



PRIMARY RESEARCH

Analyzing the credibility of eWord-of-mouth using customer reviews on social media

Alexandra Albon ¹, Patricia Kraft ², Carsten Rennhak ^{3*}^{1,2} Munich Business School, Munich, Germany³ Universität der Bundeswehr, Munich, Germany

Keywords

Eword-of-mouth
Credibility
Word-of-mouth
Social media

Abstract

This paper aims to identify the key drivers of credibility in eWord-of-Mouth based on a comprehensive literature analysis and a field study. To gather the data, an online questionnaire (n = 161) is used. The results demonstrate that credibility is predominantly influenced by source, message, and media credibility. Since social media sources are often anonymous, credibility surrogates need to be identified: this paper gives evidence that expertise/knowledge, style of speech, and logic/structure of message reasoning are perceived as the credibility drivers. Concerning media credibility, ease of navigation/usability and structure were identified as key drivers. Visual elements and interactivity were not identified as significant drivers of media credibility. From a practical perspective, collecting, systematizing, filter, and analyzing positive and negative recommendations is particularly important for firms. Moreover, companies should support consumers in writing high-quality reviews by offering templates.

Received: 8 December 2017**Accepted:** 5 January 2018**Published:** 13 February 2018

© 2018 The Author(s). Published by TAF Publishing

RELEVANCE AND PROBLEM STATEMENT

Recently, the development of the Internet into an essential means of communication has led to a radical change in existing communication. New forms of channels make it possible to generate, share, and quickly distribute content and provide new options for companies in terms of marketing tools (Ismagilova, Dwivedi, Slade, & Williams, 2017). One of these forms of communication is Electronic Word of Mouth (eWoM). Traditional WoM is the main source of information behind 20 percent to 50 percent of all purchase decisions (Bughin, Doogan, & Vetvik, 2010) and, in an online setting as well, strongly influences the customers' attitude towards a product (G.-H. Huang & Korfiatis, 2015; Ladhari & Michaud, 2015), brand (Lee, Rodgers, & Kim, 2009; Wu & Wang, 2011), or website (Lee et al., 2009). It, therefore, plays a decisive role in influencing a consumer's purchase intent (Beneke, Mill, Naidoo, & Wickham, 2015; Lin, Wu, Chen, et al., 2013).

A continuously growing number of communication stimuli implemented by companies is accompanied by the consumer's ubiquitous media consumption. This often results in the phenomenon known as information overload. Limited in their capacity to process information, consumers then find themselves compelled to select the many pieces of information that have an impact on them to filter only that which is relevant. One of these selection tools is the credibility of a piece of information (Brandlmaier et al., 2006; Case, Johnson, Andrews, Allard, & Kelly, 2004; Gröppel-Klein & Germelmann, 2009). Many studies underline that credibility significantly impacts the adaptation of eWoM (Qiu & Li, 2010). Up till now, however, only a few empirical studies have dealt specifically with the individual influences of credibility in the eWoM context (M. Y. Cheung, Luo, Sia, & Chen, 2009; Lim & Van Der Heide, 2014; Lis, 2013). To help clarify how companies can derive maximum marketing benefit from eWoM, this study analyses the individual influ-

*Corresponding author: Carsten Rennhak

†Email: Carsten.rennhak@unibw.de



ence factors of eWoM credibility from both a theoretical and empirical perspective.

THEORETICAL BASIS

WoM

Arndt (1967, p. 3) defines WoM as “oral, person-to-person communication between a recipient and a communicator whom the recipient perceives as non-commercial, regarding a brand, a product or a service”. Arndt (1967), thus, emphasises four key characteristics of traditional WoM and postulates that it must involve personal communication, oral transfer, a non-commercial sender, and a product, brand, or service as the subject of communication (Lis & Korchmar, 2012).

EWOM

In the online context, eWoM can be defined as “any positive or negative statement made by potential, actual, or former customers about a product or company which is made available to a multitude of people and institutions via the Internet” (Hennig-Thurau, Gwinner, Walsh, & Gremler, 2004). eWoM communications are characterised by enormous range, communication partner anonymity, lack of privacy, weak social ties between individual users, and no guarantee of consistency regarding the respective information on the Internet (Eisingerich, Chun, Liu, Jia, & Bell, 2015; Ismagilova et al., 2017).

An analysis of eWoM studies shows three current key research areas: the motivation to deliver and receive eWoM, the power of persuasion of eWoM, and the general effect of eWoM. Regarding the active delivery of eWoM, these studies reveal that altruism is a key motive for participation, closely followed by the communicator’s desire to present him or herself and relieve emotive tensions (Berger, 2014; Hennig-Thurau & Hansen, 2001; Rathore, 2015). For the most part, eWoM is welcomed because of the opportunity it provides to clarify ambiguities concerning products quickly and efficiently on online feedback platforms (Godes & Mayzlin, 2004; Murray, 1991). This significantly reduces the perceived risk of mispurchasing when making purchase decisions (Ha, 2002; Visser, 2016).

Regarding the persuasive power of eWoM, a distinction is made between credibility and usefulness for the recipient. A recommendation is seen as helpful and useful when it functions as a supportive tool for the consumer to make a buying decision. As part of this process, convincing reviews are meant to influence consumer attitudes and purchase intent (Davis, 1989; Jeong & Koo, 2015). An assessment of the extent to which an eWoM message is useful depends

on attributes that can be ascribed to either the communicator, the medium, or even the message itself and covers factors, such as the rankings, quality, and quantity of the information communicated and the nature of the platform (Ismagilova et al., 2017).

The last research area deals with the effect of eWoM communication. In this context, it has been revealed that eWoM substantially influences the adaptation of information, consumers’ attitude, and purchase intent (Baek, Ahn, & Oh, 2014; Beneke et al., 2015; M. Y. Cheung, Luo, Sia, & Chen, 2007; G.-H. Huang & Korfiatis, 2015; Ismagilova et al., 2017; Wang, Teo, & Wei, 2015).

Communication in the eWoM Context

Based on key findings from the previous mass communication research, the communication process can be subdivided into individual research areas (Schenk, 2007). In the eWoM context, this translates into the following key communication components: the communicator of a message, the communication content, the communication channel, the recipient, the context, and the communication effect. In eWoM research, the effect of eWoM is classified as a dependent variable (C. M. Cheung & Thadani, 2012), while the recipient and the situational context are classified as moderating variables. Within the eWoM communication process, the communicator, message, and medium are the only variables that are understood to be independent (C. M. Cheung & Thadani, 2012; Doh & Hwang, 2009). They are the subject of all further analyses of this paper.

Credibility

Although various scientific disciplines deal with the research topic of credibility, certain parameters apply to all disciplines: communication, relevance, and uncertainty (Eisend, 2003). In empirical research, credibility is understood as a multidimensional construct. The most decisive papers in this respect are those of Hovland and Weiss (1951) in the 1940s. The authors describe credibility through the dimensions of competence and trustworthiness (Hovland & Weiss, 1951; Schenk, 2007).

From a theoretical perspective, the recipient-centred approach has become particularly well-established for clearly defining credibility. Hence, credibility can be defined as “a characteristic that is ascribed to people, organisations or their communicative products (oral or written texts, audio-visual illustrations) by somebody (recipients) with regard to something (events, circumstances, etc.)” Bentele and Seidenglanz (2015, p. 412).

While credibility research can be subdivided into two key

research areas (Eisend, 2003), this study focuses on credibility assessment. It investigates the question of which factors the recipient uses to determine an object's credibility (Nawratil, 2013) and comprises two further research areas: credibility diagnosis and credibility attribution. The latter forms the basis for this study and analyses the observations made by the recipient that determine his or her credibility judgement (Eisend, 2003). Credibility assessment can be either behaviour-oriented, content-oriented, or source or context-oriented (Nawratil, 2013), the latter covered by the most studies being the most extensive area of credibility research and seemingly extremely relevant, particularly with regard to the eWoM communication process components. Source and context-oriented analysis examines the characteristics of the communicator, message, medium, context, and recipient (Eisend, 2003; Nawratil, 2013). Regarding the independent variables of the eWoM communication process, results have shown that for the communicator, it is mainly the properties of competence, trustworthiness, similarity, and physical attractiveness; for the message style, the language, contents, and structure of the message; and, for the medium, the type of medium, the accuracy with which the information is communicated, and the visual presentation that have an impact on perceived credibility (Bentele & Seidenglanz, 2015; Carbone, 1975; Eisend, 2003; Ohanian, 1990; Robinson & Kohut, 1988).

CREDIBILITY IN EWOM COMMUNICATION

Current Status of Research on eWoM Credibility

To date, only a few studies explicitly investigating the credibility of eWoM have been published (M. Y. Cheung et al., 2007; Lim & Van Der Heide, 2014; Lis, 2013; Mackiewicz, 2008; Oetting, 2010). Many of these focus only on the subject in a secondary role, as part of research on the general effect of eWoM (Hennig-Thurau et al., 2004; Oetting, 2010; Walsh & Mitchell, 2010) and on product success (Chevalier & Mayzlin, 2006) or as part of the analysis of incentives for eWoM (Hennig-Thurau et al., 2004; Hung & Li, 2007).

The theoretical basis of both the eWoM communication process and source- and context-oriented credibility assessment considers the communicator, the message, and the medium as relevant determinants. In credibility research in the eWoM context, studies on communicator credibility dominate (M. Y. Cheung et al., 2007; Lis, 2013; Mackiewicz, 2008; Steffes & Burgee, 2009), followed closely by studies regarding the individual eWoM message (C. M. Cheung, Lee, & Rabjohn, 2008).

Communicator Characteristics

Expertise

Studies on the recipient's credibility assessment in an offline context have identified the dimensions of competence and trustworthiness as relevant. Ohanian (1990, p. 44) defines expertise as "the extent to which a person is perceived to possess knowledge, skills or experience and, thereby, is considered to provide accurate information"; that is, it describes the communicator's expert knowledge, professionalism, and experience with respect to a specific product or service of interest to the recipient.

The analysis of eWoM in online communities, however, has also shown that recipients often base their decisions not so much on expert knowledge but, rather, on the number of reviews submitted by other participants. According to (J.-H. Huang & Chen, 2006), however, a lack of expertise on the part of the communicator can partly be compensated in purchase decisions with a higher level of trustworthiness.

Trustworthiness

Trustworthiness refers to the level of trust a recipient ascribes to the communicator of an eWoM message (Ismagilova et al., 2017). The credibility of a message submitted by a communicator who seems trustworthy is mistrusted far more rarely than the credibility of sources that signal a low level of trustworthiness from the outset. Various studies show that trustworthiness has a positive effect on perceived credibility (C. M. Cheung & Thadani, 2012; Lee et al., 2009; Lis, 2013; Mackiewicz, 2008). Trust is a key factor in recipient participation in virtual communities and on virtual platforms (Reichelt, 2013) and can, therefore, be understood as a criterion for credibility.

Homophily

In this context, homophily describes the degree of similarity between the communicator and the recipient and can refer to criteria, such as values and attitudes, social status, and education and other criteria, according to which two communication partners can be compared (Rogers, 2010). WoM research has established that homophily increases the communicator's influence and that the recipient takes homophilic sources into consideration much more frequently than other sources of information. Some studies also add to the traditional understanding of homophily the decisive criterion that homophily is to be understood not only as a similarity but also as an emotional bond between the communication partners, based on features, such as similar life-styles, preferences, and tastes e.g., (Lis & Korchmar, 2012).

Message Characteristics

Type of message

The components of an eWoM message have an impact on perceived credibility (M. Y. Cheung et al., 2009; Doh & Hwang, 2009). A particularly relevant feature in this context is the nature of the message (Ismagilova et al., 2017). This encompasses the differentiation between one and two-sided messages, on one hand, and the distinction between positive and negative messages, on the other. One-sided messages are characterized by either only positive or only negative content, while two-sided messages provide the recipient with both positive and negative message elements (Küster, 2012).

The correct proportion between positive and negative message elements increases perceived credibility and that a small number of negative elements amongst many positive elements can achieve an authentic and credible effect (Doh & Hwang, 2009). Generally, in the eWoM credibility context, two-sided messages are said to be more credible more often than one-sided messages (Jensen, Averbeck, Zhang, & Wright, 2013) and that, as part of the analysis of one-sided messages, many empirical findings indicate that primarily, negative recommendations achieve a greater effect than positive recommendations (Bae & Lee, 2011; Ismagilova et al., 2017).

Argument Quality

The quality of the argument of an eWoM message sometimes has the greatest effect on perceived credibility (Lis & Korchmar, 2012). The terms argument strength, argument quality, and information quality are often used synonymously and, in terms of the perceived persuasive strength of an informational message, describe the same aspect (Bhattacharjee & Sanford, 2006; Lis & Korchmar, 2012). Teng, Wei Khong, Wei Goh, and Yee Loong Chong (2014) have established a positive connection between the argument strength of an eWoM message and its perceived credibility. The effect an argument has on a recipient depends on four dimensions: the relevance of the information from the recipient's perspective, the topicality of the

message, the accuracy of the information communicated, and the information's comprehensiveness (Ismagilova et al., 2017).

Medium Characteristics

Website/platform presentation

In research on website credibility, that is, the study of factors that determine the credibility of the medium, various approaches can be identified. The most important is probably the study of what is referred to as surface credibility. Surface credibility refers to the credibility that is perceived based on an assessment of a website's initial superficial impression (Fogg & Tseng, 1999). Wathen and Burkell (2002) postulate that a website's surface credibility is probably the most important aspect of the recipient's online credibility assessment because it determines whether further credibility criteria are to be studied in a further phase.

Type of platform

Part of credibility research examines the impact of social media as a communication channel on the perceived credibility of eWoM. The use of social media as a communication channel significantly increases the perceived credibility and usefulness of eWoM communication and ultimately leads to the recipient changing his or her attitude and adapting some of the information. The possibility of interacting with other members within social networks is the main reason for the high level of perceived credibility (Hajli, 2018; Nugraha & Indrawati, 2017).

EMPIRICAL STUDY

Structure of the Study, Method, and Procedure

A theoretical elaboration of the current status of research shows that communicator, message, and medium characteristics affect the perceived credibility of eWoM. The following considerations examine these characteristics from an empirical perspective. To recapitulate, the communicator's expertise and trustworthiness and the homophily between the communicator and the recipient have a positive effect on credibility.

TABLE 1. Hypotheses on the effect of the communicator

H1	Communicator characteristics increase the perceived credibility of eWoM
H1a	The greater the communicator’s perceived expertise, the greater the perceived credibility of eWoM
H1b	The greater the communicator’s perceived trustworthiness, the greater the perceived credibility of eWoM
H1c	The greater the perceived homophily, the higher the perceived credibility of eWoM

TABLE 2. Hypotheses on the effect of the message

H2	Message characteristics increase the perceived credibility of eWoM
H2a	Two-sided eWoM messages are perceived as more credible than one-sided eWoM messages
H2b	Negative eWoM messages are perceived as more credible than positive eWoM messages
H2c	The greater the perceived relevance of an eWoM message, the higher the perceived credibility of eWoM
H2d	The greater the perceived topicality of an eWoM message, the greater the perceived credibility of eWoM
H2e	The greater the perceived accuracy of an eWoM message, the greater the perceived credibility of eWoM
H2f	The greater the perceived information comprehensiveness of an eWoM message, the greater the perceived credibility of eWoM

TABLE 3. Hypotheses on the effect of the medium

H3	The medium’s characteristics increase the perceived credibility of eWoM
H3a	The better the perceived visual presentation of the medium, the greater the perceived credibility of eWoM
H3b	The greater the perceived simplicity of navigation and structure within the medium, the greater the perceived credibility of eWoM
H3c	The greater the perceived social interactivity in social networks, the greater the perceived credibility of eWoM

Based on the findings above, in this empirical study, it is necessary to look at the effects of the communicator, mes-

sage, and medium on the perceived credibility as independent variables. Figure 1 illustrates this study’s structure.

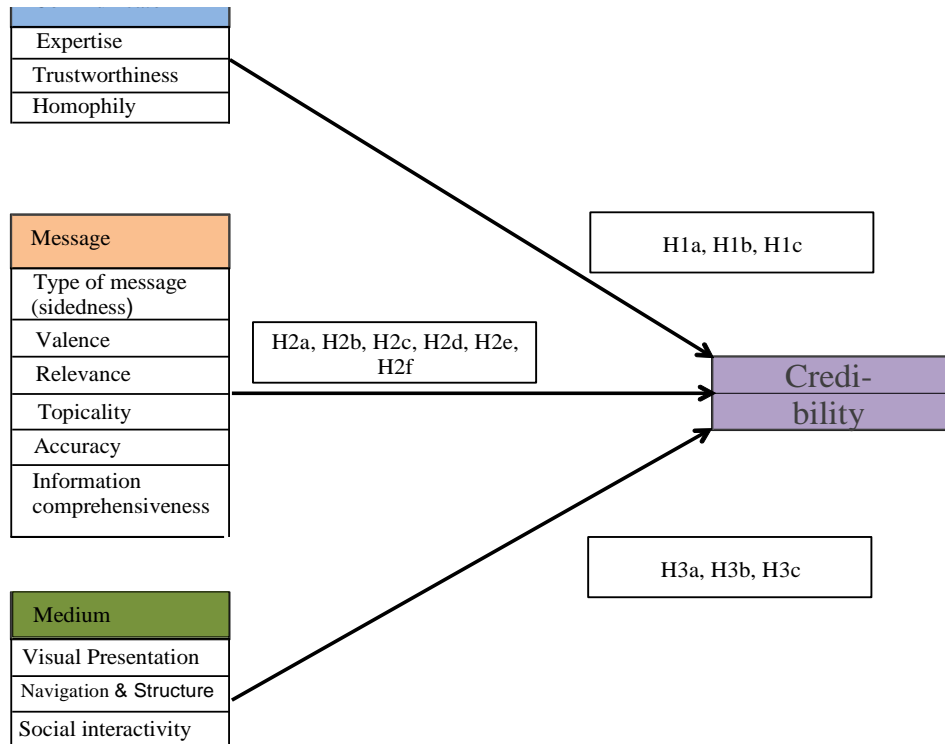


FIGURE 1. Study structure - Analysis of the credibility of eWoM

To verify the coherences postulated in the theory, cross-sectional data from a web survey were examined (Schnell, Hill, & Esser, 1999). All the scales for operationalising the variables were taken from other studies and adapted.

TABLE 4. Operationalisation of the independent variables

Subject of the study	Variable	Item	Determinant	Source	
Communi- cator	Expertise	expl	The writer of a re- view/recommenda- tion should...	...be very well informed about the product being validated/ recommended.	Reichelt (2013)
		exp2		...have had much experience with the product in question.	Reichelt (2013)
		exp3		...have a positive feeling about the product.	Reichelt (2013)
	Trustworthi- ness	tru1	The writer of a re- view/recommenda- tion should...	...be trustworthy.	Reichelt (2013)
		tru2		...submit honest reviews and recommendations.	Reichelt (2013)
		tru3		...be trustworthy.	Reichelt (2013)
		tru4		...be reliable.	Reichelt (2013)
	Homophily	hom1	The writer of a re- view/recommenda- tion should...	...have opinions and beliefs simi- lar to mine.	Reichelt (2013)
		hom2		...be quite similar to me.	Reichelt (2013)
		hom3		...have tastes and preferences similar to mine.	Reichelt (2013)
Message	Message type	sid1	A review/recommen- dation should...	...cover both positive and nega- tive aspects of the product.	M. Y. Cheung et al. (2009)
		sid2		...cover either only positive or only negative aspects of the product.	M. Y. Cheung et al. (2009)
	Valence	val1	A review/recommen- dation should...	...on the whole cover mainly the positive aspects of the product.	M. Y. Cheung et al. (2009)
		val 2		...on the whole cover mainly the negative aspects of the product.	M. Y. Cheung et al. (2009)
	Relevance	rel1	The content of a rec- ommendation/review should...	...be useful for me.	Lee et al. (2009)
		rel2		...be relevant to me.	Lee et al. (2009)
		rel3		...suit my personal situation.	Lee et al. (2009)
		rel4		...be applicable to my personal situation.	Lee et al. (2009)

Table 4 Continuee

Subject of the study	Variable	Item	Determinant	Source	
	Topicality	top1	The content of a recommendation/review should...	...be up-to-date.	C. M. Cheung et al. (2008)
		top2		...be contemporary.	C. M. Cheung et al. (2008)
		top3		...bring me up-to-date.	C. M. Cheung et al. (2008)
	Accuracy	acc1	The content of a recommendation/review should...	...be accurate.	C. M. Cheung et al. (2008)
		acc2		...be correct.	C. M. Cheung et al. (2008)
		acc3		...be reliable.	C. M. Cheung et al. (2008)
Medium	Visual presentation	vis1	It is particularly important for me that...	...the website looks great.	Montoya-Weiss, Voss, and Grewal (2003)
		vis2		...the website makes an appealing impression on me.	Montoya-Weiss et al. (2003)
		vis3		...the website contains great graphic illustrations.	Montoya-Weiss et al. (2003)
	Navigation & structure	nav1	It is particularly important for me that...	...it be easy to find the information I need on the website.	Montoya-Weiss et al. (2003)
		nav2		...the website contains a clear breakdown that lists all the topics it covers.	Montoya-Weiss et al. (2003)
		nav3		...it be easy to navigate freely on the website.	Montoya-Weiss et al. (2003)
		nav4		...the website has a structure that is logically structured and easy to follow.	Montoya-Weiss et al. (2003)
	Social Interactivity	rel1	In social networks...	...I ask my friends for tips and advice before I actually decide to purchase something.	Hajli (2018)
		rel2		...I am willing to share with my friends my own experiences with products and services in the form of reviews and recommendations.	Hajli (2018)
		rel3		...I am willing to recommend to my friends products and services that are worth purchasing.	Hajli (2018)

TABLE 5. Operationalisation of the dependent variables

Subject of the study	Variable	Item	Determinant	Source
Credibility	Credibility	cred1	For me, it is very important that a review/recommendation...	...be a true representation of the facts. M. Y. Cheung et al. (2009)
		cred2		...be precise. M. Y. Cheung et al. (2009)
		cred3		...be credible. M. Y. Cheung et al. (2009)

TABLE 6. Fornell-Larcker criterion

	TOP	CRED	EXP	ACC	HOM	COM	P NAV	REL	SID	SOC	VAL	VER	VIS
Topicality (TOP)	0.913												
Credibility (CRED)	0.678	0.914											
Expertise (EXP)	0.59	0.788	0.849										
Accuracy (ACC)	0.43	0.487	0.462	0.906									
Homophily (HOM)	0.601	0.812	0.612	0.398	0.875								
Inf comprehensiveness (COMP)	0.716	0.79	0.717	0.507	0.726	0.881							
Nav. & structure (NAV)	0.589	0.676	0.64	0.324	0.596	0.649	0.867						
Relevance (REL)	0.545	0.644	0.566	0.326	0.597	0.585	0.444	0.921					
Sidedness (SID)	0.347	0.482	0.57	0.418	0.468	0.45	0.283	0.34	0.881				
Soc. int. (SOC)	-0.1	-0.05	-0.08	-0.18	-0.11	-0.112	-0.05	-0.15	-0.19	0.913			
Valence (VAL)	0.232	0.185	0.19	0.212	0.217	0.202	0.209	0.235	0.187	-0.18	0.877		
Trustworthiness (TRU)	0.376	0.55	0.443	0.32	0.496	0.478	0.465	0.276	0.314	0.114	0.087	0.881	
Visual structure (VIS)	0.264	0.322	0.279	0.178	0.303	0.387	0.438	0.191	0.218	-0.01	0.055	0.273	0.952

The average variance of each construct is greater than its squared correlations with the other constructs. Vice versa, the root of the average variance of each construct is greater than its correlations with the other constructs

The questionnaire was distributed via social networks, with $n = 161$ respondents. The questionnaire got distributed through social networks and was divided into three main areas: in the beginning section, questions were asked about the general usage of social networks, after which the variables were measured and the test participants were asked demographic questions. As this study aims to analyse cred-

ibility of eWoM on social media, only survey participants with access to social media have been taken into consideration (filter question). With the help of a pre-test, a formal and content-related test as well as an initial item and scale analysis were carried out. With the exception of a few ambiguities, the questionnaire was rated by the test persons as comprehensible and the measuring quality of the indi-

vidual scales was classified as very good. Two items with a relatively low selectivity value were removed to improve the Cronbach's alpha values of the respective scales. The sample for the main study was generated by means of an arbitrary selection process. Results based on this sampling technique need to be handled with care as this convenient sample can be subject to potential sampling bias and self-selection bias. Hence, this sample cannot be claimed to be as representative as random sampling, but it can certainly be used to review hypotheses (Diekmann, 2003).

RESULTS OF THE EMPIRICAL STUDY

At the beginning of the data analysis, an examination was carried out to establish any differences amongst the subjects with regard to the significance of the dependent and independent variables in the process of assessing an eWoM message. A comparison between male and female subjects using the Mann-Whitney U test revealed that the variables of credibility, expertise, and simplicity of navigation on a website are significantly more important for female participants. A further comparison between young subjects (< 35 years, median split) and older subjects (≥ 35 years) showed that much greater importance is attached to a website's visual presentation by subjects under 35 than by older test persons. According to Cohen's classification, however, all the differences in tendency identified were weak effects (Cohen, 1992), with the strength of the effect varying from 0.16 to 0.19. In a further step, an analysis was carried out

to determine any differences regarding the way a subject comes across an eWoM message in social networks. As part of this analysis, a distinction was made in the questionnaire between persons who, in the past, had been confronted with eWoM messages exclusively as the result of an active search, exclusively by receiving them passively (e.g., by seeing a recommendation on the news page of a social network), or as a result of both active searching and passive receipt. Since hardly anybody who took part in the survey specified that they had never come into contact with eWoM messages in social networks, this group was omitted from the following analyses.

With regard to credibility, expertise, homophily, topicality, information comprehensiveness, visual presentation, and navigation and structure, Kruskal-Wallis tests revealed significant differences between exclusively active participants and participants who were confronted with eWoM both actively and passively. There are also significant differences between exclusively active and exclusively passive participants for the variables of homophily, visual presentation, and information comprehensiveness. For all tendency differences, the respective variables were found to be more important among the exclusively active subjects than among the comparison groups. Subsequently, the actual hypotheses were tested using the inclusion method of multiple regression. To this end, the principle of least squares was used (Streck, 2004). Table 7 gives an overview about the regression analysis results.

TABLE 7. Multiple regression analysis-results

Model	Coefficients of the Multiple Regression				Sig.
	Unstandardized Coefficients		Standardized	t	
	β	Std. Error	β		
Expertise	0.225	0.062	0.211	3.634	0.000
Trustworthiness	0.072	0.043	0.075	1.685	0.094
Homophily	0.248	0.055	0.261	4.505	0.000
Sidedness	0.011	0.058	0.009	0.198	0.844
Valence	-0.041	0.042	-0.038	-0.958	0.340
Relevance	0.121	0.041	0.15	2.957	0.004
Topicality	0.107	0.042	0.135	2.533	0.013
Information comprehensiveness	0.168	0.065	0.167	2.591	0.011
Accuracy	0.043	0.033	0.059	1.315	0.191
Visual presentation	0.006	0.028	0.009	0.22	0.826
Navigation & structure	0.114	0.049	0.125	2.31	0.023
Social interactivity	-0.055	0.029	-0.076	-1.912	0.058
Adjusted R²					0.799
Effect size					1.99

An F -test shows that the generated model is highly significant ($F(12.28) = 47.349, p < 0.001$) and that a causal connection can be expected between the independent and dependent variables. Moreover, the adjusted R^2 indicates that 79.9% of the credibility variance can be ascribed to the independent variables in the model, indicating that the entire model has high explanatory power. According to Cohen (1992) classification, a strong overall effect can, therefore, be assumed. Analysis of the beta coefficients reveals that the communicator's expertise ($t = 3.634, \beta = 0.225, p < 0.001$) and the homophily between the communicator and

the recipient ($t = 4.505, \beta = 0.248, p < 0.001$) have a highly significant positive influence on credibility and that the variables' relevance ($t = 2.957, \beta = 0.121, p = 0.004$), topicality ($t = 2.533, \beta = 0.107, p = 0.013$), information comprehensiveness ($t = 2.591, \beta = 0.168, p = 0.011$), and navigation and structure ($t = 2.31, \beta = 0.114, p = 0.023$) have significant influence. Thus, according to results of this empirical study, the hypotheses of the effect of trustworthiness, sidedness, valence, accuracy, visual presentation, and social interactivity must be discarded at the 5% significance level. Table 8 gives an overview about the test results.

TABLE 8. Summary of results

Communicator	H1a	The greater the communicator's perceived expertise, the greater the perceived credibility of eWoM	Confirmed
	H1b	The greater the communicator's perceived trustworthiness, the higher the perceived credibility of eWoM	Dismissed
	H1c	The greater the perceived homophily, the greater the perceived credibility of eWoM, too	Confirmed
Message	H2a	Two-sided eWoM messages are perceived as more credible than one-sided eWoM messages	Dismissed
	H2b	Negative eWoM messages are perceived as more credible than positive eWoM messages	Dismissed
	H2c	The greater the perceived relevance of an eWoM message, the greater the perceived credibility of eWoM	Confirmed
	H2d	The greater the perceived topicality of an eWoM message, the greater the perceived credibility of eWoM	Confirmed
	H2e	The greater the perceived accuracy of an eWoM message, the greater the perceived credibility of eWoM	Dismissed
	H2f	The greater the perceived information comprehensiveness of an eWoM message, the greater the perceived credibility of eWoM	Confirmed
Medium	H3a	The better the perceived visual presentation of the medium, the greater the perceived credibility of eWoM	Dismissed
	H3b	The greater the perceived simplicity of navigation and structure within the medium, the greater the perceived credibility of eWoM	Confirmed
	H3c	The greater the perceived social interactivity in social networks, the greater the perceived credibility of eWoM	Dismissed

CONCLUSION

This study showed that the communicator's influence factors in particular play a key role in the credibility assessment of eWoM. Surprisingly, trustworthiness was the only factor that failed significance. In the online context, it is often problematic for the recipient to assess the extent to which a communicator is trustworthy because less information is available due to the communicator's anonymity. Expertise, however, is easier to show in the online context by demonstrating expert knowledge or an appropriate style

of language. In addition, the widely held assumption that argument quality is one of the key credibility features of an eWoM message has been largely confirmed. With regard to the medium, only the simplicity of navigation and structure was identified as a significant influence factor. Visual presentation does not seem to be particularly important in social networks, which is probably also attributable to the fact that the creative potential of a social network is much more restricted than it is on normal websites due to the net-

work operator's standards. The connection between social interactivity and credibility as postulated in research was not verified either.

LIMITATIONS AND RECOMMENDATIONS

This empirical study is, however, subject to limitations. On one hand, the sample selection process is an arbitrary selection that cannot be said to be as representative as a random sample (Schnell et al., 1999). Hence, future research may focus on more sophisticated sampling techniques. In addition, this survey design can have problems in terms of clearly allocating a causal connection between dependent and independent variables, because all the variables were measured at the same time and there was no feature-typical time difference between cause and effect (Schnell et al., 1999). The independent variables also sometimes show increased correlations amongst each other. Multicollinearity and method distortion could be ruled out in a validity check but in the multiple regression, some variables could be 'suppressed' by others, possibly because they do not lend any additional explanatory power to the overall model (Aydemir, 2013).

Concerning practical implications, it is vital, as a first step, for companies to be able to handle existing eWoM efficiently. In this respect, it is particularly important to deliberately

collect, systematise, filter, and analyse positive and negative recommendations, suggestions, and comments in social networks (Ismagilova et al., 2017). On this account, companies should discuss the investment in cutting-edge software solutions. In a second step, companies should help consumers to write high-quality reviews with the help of templates, which could be based on relevant and current key subjects ascertained in eWoM data analysis (M. Y. Cheung et al., 2009). Nevertheless, offering templates for higher quality reviews may give rise to the danger that consumers feel patronized. This empirical study has also specifically shown that review writers with a high level of expertise and who are socially similar to the consumer are regarded as exceptionally credible. Companies can, thereby, benefit by identifying so-called influencers or market mavens in social networks. These informed reference providers can be either well-known bloggers or individual, loyal, satisfied, and experienced consumers (Brown & Hayes, 2008). With targeted use and the help of a bonus system, they can be prompted to regularly write positive and high-quality recommendations (M. Y. Cheung et al., 2009; Chu & Kim, 2011). Furthermore, to exploit the effects of homophily, companies and internet platforms should ensure that potential customers are able to filter reviews by socio-demographic characteristics. Thereby, people can find product or company reviews written by people with similar background.

REFERENCES

- Arndt, J. (1967). Word of mouth advertising and informal communication. In F. Cox (Ed.), *Risk taking and information handling in consumer behavior*. Boston, MA: Harvard Business School Press, Graduate School of Business Administration. doi:<https://doi.org/10.2307/25148755>
- Aydemir, S. (2013). Method of multiple linear regression. *VDSSt Spring Conference 2013*, Wolfsburg, Germany.
- Bae, S., & Lee, T. (2011). Gender differences in consumers' perception of online consumer reviews. *Electronic Commerce Research*, 11(2), 201-214. doi:<https://doi.org/10.1007/s10660-010-9072-y>
- Baek, H., Ahn, J., & Oh, S. (2014). Impact of tweets on box office revenue: Focusing on when tweets are written. *ETRI Journal*, 36(4), 581-590. doi:<https://doi.org/10.4218/etrij.14.0113.0732>
- Beneke, J., Mill, J., Naidoo, K., & Wickham, B. (2015). The impact of willingness to engage in negative electronic word-of-mouth on brand attitude: A study of airline passengers in South Africa. *Journal of Business and Retail Management Research*, 9(2), 68-84.
- Bentele, G., & Seidenglanz, R. (2015). Confidence and belief. In R. Fröhlich, P. Szyszka, & G. Bentele (Eds.), *Public relations manual*. Berlin, Germany: Springer.
- Berger, J. (2014). Word of mouth and interpersonal communication: A review and directions for future research. *Journal of Consumer Psychology*, 24(4), 586-607. doi:<https://doi.org/10.1016/j.jcps.2014.05.002>
- Bhattacharjee, A., & Sanford, C. (2006). Influence processes for information technology acceptance: An elaboration likelihood model. *MIS Quarterly*, 30(4), 805-825.
- Brandlmaier, E., Frank, H., Korunka, C., Plessnig, A., Schopf, C., & Tamegger, K. (2006). *Economic education of pupils of general secondary schools: Development, development of a measuring instrument, selected results* (Doctoral dissertation). Webster University Vienna, Vienna, Austria.

- Brown, D., & Hayes, N. (2008). *Influencer marketing: Who really influences your customers?* Amsterdam, Netherlands: Elsevier.
- Bughin, J., Doogan, J., & Vetvik, O. J. (2010). A new way to measure word-of-mouth marketing. *McKinsey Quarterly*, 2, 113-116.
- Carbone, T. (1975). Stylistic variables as related to source credibility: A content analysis approach. *Communications Monographs*, 42(2), 99-106. doi:<https://doi.org/10.1080/03637757509375884>
- Case, D. O., Johnson, J. D., Andrews, J. E., Allard, S. L., & Kelly, K. M. (2004). From two-step flow to the internet: The changing array of sources for genetics information seeking. *Journal of the American Society for Information Science and Technology*, 55(8), 660-669. doi:<https://doi.org/10.1002/asi.20000>
- Cheung, C. M., Lee, M. K., & Rabjohn, N. (2008). The impact of electronic word-of-mouth: The adoption of online opinions in online customer communities. *Internet Research*, 18(3), 229-247. doi:<https://doi.org/10.1108/10662240810883290>
- Cheung, C. M., & Thadani, D. R. (2012). The impact of electronic word-of-mouth communication: A literature analysis and integrative model. *Decision Support Systems*, 54(1), 461-470. doi:<https://doi.org/10.1016/j.dss.2012.06.008>
- Cheung, M. Y., Luo, C., Sia, C. L., & Chen, H. (2007). How do people evaluate electronic word-of-mouth? informational and normative based determinants of perceived credibility of online consumer recommendations in China. In (Vol. 18). In *Pacific-Asia Conference on Information Systems (PACIS)*, Auckland, New Zealand.
- Cheung, M. Y., Luo, C., Sia, C. L., & Chen, H. (2009). Credibility of electronic word-of-mouth: Informational and normative determinants of on-line consumer recommendations. *International Journal of Electronic Commerce*, 13(4), 9-38. doi:<https://doi.org/10.2753/jec1086-4415130402>
- Chevalier, J. A., & Mayzlin, D. (2006). The effect of word of mouth on sales: Online book reviews. *Journal of Marketing Research*, 43(3), 345-354. doi:<https://doi.org/10.1509/jmkr.43.3.345>
- Chu, S.-C., & Kim, Y. (2011). Determinants of consumer engagement in electronic Word-of-Mouth (eWOM) in social networking sites. *International Journal of Advertising*, 30(1), 47-75. doi:<https://doi.org/10.2501/ija-30-1-047-075>
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155-159. doi:<https://doi.org/10.1037//0033-2909.112.1.155>
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340. doi:<https://doi.org/10.2307/249008>
- Diekmann, A. (2003). *Empirical social research. basics, methods, applications*. Hamburg, Germany: Rowohlt.
- Doh, S.-J., & Hwang, J.-S. (2009). How consumers evaluate electronic Word-of-mouth (eWoM) messages. *Cyber Psychology & Behavior*, 12(2), 193-197. doi:<https://doi.org/10.1089/cpb.2008.0109>
- Eisend, M. (2003). *Credibility in marketing communication: Conception, influencing factors and potential effect* (1st ed.). Berlin, Germany: Springer-Verlag. doi:[10.1007/978-3-322-90954-1](https://doi.org/10.1007/978-3-322-90954-1)
- Eisingerich, A. B., Chun, H. H., Liu, Y., Jia, H., & Bell, S. J. (2015). Why recommend a brand face-to-face but not on facebook? how word-of-mouth on online social sites differs from traditional word-of-mouth. *Journal of Consumer Psychology*, 25(1), 120-128. doi:<https://doi.org/10.1016/j.jcps.2014.05.004>
- Fogg, B., & Tseng, H. (1999). The elements of computer credibility. In *Proceedings of the SIGCHI conference on human factors in computing systems* (p. 80-87). Pittsburgh, PA: ACM. doi:<https://doi.org/10.1145/302979.303001>
- Godes, D., & Mayzlin, D. (2004). Using online conversations to study word-of-mouth communication. *Marketing science*, 23(4), 545-560.
- Gröppel-Klein, A., & Germelmann, C. C. (2009). *Marketing media: Corporate communication options*. Wiesbaden, Germany: Gabler Verlag.
- Ha, H.-Y. (2002). The effects of consumer risk perception on pre-purchase information in online auctions: Brand, word-of-mouth, and customized information. *Journal of Computer-Mediated Communication*, 8(1). doi:<https://doi.org/10.1111/j.1083-6101.2002.tb00160.x>
- Hajli, N. (2018). Ethical environment in the online communities by information credibility: A social media perspective. *Journal of Business Ethics*, 149(4), 799-810. doi:<https://doi.org/10.1007/s10551-016-3036-7>
- Hennig-Thurau, T., Gwinner, K. P., Walsh, G., & Gremler, D. D. (2004). Electronic word-of-mouth via consumer-opinion platforms: what motivates consumers to articulate themselves on the internet? *Journal of Interactive Marketing*,

- 18(1), 38-52. doi:<https://doi.org/10.1002/dir.10073>
- Hennig-Thurau, T., & Hansen, U. (2001). Customer articulations on the internet. *Betriebswirtschaft-Stuttgart*, 61(5), 560-580.
- Hovland, C. I., & Weiss, W. (1951). The influence of source credibility on communication effectiveness. *Public Opinion Quarterly*, 15(4), 635-650. doi:<https://doi.org/10.1086/266350>
- Huang, G.-H., & Korfiatis, N. (2015). Trying before buying: The moderating role of online reviews in trial attitude formation toward mobile applications. *International Journal of Electronic Commerce*, 19(4), 77-111. doi:<https://doi.org/10.1080/10864415.2015.1029359>
- Huang, J.-H., & Chen, Y.-F. (2006). Herding in online product choice. *Psychology & Marketing*, 23(5), 413-428. doi:<https://doi.org/10.1002/mar.20119>
- Hung, K. H., & Li, S. Y. (2007). The influence of ewom on virtual consumer communities: Social capital, consumer learning, and behavioral outcomes. *Journal of Advertising Research*, 47(4), 485-495. doi:<https://doi.org/10.2501/s002184990707050x>
- Ismagilova, E., Dwivedi, Y. K., Slade, E., & Williams, M. D. (2017). *Electronic Word of Mouth (eWOM) in the marketing context: A state of the art analysis and future directions*. New York City, NY: Springer International Publishing. doi:[10.1007/978-3-319-52459-7](https://doi.org/10.1007/978-3-319-52459-7)
- Jensen, M. L., Averbeck, J. M., Zhang, Z., & Wright, K. B. (2013). Credibility of anonymous online product reviews: A language expectancy perspective. *Journal of Management Information Systems*, 30(1), 293-324. doi:<https://doi.org/10.2753/mis0742-1222300109>
- Jeong, H.-J., & Koo, D.-M. (2015). Combined effects of valence and attributes of e-WOM on consumer judgment for message and product: The moderating effect of brand community type. *Internet Research*, 25(1), 2-29. doi:<https://doi.org/10.1108/intr-09-2013-0199>
- Küster, F. (2012). Two-sided messages in marketing communication. In H. H. Bauer, D. Heinrich, & M. Samak (Eds.), *Experience communication* (p. 275-296). New York City, NY: Springer.
- Ladhari, R., & Michaud, M. (2015). Ewoms effects on hotel booking intentions, attitudes, trust, and website perceptions. *International Journal of Hospitality Management*, 46, 36-45. doi:<https://doi.org/10.1016/j.ijhm.2015.01.010>
- Lee, M., Rodgers, S., & Kim, M. (2009). Effects of valence and extremity of ewom on attitude toward the brand and website. *Journal of Current Issues & Research in Advertising*, 31(2), 1-11. doi:<https://doi.org/10.1080/10641734.2009.10505262>
- Lim, Y.-s., & Van Der Heide, B. (2014). Evaluating the wisdom of strangers: The perceived credibility of online consumer reviews on yelp. *Journal of Computer-Mediated Communication*, 20(1), 67-82. doi:<https://doi.org/10.1111/jcc4.12093>
- Lin, C., Wu, Y. S., Chen, J.-C. V., et al. (2013). Electronic word-of-mouth: The moderating roles of product involvement and brand image. *Proceedings of Technology Innovation and Industrial Management*, Phuket, Thailand.
- Lis, B. (2013). In eWOM we trust - A framework of factors that determine the eWOM credibility. *Business & Information Systems Engineering*, 5(3), 129-140. doi:<https://doi.org/10.1007/s12599-013-0261-9>
- Lis, B., & Korchmar, S. (2012). *Digital referral marketing: Conception, theories and determinants of the credibility of the Electronic Word of Mouth (EWOM)*. Wiesbaden, Germany: Springer Gabler.
- Mackiewicz, J. (2008). Reviewer motivations, bias, and credibility in online reviews. In K. S. Amant & S. Kelsey (Eds.), *Handbook of research on computer mediated communication*. Hershey, PA: IGI Global. doi:<https://doi.org/10.4018/978-1-59904-863-5.ch020>
- Montoya-Weiss, M. M., Voss, G. B., & Grewal, D. (2003). Determinants of online channel use and overall satisfaction with a relational, multichannel service provider. *Journal of the Academy of Marketing Science*, 31(4), 448-458. doi:<https://doi.org/10.1177/0092070303254408>
- Murray, K. B. (1991). A test of services marketing theory: Consumer information acquisition activities. *The Journal of Marketing*, 10-25. doi:<https://doi.org/10.2307/1252200>
- Nawratil, U. (2013). *Credibility in social communication*. Wiesbaden, Germany: Springer-Verlag.
- Nugraha, P. A., & Indrawati. (2017). The effect of social media experiential marketing towards customers' satisfaction (A study in Chingu Korean fan cafe Bandung Indonesia). *International Journal of Business and Administrative Studies*, 3(2), 56-63. doi:<https://doi.org/10.20469/ijbas.3.10002-2>

- Oetting, M. (2010). *Ripple effect: How empowered involvement drives word of mouth*. Berlin/Heidelberg, Germany: Springer Science & Business Media.
- Ohanian, R. (1990). Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness, and attractiveness. *Journal of Advertising*, 19(3), 39-52. doi:<https://doi.org/10.1080/00913367.1990.10673191>
- Qiu, L., & Li, D. (2010). Effects of aggregate rating on ewom acceptance: An attribution theory perspective. *Pacific-Asia Conference on Information Systems PACIS*, Taipei, Taiwan.
- Rathore, S. (2015). *Capturing, analyzing, and managing word-of-mouth in the digital marketplace*. Hershey, PA: IGI Global. doi:[10.4018/978-1-4666-9449-1](https://doi.org/10.4018/978-1-4666-9449-1)
- Reichelt, J. (2013). *Information search and online word-of-mouth: An empirical analysis through discussion forums*. Wiesbaden, Germany: Springer-Verlag. doi:[10.1007/978-3-658-01373-8](https://doi.org/10.1007/978-3-658-01373-8)
- Robinson, M. J., & Kohut, A. (1988). Believability and the press. *Public Opinion Quarterly*, 52(2), 174-189. doi:<https://doi.org/10.1086/269093>
- Rogers, E. M. (2010). *Diffusion of innovations*. New York City, NY: Free Press.
- Schenk, M. (2007). *Media impact*. Heidelberg, Germany: Mohr Siebeck.
- Schnell, R., Hill, P. B., & Esser, E. (1999). *Methods of empirical social research*. Munich, Germany: R. Oldenbourg Muenchen.
- Steffes, E. M., & Burgee, L. E. (2009). Social ties and online word of mouth. *Internet Research*, 19(1), 42-59. doi:<https://doi.org/10.1108/10662240910927812>
- Streck, G. (2004). *Introduction to statistics: For geocologists and other naturalists*. Norderstedt, Germany: Books on Demand.
- Teng, S., Wei Khong, K., Wei Goh, W., & Yee Loong Chong, A. (2014). Examining the antecedents of persuasive eWOM messages in social media. *Online Information Review*, 38(6), 746-768. doi:<https://doi.org/10.1108/oir-04-2014-0089>
- Visser, J. H. (2016). Bases of market segmentation success: A marketing decision makers perspective. *International Journal of Business and Administrative Studies*, 2(3), 75-80. doi:<https://doi.org/10.20469/ijbas.2.10004-3>
- Walsh, G., & Mitchell, V.-W. (2010). The effect of consumer confusion proneness on word of mouth, trust, and customer satisfaction. *European Journal of Marketing*, 44(6), 838-859. doi:<https://doi.org/10.1108/30905661080001357>
- Wang, X., Teo, H.-H., & Wei, K. K. (2015). Simultaneity and interactivity of the effects of communication elements on consumers' decision making in EWOM systems. *Journal of Electronic Commerce Research*, 16(3), 153-174.
- Wathen, C. N., & Burkell, J. (2002). Believe it or not: Factors influencing credibility on the web. *Journal of the American Society for Information Science and Technology*, 53(2), 134-144. doi:<https://doi.org/10.1002/asi.10016>
- Wu, P. C., & Wang, Y.-C. (2011). The influences of electronic word-of-mouth message appeal and message source credibility on brand attitude. *Asia Pacific Journal of Marketing and Logistics*, 23(4), 448-472. doi:<https://doi.org/10.1108/13555851111165020>