exploratory factor analysis. If an item explains 50% or more of the variance, we would have to assume common method variance [McFarlin and Sweeney 1992; Podsakoff 1986]. To this effect, the exploratory factor analysis performed extracts 36 factors in total, of which 7 show an eigenvalue of above 1. Since the item explaining the highest variance only explains 33%, the results do not suggest a common method bias in our case.

3.3 Operationalization of the Constructs

With the exception of *Internal Core Functions*, all other constructs are operationalized following a reflective measurement. Since a formative measurement places special demands on the set of indicators concerning redundancy of information and contribution to the construct, we had to make sure that the formative indicators of *Internal Core Functions* capture the main facets of the construct, ensuring its face/content validity [Hair et al. 2010]. Since this can mainly be achieved through a thorough qualitative approach [Diamantopoulos and Winklhofer, 2001; Jarvis et al., 2003], we explored the Facebook portal and scrutinized related literature to identify the most relevant features of the social network. In this connection, we follow a formative measurement for the construct through the respondents' valuation of the possibility to create a profile, update their status, send and receive personal messages, use chat or messenger, post pictures and videos, mark friends in such posts as well as like and comment on posts.

Concerning the other variables (with reflective measurement), the operationalization is based on existing scales from scientific literature. Here, we adapt the scale of Benbasat et al. [2007] for the construct *External Service Quality*. The associated items deal with the quality and compliance with standards of the external services offered. The *Need for Data Privacy* is operationalized based on Wirtz et al. [2015]. Their items refer to the perceived data protection and security of personal data when using Facebook. The items of the construct *Need for New Friends*, refer to the possibility of finding new friends, building new interpersonal relationships and communicating with newly found friends on Facebook. To operationalize this construct, we consult Wirtz et al. [2013]. The last determinant of the model *Need for Social Self-Portrayal* is measured by adopting Leung's [2013] scale. First, the resulting items include how much Facebook members use their online presence to share their interests, opinions, thoughts, experiences and feelings. Secondly, we also ask to what extent users present themselves to gain respect and recognition.

Passing on to the measurement of the dependent variables, we operationalize *Approval of Personalized Facebook Ads* by using and revising Taylor et al.'s [2011] scale, asking how much Facebook members like the advertised products or services, whether they feel entertained by the personalized ads and whether they perceive them as valuable information sources. To measure Facebook members' *Word-of-Mouth Intention* with regard to the advertised products or services, we draw on Shin [2013]. More specifically, the resulting scale measures the extent to which users intend to suggest friends the advertised products or services, share positive experiences about the products or services and post related positive reviews and comments on Facebook (for details on the operationalization of the constructs, please refer to the Appendix). For all of the previously described constructs, we apply 7-point Likert scales. Only for the construct *Usage Intensity*, which we operationalize as a manifest variable, we use the respondents' indications regarding their average Facebook usage per week (hours) and their related posting activities (number of posts) for measurement.

3.4 Reliability and Validity Assessment

To ensure the reliability and validity of the measurement models, we assess several quality criteria (e.g., Bearden et al. 2011, Hair et al. 2010). With regard to the average variance extracted, all generated values lie above the lower threshold of 0.5 [Fornell and Larcker 1981]. Also, all values for composite reliability exceed the lower limit of 0.6 [Bagozzi and Yi 1988]. Moreover, all factor loadings of the items of the reflective constructs exceed the demanded lower threshold of 0.4 [Bagozzi and Baumgartner 1994]. In the case of the formative construct measurement, most values differ significantly from zero [Diamantopoulos et al. 2008]. We present an overview of all tested quality criteria for reliability and validity of the measurement models in the appendix.

Since "high levels of collinearity between formative indicators are a crucial issue because they have an impact on the estimation of weights and their statistical significance" [Hair et al., 2017, p. 142], we also test for multicollinearity with regard to the formative construct *Internal Core Functions*. Following methodological literature, we calculated the variance inflation factors for the individual items, which is an "indicator of the effect that the other independent variables have on the standard error of a regression coefficient" [Hair et al., 2010, p. 161]. Since all variance inflation factors of the indicators of the formative construct are smaller than 3, multicollinearity does not seem to be a relevant issue since the recommended cut-off threshold value is 10 [Diamantopoulos and Winklhofer, 2001; Hair et al., 2010].

Subsequently, we employ the Fornell-Larcker criterion to assess the discriminant validity of the reflective constructs. This observation compares the average variances extracted with the respective squared correlations of the constructs [Fornell and Larcker 1981]. The corresponding results imply that none of the squared correlations exceed the average variances extracted. Thus, as also apparent from Table 2 and the variances in bold, all constructs fulfill the criterion.

Table 2: Fornell/Larcker Criterion

Fornell-Larcker Criterion	1	2	3	4	5	6	7
External Service Quality (1)	0.844						
Need for Data Privacy (2)	0.324	0.714					
Need for Social Self-Portrayal (3)	0.264	0.282	0.691				
Need for New Friends (4)	0.342	0.336	0.479	0.666			
Usage Intensity (5)	0.159	0.330	0.414	0.330	0.529		
Approval of Personalized Ads (6)	0.259	0.315	0.488	0.466	0.448	0.828	
WoM Intention (7)	0.275	0.329	0.512	0.534	0.549	0.750	0.872

We further estimate the illustrated model by means of multivariate analysis and structural equation modeling, which has gained popularity across many disciplines and is one of the most common and well-established approaches in empirical social science research [Hair et al. 2011; Lei and Wu 2007]. In particular for our purpose, structural equation modeling has proven to be an appropriate statistical method for analyzing relationships between independent

and dependent variables [Hair et al. 2010; Kline 2011; Steenkamp and Baumgartner 2000].

There are two basic forms of structural equation modeling, namely covariance (e.g., LISREL) and variance-based (e.g., PLS) analyses. Both approaches have certain advantages and disadvantages. In light of the requirements of this study, we favored the PLS approach since it can handle both reflective and formative measurement models (e.g., Diamantopoulos and Winklhofer, 2001, Gray and Meister 2004, Becker et al. 2012), has less stringent assumptions about the distribution of variables and error terms (e.g., Batjargal et al. 2013, Chin and Newsted 1999, Hair et al. 2011), includes lower requirements regarding the measurement levels [Fornell and Bookstein 1982] and shows greater robustness in data analysis because there are fewer identification issues than in the covariance-based approach, as well as improved efficiency in parameter estimation with lower variation [Hair et al. 2011; Reinartz et al. 2009]. Furthermore, PLS is also considered to have high statistical power, which makes it suitable for quantitative prediction, theory building, and confirmatory theory testing [Hair et al. 2011]. For the calculation, we used the SmartPLS software.

4. Results

Since there are no global measures for evaluating the models' goodness-of-fit in the PLS approach, we have to implement other actions to assess our structural model. One important means to evaluate the model's nomological validity is the coefficient of determination (R^2) regarding the endogenous constructs involved: "The coefficient can vary between 0 and 1. If the regression model is properly applied and estimated, the researcher can assume that the higher the value of R^2 , the greater the explanation power of the regression equation, and therefore the better the prediction of the dependent variable." [Hair et al. 2010, p. 156]

In this connection, the model shows values of 0.251, 0.201 and 0.620 (see Figure 3), suggesting that the respective predictor variables explain about 25%, 20% and 62% of *Usage Intensity*, *Approval of Personalized Facebook Ads* and *Word-of-Mouth Intention* respectively. When regarding the demanded thresholds in the relevant methodical literature, in which one author, for instance, evaluates R^2 -values of 0.66 as substantial, R^2 -values of 0.33 as moderate and only R^2 -values of 0.19 and lower as rather weak [Chin 1998], the values of the structural model are satisfactory, especially when also considering that Falk and Miller [1992] and Ravichandran and Lertwongsatien [2005] recommend values above the threshold of 0.1. Moreover, Hair et al. [2012a] situationally classify considerably lower values as good (e.g., in purchase behavior research).

In addition, we use the Stone-Geisser's criterion (Q^2) [Geisser 1975; Stone 1974] as a further measure to evaluate the predictive capability of the structural model. This measure aims to capture cross-validated redundancy with regard to reflectively measured latent endogenous constructs and should yield values greater than zero to show that the observed constructs exhibit predictive relevance. The corresponding Q^2 -values for our present model are 0.096 for *Usage Intensity*, 0.165 for *Approval of Personalized Facebook Ads* and 0.507 for *Word-of-Mouth Intention*, thus indicating an adequate model prediction for the three endogenous constructs.

With regard to the study's determinants, four of the five path relationships observed are statistically significant and positively related to *Usage Intensity*, supporting the hypotheses regarding *Internal Core Functions* (H_1), *Need for Data Privacy* (H_3), *Need for New Friends* (H_4) and *Need for Social Self-Portrayal* (H_5). In this connection, the effect sizes of the influencing factors differ, thus indicating that the single determinants vary in importance. While *Need for Data Privacy* (0.110) and *Need for New Friends* (0.135) show indeed comparable positive effects, we can assign the higher impacts to *Internal Core Functions* (0.256) and *Need for Social Self-Portrayal* (0.199) in descending order.

Concerning the dependent variables of the study, we can confirm significant positive effects of *Usage Intensity* on *Approval of Personalized Facebook Ads* (H_6) and *Word-of-Mouth Intention* (H_7) respectively, whereas H_6 represents the clearly stronger relationship with a coefficient of 0.448 as compared to 0.266 of H_7 . The lower value with regard to H_7 can be partially explained by the partial mediation of the relationship between *Usage Intensity* and *Word-of-Mouth Intention* through *Approval of Personalized Facebook Ads*, which ultimately confirms H_8 with a comparably high coefficient of 0.631 (for all the standardized coefficients see Figure 3).

The T-statistics for the significant paths show values between 1.650 and 9.214, revealing that five hypotheses are significant at the 0.01-level (H_1 , H_5 , H_6 , H_7 and H_8), one hypothesis at the 0.05-level (H_4) and one at the 0.1-level (H_3). Only with regard to *External Service Quality*, we have to reject H_2 due to non-significance. For a detailed overview of our bootstrapping results, please refer to Table 3. In summary we can confirm our hypothesized structural model with the exception of H_2 .

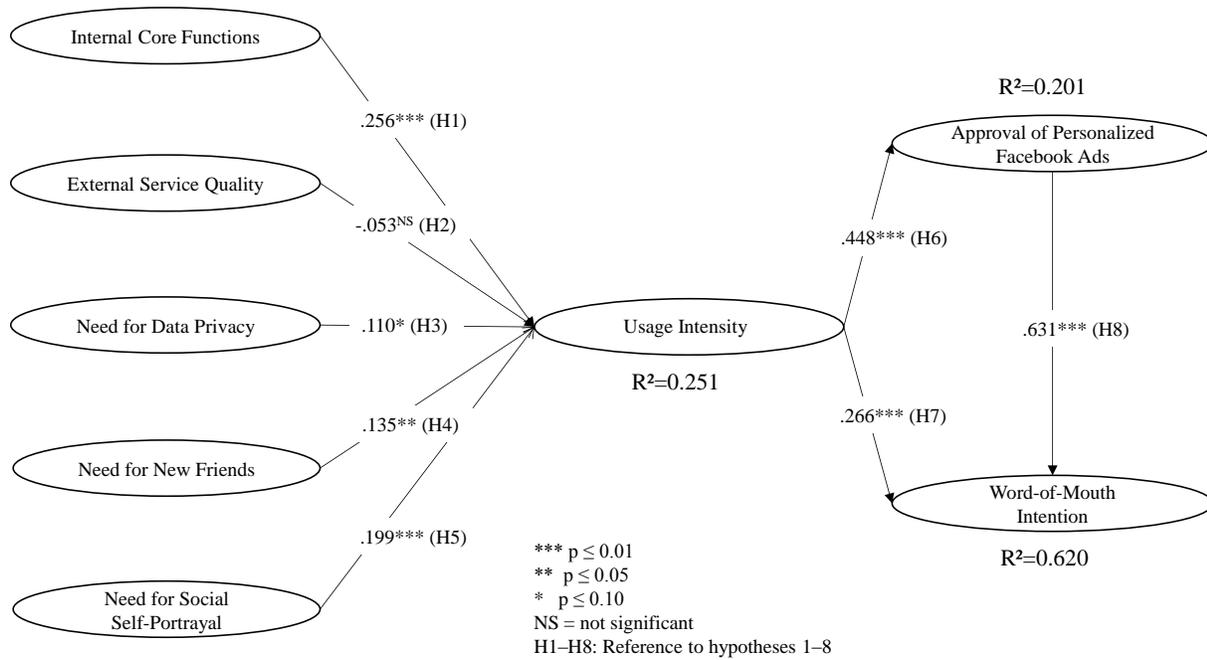


Figure 3: Structural Model

Table 3: Bootstrapping Results

Bootstrapping Results	Original Sample	Sample Mean	Standard Deviation	Standard Error	T-Statistics
Internal Core Functions -> Usage Intensity	0.256	0.292	0.061	0.061	4.157
External Service Quality -> Usage Intensity	-0.053	-0.054	0.048	0.048	1.105
Need for Data Privacy -> Usage Intensity	0.110	0.110	0.067	0.067	1.650
Need for New Friends -> Usage Intensity	0.135	0.133	0.062	0.062	2.159
Need for Social Self-Portrayal -> Usage Intensity	0.199	0.189	0.072	0.072	2.755
Usage Intensity -> Approval of Personalized Facebook Ads	0.448	0.446	0.074	0.074	6.065
Usage Intensity -> WoM Intention	0.266	0.265	0.066	0.066	4.029
Approval of Personalized Facebook Ads -> WoM Intention	0.631	0.631	0.069	0.069	9.214

5. Discussion

This study investigates influential factors of the usage intensity of social network members as well as its conceptualization and impact on both members’ approval of personalized advertising in social networks and their word-of-mouth intention with regard to locally advertised products or services. Building upon uses and gratifications theory, we initially derive determinants of usage intensity as independent variables of our study. In accordance with the aforementioned expectancy-value approach that considers the particular value or importance users attach to each single media gratification [Palmgreen and Rayburn 1985], we empirically investigate the specific effect sizes of the determinants. These five constructs concern the *Internal Core Functions*, *External Service Quality*, *Need for Data Privacy*, *Need for New Friends* and the *Need for Social Self-Portrayal* within Facebook usage. Furthermore, we illustrate the contents of the construct *Usage Intensity* based on extant research about virtual communities and social networks, thus conceptualizing the first dependent variable of our study. Lastly, we consider the impact of Facebook members’ *Usage Intensity* on two further dependent variables, namely the *Approval of Personalized Facebook Ads* and *Word-of-Mouth Intention*, within our conceptual model.

5.1 Findings

The results reveal that four out of five determinants prove to have a significant positive effect on *Usage Intensity*.

The constructs *Internal Core Functions* and *Need for Social Self-Portrayal* show the strongest impact. This outcome meets our expectations since it is plausible that the main reasons why people decide to use social networks seem to lie in their core functionality as well as a mixture of extraversion and social aspects. More specifically, social network members like to share and exchange information among themselves. By means of its core functions, like creating profiles, updating statuses, interacting via messengers and chats, posting pictures and videos, as well as liking and commenting on posts of others, Facebook offers an excellent platform for doing so, caters to these specific user needs, and therefore enjoys great popularity in society.

Furthermore, satisfying these needs requires more than one singular experience. For instance, the need for self-portrayal in social networks by means of the above-mentioned functions in an online public space, is a desire of many members [cf. Andreassen et al. 2012]. Since this finding, in turn, explains the frequently repeated use of social networks by their members, we have come full circle with regard to the two determinants that show strong empirical effect sizes in our study. This finding also substantiates earlier studies that have treated social network usage more generally and have addressed Facebook's functionality as well as needs or motivations related to the *Need for Social Self-Portrayal* [Brandtzæg et al. 2010; Park et al. 2009; Smock et al. 2011].

The almost equally significant effects of *Need for New Friends* and *Need for Data Privacy* are especially interesting against the background of the different nature and the interplay of these two determinants. In more detail, the empirical results confirm our initial assumption that the social network members decide to frequently use Facebook to satisfy their interest in the networking character inherent to it. This motivates members to log on over and over again, which gives them the opportunity to continuously extend their network of friendships, be they superficial or deep. Again, this is consistent with results in earlier studies [Ellison et al. 2007; Kim and Lee 2011].

Yet, in connection to this perspective, members may only continue to approve social networks if their data privacy is guaranteed by the responsible firm. This finding is even more important in light of the previous controversy and criticism about the terms of use and data treatment of Facebook [Luckerson 2014]. In particular, it tells us that if Facebook wants to maintain members in the long run, the social network may have to reconsider its data privacy policy more closely and should manage its corresponding image with great caution [cf. Rosen 2014]. Researchers have also confirmed such arguments through several previous investigations treating social network usage more generally [Boyd 2008; Brandtzæg et al. 2010; Debatin et al. 2009; Wang et al. 2011].

Considering the rejected hypothesis related to the determinant *External Service Quality*, we interpret this result in terms of overload perceived by Facebook members. If the critical needs of the members are met by the available core functionalities, the additional external services offered may be redundant and distracting for members. On the one hand, this may include linkages to other social media providers, like Instagram, Pinterest, or 9GAG. On the other hand, there are also various social gaming or miscellaneous apps integrated in Facebook [Darwell 2012], which are offered to members without an explicit request from members and thus may lead to irritation.

According to our finding, the negative perception seems to outweigh the potential value of these additional offers to cater to further needs of members which Facebook itself cannot fulfill. Instead, when these needs emerge, users are well aware of offers of other social media applications, and actively choose other social media right from the beginning. In this regard, Instagram represents a suitable example since it provides more differentiated uses and gratifications for its members, for instance, by allowing to include various color nuances or filters [cf. Instagram 2015].

From a methodological perspective, this study follows a confirmatory empirical approach. The goal of such investigations is to confirm theory through empirical results [cf. Armstrong 2011; Bryman 2012; Gravetter and Forzano 2012; Graziano 1993; Hair et al. 2010; Neuman 1991; Zikmund et al. 2012]. The results obtained indicate that uses and gratifications theory is applicable within the social media context since the tested determinants of Facebook members' usage intensity were largely significant.

The analysis of the structural model shows significant positive effects of Facebook members' *Usage Intensity* on *Approval of Personalized Facebook Ads* and *Word-of-Mouth Intention*. As already mentioned before in the article, researchers have so far investigated variables similar to the ones of our study, but they have not studied their relationships to each other. Instead, they have mainly focused on user interactions and the corresponding social benefits and potential consequences of usage intensity (e.g., Ellison et al. 2007, Vitak et al. 2011). Relevant studies addressing potential antecedents of acceptance, approval, or recommendation of advertising in social networks include effects of social identity and group norms [Zeng et al. 2009], expected negative experiences, perceived ad relevance and skepticism toward the ads [Kelly et al. 2010], contents of social network pages and age homophily [Airs and Ang 2012], group affiliation [Chu 2011], ad attributes, self-brand congruity, peer influence, invasiveness and privacy concerns [Taylor et al. 2011], as well as social needs of members and psychological well-being [Chi 2011]. While these studies mainly cover users' expectations, perceptions, needs and concerns, as well as social network and ad characteristics, attention has hardly been paid to the link between social network members' usage intensity and their

approval and word-of-mouth intention with regard to personalized ads.

In this respect, the results are considerably novel. They also seem plausible since the more members are involved in a social network, the more it is likely that they accept every part of it, which makes them also accept and recommend advertising as an integral part. What may appear unusual or irritating to members in the beginning becomes more familiar until it is finally accepted (e.g., personalized ads). In this connection, the finding that the relationship between *Usage Intensity* and *Word-of-Mouth Intention* is partially mediated by *Approval of Personalized Facebook Ads* is of further interest. To put it in a nutshell, even though there is a lower direct effect of *Usage Intensity* on *Word-of-Mouth Intention*, it seems to be important that members approve the general system of personalized ads on social networks in the first place, before they consider recommending advertised products or services. This appears reasonable because even if members have approved some of the advertised products or services, they would most likely not recommend it to others if they had a negative attitude towards personalized ads on Facebook or advertising in social networks in general.

5.2 Limitations and Future Research

Despite the use of well-established theories and robust methodologies in our current study, the study has certain limitations, which point to potential avenues for future research. Our study is cross-sectional in nature and concerns an area in which changes can appear on an ongoing basis (e.g., Facebook or the partners can terminate existing co-operations or new acquisitions may be made over time). Especially regarding Facebook's internal core functions since Facebook as the flagship of social networks has the ambition to provide a cutting-edge functionality. Against this background, Facebook is under continuing development. Therefore, the particular construct for our study can only cover those core functions that have been available on Facebook at the point in time of our investigation, and thus the results can only provide a snapshot of the phenomenon. We encourage researchers to conduct longitudinal studies to broaden the basis for generalization. We have only surveyed German social network members using Facebook. Future research should extend the investigation to other countries and cultural settings. Also, it would be interesting to study behaviors in other social networks in comparison to Facebook. Moreover, other social media applications (e.g., microblogs) could be investigated in similar studies. Since our study represents one of the first confirmatory empirical research papers about determinants of social network members' *Usage Intensity* and the connected *Approval of Personalized Ads* and *Word-of-Mouth Intention*, it can hopefully act as a starting point for further related conceptual and empirical research.

6. Conclusion

The current study aims to identify determinants that influence the usage intensity by Facebook members in terms of average hours spent and average posts made on Facebook per week. Furthermore, we look behind the potential benefits of said usage intensity for companies and organizations, which helps justify corporate presence in social networks.

The results of the study hold both theoretical and managerial implications. A key outcome for academics is that the study confirms the applicability of uses and gratifications theory in the social network context. Apart from that, it contributes to the literature about corporate presence in social networks and social media in general. Especially interesting is the causal chain comprising what factors determine usage intensity, and, how usage intensity influences members' patronage of companies' advertising in social networks.

The results are also relevant for managers—both of the social network and the companies commissioning the ads. Social network representatives can benefit from our findings by incorporating the (dis)confirmed determinants of usage intensity in their decisions to retain, exclude or include functions and features. This is important since members' intense usage and word-of-mouth recommendation brings financial benefits for the social network firm in terms of increased advertising revenue through the augmented exposure of members to the placed ads. However, one should not consider the investigated determinants as individual factors but rather as a cohesive set. Thus, focusing on members' need for social self-portrayal and new friends, the maintenance and continuous improvement of the social network's internal core functions, as well as catering to the members' need for data privacy promises the greatest impact.

In addition, we have been interested in the potential benefits of members' usage intensity for companies and organizations that advertise in social networks. A major result of this study is the finding that usage intensity positively influences social network members' approval of placing personalized ads and also their intention to share with others the resulting experiences with the respective products and services in the social network. Thus, as a corresponding implication, we advise managers to focus their social media advertising efforts on those platforms that generate the highest usage intensities. Within the broad range of existing social media applications, so far social networks have emerged as the most popular platforms for users, and thus also for companies and their advertising activities. Given the dynamic nature of the social media field, this fact may be subject to change sooner or later. Therefore, companies

should critically reconsider and adapt their social media strategy periodically.

Also, in light of the finding that social network members' approval of personalized ads mediates the relationship between usage intensity and word-of-mouth intention, the companies that advertise in social networks should cautiously coordinate their connected activities in the social network and with the social network provider. They have to make sure that they are not so intrusive towards the members that they lose members' goodwill. Finally, companies may try to influence social media providers to include features and functions that foster members' usage intensity and thus generate benefits for themselves. Unfortunately, this is a double-edged sword since, for instance, despite the users' need for data privacy, the controversial policy of Facebook enables the placement of personalized ads in the first place. Nevertheless, in light of the findings in the current study, a balance between user and corporate needs should be pursued in the future.

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REFERENCES

- Airs M. and L. Ang, "Avoiding Ads on Facebook Brand Pages: An Empirical Study into Brand Page Content and Homophily," *Proceedings of the Australian and New Zealand Marketing Academy Conference: Sharing the Cup of Knowledge*, 1–7, Adelaide, December, 2012.
- Allan, R., "Facebook Response to European Commission Communication on Personal Data Protection in the European Union," http://ec.europa.eu/justice/news/consulting_public/0006/contributions/not_registered/facebook_en.pdf, retrieved 22 January 2015, 2015.
- Andreassen C.S., T. Torsheim, G.S. Brunborg, and S. Pallesen, "Development of a Facebook Addiction Scale," *Psychological Reports*, Vol. 110, No. 2:501–517, 2012.
- Armstrong S.J. and T.S. Overton, "Estimating Nonresponse Bias in Mail Surveys," *Journal of Marketing Research*, Vol. 14, No. 3:396–402, 1977.
- Bagozzi R.P. and H. Baumgartner, "The Evaluation of Structural Equation Models and Hypothesis Testing," *Principles of Marketing Research*, R.P. Bagozzi (ed.), Blackwell, Cambridge, MA, pp. 386–422, 1994.
- Bagozzi R.P. and Y. Yi, "On the Evaluation of Structural Equation Models," *Journal of the Academy of Marketing Science*, Vol. 16, No. 1:74–94, 1998.
- Barelka A.J., A. Jeyaraj, and R.G. Walinski, "Content Acceptance Model and New Media Technologies," *Journal of Computer Information Systems*, Vol. 53, No. 3:56–64, 2013.
- Batjargal B., M.A. Hitt, A.S. Tsui, J.L. Arregle, J.W. Webb, and T.L. Miller, "Institutional Polycentrism, Entrepreneurs' Social Networks, and New Venture Growth," *Academy of Management Journal*, Vol. 56, No. 4:1024–1049, 2013.
- Bearden W.O., R.G. Netemeyer, and K.L. Haws, *Handbook of Marketing Scales: Multi-Item Measures for Marketing and Consumer Behavior Research*, CA, Thousand Oaks: Sage, 2011.
- Becker J.M., K. Klein, and M. Wetzels, "Hierarchical Latent Variable Models in PLS-SEM: Guidelines for Using Reflective-Formative Type Models," *Long Range Planning*, Vol. 45, No. 5:359–394, 2012.
- Benbasat I., R. Cenfetelli, and C.W. Tan, "Understanding the Antecedents and Consequences of E-Government Service Quality: An Empirical Investigation," *Proceedings of the International Conference on Information Systems 2007*, 1–21, Montreal, December, 2007.
- Bhattacharjee A., *Social Science Research: Principles, Methods, and Practices*, FL, Tampa: University of South Florida, 2012.
- Blanchflower T.M. and K.T. Watchravesringkan, "Exploring the Impact of Social Networking Sites on Brand Equity," *Proceedings of the Marketing Management Association*, 20–24, Chicago, Spring, 2014.
- Boyd D., "Facebook's Privacy Trainwreck: Exposure, Invasion, and Social Convergence," *The International Journal of Research into New Media Technologies*, Vol. 14, No. 1:13–20, 2008.
- Boyd D.M. and N.B. Ellison, "Social Network Sites: Definition, History, and Scholarship," *Journal of Computer-Mediated Communication*, Vol 13, No. 1: 210–30, 2007.
- Brandtzaeg P.B., M. Lüders, and J.H. Skjetne, "Too Many Facebook "Friends"? Content Sharing and Sociability Versus the Need for Privacy in Social Network Sites," *International Journal of Human-Computer Interaction*, Vol. 26, No. 11–12:1006–1030, 2010.
- Bryman A., *Social Research Methods*, NY, New York: Oxford University Press, 2012.
- Chang S.J., A. van Witteloostuijn, and L. Eden, "From the Editors: Common Method Variance in International

- Business Research,” *Journal of International Business Studies*, Vol. 41, No. 2:178–184, 2010.
- Chen G.M., “Tweet This: A Uses and Gratifications Perspective on How Active Twitter Use Gratifies a Need to Connect with Others,” *Computers in Human Behavior*, Vol. 27, No. 2:755–762, 2011.
- Chen H., A. Papazafeiropoulou, Y. Duan, and T. Chen, “The Antecedents and Outcomes of Brand Experience on the Social Networking Site,” *Proceedings of the 21st European Conference on Information Systems*, 1–13, Utrecht, June, 2013.
- Chi H.H., “Interactive Digital Advertising vs. Virtual Brand Community: Exploratory Study of User Motivation and Social Media Marketing Responses in Taiwan,” *Journal of Interactive Advertising*, Vol. 12, No. 1:44–61, 2011.
- Chin W.W., “The Partial Least Squares Approach for Structural Equation Modeling,” *Modern Methods for Business Research*, G.A. Marcoulides (ed.), Psychology Press, Hove, pp. 295–336, 1998.
- Chin W.W. and P.R. Newsted, “Structural Equation Modeling Analysis with Small Samples Using Partial Least Squares,” *Statistical Strategies for Small Sample Research*, R. H. Hoyle (ed.), Sage Publications, Thousand Oaks, CA, pp. 307–341, 1999.
- Chu S.C., “Viral Advertising in Social Media: Participation in Facebook Groups and Responses among College-Aged Users,” *Journal of Interactive Advertising*, Vol. 12, No. 1:30–43, 2011.
- Cvijikj I.P. and F. Michahelles, “Online Engagement Factors on Facebook Brand Pages,” *Social Network Analysis and Mining*, Vol. 3, No. 4:843–861, 2013.
- Darwell B., “Pinterest, Scribd, 9GAG, Spotify, Zynga Game Bar and More on This Week’s Top 20 Growing Facebook Apps by DAU,” <http://www.insidefacebook.com/2012/09/27/pinterest-scribd-9gag-spotify-zynga-game-bar-and-more-on-this-weeks-top-20-growing-facebook-apps-by-dau/>, retrieved 9 December 2014, 2012.
- De Valck K. F. Langerak, P.C. Verhoef, and P.W. Verlegh, “Satisfaction with Virtual Communities of Interest: Effect on Members’ Visit Frequency,” *British Journal of Management*, Vol. 18, No. 3:241–256, 2007.
- De Vries L., S. Gensler, and P. Leeﬂang, “Popularity of Brand Posts on Brand Fan Pages: An Investigation of the Effects of Social Media Marketing,” *Journal of Interactive Marketing*, Vol. 26, No. 2:83–91, 2012.
- Debatin B., J.P. Lovejoy, A.K. Horn, and B.N. Hughes, “Facebook and Online Privacy: Attitudes, Behaviors, and Unintended Consequences,” *Journal of Computer-Mediated Communication*, Vol. 15, No. 1:83–108, 2009.
- Diamantopoulos A., P. Rieﬂer, and K.P. Roth, “Advancing Formative Measurement Models,” *Journal of Business Research*, Vol. 61, No. 12:1203–1218, 2008.
- Diamantopoulos A. and H.M. Winklhofer, “Index Construction with Formative Indicators: An Alternative to Scale Development,” *Journal of Marketing Research*, Vol. 38, No. 2:269–277, 2001.
- El-Haddadeh R., V. Weerakkody, and J. Peng, “Social Networking Services Adoption in Corporate Communication: The Case of China,” *Journal of Enterprise Information Management*, Vol. 25, No. 6:559–575, 2012.
- Ellison N.B., C. Steinfield, and C. Lampe, “The Benefits of Facebook “Friends:” Social Capital and College Students’ Use of Online Social Network Sites,” *Journal of Computer-Mediated Communication*, Vol. 12, No. 4:1143–1168, 2007.
- Facebook, “About Facebook Ads,” <https://www.facebook.com/about/ads>, retrieved 11 December 2014, 2014a.
- Facebook, “App Settings,” <https://www.facebook.com/settings?tab=applications>, retrieved 11 December 2014, 2014b.
- Falk R.F. and N.B. Miller, *A Primer for Soft Modeling*, OH, Akron: University of Akron Press, 1992.
- Fornell C. and F.L. Bookstein, “Two Structural Equation Models: LISREL and PLS Applied to Consumer Exit-Voice Theory,” *Journal of Marketing Research*, Vol. 19, No. 4:440–452, 1982.
- Fornell C. and D.F. Larcker, “Evaluation Structural Equation Models with Unobservable Variables and Measurement Error,” *Journal of Marketing Research*, Vol. 18, No. 1:39–50, 1981.
- Fournier S. and J. Avery, “The Uninvited Brand,” *Business Horizons*, Vol. 54, No. 3:193–207, 2011.
- Geisser S., “A Predictive Approach to the Random Effect Model,” *Biometrika*, Vol. 61, No. 1:101–107, 1975.
- Gravetter F.J. and L.A.B. Forzano, *Research Methods for the Behavioral Sciences*, CA, Belmont: Wadsworth Cengage Learning, 2012.
- Gray P.H. and D.B. Meister, “Knowledge Sourcing Effectiveness,” *Management Science*, Vol. 50, No. 6:821–834, 2004.
- Graziano A.M. and M.L. Raulin, *Research Methods: A Process of Inquiry*, NY, New York: HarperCollins College Publishers, 1993.
- Hair J.F., W.C. Black, B.J. Babin, and R.E. Anderson, *Multivariate Data Analysis*, NJ, Upper Saddle River, Prentice Hall, 2010.
- Hair J.F., G.T.M. Hult, C.M. Ringle, and M. Sarstedt, *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, CA, Thousand Oaks, Sage, 2017.

- Hair J.F., C.M. Ringle, and M. Sarstedt, "PLS-SEM: Indeed a Silver Bullet," *The Journal of Marketing Theory and Practice*, Vol. 19, No. 2:139–152, 2011.
- Hair J.F., M. Sarstedt, C.M. Ringle, and J.A. Mena, "An Assessment of the Use of Partial Least Squares Structural Equation Modeling in Marketing Research," *Journal of the Academy of Marketing Science*, Vol. 40, No. 3:414–433, 2012.
- Herzog H., "Motivations and Gratifications of Daily Serial Listeners," *Radio Research*. P. F. Lazarsfeld and F.N. Stanton (eds.), Duell, Sloan and Pearce, New York, NY, pp. 1942–1943, 1944.
- Hicks A., S. Comp, J. Horovitz, M. Hovarter, M. Miki, and J.L. Bevan, "Why People Use Yelp.com: An Exploration of Uses and Gratifications," *Computers in Human Behavior*, Vol. 28, No. 6:2274–2279, 2012.
- Hofacker C.F. and J. Murphy, "Consumer Web Page Search, Clicking Behaviour and Reaction Time," *Direct Marketing: An International Journal*, Vol. 3, No. 2:88–96, 2009.
- Hutter K., J. Hautz, S. Dennhardt, and J. Füller, "The Impact of User Interactions in Social Media on Brand Awareness and Purchase Intention: The Case of MINI on Facebook," *Journal of Product and Brand Management*, Vol. 22, No. 5/6:342–351, 2013.
- Instagram, "FAQ," <http://instagram.com/about/faq/>, retrieved 20 January 2015, 2015.
- Jackson E., "Why Instagram Might be the Best Internet Acquisition Ever," <http://www.forbes.com/sites/ericjackson/2013/11/12/why-instagram-might-be-the-best-internet-acquisition-ever/>, retrieved 4 December 2014, 2013.
- Jahn B. and W. Kunz, "How to Transform Consumers into Fans of Your Brand," *Journal of Service Management*, Vol. 23, No. 3:344–361, 2012.
- Jarvis C.B., S.B. MacKenzie, and P.M. Podsakoff, "A Critical Review of Construct Indicators and Measurement Model Misspecification in Marketing and Consumer Research," *Journal of Consumer Research*, Vol. 30, No. 2:199–218, 2003.
- Kaplan A.M. and M. Haenlein, "Users of the World, Unite! The Challenges and Opportunities of Social Media," *Business Horizons*, Vol. 53, No. 1:59–68, 2010.
- Katz E., "Mass Communication Research and the Study of Culture," *Studies in Public Communication*, Vol. 2:1–6, 1959.
- Katz E., J.G. Blumler, and M. Gurevitch, "Uses and Gratifications Research," *The Public Opinion Quarterly*, Vol. 37, No. 4:509–523, 1973a.
- Katz E., H. Haas, and M. Gurevitch, "On the Use of the Mass Media for Important Things," *American Sociological Review*, Vol. 38, No. 2:164–181, 1973b.
- Kelly L., G. Kerr, and J. Drennan, "Avoidance of Advertising in Social Networking Sites," *Journal of Interactive Advertising*, Vol. 10, No. 2:16–27, 2010.
- Khang H., E.J. Ki, and L. Ye, "Social Media Research in Advertising, Communication, Marketing, and Public Relations, 1997–2010," *Journalism & Mass Communication Quarterly*, Vol. 89, No. 2:279–298, 2012.
- Kim A. and E. Ko, "Do Social Media Marketing Activities Enhance Customer Equity? An Empirical Study of Luxury Fashion Brand," *Journal of Business Research*, Vol. 65, No. 10:1480–1486, 2012.
- Kim J. and J.E.R. Lee, "The Facebook Paths to Happiness: Effects of the Number of Facebook Friends and Self-presentation on Subjective Well-being," *Cyberpsychology, Behavior and Social Networking*, Vol. 14, No. 6:359–364, 2011.
- Kline R.B., *Principles and Practice of Structural Equation Modeling*, NY, New York: Guilford Press, 2011.
- Ko H., C.H. Cho, and M.S. Roberts, "Internet Uses and Gratifications: A Structural Equation Model of Interactive Advertising," *Journal of Advertising*, Vol. 34, No. 2:57–70, 2005.
- Lai L.S.L. and W.M. To, "Content Analysis of Social Media: A Grounded Theory Approach," *Journal of Electronic Commerce Research*, Vol. 16, No. 2:138–152, 2015.
- Lane M. and P. Coleman, "Technology Ease of Use Through Social Networking Media," *Journal of Technology Research*, Vol. 3, July:1–12, 2012.
- LaRose R.D., M. Mastro, and S. Eastin, "Understanding Internet Usage: A Social-Cognitive Approach to Uses and Gratifications," *Social Science Computer Review*, Vol. 19, No. 4:395–413, 2001.
- Lee D., H. Kim, and J. Kim, "The Impact of Online Brand Community Type on Consumer's Community Engagement Behaviors: Consumer-created vs. Marketer-created Online Brand Community in Online Social-networking Web Sites," *Cyberpsychology, Behavior and Social Networking*, Vol. 14, No. 1–2:59–63, 2011.
- Lee C.S. and L. Ma, "News Sharing in Social Media: The Effect of Gratifications and Prior Experience," *Computers in Human Behavior*, Vol. 28, No. 2:331–339, 2012.
- Lei P-W. and Q. Wu, "Introduction to Structural Equation Modeling: Issues and Practical Considerations," *Educational Measurement: Issues and Practice*, Vol. 26, No. 3:33–43, 2007.

- Letzing J., "Facebook Adds More External Services," <http://online.wsj.com/articles/SB10001424052970203735304577169670180281972>, retrieved 4 December 2014, 2012.
- Leung L., "College Student Motives for Chatting on ICQ," *New Media & Society*, Vol. 3, No. 4:483–500, 2001.
- Leung L., "Generational Differences in Content Generation in Social Media: The Roles of the Gratifications Sought and of Narcissism," *Computers in Human Behavior*, Vol. 29, No. 3:997–1006, 2013.
- Leung L. and R. Wei, "More Than Just Talk on the Move: Uses and Gratifications of the Cellular Phone," *Journalism & Mass Communication Quarterly*, Vol. 77, No. 2:308–320, 2000.
- Li Y.M., Y.L. Lee, and N.J. Lien, "Online Social Advertising via Influential Endorsers," *International Journal of Electronic Commerce*, Vol. 16, No. 3:119–154, 2012.
- Luckerson V., "7 Controversial Ways Facebook Has Used Your Data," <http://time.com/4695/7-controversial-ways-facebook-has-used-your-data/>, retrieved 5 December 2014, 2014.
- Ma M. and R. Agarwal, "Through a Glass Darkly: Information Technology Design, Identity Verification, and Knowledge Contribution in Online Communities," *Information Systems Research*, Vol. 18, No. 1 42–67, 2007.
- Matei S.A., "What Can Uses and Gratifications Theory Tell Us About Social Media?," <http://matei.org/ithink/2010/07/29/what-can-uses-and-gratifications-theory-tell-us-about-social-media/>, retrieved 25 November 2014, 2010.
- McFarlin D.B. and P.D. Sweeney, "Research Notes. Distributive and Procedural Justice as Predictors of Satisfaction with Personal and Organizational Outcomes," *Academy of Management Journal*, Vol. 35, No. 3:626–637, 1992.
- McQuail D., *Mass Communication Theory*, London: Sage, 2010.
- Neuman W.L. *Social Research Methods: Qualitative and Quantitative Approaches*, MA, Boston: Allyn & Bacon, 2010.
- Orr E.S., M. Sisic, C. Ross, M.G. Simmering, J.M. Arseneault, and R.R. Orr, "The Influence of Shyness on the Use of Facebook in an Undergraduate Sample," *Cyberpsychology & Behavior*, Vol. 12, No. 3:337–340, 2009.
- Palmgreen P. and J. Rayburn, "An Expectancy–Value Approach to Media Gratifications," *Media Gratifications Research*, K. Rosengren, L. Wenner, and P. Palmgreen (eds.), Sage, Beverly Hills, CA, pp. 61–72, 1985.
- Palmgreen P., L. Wenner, and K. Rosengren, "Uses and Gratifications Research: The Past Ten Years," *Media Gratifications Research*, K. Rosengren, L. Wenner, and P. Palmgreen (eds.), Sage, Beverly Hills, CA, pp. 11–37, 1985.
- Park N., K.F. Kee, and S. Valenzuela, "Being Immersed in Social Networking Environment: Facebook Groups, Uses and Gratifications, and Social Outcomes," *CyberPsychology & Behavior*, Vol. 12, No. 6:729–733, 2009.
- Podsakoff P.M., "Self-Reports in Organizational Research: Problems and Prospects," *Journal of Management*, Vol. 12, No. 4:531–544, 1986.
- Podsakoff P.M., S.B. MacKenzie, J.Y. Lee, and N.P. Podsakoff, "Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies," *The Journal of Applied Psychology*, Vol. 88, No. 5:879–903, 2003.
- Pöyry E., P. Parvinen, and T. Malmivaara, "Can We Get from Liking to Buying? Behavioral Differences in Hedonic and Utilitarian Facebook Usage," *Electronic Commerce Research and Applications*, Vol. 12, No. 4:224–235, 2013.
- Raacke J. and J. Bonds-Raacke, "MySpace and Facebook: Applying the Uses and Gratifications Theory to Exploring Friend-Networking Sites," *Cyberpsychology & Behavior*, Vol. 11, No. 2:169–174, 2008.
- Ravichandran T. and C. Lertwongsatien, "Effect of Information Systems Resources and Capabilities on Firm Performance: A Resource-Based Perspective," *Journal of Management Information Systems*, Vol. 21, No. 4:237–276, 2005.
- Reinartz W., M. Haenlein, and J. Henseler, "An Empirical Comparison of the Efficacy of Covariance-based and Variance-based SEM," *International Journal of Research in Marketing*, Vol. 26, No. 4:332–344, 2009.
- Rosen J., "Facebook Fatigue? There's an App for That," <http://www.tennessean.com/story/money/tech/2014/09/20/facebook-fatigue-app/15858013/>, retrieved 5 December 2014, 2014.
- Rubin A.M., "An Examination of Television Viewing Motivations," *Communication Research*, Vol. 8, No. 2:141–165, 1981.
- Severin W.J. and J.W. Tankard, *Communication Theories: Origins, Methods, and Uses in the Mass Media*, NY, New York: Addison Wesley Longman, 2001.
- Severin W.J. and J.W. Tankard, "Uses of the Mass Media," *Communication Theories: Origins, Methods, and Uses in the Mass Media*, W.J. Severin and J.W. Tankard (eds.), Longman, New York, pp. 293–306, 1997.
- Shao G. "Understanding the Appeal of User-generated Media: A Uses and Gratification Perspective," *Internet Research*, Vol. 19, No. 1:7–25, 2009.

- Shin D.H., "User Experience in Social Commerce: In Friends We Trust," *Behaviour & Information Technology*, Vol. 32, No. 1:52–67, 2013.
- Smock A.D., N.B. Ellison, C. Lampe, and D.Y. Wohn, "Facebook as a Toolkit: A Uses and Gratification Approach to Unbundling Feature Use," *Computers in Human Behavior*, Vol. 27, No. 6:2322–2329, 2011.
- Stafford T.F., M.R. Stafford, and L.L. Schkade, "Determining Uses and Gratifications for the Internet," *Decision Sciences*, Vol. 35, No. 2:259–288, 2004.
- Statista, "Number of Monthly Active Facebook Users Worldwide from 3rd Quarter 2008 to 3rd Quarter 2014 (in Millions)," <http://www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/>, retrieved 24 November 2014, 2014.
- Steenkamp J.B.E. and H. Baumgartner, "On the Use of Structural Equation Models for Marketing Modeling," *International Journal of Research in Marketing*, Vol. 17, No. 2:195–202, 2000.
- Stern L.A. and K. Taylor, "Social Networking on Facebook," *Journal of the Communication*, Vol. 20: 9–20, 2007.
- Stone M., "Cross-validators Choice and Assessment of Statistical Predictions," *Journal of the Royal Statistical Society*, Vol. 36, No. 2:111–147, 1974.
- Taylor D.G., J.E. Lewin, and D. Strutton, "Friends, Fans, and Followers: Do Ads Work on Social Networks? How Gender and Age Shape Receptivity," *Journal of Advertising Research*, Vol. 51, No. 1:258–275, 2011.
- Trusov M., R.E. Bucklin, and K. Pauwels, "Effects of Word-of-Mouth versus Traditional Marketing: Findings from an Internet Social Networking Site," *Journal of Marketing*, Vol. 73, No. 5:90–102, 2009.
- Tuten T.L. and M.R. Solomon, *Social Media Marketing*. NJ, Upper Saddle River: Prentice Hall, 2013.
- Turri A.M., K.H. Smith, and E. Kemp, "Developing Affective Brand Commitment Through Social Media," *Journal of Electronic Commerce Research*, Vol. 14, No. 3:201–214, 2013.
- Tsai W.H.S. and L.R. Men, "Motivations and Antecedents of Consumer Engagement with Brand Pages on Social Networking Sites," *Journal of Interactive Advertising*, Vol. 13, No. 2:76–87, 2013.
- Vitak J., N. Ellison, and C. Steinfield, "The Ties That Bond: Re-Examining the Relationship between Facebook Use and Bonding Social Capital," *Proceedings of the 44th Hawaii International Conference on System Sciences*, 1–10, Hawaii, January, 2011.
- Wang Z., J.M. Tchernev, and T. Solloway, "A Dynamic Longitudinal Examination of Social Media Use, Needs, and Gratifications Among College Students," *Computers in Human Behavior*, Vol. 28, No. 5:1829–1839, 2012.
- Wang N., H. Xu, and J. Grossklags, "Third-party Apps on Facebook: Privacy and the Illusion of Control," *Proceedings of the 5th ACM Symposium on Computer Human Interaction for Management of Information Technology*, 1–10, Cambridge, December, 2011.
- Warner B., "Facebook Fatigue Among Teens Should Freak Out Marketers," <http://www.businessweek.com/articles/2013-04-11/facebook-fatigue-among-teens-should-freak-out-marketers>, retrieved 4 December 2014, 2013.
- West R.L. and L.H. Turner, *Introducing Communication Theory: Analysis and Application*, NY, New York: McGraw-Hill, 2014.
- Wirtz B.W. and V. Göttel, "Technology Acceptance in Social Media: Review, Synthesis and Directions for Future Empirical Research," *Journal of Electronic Commerce Research*, Vol. 17, No. 2:97–115, 2016.
- Wirtz B.W., R. Piehler, and P. Daiser, "E-Government Portal Characteristics and Individual Appeal: An Examination of E-Government and Citizen Acceptance in the Context of Local Administration Portals," *Journal of Nonprofit & Public Sector Marketing*, Vol. 27, No. 1:70–98, 2015.
- Wirtz B.W., R. Piehler, and S. Ullrich, "Determinants of Social Media Website Attractiveness," *Journal of Electronic Commerce Research*, Vol. 14, No. 1:11–33, 2013.
- Wirtz B.W., *e-Business*, Speyer: SpringerGabler, 2016.
- Yadav S., "Facebook - The Complete Biography," <http://mashable.com/2006/08/25/facebook-profile/>, retrieved 15 December 2014, 2006.
- Zeng F., L. Huang, and W. Dou, "Social Factors in User Perceptions and Responses to Advertising in Online Social Networking Communities," *Journal of Interactive Advertising*, Vol. 10, No. 1:1–13, 2009.
- Zikmund W.G., B.J. Babin, J.C. Carr, and M. Griffin, *Business Research Methods*, OH, Mason: Cengage Learning, 2012.

Appendix A

Reliability and validity of the measurement models

Factor	Indicators	Factor Load.	T-Statistics	AVE	Composite Reliability
Internal Core Functions	Within the scope of Facebook's Internal Core Functions, creating a profile is very important to me.	-0.027	0.158	---	---
	Within the scope of Facebook's Internal Core Functions, updating my status is very important to me.	0.336	1.660		
	Within the scope of Facebook's Internal Core Functions, sending and receiving messages is very important to me.	-0.451	2.892		
	Within the scope of Facebook's Internal Core Functions, using the chat is very important to me.	0.261	1.739		
	Within the scope of Facebook's Internal Core Functions, the 'Like'-button is very important to me.	0.004	0.020		
	Within the scope of Facebook's Internal Core Functions, commenting on posts is very important to me.	-0.002	0.013		
	Within the scope of Facebook's Internal Core Functions, posting pictures is very important to me.	-0.075	0.387		
	Within the scope of Facebook's Internal Core Functions, posting videos is very important to me.	0.449	2.390		
	Within the scope of Facebook's Internal Core Functions, marking people in pictures or videos is very important to me.	0.441	2.486		
External Service Quality	The single external services which Facebook offers in cooperation with other social media are of very high quality (e.g., Instagram, Pinterest, 9GAG).	0.864	15.159	0.844	0.956
	The single external services which Facebook offers in cooperation with other social media meet very high standards (e.g., Instagram, Pinterest, 9GAG).	0.933	19.362		
	The single external services which Facebook offers in cooperation with other social media are of superior quality in every respect (e.g., Instagram, Pinterest, 9GAG).	0.926	20.305		
	Altogether, the external services which Facebook offers in cooperation with other social media are of excellent quality (e.g., Instagram, Pinterest, 9GAG).	0.950	21.472		
Need for Data Privacy	When using Facebook, my personal data is sufficiently secured.	0.746	10.658	0.714	0.909
	When interacting on Facebook, I am very satisfied with the safety of my personal data.	0.851	13.420		
	I am convinced that Facebook does not use my personal data, if I do not allow it.	0.882	15.890		
	Altogether, Facebook attaches high value to the protection of data privacy.	0.894	16.870		

Need for New Friends	I like it a lot that Facebook enables me to find new friends.	0.858	25.968	0.666	0.887
	I like it a lot that I can build new relationships with people via Facebook.	0.880	33.278		
	I like it a lot that Facebook offers its users the possibility to connect with new friends.	0.649	10.743		
	I have a very high need for getting to know new friends via Facebook.	0.856	30.286		
Need for Social Self-Portrayal	Presenting myself on Facebook to share my interests, opinions and thoughts, is very important to me.	0.831	22.186	0.691	0.899
	Presenting myself on Facebook to share my experiences, is very important to me.	0.858	24.446		
	Presenting myself on Facebook to share my feelings, is very important to me.	0.803	17.300		
	Presenting myself on Facebook to gain respect and support, is very important to me.	0.832	21.498		
Usage Intensity	Please indicate how many hours you use Facebook on average per week.	0.375	2.578	0.529	0.654
	Please indicate how many posts you make on Facebook on average per week.	0.958	21.171		
Approval of Personalized Facebook Ads	I very much like personalized ads for products/services on Facebook (e.g., for apparel/internet flat rates).	0.906	54.624	0.828	0.935
	Personalized ads for products/services on Facebook do not only want to sell – they are also entertaining (e.g., for apparel/internet flat rates).	0.909	46.202		
	Personalized ads on Facebook are a very valuable information source concerning the respective products/services (e.g., for apparel/internet flat rates).	0.914	49.353		
Word-of-Mouth Intention	I intend to recommend my friends on Facebook the locally advertised products/ services (e.g., apparel/internet flat rates).	0.920	48.705	0.872	0.976
	I intend to share positive experiences about locally advertised products/services with my friends on Facebook (e.g., apparel/internet flat rates).	0.937	43.020		
	I intend to issue positive reviews on Facebook for the locally advertised products/services (e.g., apparel/internet flat rates).	0.952	72.954		
	I intend to positively comment on locally advertised products/services on Facebook (e.g., apparel/internet flat rates).	0.932	40.287		
	I intend to talk about positive characteristics of the locally advertised products/services with my friends on Facebook (e.g., apparel/internet flat rates).	0.915	31.804		
	I intend to recommend my friends on Facebook the locally advertised products/services (e.g., apparel/internet flat rates).	0.949	69.788		