Do you trust my tweet?

Return on Investment of Social Media: A study about @Twitter investigating the effect of message intention in the followers' level of trust.

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ABSTRACT

Recently, the interaction between society and the business world has experienced a shift towards digital, online mass communication- in short: it strongly includes social media platforms. Marketing through these platforms can not only be integrated in a business-to-consumer (B2C) setting. Business-to-business (B2B) oriented companies also include social media as communication systems to engage interactively with their customers. The inclusion of social media in the marketing strategy of a company leads to the question: What is the return of investment (ROI) of social media? This paper elaborates on a model to determine ROI of social media by investigating the effect of message intention on the level of trust of the customer towards the company. For this, the usage of Twitter in a B2B context was analysed. Two Intel and two Oracle Twitter accounts were monitored over one month, observing the message intentions entailed in the tweets and evaluating its relationship with the companies' level of trust. The outcome of the analysis proves that there is no significant relationship between sending message intention and trust, and that interacting message intention does not improve the level of trust of companies.

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1. INTRODUCTION

Nowadays, social media has become a very popular channel for marketing and business communication. The Internet, with the network-based platform Web 2.0, has made a great change in the way society communicates (Birnie & Horvath, 2002; Constantinides, 2009; Weinberg & Pehlivan, 2011). One of the most important factors that have promoted this change is social media, which caused a shift from a one-way to a two-way communication (Kumar & Mirchandani, 2012). Social media is a fast and very easy way to communicate private and group messages, and furthermore, news can be spread in seconds (Kaplan & Haenlein, 2009).

In order to exploit this technology, businesses are adapting their marketing strategies accordingly, trying to gain sustainable competitive advantage from it. Social media platforms such as Facebook, Twitter, LinkedIn, YouTube and MySpace provide good two- way communication tools for business-to-consumer (B2C) marketing and have been successful in reaching masses of people in a short period of time (Bernoff & Li, 2008). The Internet, with all its social media platforms, not only offers beneficial and profitable marketing tools for B2C communication, but can also be useful for companies operating in the business-to-business (B2B) environment. Although the first perception may be that social media solely provides techniques to communicate with the end consumers, this does not always have to be the case. Many companies are present within all different social media platforms, which means that companies can communicate with one another via these platforms. Moreover, businesses' constantly try to be aware of changes in the communication systems and to stay up-to-date, in order to be successful (Kietzman et al., 2011). B2B companies can establish relationships with their customers and suppliers via these communication platforms to build trust, brand loyalty and enhance their brand effectiveness amongst other companies (Michaelidou et al., 2011).

Important questions that are raised regarding new technological components within the business world relate to the cost of the implementation and the effect on profit. All social media platforms are free of charge, but time and effort have to be invested and the usage of social media has to be managed in a well-structured and coordinated way (Hoffman & Fodor, 2010). These aspects are essential in order to have a positive effect on the company's brand awareness and effectiveness within the market (Hoffman & Fodor, 2010). The input of this online marketing strategy is not tangible, and thus creates difficulties to measure its successfulness (Weinberg & Pehlivan, 2011). Furthermore, a challenge arises as managers get pressured to provide actual evidence of the effectiveness of social media investments to defend the outlay of resources (Powell, Groves & Dimon, 2011; Weinberg & Pehlivan, 2011). This, in turn, leads to the complication of assessing the return on investment (ROI) of the incorporation of social media in the marketing strategy of a company (Hoffman & Fodor, 2010).

Favier (2012) developed and presented a model to determine the ROI of social media. which considers the variables *trust*, *sentiment*, *time* and *income* related to a company. This model can be applied both in a B2C and a B2B context. This research, along with two other works, investigates the variable *trust* in Favier's model. *Trust* is chosen over the other variables (sentiment, time and income) because it is considered to be the most influentiable. Considering the messages that a company may publish in social media, this paper focuses specifically on the relationship between the *message intention* and the perceived level of *trust* of a customer towards a company.

The *message intention* is defined as the individuals aim or goal to clarify a statement or an opinion. In the case of a social media message the intention can be regarded as a desire to send out or post information within the boundaries of the given social media platform (Kotzinets et al., 2010).

There are many studies on the usage and the effects of social media marketing in a B2C context. However, the usage of social media marketing within the B2B environment has yet not been investigated thoroughly. Thus, this paper has the aim to answer the following research question which is based on an elaboration of the ROI model by Favier (2012): "What is the effect of the message intention on the variable trust for B2B operating companies?".

A causal model was established to answer this research question. *Trust* is used as the dependent variable and *message intention* as the independent variable.

There are many different social media platforms which can be taken into consideration when analysing the ROI of social media. However, this research will solely focus on the platform *Twitter*, as this micro blogging service is updated on a daily basis and thus provides a lot of input in a short timeframe. Furthermore, the maximum of 140 characters per 'tweet' (message) is a specific limitation that may be interesting to consider with regard to the *message intention*. Within the micro blogging system the messages posted are called a tweet and if a fellow user shares the information of a tweet it is called a retweet.

The purpose of this research is to identify if there is a relationship between the *intention* of published tweet of a B2B company and its perceived level of *trust*. The establishment of *trust* with its customers is the goal of every, firm because a stable relationship requires *trust* as a basis to be successful (Jansen et al., 2009). Thus, the findings of this study could provide a general idea of how to increase the level of *trust* in a B2B operating company, through the *intention* of the messages published on the social media platform Twitter.

This paper consists of a literature review to discuss other models for determining the ROI of social media, to define the independent variable *message intention* of this model and to elaborate on the dependent variable *trust*. Subsequently, the structure of this research is described to provide a sufficient insight on the data collection and analysis processes. Furthermore, the results are presented, evaluated and discussed.

2. THEORY

2.1 Theoretical Framework

This section discusses the available literature on measurement models and the variables *intention of a message* and *trust*.

The usage of social media in a B2B context, especially concerning the measurement of the ROI, is argued by several researchers to be difficult to detect and to measure (Hoffman & Fodor, 2010; Kumar & Mirchandani, 2012; Powell, Groves & Dimon, 2011; Weinberg & Pehlivan, 2011). In traditional marketing, the assessment of the ROI was made possible by having direct, tangible activities to measure the

effectiveness of the adverts. In social media, the activities are not tangible and hence more difficult to measure. However, there are some researchers that try to quantify the social media activity to measurable terms, in order to allow businesses to gain insight into its effect on their profit.

Weinberg and Pehlivan (2011) claim that there are two ways to outline a decision of how businesses can invest their resources in social media. Based on the traditional approach, which is to identify and invest only in the activities that have a realizable and assessable outcome (such as, incorporating a TV ad that directly influences the number of sales), social media can be approached in the same way. The marketers then only receive resources for the direct delivery of produced media, which should increase the 'controllability' of the monetary investment. The second approach is that there is no direct proof for the effect of the investment in social media. Weinberg & Pehlivan (2011) speak of a 'social currency', which is not directly attainable and is based mostly on the companies' trust in the marketers. The decision on how to spend money in the social media environment in turn has an effect on the 'social' ROI and the overall business performance (Weinberg & Pehlivan, 2011).

In the article by Kumar and Mirchandani (2012) it is stated that businesses can only be successful, with regard to social media, if they use the 'right' platforms, engage themselves in the 'correct' target group and have the 'appropriate' message intention. Furthermore, they present three different metrics to calculate the ROI of social media activities, namely the Customer Influence Effect (CIE), the Stickiness Index (SI) and the Customer Influence Value (CIV). The CIE is based on "the network centrality theory" (Kumar & Mirchandani, 2012, p.58) and measures the influence of the user of the platform on the network of people the user is connected with. The SI matches the user to a certain word cloud (group of words) based on the words he/she uses when enduring in a conversation online. Therefore, a certain pooled group of users can be identified, who discuss about the same topic. The CIV determines the monetary value reached by social media activity by assessing a users' individual influence on other customers. With the calculation of both the CIE and the CIV, Customer Lifetime Value (CLV) can be determined. This assigns a quantitative amount to each individual user. These scores can then be rank-ordered to determine which users to engage with more actively, in order to reach a greater network and hence increase the ROI of the online activities (Kumar & Mirchandani, 2012).

Moreover, Favier (2012) developed a model to determine the 'return on investment of social media'. The model consists of four variables, namely *trust*, *sentiment*, *income* and *time*. The variable *time* in the ROI model by Favier (2012) concerns the amount of time which is spent on the creation and publication of a post or, in the case of Twitter: a tweet. The variable *trust* is defined as the level of trustworthiness between the publisher and the follower within the network by regarding the online interaction of both parties. Trust must exist in a follower-to-follower context, which means amongst the users, to ensure the effectiveness of a retweet. Therefore, trust plays an essential role as the acceptance of a published tweet might lead to a retweet, which translates in a follower sharing the published information of a tweet with his/her network. This will in turn lead to higher brand awareness amongst customers. The *sentiment* of a message deals with the perception of a user towards the message which can be considered as positive, negative or neutral. The variable *income* is presented as a fixed variable in the model and considers the average income of the online users. Favier's model can be applied to various different social media platforms (Favier, 2012).

Within his model Favier developed a metric with which companies can quantify the ROI of their social media activity. The metric includes the previously mentioned variables and further, incorporates the number of 'touch points', which are defined by Favier as every reaction within the setting of the social media platform (such as a retweet or favourite status on Twitter). The metric of Favier (2012) is presented as follows:

$$ROI_{\text{of touch point x}} = \text{Time} \times \text{Trust} \times \text{Sentiment} \times \text{Income}$$

According to Favier, this model is appropriate for companies operating in both B2C and B2B settings.

Literature has shown that trust can be viewed from many different perspectives and is proven to be an essential component when establishing a relationship in online and offline environments (Anderson & Naurus, 1998; Mohr & Spekman, 1994; Morgan & Hunt, 1994). Jansen et al. (2009) state that trust within a relationship towards a company is created by the individual's trust in a brand. Furthermore, positive statements, comments, retweets and 'sharing's' on other social media services, reinforce the level of trust, and thus have an assured impact on the commitment to the brand (Jansen et al., 2009). Moreover, Kietzman et al. (2011) mention that "reputation is a matter of trust" (p.247) and that the level of this factor can be enhanced though digital or face-to-face conversations.

Another perspective is presented by Nitzan and Libai (2011), pointing out that trust can be created though homophily, which basically stands for a group of people who share the same interests and like to discuss about one topic. This can often be found within the social media environment as this is the perfect platform for pooling users with the same preferences and opinions. In the context of Twitter, if a user retweets a post, the probability is high that his/her network of followers will show interest in this shared post. On the one hand, this shows that they have faith in each other, and on the other, that they automatically have a lower threshold to overcome in trusting the brand or company publishing the post. Hence, the chance to increase the brand awareness and in addition the level of trust is raised through retweets. Furthermore, Ha (2004) states that online trust is established through the interrelation of several factors such as privacy, the brand name, word-of-mouth and the quality of the information. All these aspects influence the perception of the user and have an impact on his or her activity within the social media platforms. Shankar et al. (2002) state that the level of trust has a strong influence of the users' activity online and is an important- if not the most important- element to consider when being present in an online platform.

The social media environment creates a challenge for companies to identify the level of trust online. This determination and quantification of online trust has not been researched yet to its fullest. Nevertheless, it is an important aspect to consider as Weinberg and Pehlivan (2011) and Favier(2012) incorporate it in their ROI assessment models. As trust depends on the relationship of the company to its customers, Favier's (2012) indication to assess the level of trust for Twitter is based on a retweet-to-tweet ratio developed by Zarella (2010). The established 'ReTweetability Metric' by Zarella was developed by investigating the users' influence on other members within the network of individuals. Zarrella (2010) came across the fact, that the content of the tweet may have more influence on the effectiveness of the message

towards other users, than the status of the user publishing the tweet. This metric incorporates the average retweets per day, the average tweets published per day and the number of followers.

$$\frac{(\text{Average Retweets Per Day}) \div (\text{Average Tweets Per Day})}{(\text{Number Of Followers})}$$

Based on this metric it is assumed that only the followers that have trust in the company will retweet the message, and hence have an influence on the level of trust. Favier perceives the "ReTweetablility" metric as an accurate measurement of trust (Zarella, 2010).

In order for the followers to retweet a post many additional factors play a role. One important aspect to consider is the message content and hence the message intention. The intention for creating a message, post or tweet, is driven by the subjective emotional intuition of an individual, or based on a certain aim, goal or reason. In the context of social media the underlying intention of a published message is either sharing information, seeking information or offering a basis for members of the network to express their opinions on (Jansen et al., 2009). Basically, the new online communication system offers a way of creating a more effective and faster "interaction between the user and the system" (Jansen et al., 2009 p.2177). Furthermore, the purpose of a message can be related to a specific expression towards a product, topic or event (Jansen et al., 2009, Kietzmann et al., 2011). According to Lai (2004) the intention of sharing company related information is based on the level of satisfaction towards a brand. One can assume that the level of satisfaction can be identified as positive or negative. Douglas and Sutton (2003) state that through the inclusion of a message intention a certain emotional direction (such as, happy, sad, disappointed or angry etc.) is given, indicated by the individual's own choice.

Furthermore, the intention of a message gains importance through the element of word-of-mouth (WOM) (Buller, Borland & Burgoon, 1998). In the social media world this is called 'electronic word-of-mouth' (eWOM). This is an important aspect to consider, especially for Twitter, as this platform strongly supports the eWOM by providing the possibility to retweet a post of a fellow user. As a result, the spread of information is measured by the amount of retweets a tweet achieves. eWOM will solely be created if the intention of the message is clear for the receiver and if the acceptance of the message is reached amongst the users (Kotzinets et al., 2010; Soetarto, Yap & Sweeney, 2012). Jansen et al. (2009) identified a range of 23 different actions a message can entail (see Appendix 2 for all 23 actions). These actions are relevant for establishing content of a message in a social media setting, and will be interpreted as *message intentions* in this paper. Amongst others the intentions entail 'announcements', 'answers' or 'chitchats'.

As mentioned by Pelsmacker et al. (2010), traditional marketing was only used in a persuasive manner with the aim to force the products and services on the customers, in order to increase sales. The information was sent out through one-way communication by creating flyers, TV advertisements and radio comments (Kumar and Mirchandani, 2012). As in traditional marketing only sending messages were created, no interactions with the customer were made possible (Pelsmacker et al., 2012).

Moreover, Vivianco (2003) stresses that the intention of a message is constrained by the persuasiveness of the attitude presented in a message. Hence, persuasive messages create a limitation due to the one-way communication design (Kumar and Mirchandani, 2012). The shift in communication through social media had the consequence of enabling interactive communication with the receivers and the level of persuasive marketing had to be adjusted (Vivianco, 2003). Interactive, two way communications lead to companies receiving information, comments and opinions of customers, which are the central aspects of social media (Bernoff & Li, 2008). Vivianco (2003) states this new form of communication to be more effective as the level of persuasiveness reduces and interactive communication is enhanced. In addition, Favier (2012) states, that only sending out information is not as effective as creating an interactive process amongst customers. Online messages sent out by the company can have the purpose of both, distributing information, and requiring comments and feedback by the readers. Thus, the company can invite readers to react and interact in order to be more effective (Fahy & Jobber, 2012; Rossiter & Bellman, 2005). As a result, two different categories of message intentions can be identified, namely *sending* and *interacting message intention*. The 23 intentions by Jansen et al. (2009) can be classified in these two categories. This division creates a sufficient classification for the *message intentions* within the social media setting of Twitter.

After reviewing the literature on the aspects of *trust* and *message intention*, the study derives the following propositions:

Proposition 1: The *sending message intention* has a negative relationship with *trust*.

Proposition 2: The *interacting message intention* has a positive relationship with *trust*.

These propositions are analysed by statistical tests, in order to obtain further insight into the effect of the *message intention* on the variable *trust* for B2B companies.

Knowledge about the relationship between the two categories of messages and the level of *trust* will provide companies with valuable understanding about how strongly the *message intention* affects *trust.* This insight can then be incorporated in the assessment of the ROI of social media for the company, which provides managers with valuable information. With regard to the theory this research provides a valuable understanding for the effect of the *message intention* on the level of *trust* in social media marketing in a B2B context.

2.2 Conceptual model

Favier's model for determining the ROI of Social Media is used as the operational model for this study. The element *trust* provides the basis of the established conceptual model. The variable *trust* will be regarded as the dependent variable and is proven by many scholars to be an important aspect to consider when conducting online marketing.

In turn, the independent variable *message intention* is classified in the two different categories *sending message intentions* and *interacting message intentions*, previously developed during the literature review.

Combining both the independent and the dependent variables a conceptual model is constructed. It visualises the propositions, clarifies the relationships and presents the underlying social media platform used in this study (see Figure 1).

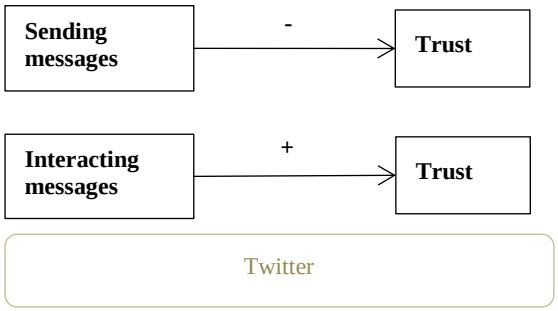

Figure 1 Conceptual Model

Figure 1 represents the direction of the relationship under investigation. The *sending message intention* is figured with a negative relation to *trust*. Whereas, the *interacting message intention* is figured with a positive relation to *trust*. As the underlying platform of investigation, the social media system Twitter is included in the model.

3. METHODS

3.1 Research setting

The social networking service Twitter was launched in the year 2006 and was predominantly established as a cheaper substitute for text messages by phone. Currently, Twitter is seen as one of the most popular micro blogging services within social media (O'Conner et al., 2010). In order to experience the benefits, users of Twitter are required to create a profile containing personal details and relevant information for other users within this online community. Once on Twitter one can 'follow' other users and one can also be 'followed' by others. For B2B operating companies, a network including customers and suppliers can be established through following relationships. Twitter messages are short and consist of a maximum of 140 characters, which resolve in an average message of 11 words (O'Conner et al., 2010). The messages are published on each user's profile and are called 'tweets'. Other users are able to share published tweets (retweets) with their own network. Furthermore, tweets can contain an '@' sign followed by the username, which allows to direct the content of the message personally to another user. This can either be a private user or another company profile (O'Conner et al., 2010). Through this interaction the creation of awareness is assured. Moreover, hash tags (using the symbol #) can be incorporated in a message, in a label-like fashion, which links the content of different messages to one another. Users can search for content related messages by searching for a hash tag followed by a specific word. This function allows content related messages to be polled, which can promote the effectiveness of a message and in turn increase the awareness of the company.

3.2 Subjects of study

The subjects of this study are two Twitter accounts belonging to the companies Intel and Oracle. Both companies operate in a B2B environment, as they are operating in the computer industry and provide intermediary parts for other companies. The Twitter activities of both firms were observed between the 1st of February 2013 and the 28th of February 2013.

INTEL

Intel was founded in the year 1968 in the United States of America and is a leading company in the computer chip industry. Currently Intel has around 100.000 employees around the world. Intel is not only a leading company in its market of computer chip development, but has also been one of the first companies to establish a strong visibility on the social media platform Twitter. Its presence in the new communication media reaches out to the individual end consumers and the business-to-business market. There are many different @Intel accounts for different departments and purposes such as @Intel Events or @Intel Official News. These two accounts update the followers on upcoming fairs and conferences and publish company internal and external news. The main corporate Twitter account is @Intel which provides a broad range of interesting information for the mass of followers. Intel's presence is enhanced through retweets by competitors, customers and consumers.

ORACLE

Oracle was founded in the United States of America in the year 1977 and is a strong competitor in its market of computer technology. The company acts on a global scale and its employee number exceeds 100.000. Oracle is an active user of the social media platform Twitter, publishing news, information and comments on a regular basis. Oracle has several accounts representing different departments and purposes and thus provides a solid base for this research. The different accounts of Oracle include @Oracle Social or @Oracle Retail. Both accounts tweet topic-related information about the company's upcoming events and new products or services. In addition Oracle also has a corporate account named @Oracle providing the top stories.

3.3 Measurement

As a content analysis of the tweets is conducted, the data of the accounts under investigation are analysed with regard to certain criteria.

The dependent variable *trust*, defined as by Favier (2012), looks "at the intensity of the online interactions between consumers to assess how close they are" to one another (Favier, 2012). A good indication for the level of *trust* can be seen by the retweet-to-tweet ratio on Twitter. "The higher these ratios, the more close friends shared the brand experience." (Favier, 2012). The operationalization of the level of *trust* will be assessed using Zarella's (2010) ReTweetability metric as a basis. An adaption to his formula has been made as not the average retweets and average tweets per day were included, but the actual counts of the tweets and retweets per day. The formula is presented as follows:

$$\frac{\text{Retweets per day} \div \text{Tweet per day}}{(\text{Number Of Followers})}$$

The attained values are then divided by the number of followers for each account respectively. As Zarrella (2010) the outcome is very low and so the results are multiplied by a constant of 10.000.

The independent variable *message intention* is defined as an emotional intuition to achieve a certain goal or aim. The intention within a tweet is determined by assigning one or multiple intentions identified by Jansen et al. (2009). These measured intentions are then classified into the two different categories *sending messages* and *interacting messages*. Not all identified intentions were perceived as relevant for this research and thus, only 13 remaining intentions are included. The definitions by Jansen et al. (2009) have been adjusted to fit the content of the Twitter messages for this research and are presented in Table 1 to create a sufficient overview. Furthermore, the operationalization of the intentions is included by presenting the division of the intentions over the categories *sending messages* and *interacting messages*. Based on this criteria the tweets where analysed.

Table 1

Operationalization and Definitions of Intentions

Category	Intentions	Definition
Sending Messages	Announcement	Declaring the upcoming
	Expecting	Looking forward to products from a company
	Forwarding	Pointing to potential useful objects, products
	Notification	Letting one know on objects, products, updates
	Recommendation	Providing positive advice regarding objects
	Suggestion	Providing ideas for improvements
Interacting Messages	Chitchat	Casual conversation
	Comment	Expressing mixed or neutral feelings regarding objects, products
	Question	Expressing confusions or doubts toward objects
	Confirmation	Giving assurance or validation regarding objects, products
	Recommendation request	Seeking advice regarding objects request
	Research	Examining objects
	Order via Twitter	Attempting to place order on Twitter

3.4 Data collection

In order to collect sufficient data to gain insight into the relationships under investigation, two Twitter accounts each of Intel and Oracle will be examined. The chosen accounts are Intel Inside (@IntelInside), Intel Intelligence Systems (@IntelSys), Oracle Commerce (@OracleCommerce) and Oracle Profit Online (@OracleProfit).

The choice of the accounts is based on a subjective scan of the accounts' profile description on Twitter by the researchers, regarding the aim and target group of each account. The accounts in question were assessed individually and then the final selection was made during a meeting with all researchers. The chosen accounts were considered to be the most influential within the B2B environment and thus are the most suitable as subjects for this study. Furthermore, the accounts have many followers which were used as selection criteria. On the 4th of June 2013 the accounts have the subsequent follower-quote: @IntelInside - 12.863 followers, @IntelSys - 8.873 followers, @OracleCommerce - 9.139 followers and @OracleProfit - 4.487 followers. These numbers are the representative for the study.

Their activity on the social media platform Twitter is observed within the timeframe of February 2013 and the tweets are gathered with the aid of an online exporting tool: www.allmytweets.net. The data was collected within a prior developed coding scheme established collaboratively by the group of researchers. The tweets under inspection approximately amount to 150. The elements relevant for the conceptual model and the operationalization of the criteria with regard to this paper are the message intentions *sending messages* and *interacting messages*. Furthermore, the data was classified according to other criteria as well, which is relevant for the other researchers' studies and are not included in this paper.

3.5 Type of Analysis

3.5.1 Reliability Analysis

Prior to the data analysis the reliability of the data collection and the entire research was assessed through the determination of the inter-rater reliability (Babbie, 2010). This measurement of reliability includes the viewpoints of several researchers to assure a certain degree of alignment of perceptions which is expressed with the values of the Cohen's Kappa. In the case of this study, four researchers were involved who were divided in two separate pairs. Each pair coded the tweets of the same Twitter accounts and respectively for each pair the Cohen's Kappa was calculated.

3.5.2 Assumptions

Prior to the execution of the analysis several assumptions (or conditions) have to be met in order to be able to generalise the conclusions to the population (Field, 2009).

The first assumption concerns the level of multicollinearity which must not result in a perfect correlation as errors will occur. Moreover, a further assumption is checked by the Durbin-Watson value which provides an insight into the independent errors. Furthermore, the non-zero variance condition has to be met which entails that the variable should include some variance within the values. Another condition regards the homoscedasticity which can be detected by the homogeneity of variance of the predicting variable. Finally, the independence assumption has to be met in order to generalise the outcome to the population.

3.5.3 Analysis

First of all the coded data of the message intentions will be divided over the categories *sending message intention* and *interacting message intention*. In order to conduct an analysis with the data, the frequency of intentions for each category is established respectively, followed by the establishment of proportions for each category.

In the interest of gaining a more in-depth insight of the relationship between the variables *sending* and *interacting message intention* and *trust,* a linear multi regression analysis was performed. By means of this analysis, an insight into the

individual relationship of both independent *message intentions* and the level of *trust* is achieved.

4. RESULTS OF ANALYSES

4.1 Results

To begin with, the results of the inter-rater reliability test are discussed. Research Group 1 achieved a Cohen's Kappa of 0.94 and Research Group 2 reached 0.86. As both values for the Cohen's Kappa exceed the value of 0.8 the reliability of the coding scheme and the level of an objective approach are confirmed (Field, 2009).

The level of multicollinearity can be viewed by the Pearson correlation value of the correlation between *sending messages* and *interacting messages,* which is -.28 (see Table 1). This value is below ± .1, thus multicollinearity exists and the assumption is not met. Furthermore, the VIF score gives an indication of the high multicollinearity. These values can be viewed in the Appendix 1. The Durbin-Watson value is 1.650 (see Appendix 2), which is close to 2, but still below 2. This is an indication that the residuals of both the *sending messages* and the *interacting messages* are positively correlated. Concerning the non- zero variance it is not always the case as many tweets entail the same proportional distribution within the data set. The homogeneity of variance assumption is met, which can be viewed in the plots of the linear relationship of the two independent variables with *trust*. This condition is met as the variance of the predictor variable is constant. In addition, the plots show the linearity, as the residuals are along the straight line (see Appendix 4). Finally, the independence assumption is met, as each tweet was analysed separately with the same criteria.

To create a first insight of the analysis, some general information about the investigated data is presented. The tweets of the four accounts amount to a total (N) of 154. The distribution of the tweets over the different accounts is not equal; however this does not entail any consequences for the analysis, as all tweets are analysed together. Intel Systems tweeted 68 times, Intel Inside 21 times, Oracle Profit 25 times and Oracle Commerce 40 times. Regarding the frequencies of the different intentions over the categories *sending* and *interacting messages,* one can see a large difference. *Sending* entails 65% of all intentions and interacting has 35%, which gives the indication that more tweets send out information instead of creating an interactive basis.

In Table 1 the mean and the standard deviation of the two independent variables are displayed. The values for the standard deviations are .17 for the category *sending* and .10 for the category *interacting*. The mean for each category respectively is: *sending* .31 and *interacting* .10. Furthermore, the correlation table (see Table 1) displays the values of the Pearson's correlation between the individual independent variables *sending* and *interacting messages,* and the dependent variable *trust*. The results make clear that there is a negative correlation between the variable *interacting messages* and *trust* (-.13) and between the two independent variables *sending messages* and *interacting messages* (-.28). The correlation between the *sending messages* and *trust* is positive (.08). However, the correlation between *sending messages* and *trust* is not statistically significant as .08 is larger than p= .05. On the other hand, *sending messages* and *interacting messages* are correlated significantly with p≤ -.28. In addition the relationship between *interacting messages* and trust is also significant as p≤ -.13. The non-significance of *sending* and *trust* is an indication that the regression analysis may also bear a low significance level with respect to *sending messages*.

Table 1

Correlation Table (N=154)

	Mean	St. dev.	Trust	Sending	Interacting
Trust	4.11	16.70	1		
Sending	.31	.17	.08	1	
Interacting	.10	.10	-.13***	-.28***	1

Note. *p≤ .05; ** p≤ .01; *** p≤ .001, one-tailed test.

In the analysis the dependent variable *trust* was regressed on the two message categories *sending* and *interacting*. The multi regression analysis revealed that the two variables *sending* and *interacting message intention* contributed to the regression model and accounted for 1.9% of the variation in *trust*. This can be seen by the R^2 value which is .019 (see Table 2).

Table 2

Regression Table

	B	p
Sending	4.72	.57
Interacting	-19.02	.17

Note. N=154; R^2= .019 ; p< .2, one-tailed test.

As to be viewed in the regression table (Table 2) the significance level for the independent variable *sending messages* is not statistical significant as p=.573 (p> .20) and hence, no further conclusion can be drawn about the relationship. Regarding the level of significance of *interacting messages*, the value is significant, as p=.165 (p< .20). The beta gives an indication of the direction of the relationship. Thus, for *interacting message*s a negative relation to *trust* (B= -19.02) is represented.

5. CONCLUSION

5.1 Discussion

With the growing integration of the various social media platforms in the daily lives of the customers, also B2B operating companies have to adapt to these new communication tools. Twitter provides many functions and features to actively integrate the customer in the conversation. This way the customer is more engaged and the company can benefit from useful comments and suggestions for product or service improvements. Furthermore, the relationship is enhanced and customer loyalty is increased. Literature has proven that the creation of *trust* in the establishment of a relationship between the customer and the company plays a major role, when founding a successful online visibility. Not only for the relationship *trust* is essential, but also to make customers believe in the brand with its products and services on offer. Studies have shown that trust is an important variable in order to give an estimation about the ROI of social media. Also Favier (2012) incorporates *trust* as one of the four key factors

which create the foundation of the model, and is an issue worth investigating. There are many different aspects that require attention when using online media marketing in order to be effective. One of the elements this paper focused on was the *message intention*. It is crucial to have a clear and obvious purpose when formulating a message, especially within the boundaries of the social media system Twitter. The tweet has the maximum of 140 characters, which makes it a challenge for the marketers, to include all the relevant information and provide an interactive basis for their users. Jansen et al. (2009) provided a sufficient fundament to this research as this study elaborated on the developed 23 different message intentions which were divided into two categories *sending* and *interacting message intentions.*

The purpose of this research was to find an answer to the research question: "What is the effect of the *message intention* on the variable *trust* for B2B operating companies?". The analysis of the different *message intentions* on the level of *trust* only partially provided statistically significant results. Hence, the outcome only gave an insight to answering the research question to a certain extent. The conduction of a multi regression analysis was performed by regressing the proportions of the frequencies of *sending* and *interacting message intention* on *trust.* Concerning the *sending messages* the outcome did not yield sufficient statistical evidence to draw a conclusion about the specified proposition. The proposition stated that the *sending message intention* has a negative relationship with *trust,* but this proposition has to be rejected due to the results.

Regarding the *interacting message intention*, a negative relation between the predicting variable and *trust* was found. This means that the inclusion of *interacting message intentions* in a tweet, leads to a decrease in the level of *trust* of the customers towards the company. However, the prior identified proposition stated a positive relationship between the independent variable and *trust*. Hence, the proposition has to be rejected, as the outcome proves the opposite direction. As according to the literature, the purpose of the integration of social media in the marketing strategy, is to create a two-way interactive communication platform, a positive relationship was assumed (Bernoff & Li, 2008; Fahy & Jobber, 2012; Rossiter & Bellman, 2005; Vivianco, 2003). Furthermore, Favier (2012) argues that interactive message intentions are more effective than sending message intentions, which again leads to a positive relationship between *interacting messages* and *trust.* Moreover, the *interacting messages* are less persuasive and leave more room for the user to decide whether to respond and integrate oneself in the conversation. This freedom is given on the basis of the layout design of Twitter, and also on trust. Companies have faith in the brand awareness they create, by being present on the social media platform. They trust the customers to interact with the tweets to further increase the awareness. The *interacting messages* within the research were mainly 'chitchats' or 'appealing comments', which have to entail the 'right' intention for followers to react on. As Twitter messages solely consist of 140 characters it is a challenge for marketers to be precise, concise and detailed with the 'correct' element of media richness (Daft & Lengel, 1986). Too much information, or information difficult to understand, creates a less media rich message. This could be a reason for the found negative relationship of *interacting messages* and *trust.* The limited amount of words can lead to misunderstandings, due to the small degree of media richness entailed in the message. This study is aimed at gaining insight into B2B operating companies and hence, Intel and Oracle were investigated. The business environment of these two companies can be perceived as more serious and less 'playful' compared to private followers, who use Twitter for their individual interest. Therefore, retweeting a message of Intel or Oracle by another company may have a different connotation, as business agreements and competitiveness are aspects that are taken into account when retweeting. Retweets of private followers in contrast do not entail any consequences when retweeting a post.

Concerning the not statistical outcome of the analysis of the *sending message intention,* a reason could be the high multicollinearity between the independent variables. The high correlation may be due to the operationalization of the message intentions. All intentions suggested by Jansen et al. (2009) are closely related and difficult to distinguish, which leads to adversity when dividing the intentions over the two categories-*sending* and *interacting messages.* Furthermore, the proportions of the frequencies were used for the analysis. This way of presenting the data may be a reason for the not significant outcome. The initial division of the intention over the categories was in percentages. However, this would have led to perfect multicollinearity as only two independent variables were involved in the research. In order to avoid this, the proportions of frequencies for both independent variables were used.

Besides the high correlation of the independent variables, the operationalization of the dependent variable *trust* may be biased and entail errors. Even though, the basic line of thought using the retweet-to-tweet ratio as an indication of the level of *trust,* makes sense, the division over the followers may lead to a biased outcome. Not all followers are equally active and this is not considered in the equation by Zarrella (2010). Of course, it is very challenging for marketers to assess the individual Twitter users' activity. However, to give an accurate indication this has to be incorporated. If not, the level of trust can be negatively affected by having many inactive followers. Nevertheless, the general perception is: the more followers the better.

5.2 Recommendations theory and practice

This research is an enrichment and addition to the existing literature on the topic of social media marketing. As this field is still growing and has only recently begun to be investigated, this study provides an elaboration on an already existing model within the literature. The element of *trust* is centre of this research and an essential part of the ROI model of social media developed by Favier (2010). The ROI of social media is interesting for all companies, in the B2C and B2B environment. Marketers have to prove the effectiveness of social media within their marketing strategy, in order to receive resources. However, this topic is still relatively new for academic research. Favier, amongst others, has made a start to quantify the ROI of social media and make the activities more tangible and easier to prove. The paper provides information on the effectiveness of *message intention* on the level of *trust.* The outcome of this study shows that interacting message do not necessarily enhance the level of trust. This is a valuable insight for both the theoretical and practical approach of social media marketing.

Essential for the managerial implication is, that one has to keep in mind that the creation of *trust* between the customer and the company is of utmost importance to be successful. In addition, through expressing a clear message intention the reader should enhance the creation of *trust*. An open attitude of the companies towards working with the researchers, in a collaborative manner, is recommended as a valuable insight for both parties can be achieved.

5.3 Limitations

There are several limitations to this research that provided some obstacles and contribute the partial statistically not significant outcome.

During the literature review, to gain a foundation of knowledge about the topic of social media within the B2B environment, it became clear that there is only limited scientific literature available. Many conference papers and not officially published articles were to be found on the topic. This is due to the fact, that this field has not yet been researched thoroughly. To create the basis of this study, communication literature and traditional marketing papers where included. Moreover, the literature contained within in the theoretical framework did not only focus on marketing within a B2B setting, but assumptions were made from the B2C marketing approaches available in the literature. Furthermore, assumptions from the communication literature were transferred to the usage of social media in a B2B environment.

A further limitation concerns the data collection. The group of researchers only had access to the public Twitter profile of Intel and Oracle and did not have the permission to access the accounts. This limited the investigation and analysis of the data, as there was no possibility to access the comments of the followers. This insight may have provided more information.

5.4 Conclusion

This paper has reviewed existing literature on the topic of *trust* and *message intention* to create a sufficient basis for an elaboration on the variable *trust* of the ROI of social media model by Favier (2012). Two Twitter accounts each of the companies Intel and Oracle were monitored and the tweets were coded and evaluated with a content analysis. Furthermore, a multiple regression analysis was executed with the purpose to find out about the relationship of the *message intention sending* and *interacting* and the level of *trust*. No statistically significant result of the category *sending messages* and *trust* was found, which leads to the conclusion that there is no relationship between those two tested variables. However, between the independent variable *interacting message intention* and *trust* a negative relationship was detected. This result leads to the rejection of the proposed proposition, as prior to the data analysis a positive relationship was assumed. This is an indication that *interacting messages* to not improve the level of *trust* of the customers towards the company.

5.5 Future research

Future research should establish a connection to the companies under investigation. Being able to have the credentials of the Twitter account will open more doors and provide a more solid basis for the research of tweets. Furthermore, interviews can be conducted with the marketers of the companies to gain a further understanding of the concept behind the tweets. This can be very useful when regarding the message intention. Perhaps, this will lead to a development of more stable intentions and a more accurate classification.

Furthermore, the literature has to be continuously reviewed to be up-to-date with new scientific literature on the topic of social media. Especially regarding the online communication platform Twitter, more literature should follow as it is a popular communication system. In addition, future work should concentrate on establishing a social media marketing plan, to provide a sufficient guideline for companies to increase their effectiveness on the platforms.

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8. APPENDIX

Appendix 1

VIF values

	Interacting	Inviting
VIF	1.084	1.084

Appendix 2

Durbin-Watson score

	Interacting	Inviting
Durbin-Watson	1.65	1.65

Appendix 3

Definitions of Content Analysis Criteria

Criteria	Definition
Announcement	Declaring the upcoming
Answer	Including or handling question
Chitchat	Casual conversation
Comment	Expressing mixed or neutral feelings regarding objects, products
Confirmation	Giving assurance or validation regarding objects, products
Consuming	'Using' objects
Expecting	Looking forward to products from a company
Forwarding	Pointing to potential useful objects, products
Maintenance	Managing objects
Missing	Feeling from the lack of objects and expecting to have them back
Negative comment	Critiquing, complaining
Notification	Letting one know on objects, products, updates
Order via Twitter	Attempting to place order on Twitter
Patronizing	Physically being in objects or going to objects frequently
Positive comment	Complimenting, praising
Question	Expressing confusions or doubts toward objects
Recommendation	Providing positive advice regarding objects
Recommendation request	Seeking advice regarding objects request
Request	Asking for objects
Research	Examining objects
Response	Giving feedback on objects
Supplement	Adding on to objects

Appendix 4

Plot: Sending message intention – Trust

Plot: Interacting message intention – Trust