The effect of Received Word-of-Mouth on Given Word-of-Mouth
Cross level effects of Firm and Product Received Word-of-Mouth
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Preface

This report is the result of my master thesis project at the University of Technology Eindhoven. The project is executed for the department of Industrial Engineering & Innovation Sciences, more specifically the “Innovation, Technology, Entrepreneurship and Marketing” group. I have conducted this research at the Strategic Development Group (SDG) in Oisterwijk. The successful completion of the master thesis project leads to the Master of Science degree in Innovation Management. During my master thesis I have received assistance and guidance of several persons. I would now like to thank these persons for their efforts.

First of all, I would like to thank all of my supervisors. My primary supervisor, Jeroen Schepers, for his expertise and guidance in this master thesis project. I particular enjoyed his feedback and trust even after the cancellation of two internships. My secondary supervisor, Josette Gevers, for critically reviewing my work and providing suggestions for improvements. My company supervisor, Bert van den Broek, who assisted me in several practical choices and provided me with feedback on my own development throughout the project.

Second, I would like to thank my colleagues at SDG. Ruud van Riel, who shared all of his wisdom on life and the management of a football association. Denis Maessen, who demonstrated skills such as, exerting control and transferring vision. Josse Dorleijn, who helped creating a more than pleasant work environment at the “farm”. I would like to wish them the best of luck with all their endeavours.

Third, I would like to thank my family and girlfriend. My parents, Ruud & Joany Dumas, who supported me both mentally and financially. Off course, my brother and sisters who helped me anyway they could. And finally my girlfriend, Madelon Toussaint, who not only allowed me into her house during my master thesis project but is also a fantastic support after long and hard days of work.

This leads to the end of this preface. I have thoroughly enjoyed this master thesis project. As such, I hope that all readers of the report will do similarly. This master thesis project has extended my knowledge and understanding of conducting scientific research. Furthermore, it has provided me with an opportunity to deal with a large individual and very important project. Now, after ten years of studying, I believe I am truly ready for a successful career and a prosperous future.

Leroy Dumas

Eindhoven April 2010

“One’s work may be finished some day, but one’s education never”

(Alexandre Dumas 1802-1870)
Abstract

Word-of-Mouth is the informal communication among consumers about products, services and firms (Liu, 2006). As such, Word-of-Mouth is important for the customer, product success, and firm success. It helps customers with their decision to adopt a product, or their decision to switch to a competing product, service provider or brand. For product success, Word-of-Mouth is necessary for crossing the chasm from the adopters to the early majority. On firm level, Word-of-Mouth is valuable since it attracts new customers. Compared to other information sources, Word-of-Mouth is more credible, trustworthy and more readily accessible through social networks (Liu, 2006).

Research background and question

Traditional studies used an individual approach and focused primarily on satisfaction and affective commitment as antecedents of Given Word-of-Mouth. As such, it fails to account for social influence. This master thesis extends current research by adapting a dyadic approach. More specifically, social influence is measured by the construct Received Word-of-Mouth. Hence the following research question is formulated.

What is the effect of Received Word-of-Mouth on Given Word-of-Mouth?

In this relationship from Received Word-of-Mouth to Given Word-of-Mouth, the cross level role of product-related versus firm related Received Word-of-Mouth receives extra attention. In order to increase the robustness of this study the following constructs have been investigated as potential moderator. On the individual level age, personality, and consumer innovativeness are investigated. On the product level, product innovativeness, product involvement, and price are investigated. On the firm level, customer based brand equity is investigated.

Literature review

The literature review demonstrates the importance and role of Word-of-Mouth on the individual, product and firm level. Scientific findings on the firm level states that Word-of-Mouth is part of relationship marketing and loyalty, eventually leading to higher customer profitability. Word-of-Mouth has also received scientific attention in a product adoption and sales context. These findings suggest that Word-of-Mouth is crucial for successful product adoption and has explanatory value regarding product sales. From an individual Received Word-of-Mouth perspective, researchers agree that customers are influenced by others in their purchase decision. In addition, Received Word-of-Mouth has an impact on product judgement. From a Given Word-of-Mouth perspective, research has focused on the antecedents of Given Word-of-Mouth. It is generally accepted that satisfaction and affective commitment lead to Given Word-of-Mouth. Despite this consensus, several researchers comment on the current body of literature. Studies have neglected the social impact and posted customers in an independent social environment. Research on social influences suggests otherwise. Different theories provide evidence that individuals operate within a social environment that exerts influence on the consumer’s behaviour. Some examples of these theories are network theory, theory of reasoned action, and the perception-behaviour link. All provide arguments and processes for the link between Received Word-of-Mouth and Given Word-of-Mouth. Lastly, literature has identified two dimensions of Word-of-Mouth, Praise and Activity. This study uses these dimensions for both Received Word-of-Mouth and Given Word-of-Mouth. Praise refers to the favourableness of the Word-of-Mouth communication, whereas Activity refers to the frequency of the Word-of-Mouth communication.
The Effect of Received Word-of-Mouth on Given Word-of-Mouth

Research model and hypotheses
Building forth on the arguments for social influences and the primary research question a research model is constructed with Received Word-of-Mouth as input and Given Word-of-Mouth as output. This research model distinguishes product level Received Word-of-Mouth, and Firm level received Word-of-Mouth. Furthermore, the Received and Given Word-of-Mouth measurements are conceptualized as Praise and Activity. Lastly, interaction effects are hypothesized for Praise and Activity. It is likely that the effect of Received Word-of-Mouth is stronger when both Praise and Activity is high, since the message is more vivid. Fig. 1 shows the research model.

Research methodology
This study is executed in a consumer mobile phone market. This particular market can be characterized as high risk. The risk is caused by the intangibility of the user-friendliness of a mobile phone and the social risk. These properties make the mobile phone market a market in which Word-of-Mouth should be most prevalent.

The research model is tested using the Partial least Square (PLS) method with the statistical package SMARTPLS. PLS is a variance based structural equation modelling technique. In line with this research, PLS is most suitable for research in an early stage of theoretical development and prediction oriented research (the explanation of endogenous constructs) (Henseler, Ringle, & Sinkovics, 2009).

Data analysis
Data was collected through a questionnaire. The respondents consisted of 141 females and 147 males with an average age of 28,3. To increase validity and reliability, three items are removed. This resulted in a convergent, valid and reliable measurement model. Analysis of the research model resulted in three significant relationships. Analysis of the moderators resulted in six significant moderating effects. As such, Fig. 1 shows the results of the analysis of the original model and the moderator analysis.

An extra analysis is executed that incorporated satisfaction, affective commitment. This analysis of the extended model resulted in seven significant relationships as shown in Fig. 2. This model is referred to as the extended model.

Discussion and conclusion
This study provides evidence that Given Word-of-Mouth is affected by the social environment. As such it has increased understanding of the social influence as antecedent of Given Word-of-Mouth. The first major finding of this study is the limited impact of firm level Received Word-of-Mouth on product level Given Word-of-Mouth. In other words, especially product level constructs affects Given Word-of-Mouth. Second, Praise and Activity are two distinct constructs in the context of both Received Word-of-Mouth and Given Word-of-Mouth. From a Received Word-of-Mouth point of view, the effects of Praise are different from Activity. From a Given Word-of-Mouth point of view, Praise and Activity have different antecedents. Furthermore, evidence is found for copy behaviour. Such copy behaviour can be explained by different theories: identification (Kelman, 1961), perception-behaviour (Chartrand & Bargh, 1999) and network theory (perceptual affinity) (Bruyn & Lilien, 2008).

Considering the full model, it is found that satisfaction is a mediator on product level, whereas affective commitment is a mediator on firm level. Only a direct effect exists from Received Word-of-Mouth Product Activity to Given Word-of-Mouth Product Activity. Lastly, with regard to the moderators it is found that individual and product characteristics affect the relationship from Received Word-of-Mouth to Given Word-of-Mouth. Worth mentioning is the specific role of consumer innovativeness and Given Word-of-Mouth Activity. Individuals with high consumer innovativeness are less susceptible for social influence on product level. However, for firm level influence, the opposite is true. Individuals with high consumer innovativeness are more susceptible for firm level influence.
Managerial implications
For marketing managers, this research has the following major implications. Managers can use social influences as a tool for stimulating Word-of-Mouth. Marketing campaigns and techniques should be developed to flourish in both online and offline networks. Furthermore, depending on the specific situation of the firm and product, marketing managers can develop a more effective Word-of-Mouth strategy. More specifically, the role of Praise versus Activity is important in this context. Lastly, based on this work, managers are able to assess their customer propensity to spread Word-of-Mouth and identify the specific role social influence has for their products.

Limitations and future research
This study has the following important limitations. First is the choice of dimensions for social influence. Incorporating a Received Word-of-Mouth view on social influences ignores other relevant dimensions such as closeness, tie strength, and other. These dimensions are worthy of investigation. Second is the choice for the dimensions of the dependent variable Given Word-of-Mouth. Other interesting questions are to whom Given Word-of-Mouth is directed and how does this relate to the individual from whom Word-of-Mouth was received. A third limitation is the mobile phone context in which this study is executed. The impact of social influence should also be investigated in a service industry. Considering the relevance of Word-of-Mouth in a service industry such research would provide interesting results.

Figure 1 Results original research model
Figure shows the standardized beta coefficients
**. Correlation is significant at the 0.01 (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
The Effect of Received Word-of-Mouth on Given Word-of-Mouth

**Fig. 2 Results Extended model**

Figure shows the standardized beta coefficients

**. Correlation is significant at the 0.01 (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

RWPP = Received Word-of-Mouth Product Praise

GWPP = Given Word-of-Mouth Product Praise

RWPA = Received Word-of-Mouth Product Activity

GWPA = Given Word-of-Mouth Product Activity

SATI = Satisfaction

AFCO = Affective commitment

CINN = Consumer Innovativeness

PRIN = Product Innovativeness

PINV = Product Involvement

RWFP = Received Word-of-Mouth Firm Praise

RWFA = Received Word-of-Mouth Firm Activity

GWPP*A = Interaction effect RWPP and RWPA

RWFP*A = Interaction effect RWFP and RWFA
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1. Introduction

This introduction begins with underlining the importance of Word-of-Mouth (WOM). Second, it describes the research background and the current status of the WOM theory. Third, the research questions of this master thesis are presented. Lastly, the structure of this report is provided.

1.1 The importance of Word-of-Mouth

WOM, or “buzz”, involves informal communication among consumers about products, services and firms (Liu, 2006). In its broadest sense, WOM communication includes any information about a target object (e.g. company, brand) transferred from one individual to another (Brown, Barry, Dacin, & Gunst, 2005). Two important features distinguish WOM from other information sources, such as advertising: WOM is usually perceived as more credible and trustworthy, and it is more readily accessible through social networks (Liu, 2006).

For individuals WOM helps to reduce risks at time of purchase (Rogers, 1983). Furthermore, WOM enables consumers to make comparisons between or among service alternatives, or to increase understanding prior to delivery and consumption of the service (Bristol, 1990). Lastly, WOM provides vital information about a firm to consumers that oftentimes help consumers decide whether or not to patronize a firm (Zeithaml, Berry, & Parasuraman, 1993).

On product level positive WOM is important for product success. In early phases of the adoption process it helps to cross the chasm and speed up the adoption process (East, Hammond, & Lomax, 2008). For more mature products it helps customers to make a switch to competing products, providers or brands. Among users of mature categories, WOM acts within a framework of acquired consumer beliefs, preferences, habits, and commercial influences that may constrain or assist response to the advice (East, Hammond, & Lomax, 2008).

On firm level, WOM is viewed as being part of firm loyalty (Zeithaml & Parasuraman, 1996). As noted by Aker (1991), the real value of those customers most loyal to a firm (customer loyalty), is not so much the business that they personally generate but rather their impact on others in the marketplace. Thus positive WOM that is spread by loyal customers increases customer’s profitability, because positive WOM attracts new customers. Herr et al. (1991) recognized that positive WOM is a particularly valuable vehicle for promoting a firm’s products and services. As a result companies spent much money to stimulate positive WOM.

In contrast, negative WOM about products tends to carry greater weight on prospective buyers than favourable information (Mizerski, 1982). In a diffusion context Arndt (1967) concluded that persons receiving negative WOM comments about a product were 24% less likely to purchase the product than other individuals.

Understanding WOM is becoming more important because, traditional forms of communication appear to be losing effectiveness (Trusov, Bucklin, & Pauwels, 2009) and the growing popularity of social network sites and blogs expands the availability of WOM in the marketplace (Brown, Barry, Dacin, & Gunst, 2005).

1.2 Research background

Researchers acknowledge the importance of WOM. Brown and Reingen (1987) find that WOM is important for shaping consumers’ attitude and behaviours. Mangold et al. (1999) regard WOM as the dominant force in the service market place. Furthermore, Bendapudi and Berry (1997) describe WOM as the ultimate test of customer’s relationship.

Traditionally, researchers regarded satisfaction (Arnett, German & Hunt 2003; Bettencourt 1997; Reynolds and Beatty 1999) and affective commitment (Brown, Barry, Dacin, & Gunst, 2005; Harrison-Walker, 2001) as antecedents of WOM. Despite this large body of evidence, there is still room for improvement. Several scientists acknowledge that current WOM theories fail to account for social influences. Reingen and Kernan (1986) and Yale and Gilly (1995) suggest that a dyadic approach or
network approach is better than the traditional “individualistic” approach. Such an approach supports the idea that persons operate in a social context and are dependent of this context. From a network and diffusion of innovation perspective, Abrahamson and Rosenkopf (1997) identify a similar construct and suggest there is a feedback loop within groups or networks. Abrahamson and Rosenkopf use the bandwagon metaphor to explain adoption behaviour. A positive feedback loop increases the number of adopters which creates stronger bandwagon pressures and in turn causes increases in the number of adopters. Thus WOM spurs WOM.

Brown et al. (2005) uses the construct of self-identification to explain WOM behaviour. This construct on itself indirectly suggests that social influences play a role in WOM. Brown et al. define identification as the degree of overlap of self schema and organization schema. In this context an entity’s identity is referred to as a schema or perception of what is central and distinctive about the entity (Dutton, Dukerich, & Harquail, 1994). Conceptually it is logical that self-identification is positively associated with WOM, because saying positive things about an organization to others may provide a means of expressing his/her own identity (Arnett, German, & Hunt, 2003), and the greater the degree of overlap between the organization and the self, the more likely that the individual will say positive things about the organizations to “others” (Brown, Barry, Dacin, & Gunst, 2005). Thus Brown et al. recognize the importance and influence of “others”.

Matos and Rossi (2008) suggest that future research should integrate the perspectives of the WOM recipient and WOM giver, and variables should be identified that increase understanding in how received WOM influences customers’ propensity to pass information to others. Thus Matos and Rossi affirm the influence of the social context. Overall, it can be concluded that researchers agree that the social context is indeed important and social influence is likely to play a role in WOM behaviour. However, empirical evidence is not yet provided.

1.3 Research Questions
In the previous section it was concluded that current WOM theories fail to account for social influence. In a consumer market the social influence is known as subjective norm and is created by WOM (Schepers & Wetzels, 2007). This social influence is referred to as Received Word-of-Mouth (RW). On the other hand, WOM that is spread is referred to as Given Word-of-Mouth (GW). This leads to the following research question.

What is the effect of Received Word-of-Mouth on Given Word-of-Mouth?

This investigation of the relationship from RW to GW focuses on the impact of cross level effects of Product related RW (RWP) and Firm related RW (RFWP) on Product related GW (GW). The focus on GWP originates from the importance of WOM for product adoption. RWP deals with a judgement about a firm, whereas RWP deals with a judgement about a product. GWP deals with a recommendation (or warning) of a product. Furthermore, moderating effects on the individual level are investigated to increase segmentation capability. Lastly, perceptions of product and firm level characteristics are investigated as moderator to increase predictability of specific product and firm related GWP behaviour.

On the individual level, moderating effects of age, personality and consumer innovativeness are tested in this master thesis. On the product level, moderating effects of product innovativeness, product involvement and price are tested. On the firm level, moderating effects of customer based brand equity is tested. Customer-based brand equity is defined as the differential effect of brand knowledge on consumer response to the marketing of the brand. This leads to the following research questions.

1. What is the influence of age on the effect sizes of relationships on GWP?
2. What is the influence of personality on the effect sizes of relationships on GWP?
3. What is the influence of consumer innovativeness on the effect sizes of relationships on GWP?
4. What is the influence of product innovativeness on the effect sizes of relationships on GWP?
5. What is the influence of product involvement on the effect sizes of relationships on GWP?
6. What is the influence of price image on the effect sizes of relationships on GWP?
7. What is the influence of customer based brand equity on the effect sizes of relationships on GWP?

1.4 Report structure

This master thesis consists out of three phases, the orientation phase, analysis phase and conclusion phase. The orientation phase includes chapter 1, that elaborates on the research background of the study topic and chapter 2 that describes the literature with regard to WOM and social influences. The analysis phase includes chapter 3 that describes the hypothesis development and the research model. Chapter 4 that describes the research methodology and finally chapter 5 describes the analysis of the data. The conclusion phase includes chapter 6 that describes the conclusions, discussion, managerial implications and limitations. Figure 1 shows these phases.

Figure 1 Introduction, analysis and conclusion phase
The Effect of Received Word-of-Mouth on Given Word-of-Mouth

2. Literature review
This chapter explores what has been written about WOM in general, Received Word-of-Mouth (RW), Given Word-of-Mouth (GW) and social influence. Section 2.1 provides an introduction of WOM and findings on product and firm level. Section 2.2 describes findings on RW. Section 2.3 describes findings on GW, more specifically the antecedents of GW are discussed. Section 2.4 describes different theories of social influence.

2.1 Word-of-Mouth
Existing WOM studies can be divided into firm, product and individual level studies. The individual level studies can be divided into a receiver perspective (RW) and a sender perspective (GW). Figure 2 illustrates these different levels. This section provides a general introduction of WOM and WOM findings on firm and product level. As such it provides an overview of the importance of WOM on these levels.

<table>
<thead>
<tr>
<th>Firm level Word-of-Mouth</th>
<th>Paragraph 2.1.2</th>
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<tbody>
<tr>
<td>Product level Word-of-Mouth</td>
<td>Paragraph 2.1.3</td>
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<tr>
<td>Individual level Received Word-of-Mouth</td>
<td>Paragraph 2.2</td>
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<tr>
<td>Individual level Given Word-of-Mouth</td>
<td>Paragraph 2.3</td>
</tr>
</tbody>
</table>

2.1.1 WOM definition
One of the first researchers to address WOM was Arndt (1968), Arndt defined WOM as “oral, person-to-person communication between a perceived non-commercial communicator and a receiver concerning a brand, a product, or a service offered for sale”. Some years later, Westbrook (1987) defined WOM as “informal communications directed at other consumers about the ownership, usage, or characteristics of particular goods and services and/or their sellers”. More recently, East, Hammond and Lomax (2008) defined WOM shortly as “informal advice passed between consumers”. The differences between these descriptions are small. Nowadays researchers use either one of these definitions in their research (Harrison-Walker, 2001; Brown, Barry, Dacin, & Gunst, 2005; Mowen, Park, & Zablah, 2007).

2.1.2 Word-of-Mouth at Firm level
WOM studies at firm level focuses on the effects and importance of WOM for the firm. Two distinct topics are identified in literature: customer profitability studies, and studies focusing on firm results. Findings on these topics are now discussed. Table 1 shows all related studies.
The Effect of Received Word-of-Mouth on Given Word-of-Mouth

Table 1 Studies focused at effects and importance of WOM on firm level

<table>
<thead>
<tr>
<th>Context</th>
<th>Valence</th>
<th>Off/on-line</th>
<th>Product/ Service</th>
<th>Authors</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>+/-</td>
<td>Off</td>
<td>Product/ service</td>
<td>Reynolds and Beatty (1999)</td>
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<td>+</td>
<td>Off/on</td>
<td>Product Service</td>
<td>Hogan et al. (2003)</td>
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<td></td>
<td>+</td>
<td>Off</td>
<td>Product/ Service</td>
<td>Kumar et al. (2007)</td>
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<tr>
<td></td>
<td>+/-</td>
<td>On</td>
<td>Product/ Service</td>
<td>Wangenheim and Bayon (2007)</td>
</tr>
<tr>
<td>Stock prices</td>
<td>-</td>
<td>Off/on</td>
<td>Service</td>
<td>Luo (2009)</td>
</tr>
</tbody>
</table>

Customer profitability

WOM is important for customer acquisition. Customer profitability represents a multi-period measure of the economic value of a customer to the firm, expressed in contribution margin terms (Reinartz, Thomas, & Kumar, 2005). To that extent WOM is particular important for customer acquisition. Several researchers underline the importance of WOM for customer acquisition. Based on established consumer behaviour literature, Seth and Parvatiyar (1995) concluded that consumers engage in relational market behaviour due to personal influences, social influences (WOM), and institutional influences. As such, these influences can originate from family, social norms, peer group pressures, government mandates, religious tenets, employer influences and marketer policies. Hogan et al. (2003) demonstrated how customer profitability decreases as customers defect (switch provider or manufacturer) or disadopts the product all together. According to Hogan et al., this results in an absence of WOM from this particular customer. In the case of defection, this leads to lower sales for the specific firm. Moreover, in the case of disadoption, this leads to lower category-level sales and thus reduces the future sales of all firms. Villanueva et al. (2008) concluded that companies acquire customers through costly but fast-acting marketing investments or through slower but cheaper WOM processes. In addition if was found that marketing induced customers add more short-term value, whereas WOM induced customers add nearly twice as much long-term value.

In the context of customer acquisition and WOM, the concept of customer loyalty is very important. As stated by Reinart and Kumar (2002) customer loyalty is often associated with customers who market the company to others. From a more practical point of view, Kumar et al. (2007) identifies four customer segments based on their customer’s referral value (CRF): Affluents, advocates, misers and Champions. As such Kumar et al. recommends different approaches to direct affluents, advocates and misers to be a champion. These champions are associated with both high buying behaviour and high market behaviour. Wangenheim and Bayon (2007), empirically validated the link between WOM and new customer acquisition. Furthermore, they state that neglecting WOM effects in Return on Quality models is likely to lead to underestimate the returns from increasing quality and leads to underestimated Customer Lifetime Value (CLV).

Stock prices

One of the latest developments of WOM consequences on firm level is the link between negative WOM and stock prices. Luo (2009) uncovered short- and long-term effects of negative WOM on cash flows, stock returns, and stock volatilities. Furthermore, negative WOM “wear-in (time until stock prices are affected) and wear-out (time until the effect of negative WOM wears out) effects were identified. Luo concludes that these findings offer unique implications for buzz management. As such, companies should stimulate positive WOM, and reduce negative WOM.
2.1.3 Word-of-Mouth at Product level

WOM studies at product level focuses on the importance of WOM and the consequences of WOM for products. Two distinct research topics can be identified. First is WOM research that deals with product adoption. This specific research focuses primarily on offline WOM. Second is WOM that deals with product sales. This research focuses primarily on online WOM and is very popular at the moment.

Table 2 Studies focused at effects and importance of WOM on product level

<table>
<thead>
<tr>
<th>Context</th>
<th>Valence</th>
<th>Off/on-line</th>
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<td>Product</td>
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<td>+/-</td>
<td>Off</td>
<td>Product</td>
<td>Lampert and Rosenberg (1975)</td>
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<td>Off</td>
<td>Product</td>
<td>Dodson and Muller (1978)</td>
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<td>Product</td>
<td>Mahajan et al. (1984)</td>
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<td>Off</td>
<td>Product</td>
<td>Monahan (1984)</td>
</tr>
<tr>
<td></td>
<td>+/-</td>
<td>On</td>
<td>Service</td>
<td>Godes and Mayzlin (2004)</td>
</tr>
<tr>
<td>Product sales</td>
<td>+/-</td>
<td>Off</td>
<td>Product</td>
<td>Arndt (1967)</td>
</tr>
<tr>
<td></td>
<td>+/-</td>
<td>On</td>
<td>Services</td>
<td>Liu (2006)</td>
</tr>
</tbody>
</table>

Product Adoption

In general, researchers conclude that WOM is important for successful adoption and diffusion of innovation. In the early days of product adoption science, Arndt (1967) found that WOM exposure aids acceptance of a new product, while unfavourable comments hinder it. Martilla (1971) concluded that WOM within firms is an important factor in the later stages of the adoption process. Martilla studied the adoption process within a firm and identified two sorts of sources for information (personal and impersonal). It was concluded that especially personal sources are important for adoption. Dodson and Muller (1978) narrowed this view and concluded that for successful diffusion, WOM is particular important between adopters and non adopters. Dodson and Muller developed a diffusion model that incorporated (1) the interaction between adopters and non-adopters and (2) the influence of external information sources such as advertising. More recently, Godes and Mayzlin (2004) researched WOM in an “online” diffusion context and concluded that online conversations can be used to study WOM and diffusion of innovation. More specifically, Godes and Mayzlin found that the dispersion of conversations across communities has explanatory power in a dynamic model of TV ratings.

Product Sales

The findings on product sales and WOM provide convergent evidence that positive WOM leads to higher product sales. Building forth on the use of online WOM, several researchers investigated the effect of WOM on product sales. Chevalier and Mayzlin (2006) found that an improvement in a book’s review leads to an increase in relative sales. Chevalier and Mayzlin investigated the effects of review by performing a regression analyses. They furthermore concluded that the reviews were overwhelmingly positive and that customers review text rather than relying only summary statistics. In a movie sales context, Liu (2006) showed that WOM activities are most active during a movie’s prelease and opening week. Furthermore, online WOM information offers significant explanatory power for both aggregate and weekly box office revenue. In the same movie context, Duan et al. (2008) utilize a dynamic simultaneous equation system in which WOM is separated as both precursor to and outcome of retail sales. It was concluded movie’s box revenue and WOM valence significantly influences WOM volume. WOM volume in turn leads to higher box office performance.
2.2 Effects of Received Word-of-Mouth

This section focuses on WOM from the receiver’s perspective (RW) on the individual level, more specifically it focuses on the effects of RW and the influence on behaviour and attitude of the individual. RW effects have been studied in a pre-purchase, product judgment (without purchase) and pre-switching context. These studies focus either on products or services (research subject), whereby either a specific firm or product is recommended or warned for (RW Firm/RW Product). Given the scope of this master thesis only findings for the pre-purchase and product judgement are reported. Table 3 shows all related literature.

2.2.1 Product and Firm Received Word-of-Mouth

RW can be divided in two levels. This differentiation is necessary to assess the cross level influence of product level RW (RWP) and firm level RW (RWF). On one hand, there is RW concerning specific product. For example; you should get the new Iphone 3GS or the new HTC Hero. On the other hand, there is RW concerning a certain brand. This means that consumers experience RW about a brand. For example; You should really use a car of BMW, or you should really buy your financial services at ING.

Table 3 Studies focused at effects of RW at the individual level

<table>
<thead>
<tr>
<th>Context</th>
<th>RW firm/product (RWF/RWP)</th>
<th>Research subject</th>
<th>Valence</th>
<th>Off/on-line</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-purchase</td>
<td>RWF (b2b)</td>
<td>Cleaning products</td>
<td>+/-</td>
<td>Off</td>
<td>Roselius (1971)</td>
</tr>
<tr>
<td></td>
<td>RWF/ RWP (b2c)</td>
<td>Piano lessons</td>
<td>+/-</td>
<td>Off</td>
<td>Brown and Reingen (1987)</td>
</tr>
<tr>
<td></td>
<td>RWF (b2b)</td>
<td>Medical service</td>
<td>+</td>
<td>Off</td>
<td>Duhan, et al. (1997)</td>
</tr>
<tr>
<td></td>
<td>RWF (b2c)</td>
<td>Commercial services</td>
<td>+</td>
<td>Off</td>
<td>Money et al. (1998)</td>
</tr>
<tr>
<td></td>
<td>RWF/ RWP (b2c)</td>
<td>General services</td>
<td>+</td>
<td>Off</td>
<td>Bansal and Voyer (2000)</td>
</tr>
<tr>
<td></td>
<td>RWF/RWP (b2c)</td>
<td>Generals services and products</td>
<td>+/-</td>
<td>Off</td>
<td>Mooradian and Swan (2006)</td>
</tr>
<tr>
<td></td>
<td>RWF (b2c)</td>
<td>Organizational attractiveness</td>
<td>+/-</td>
<td>Off</td>
<td>Hoyer and Lievens (2007)</td>
</tr>
<tr>
<td></td>
<td>RWP (b2c)</td>
<td>Email</td>
<td>+</td>
<td>On</td>
<td>Bruyn and Lilien (2008)</td>
</tr>
<tr>
<td></td>
<td>RWF (b2c)</td>
<td>Leather goods and hair colorants</td>
<td>+/-</td>
<td>Off</td>
<td>East et al. (2008)</td>
</tr>
<tr>
<td>Product</td>
<td>RWP (b2c)</td>
<td>Computers and cars</td>
<td>+/-</td>
<td>Off</td>
<td>Herr et al. (1991)</td>
</tr>
<tr>
<td>judgement</td>
<td>RWP (b2c)</td>
<td>Cookies</td>
<td>+/-</td>
<td>Off</td>
<td>Bone (1995)</td>
</tr>
<tr>
<td>Pre-switching</td>
<td>RWF (b2b)</td>
<td>Commercial services</td>
<td>+</td>
<td>Off</td>
<td>Money (2004)</td>
</tr>
</tbody>
</table>

2.2.2 Pre-purchase

All these studies indicate that RW has a significant effect on buying behaviour. At individual level WOM has especially received attention in a pre-purchase context focused on both positive and negative offline WOM. Roselius (1971) concluded that consumers rely on WOM to reduce risk at time of purchase. According to Roselius consumers can pursue different strategies to reduce disk associated with various types of loss. One of which is WOM, it was found that WOM was equally helpful for time-loss, ego-loss and money-loss. East et al. (2008) investigated the impact of positive and negative WOM on brand purchase probability. They found that the impact of Positive WOM is generally greater than negative WOM. This impact of both positive WOM and negative WOM is strongly related to the pre-WOM probability purchase. Hereby, respondents resist negative WOM on brands they are very likely to choose, and resist positive WOM on brand they are very unlikely to choose. From a network perspective, Brown and Reingen (1987), Bruyn et al. (2008) and East et al. (2008) found empirical support for a positive tie strength effect on behaviour. In other words, the stronger the tie-strength, the more likely the recommended behaviour was performed. Unlike Money (2004), who found no support for a tie-strength effect. One explanation might be the b2b context in which Money executed his study, whereas Brown and Reingen (1987), Bruyn et al. (2008) and East et al. (2008) performed their study in a b2c context.
Another approach focuses on the RW process and the role of interpersonal influence. This approach investigates dimensions such as vividness and persistence of the RW process (Herr, Kardes, & Kim, 1991) or the differences or similarities between the source and the receiver. Herr et al. conclude that as vividness and persistence of the WOM message increases, the impact of WOM also increases. Bansal and Voyer (2000) investigated the role of interpersonal influences and concluded that three distinct relations exist. First is the effect of non-interpersonal effects such as receiver’s expertise, receiver’s perceived risk and sender’s expertise on the service purchase decision. Second, is the effect of the interpersonal forces (tie strength, information seeking) on the influence of WOM on the purchase decision. Third are the effects of non-interpersonal forces on interpersonal forces. It was concluded that a strong relationship exists between receiver’s expertise and the degree of search for WOM. Furthermore, higher receiver’s expertise leads to lower levels of perceived risk. Lastly, it was found that sender’s expertise is a strong indicator of the influence of WOM on the receiver’s purchase decision.

2.2.3 Product judgement

Two studies investigate the effects of RW on product judgement and conclude that RW indeed affects product judgements. Herr et al. (1991) investigated the effects of WOM and product attribute information on persuasion in a product judgement context. Herr et al. (1991) used the accessibility-diagnosticity perspective. This theory poses that accessible information is not used as an input for judgement and choice when more diagnostic or probative information is available (Feldman & Lynch, 1988; Feldman & Spencer, 1965). It was concluded that information accessibility mediates the effects of WOM information of product judgements. However, information-accessibility effects on judgement are reduced when more diagnostic information (prior impressions or extreme negative attribute information) is available. Bone (1995) investigated the effects of WOM on short and long term product judgements. She concluded that the influence of WOM is greater when a consumer faces a disconfirmation experience and when the communication is presented by an expert. In addition, Bone found that susceptibility to interpersonal influence and product knowledge does not appear to moderate WOM.

2.2.4 Received Word-of-Mouth measurement

This master thesis uses the dimensions RW “praise” and RW “activity”. The use of RW “praise” is in line with all research on RW. The use of RW “activity” is quite unique. Adopting RW “activity” results in a broad view, which incorporates a social pressure (subjective norm), or network approach. The activity dimension refers to a social (subjective norm) pressure since this pressure increases with the number of referents. Similarly, the network dimension centrality also refers to a number of referents who give WOM. In addition, the use of these constructs is in line with the GW study of Harrison-Walker (2001) who identified 2 dimensions of GW. This study is discussed in paragraph 2.3.5 Given Word-of-Mouth measurement.

There are also some weaknesses related to this dimensions. Some potentially important aspects are not discussed such as tie strength, network externality, vividness and the status of the reference groups. Incorporating these aspects is not possible since it would result in conflicting research methods. Since every form of RW should be dealt with individually, thus the specific RW activity becomes the focal construct. Given the research question, such an approach would be to narrow.

In line with the product and firm level RW as identified in paragraph 2.2.1 Product and Firm Received Word-of-Mouth, this master thesis uses the following RW dimensions as independent variables: (1) Received Word-of-Mouth Product Praise (RWPP), (2) Received Word-of-Mouth Product Activity (RWPA), (3) Received Word-of-Mouth Firm Praise (RWFP) and (4) Received Word-of-Mouth Firm Activity (RWFA).
2.3 Antecedents of Given Word-of-Mouth

This section focuses on WOM from the sender perspective (GW) on the individual level, more specifically the antecedents for GW are discussed. In other words, these studies attempt to answer the question: “why do persons give WOM?”. Several studies have concluded that satisfaction, quality, affective commitment and identification are significant antecedents of GW. These concepts are now discussed. Given the limited findings on trust and perceived value these constructs don’t receive attention in this master thesis. Table 4 shows all identified antecedents and the related studies.

Table 4 Studies focused on antecedents of GW at the individual level

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Support</th>
<th>Product/Service</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction</td>
<td>Yes</td>
<td>Product</td>
<td>Richins (1983)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Product</td>
<td>Richins (1987)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Product</td>
<td>Westbrook (1987)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Product</td>
<td>Swan and Oliver (1989)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Singh (1990)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Mittal, et al. (1999)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Price and Arnould (1999)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Maxham (2001)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Brown et al. (2005)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Wangenheim (2005)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Heitmann and Herrmann (2007)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Wangenheim and Bayon (2007)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Service</td>
<td>East et al. (2007)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Bettencourt (1997)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Reynolds and Beatty (1999)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Arnett et al. (2003)</td>
</tr>
<tr>
<td>Quality</td>
<td>yes</td>
<td>Service</td>
<td>Boulding et al. (1993)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Zeithalm (1996)</td>
</tr>
<tr>
<td></td>
<td>Yes/No</td>
<td>Service</td>
<td>Harrison-Walker (2001)</td>
</tr>
<tr>
<td>Affective commitment</td>
<td>yes</td>
<td>Service</td>
<td>Morgan and Hunt (1994)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Harrison-Walker (2001)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Henning-Thureau (2002)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Lacey et al. (2007)</td>
</tr>
<tr>
<td>Identification</td>
<td>Yes</td>
<td>Service</td>
<td>Bettencourt (1997)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Fournier (1998)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Pritchard and Havitz (1999)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Gruen et al. (2000)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Sen and Bhattachrya (2001)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Arnett et al. (2003)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Brown et al. (2005)</td>
</tr>
<tr>
<td>Trust</td>
<td>Yes</td>
<td>Service</td>
<td>Garbarino and Johnson (1999)</td>
</tr>
<tr>
<td>Perceived Value</td>
<td>Yes</td>
<td>Service</td>
<td>Hartline and Jones (1996)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Mckee et al. (2006)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>Gruen, et al. (2006)</td>
</tr>
</tbody>
</table>

2.3.1 Satisfaction

Satisfaction as antecedent of GW has been studied to great depth. Several studies (Wangenheim & Bayon, 2007; Brown, Barry, Dacin, & Gunst, 2005), used the definition for satisfaction as proposed by Oliver (1997). Oliver defines satisfaction as a pleasurable level of consumption-related fulfilment.
Although there seems to be a consensus of satisfaction, Heitmann et al. (2007) finds this definition of satisfaction to limited and incorporate the concept of decision satisfaction. According to them, satisfaction is determined by every aspect of the purchasing- consumption process. In their study this claim is empirically validated. Bettencourt (1997), uses the definition of Anderson and Narus (1990), who define satisfaction as an overall affective evaluation of the organization based upon all encounters and experiences with that particular organization.

Satisfaction with products or service is an important post-purchase response often associated with consumer outcomes such as loyalty and retention and to a lesser extent GW (Brown, Barry, Dacin, & Gunst, 2005). The empirical evidence about the relationship between satisfaction and GW intentions or behaviour is equivocal (Brown, Barry, Dacin, & Gunst, 2005). On one hand there are researchers, who conclude that there is a significant positive influence of satisfaction on GW (Heckman & Guskey, 1998; Mittal, Kumar, & Tsiros, 1999; Swan & Oliver, 1989). On the other hand there are researchers, who did not find any evidence of a direct relationship between the constructs (Arnett, German, & Hunt, 2003; Bettencourt, 1997; Reynolds & Beatty, 1999). One explanation for the equivocal results is that existing research has ignored the possibility that the influence of satisfaction on GW may differ depending on other characteristics of consumers such as level of commitment to the focal entity (Brown, Barry, Dacin, & Gunst, 2005).

2.3.2 Quality

Closely related to the concept of satisfaction, is the concept of quality. GW related studies based on quality were all performed in a service context. Harrison and Walker (2001) use the definition of Cronin and Taylor (1992) for quality. Cronin and Taylor conceptualize “service” quality as an attitude that is defined by an individual’s importance-weighted evaluation of the performance of the specific dimensions of a service. Boulding et al. (1993) conceptualize perceived quality as a blend of a customer’ prior expectations of what will en what should transpire during an encounter and the actual delivered service during an encounter. Thus similar to satisfaction, quality links expectations with actual performance. This is in line with the expectancy disconfirmation theory (Oliver, 1980).

Most empirical data support the view that quality leads to GW. Both Boulding et al. (1993) and Zeithalm (1996) tested the effect of quality perception on the person’s intended behaviours (e.g. WOM). Harrison-Walker (2001) tested the effect of service quality on GW through a Structural Equation Modelling analysis. Surprisingly, Harrison-Walker only found a significant effect in a veterinary industry but did not find a significant effect the hair salon industry. One explanation posed by Harrison-Walker is the focus of the SERVQUAL measurement for service quality. As proposed by Buttle (1996), SERVQUAL focuses on the process of service delivery rather than the outcome of the service encounter. For the veterinary industry, Harrison-Walker expects that consumers judge the process, since consumers are not able to judge the outcome since they do not possess medical knowledge. Whereas the hair salon industry is judged on the outcome, since consumers can judge if they like or dislike the outcome. From the presented findings it can be concluded that somewhat similar results exist for quality and satisfaction. As such, it is likely that the divergent findings on quality can be explained by the absence of affective commitment, as is the case for satisfaction.

2.3.3 Affective commitment

Buchanan (1974) conceptualized organizational commitment as an affective attachment to the goals and values of the organization; to one’s role in relation to the goals and values; and to the organization for its own sake, apart from its purely instrumental worth. Moorman et al. (1992) define affective commitment as an enduring desire to maintain a valued relationship”. Morgan and Hunt (1994) define commitment as an exchange partner believing that an ongoing relationship with another is so important as to warrant maximum efforts a maintaining it. These definitions indicate that affective commitment consists out of the following concepts: A valued relationship and a desire to maintain this relationship. According to Morgan and Hunt (1994) commitment is higher for those who believe that they receive more value from a relationship. These highly committed customers
should be willing to pay-back this overvalue to a firm in the form of GW. The empirical findings on affective commitment are unified. Harrison-Walker (2001), Henning-Thurau et al. (2002), and Lacey et al. (2007) found significant results for the relationship between affective commitment and GW. The results of these studies suggest that researchers are unified about the role of affective commitment as significant predictor for GW behaviour.

2.3.4 Identification

Closely related to the concept of affective commitment is identification. Empirical research shows that these are distinct concepts (Ashforth & Mael, 1989; Bergami & Bagozzi, 2000; Harrison-Walker, 2001). Dutton et al. (1994) define identification as the degree to which the self is defined by the same attributes the individual believes defines the organization. Bhattachrya et al. (1995) describe identification as the degree to which an individual perceives an oneness with an organization. More recently, Brown, Barry, Dacin, and Gunst (2005) have defined identification as the degree of overlap of self-schema and organization schema. According to Arnett et al. (2003), it is logical that individuals say positive things about a marketing organization, because it is a way of expressing their own self identity. Furthermore, the greater the overlap between the organization and self identity, the more likely the individual will say positive things about the organization. Several studies empirically support the view that identification leads to GW. As such, these findings about identity are in line with the general findings of affective commitment.

2.3.5 Given Word-of-Mouth measurement

This master thesis uses the GW conceptualization as developed and validated by Harrison-Walker (2001) for GW. The work of Harrison-Walker (2001) is the first work that systematically developed and empirically validated Product GW measurement. Borrowing from Arndt (1967) Harrison-Walker defines WOM as informal, person-to-person communication between a perceived non-commercial communicator and a receiver regarding a brand, a product, an organization, or a service. Following this definition Harrison-walker generated a set of items that capture the domain of the construct. On the basis of a literature review, Harrison-Walker concludes that WOM should include three aspects. First is enthusiasm that includes frequency and the number of contacts. Second is detail that states how much is said. Third is praise, which is the favourableness of the WOM communication. These aspects were represented through thirteen items. Harrison-Walker used a factor analysis to confirm the uni-dimensionality of the construct. It was concluded that GW can be measured by the constructs “GW Activity” and GW “Praise”.

This master thesis uses these two constructs to conceptualize GW. More specifically, since this master thesis deals with GW at product (and not a firm) level, the following dependent variables are used: (1) Given Word-of-Mouth Product Praise (GWPP) and (2) Given Word-of-Mouth Product Activity (GWPA).

2.4 Social influence

This section describes four different theories that account for social influence. As such this section provides background information on the basic social theories that are utilized in this master thesis. First is the theory of processes of opinion change. Second is the theory of perception-behaviour. Third is the theory of reasoned action. Fourth is the theory of social networks. Table 5 shows all studies regarding social influences as used in this master thesis.

2.4.1 Processes of opinion change

Kelman (1961) introduced the theory of “processes of opinion change. He identified three processes of social influence and labelled these as internalization, compliance and identification. Internalization occurs when an individual accepts influence because the induced behaviour is congruent with his value systems. The individual adopts the content because he perceives it as inherently conducive to the maximization of his values. Put more simple, internalization represents
The Effect of Received Word-of-Mouth on Given Word-of-Mouth

the human tendency to interpret information from important others as evidence about reality. Compliance occurs when an individual accepts influence from another person or from a group because he hopes to achieve a favourable reaction from the other. The individual may be interested in attaining certain specific rewards or in avoiding certain specific punishments that the influencing agent controls. Identification occurs when an individual adopts behaviour derived from another person or a group because this behaviour is associated with a satisfying self-defining relationship to this person or group. This relationship forms a part of the person’s self-image. Accepting this influence is a way of establishing or maintaining the desired relationship to the other, and the self-definition that is anchored in this relationship. These processes also play an important role in reference group theory as mentioned by Bearden and Etzel (1982) and Childers and Rao (1992). This theory states that individuals compare themselves with a reference group to whom they look for guidance for their own behaviour. Consumers do not have to be a member of such a group, but nevertheless derive their norms, values and standards for their own behaviour from these groups.

Table 5 Studies focused at social influence

<table>
<thead>
<tr>
<th>Theory</th>
<th>Main constructs</th>
<th>Authors</th>
</tr>
</thead>
</table>

2.4.2 Perception behaviour link

The perception behaviour link poses that people behave the same as the behaviours they observe. One of the first studies on the perception-behaviour is the study of Bargh et al. (1996). Bargh et al. (1996) proposed that trait concepts and stereotypes become active automatically in the presence of relevant behaviour or stereotyped-group features. In other words, if an individual perceives the behaviour of a referent person, this individual is likely to copy this behaviour unconsciously. Several explanations exist for the existence of such a link. Bargh et al. (1996) state that such copy behaviour is an important ingredient in the “glue” that binds two (or more)
interaction partners, keeps them on the same wavelength, and helps to bring each partner a sense of validation by others of their experience. Such an automatic link is also discussed in imitation theory (Koffka, 1935) (Bandura, 1977). Imitation theory poses that imitation is important for learning. As such it is important for speech and language (Dell, 1986), and understanding/anticipation of social behaviour (Schank, 1977).

Perception does not always lead to behaviour, otherwise all people would do the same. Two important views exist on this matter (Dijksterhuis & Bargh, 2001). The first view states that perception in itself is insufficient to elicit action and that an additional process is required. In other words, the behaviour should be facilitated. Dijksterhuis and Bargh (2001) mention different facilitators (e.g. motivation). This means that perception does not always leads to action whereas in other occasions it does. The second view states that the perceptual activity is sufficient to lead to behaviour, however the behaviour might be inhibited. In other words, it is not possible to perform the behaviour although the individual has the impulse to perform the behaviour.

Several studies provide empirical data on the perception behaviour link. Dijksterhuis and Knippenberg (1998) showed how activation of a mental representation of a social group leads to behaviour corresponding with specific attributes of the stereo type. Similarly, Bargh et al. (1996) concluded that social behaviour can be triggered by features of the environment. In other words, the research subjects showed similar behaviour as others in a certain environment.

### 2.4.3 Theory of Reasoned Action

The Theory of Reasoned Action (TRA), was introduced by Fishbein and Ajzen (1975) and originates from social psychology. According to Fishbein and Ajzen (1975) a behavioural intention measure will predict the performance of any voluntary act, unless intent changes prior to performance or unless the intention measure does not correspond to the behavioural criterion in terms of action, target, context, time-frame and/or specific. Fishbein and Ajzen (1975) suggest that in practice, the latter two constraints can be minimized by paying careful attention to the correspondence between the performance criterion and the wordings of the attitude, subjective norm, and intention questions, and by administering the measures of attitudes, subjective norms and intentions as close as possible to the performance time. This means that the constructs of Attitude and subjective norm predict intention and intention is used to predict the actual performance of behaviour.

Fishbein and Ajzen have long asserted that TRA can be used to understand and predict most human behaviour, although Fishbein and Ajzen (1975) do mention three limitations. First, TRA does not account for behaviour outcome or goals. It only focuses on the behaviour itself. Furthermore the model only accounts for behaviours that are under volitional control. Thus it can be the case that the intention to perform behaviour is strong but the person does not have the capabilities or resources to perform the behaviour. Second, TRA only accounts for a single behaviour and does not deal with the choices among alternative behaviour. Third, an intention measure may not provide a good prediction for actual behaviour since it is based on current considerations and these considerations might be limited or change over time. Despite these limitations, TRA has also been used in situations in which (1) the target behaviour is not completely under the subjects’ volitional control (2) the situation involves a choice problem not explicitly addressed by Fishbein and Ajzen, and/or (3) subjects’ intentions are addressed when it is impossible for them to have all of the necessary information to form a completely confident intention.

From their meta-analysis, Sheppard, Hartwick and Warshaw (1988) conclude that TRA is a strong predictor, even when utilized to investigate situations and activities that do not fall within the conditions originally specified for the model. Despite this conclusion, Sheppard, Hartwick and Warshaw do advice further refinement of the model. One refinement in the model is the inclusion of the construct perceived behavioural control. Perceived behavioural control is defined as the perceived ease or difficulty of performing the behaviour (Ajzen, 1991). This new model is called the “theory of planned behaviour” and has been successfully used in several studies. Ajzen (1991) concludes that the theory is found to be well supported by empirical evidence and Intentions to
perform behaviours of different kinds can be predicted with high accuracy from attitudes toward the behaviour, subjective norms, and perceived behavioural control; and these intentions, together with perceptions of behavioural control, account for considerable variance in actual behaviour.

2.4.4 Social networks

Social network theorem assumes that every individual is part of a network. A network is a collection of actors which can be individuals, organizations etc. These actors can be connected through relationships such as friendship, buyer-supplier etc. These relationships and actors together can be referred to as network (Borgatti & Foster, 2003). According to Granovetter (1973), through these small personal networks, small-scale interaction becomes translated into large-scale patterns, and that these, in turn, feed back into small groups.

From an interpersonal network perspective, Brown and Reingen (1987) concluded that at the macro level, weak ties displayed an important bridging function, allowing information to travel from one subgroup to other subgroups. At the micro level, strong and homophilous ties were more likely to be activated for the flow of referral information. For that study two dimensions of social influences were identified namely, Tie strength and homophily. Tie strength is the type of social relation (e.g. friend, neighbour, relative, etc.) with each of the actors from whom WOM was received. Homophily is described as the level of similarity in characteristics of the WOM referral.
3. Research Model and hypotheses

This chapter describes the hypotheses development of this master thesis. To that extent first the research model is discussed. Second, the moderators are described on individual, product and firm level.

3.1 Research model

The core process of this master thesis has RWP and RWF as input and GWP as output (Figure 3). It is assumed that RWP and RWF have a direct influence on GWP. The underlying process of this social influence poses that individuals perform the same behaviour as their social environment. Such “copy” or “similarity” behaviour can be explained by different theories. These theories are now discussed.

![Figure 3 Direct influences from RWP to GWP and from RWF to GWP](image)

3.1.1 Copy behaviour

Different theories posit that individuals copy behaviour of others. First is identification and reference group theory. Kelman (1961) posits that an individual derives his behaviour from another person or a group because this behaviour is associated with a satisfying self-defining relationship to this person or group and calls this process identification. Hsu and Lu (2004) state that identification occurs when a user adopts an opinion held by others because he or she is concerned with defining himself or herself as related to the group. Bearden et al. (1989) claims that identification reflects the individual’s desire to enhance self-image by association with a reference group. Thus, individuals look at the WOM behaviour of others and copy this behaviour in order to enhance ones self-image.

Second is the perception and behaviour link which adapts a more primitive approach. This theory poses that the act of perceiving another person’s behaviour creates a tendency to behave similarly oneself (Chartrand & Bargh, 1999). This link leads to smoother social interaction and bonding (Chartrand & Bargh, 1999) and understanding/anticipation of social behaviour (Schank, 1977). According to Dijksterhuis and Knippenberg (1998), such copy behaviour can be activated by a mental representation of a social group. In other words, the individual behaves corresponding with the specific attributes related to that group. Applied to WOM, this means that when individuals receive and thus perceive WOM behaviour in situation A, the copied WOM behaviour can be activated in situation B.

Last is network theory, which explains copy behaviour with the concept of perceptual affinity. Bruyn and Lilien (2008) define perceptual affinity as similarities between two people’s values, likes, dislikes and experience. Based on this definition, Bruyn and Lilien found that the receiver would perform certain behaviour more likely, if personal affinity is higher. Brown and Reingen (1987) refer to perceptual affinity as the attitudinal/ lifestyle similarity between the WOM giver and WOM receiver. In other words, from a common interest/like/value, network actors are likely to perform the same WOM behaviour. As such, if the perceptual affinity of the actors increases, so does the likelihood that the copy behaviour is performed.

In short, individuals look toward others as a source for their own behaviour. Considering the measurement dimensions of WOM (Praise and Activity), the following hypotheses can be formed.

**H1A. RWP “Praise” will have a positive impact on GWP “Praise”.
H1B. RWP “Activity” will have a positive impact on GWP “Activity”**
Individuals have the tendency to speak more about products which are evaluated either very negative or very positive with regard to more moderate evaluations. This can be concluded from findings in WOM research. For negative GW, Harrison-Walker (2001) found that service quality is negatively related to GW “activity” in a veterinary industry. Thus if the quality is more negative, GW activity increases. For positive WOM, Brown et al. (2005) found that with increased satisfaction, GW intention increases. When the findings for negative WOM and positive WOM are combined, it can be concluded that a U-relationship between RW praise and GW activity exists. These examples of Harrison-Walker and Brown et al. use quality and satisfaction as input for GW. It is likely that similar results exist for RW as input. In other words it is likely that a person, who has high levels of RW (either positive or negative), will talk more often about the product. This results in the next hypothesis.

H1C. RW “Praise” will have a U-relationship with GW “Activity”.

3.1.2 Cross level effects of firm RW

The next direct influence is the influence of firm level RW (RWF) on GWP. Similar cross level influences play a role in different theories. First, building forth on the identification argument of Kelman (1961), it is logical that individuals identify with norms and values of a firm. As a result, individuals will talk about products of this particular firm. Second, in satisfaction theory, Gwinner et al. (1998) describes benefits that relational customers may receive from service providers. Benefits such as social benefits, psychological benefits, economic benefits and special treatments, has a positive effect on service satisfaction. Thus satisfaction with, or an affective commitment with the provider has an impact on product satisfaction. Furthermore, in line with the consumption system approach of satisfaction (Mittal, Kumar, & Tsiros, 1999), cross over effects of products and the service subsystem on the intentions toward manufacturer (or service provider) can be expected. Third, in brand equity theory, it is widely accepted that a brand has negative customer-based brand equity when consumers react less favourably to an element of the marketing mix for the brand than they do to the same marketing mix element when it is attributed to a fictitiously named or unnamed version of the product or service (Keller, 1993). In other words, a negative brand image results in a more negative consumer attitude toward a product. Fourth, cross level WOM influences, shows resemblance with cross channel satisfaction effects as discussed by (Montoya-Weiss, Voss, & Grewal, 2003). In other words, it is expected that similar relationships exists for firm level RW to GW as for product level RW to GWP. Adapting this approach on hypotheses H1A to H1D, results in the following hypotheses.

H2A. RWF “Praise” will have a positive impact on GWP “Praise”.
H2B. RWF “Activity” will have a positive impact on GWP “Activity”.
H2C. RWF “Praise” will have a U-relationship with GWP “Activity”.

3.1.3 Interaction effects of Activity and Praise

This master thesis conceptualizes GWP with the dimensions Activity and Praise. As described in H1A-C and H2A-C, both RW “praise” and RW “activity” influences GW behaviour on their own. However it is highly plausible that an interaction effect is present. This effect is similar to the vividness effect as mentioned by Herr et al. (1991). This effect poses that as the vividness of the message increases, so does the effect of the message. Thus, as RW activity of the RW Praise message increases, so will the effect. In other words, when RW Praise and Activity are both high, the effect on GW intention is most likely to be higher than the sum of the effect of each individual dimension. This seems logical since an individual receives a highly positive recommendation (or negative warning), multiple times, which together should increase RW effectiveness. This results in the next hypotheses.
H3A. The interaction effect of RWP “Activity” and RWP “Praise” will have a positive impact on GWP “Praise”.

H3B. The interaction effect of RWP “Activity” and RWP “Praise” will have a positive impact on GWP “Activity”.

H3C. The interaction effect of RWF “Activity” and RWF “Praise” will have a positive impact on GWP “Praise”.

H3D. The interaction effect of RWF “Activity” and RWF “Praise” will have a positive impact on GW “Activity”.

Hypothesis 1 to 3 results in the conceptual model as shown in Figure 4.

Figure 4 Research model

3.2 Moderators on individual, product and firm level

In order to increase the robustness of this study moderating effects are hypothesized and tested on the individual, product and firm level.

3.2.1 Individual level

At the individual level age, personality and consumer innovativeness are researched.

Age

Age difference has been researched to a deep extent. The influence of age in the WOM context has not yet been researched. From a social psychological development point of view it is widely accepted that social influences increases during adolescence (Berndt, 1979). Within marketing, age difference has been researched in the context of information processing, market segmentation and technology adoption. It was concluded that elderly individuals and younger adults process information differentially (Philips & Sternthal, 1977). Furthermore, older workers were more strongly influenced by subjective norm and perceived behavioural control in comparison to younger workers (Morris & Venkatesh, 2000). These findings suggest that age differences might play a role in WOM behaviour. On one hand it can be argued that the social influence in positive WOM increases with age. This is in line with the findings in adoption theory as discussed above. On the other hand it can
be argued that social influences decreases with age since younger persons are more sensitive for the opinions of others. This master thesis follows the latter reasoning and assumes that social influences decreases with greater age. Thus for older people the relationship between RW and GW is likely to be weaker. This results in the next hypothesis.

**H4: With greater age**

**A. the positive relationship between RW* and GW* will be attenuated.**

**B. the positive relationship between RWF* and GWP* will be attenuated.**

(*both praise and activity)

**Personality**

Personality is one of the more engrossing concepts in the study of consumer behaviour (Kassarjian, 1971). Within the theory of WOM, Mowen et al. (2007) investigated trait antecedents of two surface level traits namely: an enduring disposition to communicate market information to others and an enduring disposition to receive market information from others thus RW and GW behaviour. Mowen et al. (2007) used the Motivation and Personality (3M) theory for this study and it was concluded that fashion innovativeness, shopping interest, and material resource needs are significant predictors of information sending. In addition, the predictors of information receiving are susceptibility to normative influence, value consciousness, and need for learning. One limitation of the study executed by Mowen et al. (2007), is the narrow focuses on personality traits and absence of traditional WOM antecedents such as satisfaction and commitment. However, in the context of this master thesis the study of Mowen et al. does suggest that personality has a moderating effect.

Personality has been conceptualized from a variety of theoretical perspectives and at various levels of abstraction or breadth. Despite these different perspectives, personality is reaching a consensus. As mentioned by John and Srivastava (1999), more and more studies use the taxonomy of personality traits as developed by Tuples and Christal (1961). The results indicate that this model is very useful for predicting how people behave and perform (Barrick & Mount, 1991). Given the robustness of this five factor model, this model is used in this study. The big Five model is a hierarchical model of personality traits with five factors that represent personality at the broadest level of abstraction (Gosling, Rentfrow, & Swann, 2003). This model recognizes five factors, namely: Neuroticism, extraversion, openness to experience, Agreeableness and conscientiousness.

The first factor, neuroticism is associated with emotions and affects such as worrying, insecure, self-conscious, and temperamental (Mcrae & Costa, 1987). Mcrae and Costa found that impulsive behaviours such as tendency to overeat, smoke, or drink excessively, can be linked to neuroticism. Other studies linked neuroticism to irrational beliefs (Teasdale & Rachman, 1983; Vestre, 1984). Given these observed behaviours, it is likely that individuals scoring high in neuroticism are less susceptible for social influences. These persons do not behave along the line of social norms regarding smoking, drinking and rational beliefs. It is therefore expected that individuals scoring high in neuroticism are less susceptible for social influence. This results in the next hypotheses.

**H5. With greater neuroticism**

**A. the relationship between RWP* and GWP* will be attenuated.**

**B. the relationship between RWF* and GWP* will be attenuated.**

(*both praise and activity)

The second factor, extraversion is associated with being sociable, fun-loving, affectionate, friendly, and talkative (Mcrae & Costa, 1987). As described by Chartrand and Bargh (1999) the perception behaviour link assumes that this specific phenomenon leads to a more fluent social interaction and thus being more social. This implies that persons with greater extraversion are more perceptive for social influence, since such a person acts more in line with his or her environment. Since extraversion is linked with being more sociable it is plausible that the relationship between RW and GW is stronger for individuals with high extraversion. Thus the following hypotheses can be formed.
The Effect of Received Word-of-Mouth on Given Word-of-Mouth

H6. With greater extraversion
A. the positive relationship between RWP* and GWP* will be strengthened.
B. the positive relationship between RWF* and GWP* will be strengthened.
(*both praise and activity)

The third factor, openness to experience is associated with original, imaginative, broad interest, and daring (Mcrae & Costa, 1987). Mowen, et al. (2007) concluded that this factor is negatively related to information receiving. Mowen (2007) explains this by stating that information receivers are not “open” to exploring on their own. As a result, they seek assistance from others. Hence, the greater openness to experience the less influence the social environment has. Thus the relationship between RW and GW is likely to be weaker for individuals with high openness to experience. This results in the next hypothesis.

H7. With greater openness to experience
A. the positive relationship between RWP* and GWP* will be attenuated.
B. the positive relationship between RWF* and GWP* will be attenuated.
(*both praise and activity)

The fourth factor, agreeableness is associated with, naivety, dependency and fawning (Mcrae & Costa, 1987). These behaviours are the opposite of behaviours such as mistrustful, sceptical, unsympathetic, uncooperative and stubborn. This opposite behaviour is called antagonism (Eysenck & Eysenck, 1975). A person can be located between agreeableness and antagonism. Social influences play are stronger role for individuals who score high on agreeableness, whereas persons who score high an antagonism are likely to show an opposite behaviour, or develop an own behaviour and attitude. In other words, it is expected that the relationship between RW and GW is stronger for individuals with high agreeableness. This results in the next hypotheses.

H8. With greater agreeableness
A. the positive relationship between RWP* and GWP* will be strengthened.
B. the positive relationship between RWF* and GWP* will be strengthened.
(*both praise and activity)

The fifth and last factor, conscientiousness is associated with dutiful, scrupulous, and moralistic (Mcrae & Costa, 1987). A person who is scrupulous might be less susceptible for social influence and is likely to form his own judgements. Thus, the relationship between RW and GW is likely to be stronger for individuals with higher conscientiousness. The following hypotheses can be formed.

H9. With greater conscientiousness
A. the positive relationship between RWP* and GWP* will be strengthened.
B. the positive relationship between RWF* and GWP* will be strengthened.
(*both praise and activity)

Consumer innovativeness
Consumer innovativeness is the tendency to buy new products more often and more quickly than other people (Midgley & Dowling, 1978). More recently, Steenkamp el al. (1999) described consumer innovativeness as a predisposition to buy new and different products and brands rather than remain with previous choices and consumer patterns. Most authors associate consumer innovativeness with behaviour such as risk taking in making product choices, adoption of new products and services, variety seeking in purchase behaviour, browsing, and curiosity motivated information acquisition (Roehrich, 2004). Such behaviour can be explained by the individual tendency to express a feeling of uniqueness or a tendency to distinguish oneself. As stated by Simonson and Nowlis (2000) there is a tension between two opposite objectives in decision making: conformity and distinction. Furthermore, Roehrich (2004) acknowledges that the need for uniqueness pushes the individual to distinguish him/her-self through the possession of rare items. A person who wants to distinguish oneself is less likely to be affected by social influence. Therefore, the relationship between RW and
GW is likely to be lower for individuals with high consumer innovativeness. This leads to the next hypothesis.

**H10.** With greater consumer innovativeness
A. *the positive relationship between RWP* and *GWP* will be attenuated.
B. *the positive relationship between RWF* and *GWP* will be attenuated.
(*both praise and activity)

**3.2.2 Product level**

At the product level, product innovativeness, product involvement and price are studied.

**Product innovativeness**

Product innovativeness can be described as product benefits that are unique to a given product and are perceived as meaningful by customers (Cooper, 1993). From a market perspective, Sethi et al. (2001) refer to product innovativeness as the extent to which the product differs from competing alternatives. For such products, consumers rely on WOM (Cooper, 1993). Thus it can be expected that the relationship between RW and GW is stronger for products with high innovativeness. This leads to the next hypotheses.

**H11: With greater product innovativeness**
A. *the positive relationship between RWP* and *GWP* will be strengthened.
B. *the positive relationship between RWF* and *GWP* will be strengthened.
(*both praise and activity)

**Product involvement**

Product involvement is the degree to which a person perceives a product to be personally relevant (Zaichkowsky, 1985). Product involvement has been identified by various theories such as social network theory and dissonance theory as influencing WOM behaviour (Wangenheim & Bayon, 2007). Highly involved consumers will search for more information about the respective product class, will be more receptive, and will be more knowledgeable about it (Wangenheim & Bayon, 2007). Since consumers are more receptive for products with which they are highly involved, it can be concluded that the relationship between RW and GW is stronger for products with high product involvement. Therefore the following hypothesis can be formed.

**H12: With greater product involvement**
A. *the positive relationship between RWP* and *GWP* will be strengthened.
B. *the positive relationship between RWF* and *GWP* will be strengthened.
(*both praise and activity)

**Price**

Another product factor that might influence GW is price and the related price image. Price image can be defined as the extent to which the use of an innovation or product enhances one’s status in a social system (Moore & Benbasat, 1991). It is derived from the diffusion of innovation theory (Rogers, 2003). Rogers originally described five attributes (relative advantage, compatibility, complexity, trailability and observability) in his diffusion model that predict the rate of adoption. In addition, Rogers (2003) and other researchers (Tornatzky & Klein, 1982) identified the characteristic image. Schlosser (2002) suggested that the use of mobile technology is dependent on the consumer’s self-identity, as the use of such technology allows the consumer to express who he or she is. Since price can be related to social status and self-identity, it can be argued that persons are more receptive for information about products with a high price. Thus the relationship between RW and GW is likely to be stronger for products with a high price. Therefore the following hypotheses can be formed.

**H13: With greater price**
A. *the positive relationship between RWP* and *GWP* will be strengthened.
B. *the positive relationship between RWF* and *GWP* will be strengthened.
(*both praise and activity)
3.2.3 Firm Level

At the firm level, customer based brand equity is studied as moderator. Customer based brand equity is defined as the differential effect of brand knowledge on consumer response to the marketing of the brand (Keller, 1993). Basically, brand equity stems from the greater confidence that consumers place in a brand than they do in its competitors. Keller (1993) states that a brand is said to have positive (negative) customer based brand equity when consumers react more (less) favourably to an element of the marketing mix for the brand than they do to the same marketing mix element when it is attributed to a fictitiously named or unnamed version of the product or service. The same differential effect is likely to occur for social influence. Thus a person is more susceptible for RW about firms, to which a person has a high perceived brand equity perception.

Collectively, brand equity consists out of four dimensions namely, brand loyalty, brand awareness, perceived quality of brand and brand associations (Keller, 1993). These dimensions may be used to explore the findings of marketing and consumer behaviour research in relation to brand equity (Yoo & Dothu, 2001). Brand loyalty refers to the tendency to be loyal to a focal brand, which is demonstrated by the intention to buy the brand as a primary choice (Oliver, 1997). Brand awareness is the ability for a buyer to recognize or recall that a brand is a member of a certain product category (Aaker, 1991). Brand awareness consists out of brand recognition and recall (Keller, 1993). Perceived quality is the consumer’s judgment about a firm’s overall excellence or superiority (Zeithalm, 1988). Brand associations are defined as anything linked in memory to a brand and brand image as a set of associations (Yoo & Dothu, 2001). Based on these the dimensions and the notion that consumers are more susceptible for firms with high customer based brand equity the following hypotheses can be formed.

**H14: With greater customer based brand equity**

*the positive relationship between RWP* and GW* will be strengthened.*

*the positive relationship between RWF* and GW* will be strengthened.*

(*both praise and activity)
4. Research Methodology

The previous chapter describes the conceptual model. This chapter is dedicated to the research methods that are used to confirm this conceptual model. First, the research context selection is described. Second, the measurement instrument is discussed.

4.1 Research context selection

Rogers (1983) posits that consumers often engage in WOM for high risk purchases. As such WOM is most prevalent in an industry or market with high perceived risk. Every purchase has some degree of uncertainty which can be conceptualized as the likelihood of negative consequence. The target product in this study is the mobile phone. This market can be characterized as high risk because of the intangibility risk and the social risk. Bristor (1990) concluded that WOM is particularly important for services because WOM helps customers to make comparisons between or among service alternatives, or to increase understanding prior to delivery and consumption of the service. In other words, WOM helps customers to increase tangibility. When this approach is adapted to the mobile phone market it can be concluded that a mobile phone has highly tangible aspects such as screen size, input method (buttons, touch screen, qwerty) and memory size. However, one very important highly intangible aspect remains, namely the user-friendliness. Since most consumers use the mobile phone daily this aspect is very important. As such it increases the perceived risk.

Another aspect that increases perceived risk is the social risk. Kapferer and Laurent (1985) recognize the importance of social risk. In a haircut service, test subjects could conceivably recognize a perceived “social risk” regarding the negative consequences of a “bad” haircut. That is, students may perceive that a bad haircut will temporarily diminish their personal appearance and attractiveness. The same holds for the mobile phone, given the increased importance as a social status product.

Lastly, the mobile phone context has been chosen for a practical reason. Almost every person has a mobile phone which provides an advantage with regard to the dispersion and collection of questionnaires. Given these arguments it can be concluded that the mobile phone market is a highly interesting and practical market to investigate.

4.2 Measurement instrument

To assess the relationships in the research model, path modelling with latent variables (LVP) is used on the basis of partial least squares (PLS) method.

4.2.1 Data Collection

Data is collected through online questionnaires. The online questionnaires are spread through Hyves, Facebook, TUE Linked-In, Student Sport Centre, sport centre “Cardo” in Veldhoven and at the Jumbo Supermarkt in Veghel. Respondents are required to be in possession of a mobile phone for no longer than 36 months. Furthermore, respondents should be in the age of 12 to 85 years. These requirements are necessary because a certain mobile phone involvement and a social impact are required.

4.2.2 Measures

The latent variables in the research model are initially measured through multiple items based on previous research from A Journals. Responses are based on a 7-point Likert-type scale. The categories differed depending on the measurement scale. Wordings are adapted for the specific research context. All measurements can be seen in Appendix 1 Measurement scales.

Given and Received Word-of-Mouth measurements

The measurements of GWPP and GWPA are derived from the study of Harrison-Walker (2001). Harrison-Walker initially developed a 13-item scale to represent GW activity, detail and praise. 3 items are used to represent GWPP and 4 items are used to represent GWPA.
The measurements of RWPP, RWPA, RWFP and RWFA are also derived from the study of Harrison-Walker (2001). The study of Harrison-Walker (2001) was done in a GW context. Therefore, alterations are required before the items can be used in a RW context. Based on the items as developed by Harrison-Walker, six items are generated to reflect activity, and six items are generated to reflect praise.

**Remaining measurements**

Satisfaction is measured using the 3-item satisfaction scale by Gustafsson, Johnson, and Roos (2005). Affective commitment is measured using a 5-item scale based on the research of Schechter (1985) which was evaluated by Mayer and Schoorman (1992). Personality is measured using the ten-item scale TIPI (Tupes & Christal, 1961). Customer’s innovativeness is measured using a 4-item scale developed by Agarwal and Prasad (1998). Product innovativeness is measured though a self-developed feature scale. The innovativeness of a mobile phone can be measured through the presence of a feature such as, touchscreen and internet. Based on these features, mobile phones can be categorized as low, middle and high segment. Product involvement is measured based on a 5-item measurement scale developed by Richins and Bloch (1991). Price is measured through the estimated price of the product and the moment of purchase. Customer based brand equity is measured through a 10-item scale developed by Yoo and Donthu (2001).

**4.2.3 Partial Least Square Method**

The hypotheses are tested using Partial Least Square (PLS) Method with the statistical package SMARTPLS. PLS is a variance based structural equation modelling technique. This method uses an estimation approach that requires minimal demands on sample and residual distributions (Chin, 1998). The strengths of this method are in line with the goal of this research. According to Henseler et al. (2009) PLS is recommended in the following situations. Firstly, when the theory is in an early stage of theoretical development and exploratory models are tested and validated. Second, PLS is highly useful when the study focuses on the explanation of endogenous constructs. Third, when the research model is very complex with many latent and manifest variables.

**4.2.4 Construct validation Pilot study**

The questionnaire is tested in two steps. First the questionnaire is reviewed by two college dr.’s with experience in human behaviour research and a field expert with a MBA in finance, marketing and organizational development. These persons were asked to comment on length, wording and instructions. A similar approach to test a questionnaire is used by Anderson and West (1998).

Second, the measurement model is tested through a limited dispersion of 20 questionnaires. The results are tested using Confirmatory Factor Analysis (CFA). Such an approach of the pre-test is in line with the pre-test as executed by Bansal and Voyer (2000). Based on this pre-test several adjustments are made. The measurement scale for satisfaction is replaced, several measurement scales are reduced to a length of 4-items, and other items are phrased positively or just rephrased. This resulted in the questionnaire as presented in Appendix 2 Questionnaire.
5. Data analysis
This chapter first presents the descriptive statistics. Second are the validity and reliability of the measurement model. Third is the assessment of the structural model with PLS.

5.1 Descriptive statistics
In total 396 questionnaires were submitted of which 311 questionnaires were completed. 14 cases were deleted because the mobile phone was in possession for more than 36 months. 9 cases were deleted because either the price was too high or too low. 288 cases remained of which 141 female and 147 male with an average age of 28,3, an age range from 14 to 60 and a standard deviation of 8,01.

5.2 Validity and reliability
In order to assess the validity, first a confirmatory factor analysis (CFA) is executed on every single construct. Second, Cronbach’s α is used to test reliability. Third, the Fornell and Larcker (1981) test is used to assess discriminant validity.

Confirmatory factor analysis
To test the validity of the measures confirmatory factor analysis is executed on every single measure. Factor loadings are described in Table 6. Because of a low loading item 4 of RWFP is removed. All loadings should be greater than 0,5 (Peterson, 2000). Other loadings are sufficient, thus the measurement model has convergent validity.

Reliability
To test the reliability of each measurement, Cronbach’s α is used. A Cronbach’s α score of 0,7 or higher indicates unidimensionality of the construct (Cortina, 1993). Item 4 of RWPP is removed because of increased reliability (Cronbach α from 0,870=>0,932) and because of consistency with item 4 of RWFP (which is also removed). Item 3 of GWPA is removed because of a relative low mean and increased validity (Cronbach α from 0,902=>0,909). Lastly, the constructs of agreeableness, conscientiousness, neuroticism and openness to experience require extra attention. Several researchers report similar low scores (Ehrhart, Holcome-Ehrhart, Roesch, Chung-Herrera, Nadler, & Bradshaw, 2009). Commenting on these low scores, Gosling et al. (2003) state that the TIPI measurement was not designed to meet high standards or reliability, or other psychometric properties. TIPI was designed as a brief measure of personality without sacrificing validity. As such, the results of the TIPI measurement are further used for the analysis. All measures can be found in Table 6.

Table 6 Summary of measurement scales

<table>
<thead>
<tr>
<th>Construct item</th>
<th>mean</th>
<th>S.D.</th>
<th>Factor loading</th>
<th>Cronbach α</th>
<th>α if item is removed</th>
<th>Average variance extracted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possession</td>
<td>11,72</td>
<td>8,57</td>
<td>0,948 (0,928)</td>
<td>0,932 (0,870)</td>
<td>0,886 (0,789)</td>
<td>0,880 (0,731)</td>
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<tr>
<td>Costs</td>
<td>338,20</td>
<td>232,72</td>
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<tr>
<td>Received Word of Mouth Product Praise (RWPP)</td>
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</tr>
<tr>
<td>1. Andere mensen hebben alleen goede dingen te vermelden over mijn mobiele telefoon.</td>
<td>4,52</td>
<td>1,44</td>
<td>0,948 (0,928)</td>
<td>0,932 (0,870)</td>
<td>0,886 (0,789)</td>
<td>0,880 (0,731)</td>
</tr>
<tr>
<td>2. Over het algemeen praten andere mensen positief over mijn mobiele telefoon.</td>
<td>4,79</td>
<td>1,48</td>
<td>0,932 (0,929)</td>
<td>0,912 (0,783)</td>
<td>0,906 (0,804)</td>
<td></td>
</tr>
<tr>
<td>3. Ik hoor alleen goede dingen over mijn mobiele telefoon.</td>
<td>4,31</td>
<td>1,47</td>
<td>0,935 (0,909)</td>
<td>0,912 (0,783)</td>
<td>0,906 (0,804)</td>
<td></td>
</tr>
<tr>
<td>4. Mensen die ik, ken raden deze mobiele telefoon af. (Item removed)</td>
<td>(5,82)</td>
<td>(1,43)</td>
<td>(0,612)</td>
<td>(0,932)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Received Word of Mouth Product Activity (RWPA)
| **1. Andere mensen praten vaak over mijn mobiele telefoon.** | 3,28 | 1,92 | 0,944 | 0,977 | 0,980 | 0,936 |
| 2. Ik ken veel mensen die over deze mobiele telefoon praten met anderen. | 3,01 | 1,91 | 0,973 | | 0,966 | |
| 3. Veel mensen die ik ken praten over deze mobiele telefoon. | 3,01 | 1,88 | 0,981 | | 0,963 | |
| 4. Mijn telefoon wordt vaak besproken door anderen. | 3,04 | 1,88 | 0,970 | | 0,968 | |

**Satisfaction (SATI)**

| 1. Hoe tevreden of ontevreden bent u over uw telefoon? | 5,44 | 1,28 | 0,914 | 0,881 | 0,881 | 0,815 |
| 2. In hoeverre voldoet de mobiele telefoon aan uw verwachtingen? | 5,42 | 1,26 | 0,973 | 0,966 | 0,966 | 0,954 |
| 3. Hoe dicht liggen de prestaties van uw mobiele telefoon bij de prestaties van uw ideale telefoon? | 4,77 | 1,53 | 0,981 | 0,963 | 0,963 | 0,936 |

**Given Word-of-Mouth Product Praise (GWPP)**

| 1. Ik heb alleen maar goede dingen te melden over deze mobiele telefoon. | 4,63 | 1,51 | 0,923 | 0,926 | 0,909 | 0,875 |
| 2. Over het algemeen, spreek ik positief over deze telefoon. | 5,25 | 1,41 | 0,942 | | 0,883 | |
| 3. Ik raad deze telefoon aan. | 4,98 | 1,66 | 0,941 | | 0,886 | |

**Given Word-of-Mouth Product Activity (GWPA)**

| 1. Ik praat vrij regelmatig over deze mobiele telefoon. | 3,47 | 1,77 | 0,943 | (0,911) | (0,902) | (0,847) |
| 2. Ik heb meer mensen over mijn mobiele telefoon verteld, in vergelijking met andere producten. | 3,43 | 1,93 | 0,941 | (0,917) | (0,909) | (0,850) |
| 3. Ik gebruik elke mogelijkheid om over deze telefoon te praten. | 1,86 | 1,30 | 0,815 | | | 0,909 |
| 4. Wanneer ik andere mensen vertel over de mobiele telefoon dan doe ik dat uitgebreid. | 2,52 | 1,63 | 0,876 | (0,882) | | 0,873 |

**Received Word-of-Mouth Firm Praise (RWFP)**

| 1. Andere mensen hebben alleen goede dingen te vermelden over het merk van mijn mobiele telefoon. | 4,56 | 1,34 | 0,911 | (0,895) | (0,898) | (0,832) |
| 2. Over het algemeen praten andere mensen positief over het merk van mijn mobiele telefoon. | 5,01 | 1,28 | 0,926 | (0,921) | (0,787) | (0,673) |
| 3. Ik hoor alleen goede dingen over het merk van mijn mobiele telefoon. | 4,65 | 1,37 | 0,899 | (0,893) | | (0,642) |
| 4. Mensen die ik ken, raden het merk van mijn mobiele telefoon af. | 5,67 | 1,36 | 0,376 | (0,376) | | (0,898) |

**Received Word-of-Mouth Firm Activity (RWFA)**

| 1. Andere mensen praten vaak over het merk van mijn mobiele telefoon. | 4,14 | 1,58 | 0,927 | 0,969 | 0,973 | 0,916 |
| 2. Ik ken veel mensen die over het merk van mijn mobiele telefoon praten met anderen. | 3,80 | 1,69 | 0,969 | | 0,954 | |
| 3. Veel mensen die ik ken praten over het merk van mijn mobiele telefoon. | 3,78 | 1,67 | 0,966 | | 0,955 | |
| 4. Het merk van mijn telefoon wordt vaak besproken door anderen. | 3,90 | 1,71 | 0,966 | | 0,955 | |

**Firm Quality (FQUA)**

| 1. Het is erg waarschijnlijk dat de kwaliteit van dit merk erg hoog is. | 5,35 | 1,17 | 0,947 | 0,886 | | 0,898 |
| 2. Ik vind de kwaliteit van de producten van dit merk erg hoog. | 5,31 | 1,19 | 0,947 | | | |

**Loyalty (LOYA)**

| 1. Ik beschouw mezelf als loyaal tot het merk. | 3,87 | 1,92 | 0,937 | 0,931 | 0,902 | 0,880 |
| 2. Het merk zou mijn eerste keus zijn. | 4,10 | 1,97 | 0,957 | | 0,869 | |
The Effect of Received Word-of-Mouth on Given Word-of-Mouth

3. Ik zal geen andere merken kopen als dit specifieke merk in de winkel beschikbaar is.

<table>
<thead>
<tr>
<th>Affective Commitment (AFCO)</th>
<th>3.11</th>
<th>1.92</th>
<th>0.919</th>
<th>0.929</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Voor mij is dit één van de beste mobiele telefoon merken.</td>
<td>4.84</td>
<td>1.71</td>
<td>0.797</td>
<td>0.906</td>
</tr>
<tr>
<td>2. Ik ben er trots op dat ik een mobiele telefoon gebruik van dit merk.</td>
<td>3.83</td>
<td>1.89</td>
<td>0.890</td>
<td>0.876</td>
</tr>
<tr>
<td>3. Ik voel me verbonden met dit merk.</td>
<td>3.46</td>
<td>1.86</td>
<td>0.924</td>
<td>0.855</td>
</tr>
<tr>
<td>4. Dit merk inspireert mij om mobiele telefoons te blijven kopen van dit merk.</td>
<td>3.60</td>
<td>1.95</td>
<td>0.918</td>
<td>0.859</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Brand awareness (BRAW)</th>
<th>5.13</th>
<th>1.66</th>
<th>0.914</th>
<th>0.913</th>
<th>0.876</th>
<th>0.796</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ik herken dit merk tussen andere concurrerende merken.</td>
<td>5.07</td>
<td>1.64</td>
<td>0.927</td>
<td>0.868</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Sommige kenmerken van dit merk schieten me makkelijk te binnen.</td>
<td>4.49</td>
<td>1.84</td>
<td>0.884</td>
<td>0.892</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Ik kan het symbool of logo van het merk snel voor de geest halen.</td>
<td>5.24</td>
<td>1.69</td>
<td>0.842</td>
<td>0.911</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>28.32</th>
<th>8.01</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Extraversion (PEX)</th>
<th>4.91</th>
<th>1.21</th>
<th>0.905</th>
<th>0.772</th>
<th>0.819</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Ik beschouw mezelf als gereserveerd, stil.</td>
<td>4.88</td>
<td>1.44</td>
<td>0.905</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Agreeableness (PAG)</th>
<th>3.51</th>
<th>1.30</th>
<th>0.789</th>
<th>0.394</th>
<th>0.623</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ik beschouw mezelf als kritisch, confrontatie zoekend.</td>
<td>3.93</td>
<td>1.37</td>
<td>0.789</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contentiousness (PCO)</th>
<th>5.33</th>
<th>1.10</th>
<th>0.833</th>
<th>0.550</th>
<th>0.694</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Ik beschouw mezelf als wanordelijk, roekeloos.</td>
<td>5.44</td>
<td>1.33</td>
<td>0.833</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Neuroticism (PNE)</th>
<th>2.53</th>
<th>1.41</th>
<th>0.845</th>
<th>0.599</th>
<th>0.746</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Ik beschouw mezelf als kalm, emotioneel stabiel.</td>
<td>3.15</td>
<td>1.30</td>
<td>0.845</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Openness to experience (POE)</th>
<th>5.54</th>
<th>1.03</th>
<th>0.812</th>
<th>0.471</th>
<th>0.660</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Ik beschouw mezelf als open voor nieuwe ervaringen, complex.</td>
<td>5.27</td>
<td>1.34</td>
<td>0.812</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Consumer innovativeness (CINN)</th>
<th>2.69</th>
<th>1.67</th>
<th>0.892</th>
<th>0.899</th>
<th>0.890</th>
<th>0.834</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. In vergelijking tot mijn vrienden ben ik meestal één van de eerste die een nieuwe telefoon probeert.</td>
<td>2.81</td>
<td>1.86</td>
<td>0.926</td>
<td>0.831</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Ik hou ervan om nieuwe mobiele telefoons te proberen.</td>
<td>3.25</td>
<td>1.92</td>
<td>0.921</td>
<td>0.842</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product Involvement (PINV)</th>
<th>3.10</th>
<th>1.78</th>
<th>0.907</th>
<th>0.917</th>
<th>0.913</th>
<th>0.860</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Ik weet veel van de markt van de mobiele telefoons en de verschillende merken.</td>
<td>2.97</td>
<td>1.69</td>
<td>0.960</td>
<td>0.823</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Ik heb een goed overzicht van de merken in de markt van mobiele telefoons.</td>
<td>3.37</td>
<td>1.748</td>
<td>0.913</td>
<td>0.903</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Discriminant validity

Discriminant validity is tested based on the Fornell and Larcker (1981) approach. This approach states that the square root of the Average Variance Extracted (AVE) for each construct should exceed the correlation estimate between any two constructs. All constructs passed the test. However, attention is required for the following constructs: GWPP=>SATI, GWPA=>RWPA, AFCO=>LOYA and PINV=>CINN. Closer investigation of these constructs showed that no significant improvements can be achieved by eliminating items in these constructs. As such these correlations are accepted in this study. Table 7 shows all related measures. It should be noted that Table 7 can also be regarded as the standard correlation table, with the exception of the squared AVE value on the diagonal.

Table 7 Discriminant and convergent validity of the constructs

| RWPP | RWPA | SATI | GWPP | GWPA | RWFA | FQUA | LOYA | AFCO | BRAW | PEX | PAG | PCS | PNE | POE | PAG | CINN | PINV |
|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|------|------|
| 0.938 | 0.490 * | 0.345 | 0.903 | 0.588 | 0.353 | 0.840 * | 0.935 | 0.364 | 0.700 * | 0.283 | 0.319 | 0.882 | 0.510 | 0.212 | 0.354 | 0.440 | 0.221 | 0.912 |
| 0.371 | 0.613 * | 0.309 | 0.374 | 0.541 | 0.480 | 0.957 | 0.499 | 0.254 | 0.528 | 0.610 | 0.211 | 0.558 | 0.485 | 0.948 | 0.395 | 0.271 | 0.364 | 0.439 | 0.331 | 0.417 | 0.438 | 0.474 | 0.938 |
| 0.474 | 0.432 | 0.456 | 0.552 | 0.478 | 0.502 | 0.605 | 0.561 | 0.810 * | 0.884 | 0.414 | 0.452 | 0.252 | 0.344 | 0.441 | 0.423 | 0.549 | 0.513 | 0.517 | 0.669 | 0.892 |
| 0.136 | 0.023 | 0.106 | 0.138 | 0.071 | 0.126 | 0.118 | 0.173 | 0.243 | 0.186 | 0.149 | 0.063 | 0.094 | 0.833 | 0.019 | 0.136 | 0.036 | 0.036 | 0.109 | 0.119 | 0.088 | 0.038 | 0.052 | 0.044 | 0.067 | 0.905 |
| 0.094 | 0.140 | 0.073 | 0.118 | 0.132 | 0.048 | 0.110 | 0.023 | 0.018 | 0.031 | 0.161 | 0.266 | 0.789 | 0.429 | 0.373 | 0.145 | 0.864 |
| 0.169 | 0.019 | -0.001 | 0.020 | 0.167 | 0.002 | 0.118 | 0.069 | 0.008 | 0.060 | 0.254 | 0.354 | -1.04 | 0.055 | -1.08 | 0.812 | 0.277 | 0.466 | 0.102 | 0.142 | 0.577 | 0.178 | 0.385 | 0.136 | 0.265 | 0.390 | 0.373 | 0.071 | 0.034 | 0.122 | 0.005 | 0.090 | 0.914 |
| 0.253 | 0.369 | 0.037 | 0.139 | 0.532 | 0.190 | 0.343 | 0.204 | 0.241 | 0.367 | 0.429 | -0.041 | 0.080 | 0.148 | -0.079 | 0.113 | 0.798 * | 0.927 |

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

5.3 Testing of hypotheses

First the original model is tested. Second, the model is tested for U-relationships. Third, two improvements are tested in two model extensions. All models are tested using SMARTPLS with iterations at 500. T-values are determined through a bootstrap procedure with 288 cases and 1000 samples.

5.3.1 Results analysis original model

In the original model, direct significant positive effects are found for RWPP to GWPP, RWPA to GWPA and RWFA to GWPA. Hence hypotheses H1A, H1B and H2B are supported. No support is found for the hypotheses H2A, H3A, H3B, H3C, and H3D. Hypotheses H1C and H2C are tested in the following paragraph. This means that as others speak more favourable about a mobile phone, so will the individual. Furthermore, as others talk more often about a mobile phone, so will the individual. Lastly, as others talk more often about a firm, so will the individual talk more often about the mobile phone of that firm. Figure 5 shows the results of the original model. The path coefficients can be interpreted as standardized beta coefficients of ordinary least squares regressions (Henseler, Ringle, & Sinkovics, 2009).
PLS seeks to minimize the error (in other words, maximize the variance explained), in the endogenous constructs. As such, the quality of a PLS model can be determined by examining the $R^2$ values of the constructs (Hulland, 1999). This method differs from approaches used in covariance structure analysis such as LISREL, that seek to reproduce the observed covariance matrix as closely as possible (Hulland, 1999). This original model explains 40% of GWPP and 51% of GWPA. Chin (1998) regards $R^2$ values of 0.67; 0.33; 0.19 in PLS models as substantial, moderate, and weak. Thus the results can be regarded as moderate to substantial.

Figure 5 Results original model

**. Correlation is significant at the 0.01 (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

RWPP= Received Word-of-Mouth Product Praise
RWPA= Received Word-of-Mouth Product Activity
RWFP= Received Word-of-Mouth Firm Praise
RWFA= Received Word-of-Mouth Firm Activity
GWPP= Given Word-of-Mouth Product Praise
GWPA= Given Word-of-Mouth Product Activity

U-relationship model

In order to assess the U-relationship from RWPP to GWPA and from RWFP to GWPA (hypotheses 1C and 2C), a model with only GWPA as dependent construct is required. Furthermore, both RWPP and RWFP constructs need to be squared. No significant relationship is found from RWPP to GWPA and from RWFP to GWPA. So no evidence exists for the U-relationship. Figure 6 shows the results of this U-model.

The U-relationship was also tested for the product constructs, RWPP*A and RWFP*A, although these U-relationships are not originally hypothesized. Similar to the former relationship no significant results are found. Figure 7 shows the results of this u-model on the product constructs.
5.3.2 Results moderator analysis

At individual level, as expected, a negative moderating effect is found for consumer innovativeness on the relationship RWPA-GWPA (H10A). Unexpected is the positive moderating effect for consumer innovativeness on the relationship RWFA-GWPA (H10B). Furthermore, in line with the corresponding hypothesis, openness to experience is found to be a moderator on the relationship RWPP-GWPP (H7A). At product level, H11A, H12A and H13A are supported. As such, positive moderating effects are found for product innovativeness, product involvement and price on the relationship RWPP-GWPP. At firm level, no significant moderating effect is found for customer based brand equity. Table 8 shows all significant results of the moderator analysis. All results of the moderator analysis are presented in Appendix 4 Results moderating effects.

**Interpretation of the moderating effects**

The moderator analysis identified six moderating effects. These moderators are now further investigated by interpreting the interaction graph. This interpretation is based on the work of Aiken and West (1991). These results should be interpreted with great care because a valid method for the interpretation of moderation results from SMARTPLS is still in development. As such, SMARTPLS does not provide the following data: unstandardised regression coefficients, means and the standard deviations of both independent variable and moderator, and intercept. This problem is partially overcome by recalculating the unstandardised coefficients, the means and the standard deviations.
with help of the average scores on the independent, dependent and moderator variables. Furthermore, the intercept has been defaulted to be three. The graph is drawn up with help of the excel sheet“ two-way interaction effects for unstandardised variables” as provided by www.jeremydawson.co.uk/slopes.htm.

Table 8 Results moderator analysis

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Dependent variable</th>
<th>R²</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>POE</td>
<td>GWPP</td>
<td></td>
<td>0,128 (1,994)*</td>
<td>39%</td>
</tr>
<tr>
<td>RWPP*OE (H7A (-))</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CINN</td>
<td>RWPA*CINN (H10A (-))</td>
<td></td>
<td>0,305 (6,547)**</td>
<td>0,135 (2,304)*</td>
</tr>
<tr>
<td>RWFA*CINN (H10B (-))</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td></td>
<td></td>
<td>41%</td>
<td></td>
</tr>
<tr>
<td>PRIN</td>
<td>RWPP*PRIN (H11A(+))</td>
<td>0,131 (1,975)*</td>
<td>40%</td>
<td>0,232 (4,676)**</td>
</tr>
<tr>
<td>R²</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PINV</td>
<td>RWPP*PINV (H12A(+))</td>
<td>0,164 (2,288)*</td>
<td>40%</td>
<td>0,291 (6,479)**</td>
</tr>
<tr>
<td>R²</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price</td>
<td>RWPP*Price (H13A(+))</td>
<td>0,136(2,101)*</td>
<td>39%</td>
<td>0,221 (3,943)**</td>
</tr>
<tr>
<td>R²</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBBE</td>
<td>GWPA</td>
<td></td>
<td>0,331 (5,707)**</td>
<td>46%</td>
</tr>
</tbody>
</table>

Only significant results are included.

Table shows the standardized beta coefficients

**. Correlation is significant at the 0,01 (2-tailed).
* . Correlation is significant at the 0,05 level (2-tailed).

RWPP= Received Word-of-Mouth Product Praise, GWPP= Given Word-of-Mouth Product Praise, POE= Openness to Experience, CINN= Consumer Innovativeness, PRIN= Product Innovativeness, PINV= Product Involvement, CBBE= Customer Based Brand Equity

Figure 8 shows the interaction graph of openness to experience on the RWPP to GWPP relationship. The graph shows that for higher levels of openness to experience the relationship from RWPP to GWPP is strengthened. This effect is stronger in the case of high RWPP, in comparison to low levels of RWPP. This finding suggests the opposite of hypothesis 7A. This means that individuals with high openness to experience are open of experiences of others with regard to Praise.
The Effect of Received Word-of-Mouth on Given Word-of-Mouth

Figure 9 shows the interaction graph of consumer innovativeness on the RWPA to GWPA relationship. The graph shows that for higher levels of consumer innovativeness, the relationship between RWPA and GWPA is attenuated. This effect only holds for high levels of RWPA. This finding confirms hypothesis 10A. This indicates that for high RWPA, individuals with low consumer innovativeness are more open for the influence of others with regard to Activity.

![Interaction graph of CINN on RWPA-GWPA](image1)

**Figure 9 Interaction graph of CINN on RWPA-GWPA**
- RWPA= Received Word-of-Mouth Product Activity
- GWPA= Given Word-of-Mouth Product Activity
- CINN= Consumer innovativeness

Figure 10 shows the interaction graph of consumer innovativeness on the RWFA to GWPA relationship. The graph shows that for higher levels of consumer innovativeness, the relationship between RWFA and GWPA is strengthened. This effect is stronger in the case of high RWPA, in comparison to low levels of RWPA. This finding suggests the opposite of hypothesis H10B. Thus, individuals with high consumer innovativeness are more influenced by RW on firm level by others with regard to Activity.

![Interaction graph of CINN on RWFA-GWPA](image2)

**Figure 10 Interaction graph of CINN on RWFA-GWPA**
- RWFA= Received Word-of-Mouth Product Activity
- GWPA= Given Word-of-Mouth Product Activity
- CINN= Consumer innovativeness
Figure 11 shows the interaction graph of product innovativeness on the RWPP to GWPP relationship. From the graph it can be concluded that for higher levels of product innovativeness the relationship between RWPP and GWPP is strengthened. This effect is stronger in the case of high RWPP, in comparison to low levels of RWPP. This finding confirms hypotheses H11A. As such, consumers with a highly innovative mobile phone are more influenced by others with regard to Praise.

Figure 11 Interaction graph of PRIN on RWPP-GWPP
RWPP= Received Word-of-Mouth Product Praise
GWPP= Given Word-of-Mouth Product Praise
PRIN= Product innovativeness

Figure 12 shows the interaction graph of product involvement on the RWPP to GWPP relationship. The graph shows that for higher levels of product involvement the relationship between RWPP and GWPP is strengthened. This effect is stronger in the case of high RWPP, in comparison to low levels of RWPP. This finding confirms hypotheses H12A. In other words, individuals who are highly involved are more influenced by others in the case of Praise.

Figure 12 Interaction graph of PINV on RWPP-GWPP
RWPP= Received Word-of-Mouth Product Praise
GWPP= Given Word-of-Mouth Product Praise
PINV= Product involvement
Figure 13 shows the interaction graph of price on the relationship from RWPP to GWPP. The graph indicates that for higher price levels, the relationship between RWPP and GWPP is strengthened. This effect is stronger in the case of high RWPP, in comparison to low levels of RWPP. This finding confirms hypotheses H13A. This means that consumers with a more expensive mobile phone are more influenced by other with regard to price.

![Interaction graph of PRICE on the relationship RWPP to GWPP](image)

**Figure 13 Interaction graph of PRICE on the relationship RWPP to GWPP**

RWPP= Received Word-of-Mouth Product Praise
GWPP= Given Word-of-Mouth Product Praise

**Extra identified antecedents**

Next to the identification of significant moderators, the moderator analysis unexpectedly demonstrated direct effects. On the individual level personal innovativeness and openness to experience are identified as antecedent of GWPA. On the product level, product innovativeness, product involvement and price are identified as antecedents for GWPA. On the firm level, customer based brand equity is identified as antecedent of GWPP. These results are further investigated in the next paragraph.
5.3.3 Model Extensions
This section describes two model extensions. The first model extension incorporates affective commitment and satisfaction. This first extension is likely to provide significant results given the results on satisfaction (e.g. Brown et al., 2005; Heitmann and Herrmann, 2007; Wangenheim and Bayon, 2007; East et al. 2007) and affective commitment (Morgan and Hunt, 1994; Harrison-Walker, 2001; Henning-Thureau, 2002; Lacey et al., 2007). Furthermore, RWP is likely to affect satisfaction given the results on RW and product judgement (Herr et al., 1991; and Bone, 1995). RWF is likely to influence affective commitment similar to the identification theory (Kelman, 1961). Direct significant positive effects are found for RWPP to SATI, RWPA to GWPA, RWFP to AFCO, RWFA to AFCO, SATI to GWPP, AFCO to GWPP and AFCO to GWPA. This first extension with satisfaction and affective commitment explains 37% of SATI, 43% of AFCO, 76% of GWPP and 54% of GWPA. Figure 14 shows the results of this first extension.

**Figure 14 Results analysis first extension**
Figure shows the standardized beta coefficients

**. Correlation is significant at the 0.01 (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

RWPP= Received Word-of-Mouth Product Praise
RWPA= Received Word-of-Mouth Product Activity
RWFP= Received Word-of-Mouth Firm Praise
RWFA= Received Word-of-Mouth Firm Activity

GWPP= Given Word-of-Mouth Product Praise
GWPA= Given Word-of-Mouth Product Activity
SATI= Satisfaction
AFCO= Affective commitment
RWPP*A= Interaction effect RWPP and RWPA
RWFP*A= Interaction effect RWFP and RWFA
The second extension builds forth on the first extension and initially added the following constructs: consumer innovativeness, openness to experience, product innovativeness, price and customer based brand equity. These constructs are identified as significant antecedents for either GWPP or GWPA in the moderator analysis. However, incorporating all these constructs in a PLS analysis only resulted in significant effects for customer innovativeness, product innovativeness and product involvement. The quality score of GWPA increased from 54% to 63%. The quality score for GWPP remained the same. Thus this second extension can be regarded as an improvement of the first extension. Figure 15 shows the results of this second extension. This model is referred to as the extended model. Appendix 3 Results original and extended models shows all scores on the relationships of the three models.

Figure 15 Results analysis second extension (extended model)

**. Correlation is significant at the 0,01 (2-tailed).
*. Correlation is significant at the 0,05 level (2-tailed).

GWPA: Given Word-of-Mouth Product Activity
SATI: Satisfaction
AFCO: Affective commitment
CINN: Consumer Innovativeness
PRIN: Product Innovativeness
PINV: Product Involvement
RWPP*A= Interaction effect RWPP and RWPA
RWFP*A= Interaction effect RWFP and RWFA

Figure shows the standardized beta coefficients
6. Discussion and conclusion

This chapter firstly discusses two major findings based on two patterns as found in the research model. Second, findings with regard to direct and indirect effects are discussed. Third, the conclusions with regard to the moderating findings are discussed. Fourth, the theoretical value of this master thesis is described. Fifth, the managerial implications of this master thesis are discussed. Lastly, the limitations and directions for future research are discussed.

The purpose of this study is to increase our understanding of social influence as an antecedent of Given Word-of-Mouth Praise and Activity. More specifically, the relationship between Received Word-of-Mouth as an independent variable and Given Word-of-Mouth as a dependent variable was investigated. Furthermore, perceptions of cross level effects from firm level Received Word-of-Mouth to product level Given Word-of-Mouth were addressed. Lastly, moderating effects were investigated on individual, product and firm level. Table 9 shows the summary of findings with regard to the antecedents. Table 10 shows the summary of findings with regard to the moderators.

### Table 9 Summary of findings antecedents

<table>
<thead>
<tr>
<th>Model</th>
<th>Hypotheses</th>
<th>Independent variable</th>
<th>Dependent variable</th>
<th>Supported?</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original model</td>
<td>H1A (+)</td>
<td>RWPP</td>
<td>GWPP</td>
<td>Yes</td>
<td>0.489**</td>
</tr>
<tr>
<td></td>
<td>H1B (+)</td>
<td>RWPA</td>
<td>GWPA</td>
<td>Yes</td>
<td>0.581**</td>
</tr>
<tr>
<td></td>
<td>H1C (U)</td>
<td>RWPP</td>
<td>GWPA</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H2A (+)</td>
<td>RWFP</td>
<td>GWPP</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H2B (+)</td>
<td>RWFA</td>
<td>GWPA</td>
<td>Yes</td>
<td>0.189**</td>
</tr>
<tr>
<td></td>
<td>H2C (U)</td>
<td>RWFP</td>
<td>GWPA</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H3A (+)</td>
<td>RWPP*A</td>
<td>GWPP</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H3B (+)</td>
<td>RWPP*A</td>
<td>GWPA</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H3C (+)</td>
<td>RWFP*A</td>
<td>GWPP</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H3D (+)</td>
<td>RWFP*A</td>
<td>GWPA</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Extended model</td>
<td>RWPP</td>
<td>SATI</td>
<td>GWPA</td>
<td>0.529**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RWPA</td>
<td>SATI</td>
<td>GWPP</td>
<td>0.443**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RWFP</td>
<td>AFCO</td>
<td>GWPP</td>
<td>0.698**</td>
<td>consistent with Brown et al. (2005), Heitmann and Herrmann (2007), Wangenheim and Bayon (2007), and East et al. (2007).</td>
</tr>
<tr>
<td></td>
<td>RWFA</td>
<td>AFCO</td>
<td>GWPP</td>
<td>0.283**</td>
<td></td>
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<tr>
<td></td>
<td>AFCO</td>
<td>GWPP</td>
<td>0.468**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AFCO</td>
<td>GWPA</td>
<td>0.162**</td>
<td>consistent with Morgan and Hunt (1994), Harrison-Walker (2001), Henning-Thureau et al. (2002), and Lacey et al. (2007)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CINN</td>
<td>GWPA</td>
<td>0.067**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PRIN</td>
<td>GWPA</td>
<td>0.141**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PINV</td>
<td>GWPA</td>
<td>0.156**</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table shows standardized beta-coefficients.

**. Correlation is significant at the 0.01 (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

RWPP=Received Word-of-Mouth Product Praise
RWPA=Received Word-of-Mouth Product Activity
RWFP=Received Word-of-Mouth Firm Praise
RWFA=Received Word-of-Mouth Firm Activity
RWPP*A=Interaction effect RWPP and RWPA
GWPP= Given Word-of-Mouth Product Praise
GWPA= Given Word-of-Mouth Product Activity
SATI=Satisfaction
AFCO= Affective commitment
CINN= Consumer Innovativeness
PRIN= Product Innovativeness
PINV= Product Involvement
6.1 Main Conclusion

Overall, the results of this study suggest that Given Word-of-Mouth is affected by the social environment. The data confirmed three hypotheses regarding the antecedents of Given Word-of-Mouth. First, Received Word-of-Mouth Product Praise is identified as antecedent for Given Word-of-Mouth Product Praise. Furthermore, Received Word-of-Mouth Product Activity and Received Word-of-Mouth Firm Activity are both identified as antecedents for Given Word-of-Mouth Product Activity. Seven hypothesized direct relationships are not confirmed by the data.

Next to these findings, the moderator analysis identified openness to experience, product innovativeness, product involvement and price as moderator on the Received Word-of-Mouth Product Praise to Given Word-of-Mouth Product Praise relationship. Lastly, the data identified openness to experience as moderator on the relationship Received Word-of-Mouth Product Activity to Given Word-of-Mouth Product Activity and the relationship received Word-of-Mouth Firm Activity to Given Word-of-Mouth Product Activity. The data did not support the existence of the six remaining expected moderators.

This study has two major findings relating to the influence of the social environment. First, the cross level impact of Received Word-of-Mouth on firm level and affective commitment on product level Given Word-of-Mouth is limited. Given Word-of-Mouth on product level is primarily affected by Received Word-of-Mouth on product level and product satisfaction. In other words, individuals are mainly influenced by product related messages with regard to product level Given Word-of-Mouth. The impact of firm related messages is limited.

Second, Praise and Activity are two distinct constructs in the context of both Received Word-of-Mouth and Given Word-of-Mouth. The results demonstrate that received Word-of-Mouth Praise affects Given Word-of-Mouth Praise, and Received Word-of-Mouth Activity mainly affects Given Word-of-Mouth Activity. In other words there are no cross-over effects from Praise to Activity and vice versa. This means that the antecedents of Given Word-of-Mouth Product Praise differ from the antecedents of Given Word-of-Mouth Product Activity. The Given Word-of-Mouth Product Praise depends primarily on the traditional antecedents, satisfaction and affective commitment. Meanwhile, the Given Word-of-Mouth Product Activity depends primarily on Received Word-of-Mouth Product Activity. Furthermore, the constructs product involvement, product innovativeness and consumer innovativeness directly (positive relationship) affect Given Word-of-Mouth Product Activity to lesser extent.

6.2 Direct effects and indirect effects

From the original model it can be concluded that individuals show copy behaviour with regard to Given Word-of-Mouth. Such copy behaviour can have different reasons. Kelman (1961) calls this process, identification and posits that an individual derives his behaviour from another person or a group because this behaviour is associated with a satisfying self-defining relationship to the person or group. Thus the individual copies the behaviour since the behaviour fits with the group with who he/she wants be associated. According to Chartrand and Bargh (1999), people tend to copy others unconsciously, since it leads to smoother social interaction, whereas Dell (1986), and Schank (1977) state that imitation is important for speech development and understanding/participation of social behaviour. Network theory suggests that individuals behave the same as their network actors due to similarities in likes/dislikes and attitude. This phenomenon is referred to as perceptual affinity (Bruyn & Lilien, 2008) and homophily (Brown & Reingen, 1987).

Similar to the original model, the extended model implies that Given Word-of-Mouth is affected by the social environment. However, most of the social influence is mediated by satisfaction and affective commitment. The exception is Received Word-of-Mouth Product Activity, which directly influences Given Word-of-Mouth Product Activity. Thus, if others talk a lot about a product, so will the individual. Another notable finding relates to the social influence on affective commitment. It is found that as others talk more about a firm, the affective commitment of the individual toward that
firm increases. This relationship seems to fit within the popular phrase, there is no such thing as bad publicity. Thus as long as people talk about a company, an affective commitment is formed which is seemingly independent of the level of praise. Furthermore, consumer innovativeness, product innovativeness and product involvement are identified as antecedent of Given Word-of-Mouth Activity. The finding on consumer innovativeness is in line with Mowen et al. (2007) who found that with higher innovativeness, consumers are more willing to send market information. The tendency to spread Given Word-of-Mouth serves the goal of expressing uniqueness and distinction from others (Roehrich, 2004). The finding that product innovativeness leads to Given Word-of-Mouth Product Activity fits within the finding of Matos and Rossi (2008) with regard to perceived value. From their meta-analyses, Matos and Rossi find that perceived value leads to Given Word-of-Mouth Product Activity. Consumers might link product-innovativeness to perceived value since new innovative features might lead to higher value. The finding that product involvement leads to more Given Word-of-Mouth Product Activity is in line with findings of Wangenheim and Bayon (2007), who claim that individuals who are highly involved with a particular product are more knowledgeable and talk more about the product. In sum, the extended model suggests that product level constructs affects product level Given Word-of-Mouth. To lesser extent do individual characteristics and firm level constructs exert influence on product level Given Word-of-Mouth.

6.3 Moderators

Moderating effects originate from individual and product level. On the individual level the findings suggest that individual characteristics have a moderating role. Both openness to experience and consumer innovativeness are identified as moderators. The positive moderating effect of openness to experience is unexpected. Individuals with high openness to experience are more influenced by product praise messages of others than individuals with low openness to experience. This holds more for product messages with a high level of praise than messages with a low level of praise. Mowen et al. (2007) found the opposite effect and concluded that individuals high in openness to experience are open for experiences from others. The results of this study suggest otherwise.

The findings on consumer innovativeness are more complex. Two distinct moderating effects are identified. First is the expected negative moderating effect on the relationship Received Word-of-Mouth Product Activity to Given Word-of-Mouth Product Activity. Only in the case of high levels of Received Word-of-Mouth Product Activity does lower consumer innovativeness lead to higher levels of Given Word-of-Mouth product Activity. As found by Mowen et al. (2007) consumers with high innovativeness want to distinguish oneself. The present results extend this finding by stating that this rule only holds when Received Word-of-Mouth Product Activity is high. Second is the unexpected positive moderating effect of consumer innovativeness on the relationship from Received Word-of-Mouth Firm Activity to Given Word-of-Mouth Product Activity. This relationship is stronger for individuals with high consumer innovativeness. This is especially true in the case of high levels of Received Word-of-Mouth Firm Activity. In other words, individuals with high consumer innovativeness talk more often about a product, when others talk more often about the particular firm. When both moderating effects of consumer innovativeness are combined the following can be concluded. Individuals with high consumer innovativeness want to distinguish oneself only on product level. In the case of firm level messages they are more susceptible for Word-of-Mouth Activity. As such, these individuals talk along.

On the product level the findings fit within the major finding of this report, which highlights the importance of product level perceptions for product level Given Word-of-Mouth. The relationship between Received Word-of-Mouth Product Praise and Given Word-of-Mouth is strengthened by higher levels of product innovativeness, product involvement and price. The interpretations of these moderators are similar. The relationship is particular strengthened in the case of high Received Word-of-Mouth Product Praise.

On firm level, the findings fit within the major finding of the report that consumers do not transfer firm level perceptions to product level Given Word-of-Mouth. Unexpectedly, individuals are
not more receptive for Received Word-of-Mouth concerning a firm which they regard as high in brand equity. This finding is not in line the statement of Dick and Basu (1994) who state that customers high in loyalty have greater motivation for processing new information about the company.

Table 10 Summary of findings Moderators

<table>
<thead>
<tr>
<th>Moderator</th>
<th>Supported?</th>
<th>Independent variable</th>
<th>Dependent variable</th>
<th>Standardized beta coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>H4A(-) Age</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H4B(-) Neuroticism</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H5A(-) Extraversion</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H5B(-) Openness to Experience</td>
<td>No</td>
<td>RWPP</td>
<td>GWPP</td>
<td>Moderating effect: 0,128*</td>
</tr>
<tr>
<td>H6A(+) Agreeableness</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H6B(+) Conscientiousness</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H7A(-) Consumer</td>
<td>Yes</td>
<td>RWPA</td>
<td>GWPA</td>
<td>Moderating effects: -0,135*</td>
</tr>
<tr>
<td>H7B(-) Innovativeness</td>
<td>Refuted</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H11A(+) Product</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H11B(+) Openness to Experience</td>
<td>No</td>
<td>RWPP</td>
<td>GWPP</td>
<td>Moderating effect: 0,131*</td>
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<tr>
<td>H12A(+) Product</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H12B(+) Involvement</td>
<td>No</td>
<td></td>
<td></td>
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<tr>
<td>H13A(+) Price</td>
<td>Yes</td>
<td>RWPP</td>
<td>GWPP</td>
<td>Moderating effect: 0,164**</td>
</tr>
<tr>
<td>H13B(-) Customer Based</td>
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<tr>
<td>H14B(+)</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

**. Correlation is significant at the 0.01 (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
RWPP=Received Word-of-Mouth Product Praise
GWPP=Given Word-of-Mouth Product Praise
RWPA=Received Word-of-Mouth Product Activity
GWPA=Given Word-of-Mouth Product Activity

6.4 Theoretical contribution

Current Given Word-of-Mouth theories do not account for social influences (Yale & Gilly, 1995; Matos & Rossi, 2008). This study provides a first step in filling that gap. The results of this study suggests that social influence is a significant antecedent for Given Word-of-Mouth. As such, it provides evidence for the bandwagon metaphor as proposed by Abrahamson and Rosenkopf (1997). It seems that they are right in stating that a feedback-loop exists in groups and networks. This means that Received Word-of-Mouth spurs Given Word-of-Mouth, which for another individual is Received Word-of-Mouth. Furthermore, this study is an extension of the self-identification theory as suggested by Brown et al. (2005). This master thesis suggests that others have influence on the self schema, which eventually affects the overlap between self schema and the organization schema. Lastly, this study provides insight into Received Word-of-Mouth influences on customers’ propensity to pass information to others as suggested by Matos and Rossi (2008).

6.5 Managerial implications

Since traditional forms of communication are losing effectiveness (Trusov, Bucklin, & Pauwels, 2009) stimulating Word-of-Mouth becomes more important. The identification of social influence as antecedent of Given Word-of-Mouth provides marketers with an opportunity to stimulate Word-of-Mouth. This master thesis has several implications for marketing managers. The findings provide directions for action depending on the specific scenario a firm and the particular product is in. Marketers should adapt marketing campaigns and techniques that flourish in networks and communities. In addition the marketers should make use of the existing communication channels for

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networks. Especially the use of online networks as marketing channel should receive extra attention. Further development of marketing tools such as viral marketing should result in highly efficient marketing campaigns.

More specifically, since the cross level effects from firm to product are limited, these marketing activities aimed at stimulating Given Word-of-Mouth on product level should primarily focus on the product and to lesser extent on the firm. In contract, when negative firm messages such as bad annual results or a bad track record go around, managers do not have to fear the impact on product level Given Word-of-Mouth, because this impact is limited.

Furthermore, as there is no cross effect from praise to activity and vice versa, managers should allocate their resources in line with their specific Given Word-of-mouth goal. In the case of low levels of Given Word-of-Mouth Praise (negative Word-of-Mouth), managers should try to affect satisfaction by stimulating Received Word-of-Mouth Product Praise. The effects of such actions seem limited since actual satisfaction primarily depends on the product itself. However, findings with regard to service recovery provide promising prospects since sufficient recovery might result in even higher levels of Word-of-Mouth (Maxham, 2001). Another approach in the case of negative Word-of-Mouth, is the reduction of Given Word-of-Mouth Product Activity. To achieve lower levels of activity, firms can reduce the perceptions of product innovativeness. This can be achieved by marketing the product as “not new” or even out dated or focus their marketing activities on upcoming products. A good example of this particular situation is provided by Microsoft and their operating system “Windows Vista”. Vista was introduced in January 2007. This operating system received bad reviews and was labelled as slow and complex. As such Microsoft rapidly focused marketing activities on the successor of Windows Vista, named Windows 7. Windows 7 is marketed as the improved Windows Vista. Moreover, considerable attention was drawn to specific development activities of Windows 7 (e.g. co-development). As such, consumers and critics focused their attention on Windows 7.

In contrast, in the case of positive Word-of-Mouth, managers should try to increase Given Word-of-Mouth Product Activity. Managers could alter the perceptions of product innovativeness and product involvement. This goal can be achieved by highlighting the specific new features of the product or provide market information (e.g. compare the product with other competing products). Moreover managers should target their marketing activities toward individuals high in consumer innovativeness and openness to experience. A good example of this particular approach is provided by Apple and the introduction of the IPAD. Apple markets it IPAD as highly innovative. As such the IPAD enjoys high levels of Word-of-Mouth activity even before actual launch. However, the level of innovativeness is dubious. The used technologies have been around for quite some time. Moreover other manufacturers introduced similar products with less success a year prior to the IPAD.

Lastly, managers should be aware that Given Word-of-mouth Product Praise has different antecedents and moderators than given Word-of-Mouth Product Activity. The identification of the different antecedents and moderators allows marketers to segment specific groups which are either more susceptible for Received Word-of-Mouth or are more prone to spread Word-of-Mouth. It allows marketers to assess their current customers and their propensity to spread Word-of-Mouth. As such it provides an explanation for why specific companies are more successful in establishing strong Word-of-Mouth sources (e.g. Apple customers). The identified moderators and antecedents on product level enable marketers to assess the impact of Word-of-Mouth and specify its particular role for products and their lifecycles.

On the overall it can be concluded that the findings of this master thesis allows for more efficient and effective allocation of marketing expenditures. Furthermore, marketing managers have another tool to stimulate Word-of-Mouth next to satisfaction and affective commitment.

6.6 Limitations and future research

This master thesis has several limitations that provide interesting directions for future research. The first limitation is the dimensions of the independent and dependent variable. Research regarding Word-of-Mouth and social influence has identified multiple interesting and relevant dimensions.
From a network perspective, dimensions such as centrality and closeness could lead to new insights. The same holds for an investigation from a Theory of reasoned Action point of view. Such research would focus on the specific relationship of the sender and receiver. Another interesting approach is the situational approach as adapted by Mazzarol et al. (2007) who studied Word-of-Mouth triggers and conditions. Insights from these theories would provide a broader scope and a more in depth analyses of the Received Word-of-Mouth to Given Word-of-Mouth relationship.

A second limitation is the selected research context. This study focuses on a highly dynamic product context. The conclusions of this master thesis should also be tested in a less dynamic context and/or in a service context. Another interesting research context is the social influence in an online environment (virtual community). As stated by several researchers (Dholakia, Bagozzi, & Pearo, 2004; Hsu-Lung & Lu, 2004), social influences play an important role in virtual communities. Given the recent online development, the relationship from online RW to on/off-line GW should receive attention.

The third limitation is the limited network approach. This study investigates the behaviour of an actor who is influenced by his/her network environment and exerts influence on this network his/her-self. On a higher level, it is interesting to study the development of opinions, attitude and behaviour of multiple actors as it grows throughout a network.

A fourth limitation is the lack of distinction between positive and negative Received Word-of-Mouth messages. In this study, the subject is asked for the general opinion of his/her environment. It is highly interesting to study the interaction between positive and negative Received Word-of-Mouth messages and their impact on Given Word-of-Mouth of the individual.

The fifth limitation deals with the data collection. The data is collected primarily within the (or close to) network of the researcher. As such, the collection might contain a certain bias. Hence, follow up studies should address a more general research group.

The sixth limitation deals with the highly scientific research approach. As such, this study scores high on the criteria (conceptual adequacy, methodological rigor and accumulated empirical evidence) for scientific rigor as identified by Shrivasta (1987). In contrast, the study scores low on the practical usefulness of criteria (operational validity, innovativeness, cost of implementation, meaningfulness and goal relevance). Hence future studies should aim at applying the results of this study in practice. As such it should address the question “how can social influence be changed”.

Lastly, two practical limitations should be noted. First is the strong correlation between product innovativeness, consumer innovativeness and product involvement (both theoretical as statistical). This raises the issue of multicollinearity. As such the predictive power of the model as a whole is not reduced but the path coefficients of the individual predictors should be treated with care. Furthermore the interpretation of the moderating effects should also be treated with care. Since a valid method to address the interpretation of moderator effects from PLS results is in development.
Bibliography


The Effect of Received Word-of-Mouth on Given Word-of-Mouth


Appendix 1 Measurement scales

1A. Measurement of RW Product and RW Firm
This 12 item measurement is based on the original set of items generated to measure WOM as identified by Harrison-Walker (2001). Harrison-Walker developed 4 items for WOM activity and 3 items for WOM praise. Items were adapted and added for use in a RW instead of a WOM context. Furthermore, these items are adapted for measurement of RW related to the firm and product.

**Product RW “activity”**
1. Other persons mention my phone quite frequently.
2. I hear more people talking about my phone than over other products.
3. When others tell me about this phone, they tend to talk about this product in great detail.
4. I know a lot of persons who recommend this phone to others.
5. A lot of persons that I know talk about this phone.
6. My phone is mentioned a lot by others.

**Product RW “praise”**
7. Other persons have only good things to say about my phone.
8. In general other people do not speak favourably about my phone. (R)
9. I hear only good things about my phone.
10. Persons I know, warn for this phone. (R)
11. This phone was recommended to me by others.
12. I hear bad thing about my phone. (R)

**Firm RW “Activity”**
1. Other persons mention this brand quite frequently.
2. I hear more people talking about my brand than over other brands.
3. When others tell me about this brand, they tend to talk about this brand in great detail.
4. I know a lot of persons who recommend this brand to others.
5. A lot of persons that I know talk about this brand.
6. This brand is mentioned a lot by others.

**Firm RW “Praise”**
7. Other persons have only good things to say about my brand.
8. In general other people do not speak favourably about my brand. (R)
9. I hear only good things about my brand.
10. Persons I know, warn for this brand. (R)
11. This brand was recommended to me by others.
12. I hear bad thing about this brand. (R)

1B. Measurement of Satisfaction
This 3 item measurement is based on the original set of items generated to measure satisfaction as developed by Gustafsson, et al. (2005). The items are adapted for product use instead of services. Responses are based on a 7-point Likert-type scale, anchored by respectfully: very dissatisfied (1) and very satisfied (7); falls short of expectations (1) and exceeds expectations (7); Not very close to ideal mobile phone (1) and very close to ideal mobile phone (7).

1. Overall, how satisfied or unsatisfied are you with the manufacturer of you mobile phone?
2. To what degree does the manufacturer of your mobile phone fall short of or exceed your overall expectations?
3. How close is the performance of your mobile phone to an ideal performance?
1C. Measurement of Affective Commitment
This 5 item measurement is based on the original set of items generated to measure Affective Commitment as developed by Schechter (1985) and evaluated by Mayer and Schoorman (1992). The items are adapted for product use instead of services. Responses are based on a 7-point Likert-type scale, anchored by strongly disagree (1) and strongly agree (7). (R)= reversed scored.

1. For me, this is one of the best product organizations of its kind.
2. I am proud that I use the products of this organization.
3. I usually agree with this organization’s policies and procedures on important matters.
4. I care about the fate of this organization.
5. This organization inspires the best in me in the way of being a good customer.

1D. Measurement of WOM intention
This 7 item measurement is based on the original set of items generated to measure WOM as identified by Harrison-Walker (2001). Responses are based on a 7-point Likert-type scale, anchored by strongly disagree (1) and strongly agree (7). (R)= reversed scored.

WOM “activity”
1. I mention this product to others quite frequently.
2. I’ve told more people about this product than I’ve told about most other products.
3. I seldom miss an opportunity to tell others about this product.
4. When I tell others about this product, I tend to talk about this product in great detail.

WOM “praise”
1. I have only good things to say about this product.
2. In general, I do not speak favourably about this product. (R)
3. I am proud to tell others that I use this product.

1E. Measurement of personality
This ten-item measurement is based on the work of Gosling, et al. (2003). Responses are based on a 7-point Likert-type scale, anchored by strongly disagree (1) and strongly agree (7). (R)= reversed scored.

1. I see myself as extraverted, enthusiastic.
2. I feel myself as reserved, quiet.
3. I see myself as critical, quarrelsome.
4. I feel myself as sympathetic, warm.
5. I see myself as dependable, self-disciplined.
6. I feel myself as disorganized, careless.
7. I see myself as anxious, easily upset.
8. I feel myself as calm, emotionally stable.
9. I feel myself as open to new experiences, complex.
10. I feel myself as conventional, uncreative.

1F. Measurement of customer’s innovativeness
This four-item measurement is based on the work of Agarwal and Prasad (1998) The measurement scale is adopted for use in a mobile phone context. Responses are based on a 7-point Likert-type scale, anchored by strongly disagree (1) and strongly agree (7). (R)= reversed scored

1. If I heard about a new mobile phone, I would look ways to experiment with it.
2. Among my peers, I am usually the first to try out new mobile phone.
3. In general, I am hesitant to try out new mobile phones (R)
4. I like to experiment with new mobile phones.

1G. Measurement of Product innovativeness
This measurement is specifically developed for this master thesis. In order to categorize the mobile phone on the basis of innovativeness, consumers are asked to place their mobile phone in one of the following three segments.

Segment 1 Basic Functionalities
- Basic phone abilities.
- Basic sms abilities

Segment 2 Extended functionalities
- Basic phone abilities.
- Basic sms abilities
- Restricted internet abilities
- Foto camera ability (up to 2 mp)
- MMS capability
- Basic email capability

Segment 3 Advanced functionalities
- Basic phone abilities.
- Basic SMS abilities
- Full internet abilities
- Foto camera ability (2 mp and more)
- MMS capability
- Full email capability
- Software and apps installation

1H. Measurement of product involvement
This five-item measurement is based on the work of Richins and Bloch (1991). The items are adapted for use in mobile phone industry. Responses are based on a 7-point Likert-type scale, anchored by strongly disagree (1) and strongly agree (7). (R)= reversed scored

1. I am very interested in the mobile phone industry.
2. I know a lot about the mobile phone industry and the various manufacturers.
3. It is interesting to get an overview over the many manufacturers in mobile phone market.
4. Sometimes I talk about the mobile phone industry and manufacturers with other people.
5. I have seen many advertising campaigns of mobile phone manufacturers.

Possession
1. How many months do you have the mobile phone?

11. Measurement of Price I
This measurement is exclusively developed for this master thesis.

1. How much did you phone cost at the time of purchase?
   Note: This should be the price without subscription. You may estimate.

1J. Measurement of Customer based brand equity
This Ten- item measurement is based on the work of Yoo and Donthu (2001).
Items are measured using a seven-point Likert scale. Responses are based on a 7-point Likert-type scale, anchored by strongly disagree (1) and strongly agree (7).

**Brand Loyalty**
1. I consider myself to be loyal to brand X.
2. Brand X would be my first choice.
3. I will not buy other brands if brand X is available at the store.

**Perceived quality**
4. The likely quality of brand X is extremely high.
5. The likelihood that brand X would be functional is very high.

**Brand awareness/associations**
6. I can recognize brand X among other competing brands.
7. I am aware of brand X.
8. Some characteristics of brand X come to my mind quickly.
9. I can quickly recall the symbol or logo of brand X.
10. I have difficulty in imagining brand X in my mind.
Appendix 2 Questionnaire

Tevredenheid mobiele telefoon
Deze enquête is bedoeld voor mensen met een mobiele telefoon in de leeftijdscategorie 12-85. Deze mobiele telefoon mag niet langer dan 3 jaar in uw bezit zijn. De enquête meet de tevredenheid en de mate waarin u, uw mobiele telefoon zou aanraden aan anderen. Het invullen van de enquête duurt ongeveer 9 minuten. Er zijn 25 vragen in deze vragenlijst.

Telefoon kenmerken
De volgende onderdelen gaan over uw huidige telefoon.

1. Welk merk telefoon heeft u?


Segment 1 "basis functionaliteiten":
Deze telefoon heeft standaard bel en sms mogelijkheden.

Segment 2 "meer dan basis functionaliteiten":
Naast de standaard bel en sms mogelijkheden heeft deze telefoon: beperkte internet mogelijkheden, foto mogelijkheden (tot circa 2 megapixel), MMS mogelijkheden en standaard email mogelijkheden.

Segment 3 "geavanceerde functionaliteiten":
Naast de standaard bel en sms mogelijkheden heeft deze telefoon: geavanceerde internet mogelijkheden, foto mogelijkheden (grooter dan 2 megapixel), MMS mogelijkheden, geavanceerde email mogelijkheden, mogelijkheden tot het installeren van software en apps.

3. Hoeveel maanden hebt u de telefoon? (dit mag een schatting zijn)

4. Hoeveel kostte uw telefoon bij aanschaf? (dit is de prijs van het toestel als het zonder abonnement verkocht zou worden. Dit mag een schatting zijn, afronden op hele euro’s)

De mening van anderen wat betreft de telefoon
Dit onderdeel gaat over uw telefoon (bv. Iphone, Hero, 6300, Cookie, Soul, N95) en hoe anderen denken over deze telefoon.

5. De volgende stellingen gaan over de mate waarin anderen positief (of negatief) praten over uw mobiele telefoon (bv: Iphone 3G). Geef aan in hoeverre u het eens bent met de volgende stellingen. (1=zeer mee oneens, 7=zeer mee eens) *
- Andere mensen hebben alleen goede dingen te vermelden over mijn mobiele telefoon.
- Over het algemeen praten andere mensen positief over mijn mobiele telefoon.
- Ik hoor alleen goede dingen over mijn mobiele telefoon.
- Mensen die ik ken, raden deze mobiele telefoon af.

6. De volgende stellingen gaan over de mate waarin anderen praten over uw mobiele telefoon (bv: Iphone 3G). Geef aan in hoeverre u het eens bent met de volgende stellingen. (1=zeer mee oneens, 7=zeer mee eens) *
Andere mensen praten vaak over mijn mobiele telefoon.
Ik ken veel mensen die over deze mobiele telefoon praten met anderen.
Veel mensen die ik ken praten over deze mobiele telefoon.
Mijn telefoon wordt vaak besproken door anderen

Tevredenheid telefoon
De volgende onderdelen gaan over uw tevredenheid met betrekking tot uw huidige telefoon.
7. Hoe tevreden of ontevreden bent u over uw telefoon? (1= Zeer ontevreden, 7=Zeer tevreden) *
8. In hoeverre voldoet de mobiele telefoon aan uw verwachtingen? (1=Voldoet niet aan de verwachtingen, 7=overtreft verwachtingen) *
9. Hoe dicht liggen de prestaties van uw mobiele telefoon, bij de prestaties van uw ideale telefoon? (1=Niet erg dicht bij de ideale mobiele telefoon, 7=zeer dicht bij de ideale mobiele telefoon) *
10. De volgende stellingen gaan over de kwaliteit van uw mobiele telefoon. Geef aan in hoeverre u het eens bent met de volgende stellingen. (1=zeer mee oneens, 7=zeer mee eens) *
   • Deze mobiele telefoon is betrouwbaar.
   • Deze mobiele telefoon is van hoge kwaliteit.
   • Deze mobiele telefoon werkt altijd.
11. De volgende stellingen gaan over de mate waarin u positief (of negatief) praat over uw mobiele telefoon. Geef aan in hoeverre u het eens bent met de volgende stellingen. (1=zeer mee oneens, 7=zeer mee eens)
    • Ik heb alleen maar goede dingen te melden over deze mobiele telefoon.
    • Over het algemeen, spreek ik positief over dit product.
    • Ik raad deze telefoon aan.
12. De volgende stellingen gaan over de mate waarin u praat over uw mobiele telefoon. Geef aan in hoeverre u het eens bent met de volgende stellingen. (1=zeer mee oneens, 7=zeer mee eens) *
    • Ik praat vrij regelmatig over deze mobiele telefoon.
    • Ik heb meer mensen over mijn mobiele telefoon verteld, in vergelijking met andere producten.
    • Ik gebruik elke mogelijkheid om over deze telefoon te praten
    • Wanneer ik andere mensen vertel over de mobiele telefoon dan doe ik dat uitgebreid.

De mening van anderen wat betreft het merk
Dit onderdeel gaat over het merk van uw mobiele telefoon (bv. Apple, Nokia, Samsung) en hoe anderen denken over dit merk.
13. De volgende stellingen gaan over de mate waarin anderen positief (of negatief) praten over het merk (bv: Apple) van uw mobiele telefoon. Geef aan in hoeverre u het eens bent met de volgende stellingen. (1=zeer mee oneens, 7=zeer mee eens) *
    • Andere mensen hebben alleen goede dingen te vermelden over het merk van mijn mobiele telefoon.
    • Over het algemeen praten andere mensen positief over het merk van mijn mobiele telefoon.
    • Ik hoor alleen goede dingen over het merk van mijn mobiele telefoon.
    • Mensen die ik ken, raden het merk van mijn mobiele telefoon af.
14. De volgende stellingen gaan over de mate waarin anderen praten over het merk (bv: Apple) van uw mobiele telefoon. Geef aan in hoeverre u het eens bent met de volgende stellingen. (1=zeer mee oneens, 7=zeer mee eens) *
   - Andere mensen praten vaak over het merk van mijn mobiele telefoon.
   - Ik ken veel mensen die over het merk van mijn mobiele telefoon praten met anderen.
   - Veel mensen die ik ken praten over het merk van mijn mobiele telefoon.
   - Het merk van mijn telefoon wordt vaak besproken door anderen.

15. De volgende stellingen gaan over de kwaliteit van producten van het merk van uw telefoon. Geef aan in hoeverre u het eens bent met de volgende stellingen. (1=zeer mee oneens, 7=zeer mee eens) *
   - Het is erg waarschijnlijk dat de kwaliteit van dit merk erg hoog is.
   - Ik vind de kwaliteit van de producten van dit merk erg hoog.


17. Geef aan in hoeverre uw imago overeenkomt met het imago van het merk van uw mobiele telefoon. (1=Helemaal niet, 7=Heel veel)

18. De volgende stellingen gaan over uw loyaliteit met betrekking tot het merk van uw mobiele telefoon. Geef aan in hoeverre u het eens bent met de volgende stellingen. (1=zeer mee oneens, 7=zeer mee eens) *
   - Ik beschouw mezelf als loyaal tot het merk.
   - Het merk zou mijn eerste keus zijn.
   - Ik zal geen andere merken kopen als dit specifieke merk in de winkel beschikbaar is.

19. De volgende stellingen gaan over uw betrokkenheid met betrekking tot het merk van uw mobiele telefoon. Geef aan in hoeverre u het eens bent met de volgende stellingen. (1=zeer mee oneens, 7=zeer mee eens)
   - Voor mij is dit één van de beste mobiele telefoon merken.
   - Ik ben er trots op dat ik een mobiele telefoon gebruik van dit merk.
   - Ik voel me verbonden met dit merk.
   - Dit merk inspireert mij om mobiele telefoons te blijven kopen van dit merk.

20. De volgende stellingen gaan over de mate waarin u, het merk van uw mobiele telefoon herkent. Geef aan in hoeverre u het eens bent met de volgende stellingen. (1=zeer mee oneens, 7=zeer mee eens)*
   - Ik herken dit merk tussen andere concurrerende merken.
   - Ik ben me bewust van dit merk.
   - Sommige kenmerken van dit merk schieten me makkelijk te binnen.
   - Ik kan me het symbool of logo van het merk snel voor de geest halen.

**Persoonlijke kenmerken**
De volgende onderdelen gaan over u en uw persoonlijkheid.
21. In welk jaar bent u geboren? *
22. Wat is uw geslacht? *
23. De volgende stellingen gaan over uw persoonlijkheid. Geef aan in hoeverre u het eens bent met de volgende stellingen. (1=zeer mee oneens, 7=zeer mee eens)
   Ik beschouw mezelf als.. *
   • extravert, enthousiast.
   • gereserveerd, stil.
   • kritisch, confrontatie-zoekend.
   • meegaand, toegeefelijk
   • betrouwbaar,zelf-gedisciplineerd.
   • wanordelijk, roekeloos
   • snel van streek.
   • kalm, emotioneel-stabiel.
   • open voor nieuwe ervaringen, complex.
   • conventioneel, niet-creatief.

24. De volgende stellingen gaan over uw interesse in nieuwe mobiele telefoons. Geef aan in hoeverre u het eens bent met de volgende stellingen. (1=zeer mee oneens, 7=zeer mee eens) *
   • Als ik iets hoor over een nieuwe telefoon, dan zoek ik een manier om deze telefoon te proberen
   • In vergelijking tot mijn vrienden ben ik meestal één van de eerste die een nieuwe telefoon probeert.
   • Ik hou ervan om nieuwe mobiele telefoons te proberen.

25. De volgende stellingen gaan over uw interesse in de markt van de mobiele telefoons. Geef aan in hoeverre u het eens bent met de volgende stellingen. (1=zeer mee oneens, 7=zeer mee eens) *
   • Ik ben erg geïnteresseerd in de markt van de mobiele telefoons.
   • Ik weet veel van de markt van de mobiele telefoons en de verschillende merken.
   • Ik heb een goed overzicht van de merken in de markt van mobiele telefoons.
Appendix 3 Results original and extended models

### Original model

<table>
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<th>Independent variable</th>
<th>Dependent variable</th>
<th>GWPP</th>
<th>GWPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>RWPP</td>
<td>0.489 (6.331)**</td>
<td></td>
<td>0.007 (0.093)</td>
</tr>
<tr>
<td>RWPP</td>
<td>-0.013 (0.156)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RWPA</td>
<td>0.126 (1.479)</td>
<td>0.581 (8.638)**</td>
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<tr>
<td>RWPP*RWPA</td>
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<td></td>
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<tr>
<td>RWPP</td>
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<td></td>
<td>0.013 (0.201)</td>
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<tr>
<td>RWPA</td>
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<tr>
<td>RWPA</td>
<td>-0.064 (0.853)</td>
<td>0.189 (3.044)**</td>
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</tr>
<tr>
<td>RWPP*RWPA</td>
<td></td>
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</tr>
<tr>
<td>RWFA</td>
<td>0.445 (6.292)**</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RWFA*RWFA</td>
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<td></td>
</tr>
<tr>
<td>R²</td>
<td>40%</td>
<td>51%</td>
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</table>

Table shows the standardized beta coefficients

**. Correlation is significant at the 0.01 (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

GWPP= Received Word-of-Mouth Product Praise
RWFA= Received Word-of-Mouth Firm Activity
GWPA= Given Word-of-Mouth Product Activity
RWPP= Received Word-of-Mouth Product Praise
RWPA= Received Word-of-Mouth Product Activity

### Extended model, Satisfaction and Affective Commitment

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<th>GWPA</th>
<th>SATI</th>
<th>AFCO</th>
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<td>0.583 (10.612)**</td>
<td>0.023 (0.415)</td>
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<tr>
<td>RWFP</td>
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<td>RWFA</td>
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</tr>
<tr>
<td>SATI</td>
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<tr>
<td>SATI</td>
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<td>RWFP</td>
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<tr>
<td>AFCO</td>
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<tr>
<td>R²</td>
<td>76%</td>
<td>54%</td>
<td>37%</td>
<td>43%</td>
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</table>

Table shows the standardized beta coefficients

**. Correlation is significant at the 0.01 (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

GWPP= Received Word-of-Mouth Product Praise
GWPA= Given Word-of-Mouth Product Activity
SATI= Satisfaction
AFCO= Affective commitment
RWPP= Received Word-of-Mouth Product Praise
RWPA= Received Word-of-Mouth Product Activity
RWFP= Received Word-of-Mouth Firm Praise
RWFA= Received Word-of-Mouth Firm Activity
The Effect of Received Word-of-Mouth on Given Word-of-Mouth

Extended model, satisfaction, affective commitment, product innovativeness, and product involvement.

<table>
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<th>Independent variable</th>
<th>Dependent variable</th>
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<th>GWPA</th>
<th>SATI</th>
<th>AFCO</th>
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<td>RWPA</td>
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<td>0.156 (3,733)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>76%</td>
<td>62%</td>
<td>33%</td>
<td>43%</td>
<td></td>
</tr>
</tbody>
</table>

Table shows the standardized beta coefficients. **. Correlation is significant at the 0.01 (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed). RWPP= Received Word-of-Mouth Product Praise GWPP= Given Word-of-Mouth Product Praise RWPA= Received Word-of-Mouth Product Activity GWPA= Given Word-of-Mouth Product Activity SATI= Satisfaction AFCO= Affective commitment RWFP= Received Word-of-Mouth Firm Praise CINN= Consumer innovativeness RWFA= Received Word-of-Mouth Firm Activity PRIN= Product innovativeness PINV= Product involvement
### Appendix 4 Results moderating effects

#### Individual Level

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Dependent variable</th>
<th>AGE</th>
<th>RWPP*AGE</th>
<th>RWFP*AGE</th>
<th>RWPA*AGE</th>
<th>RWFP*AGE</th>
<th>RWFA*AGE</th>
<th>RWPP</th>
<th>RWPP</th>
<th>RWPA</th>
<th>RWFP</th>
<th>RWFA</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE</td>
<td></td>
<td>0.066 (1,263)</td>
<td>-0.046 (0,640)</td>
<td>-0.083 (1,110)</td>
<td>0.014 (0,196)</td>
<td>0.024 (0,341)</td>
<td>0.054 (0,917)</td>
<td>-0.010 (0,154)</td>
<td>0.483 (8,239)**</td>
<td>0.018 (0,272)</td>
<td>0.517 (9,304)**</td>
<td>0.209 (3,507)**</td>
<td>0.191 (3,019)**</td>
</tr>
</tbody>
</table>

Table shows the standardized beta coefficients

**. Correlation is significant at the 0.05 level (2-tailed).

*Correlation is significant at the 0.01 level (2-tailed).

#### Consumer innovativeness

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Dependent variable</th>
<th>CINN</th>
<th>RWPP*CINN</th>
<th>RWFP*CINN</th>
<th>RWPA*CINN</th>
<th>RWFP*CINN</th>
<th>RWFA*CINN</th>
<th>RWPP</th>
<th>RWPP</th>
<th>RWPA</th>
<th>RWFP</th>
<th>RWFA</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>CINN</td>
<td></td>
<td>0.064 (1,361)</td>
<td>0.166 (1,931)</td>
<td>0.027 (0,404)</td>
<td>0.082 (0,995)</td>
<td>-0.135 (2,304)*</td>
<td>-0.043 (0,613)</td>
<td>0.131 (2,259)*</td>
<td>0.520 (9,407)**</td>
<td>0.010 (0,156)</td>
<td>0.463 (8,051)**</td>
<td>0.186 (3,220)**</td>
<td>0.002 (0,048)</td>
</tr>
</tbody>
</table>

Table shows the standardized beta coefficients

**. Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

#### Variables Definitions

- **GWPP** = Given Word-of-Mouth Product Praise
- **GWPA** = Given Word-of-Mouth Product Activity
- **RWPP** = Received Word-of-Mouth Product Praise
- **RWPA** = Received Word-of-Mouth Product Activity
- **RWFP** = Received Word-of-Mouth Firm Praise
- **RWFA** = Received Word-of-Mouth Firm Activity
- **CINN** = Consumer Innovativeness
## Extraversion

<table>
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<tr>
<th>Independent variable</th>
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<th>GWPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEX</td>
<td>0.041 (0.608)</td>
<td>0.014 (0.296)</td>
</tr>
<tr>
<td>RWPP*PEX</td>
<td>0.071 (1.050)</td>
<td>0.045 (0.448)</td>
</tr>
<tr>
<td>RWFP*PEX</td>
<td>0.085 (1.216)</td>
<td>0.022 (0.332)</td>
</tr>
<tr>
<td>RWPP*PEX</td>
<td>0.071 (1.050)</td>
<td>0.054 (0.774)</td>
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<td>RWPA*PEX</td>
<td>0.022 (0.332)</td>
<td>-0.002 (0.028)</td>
</tr>
<tr>
<td>RWPP</td>
<td>0.477 (8.189)**</td>
<td>0.027 (0.403)</td>
</tr>
<tr>
<td>RWPA</td>
<td>0.181 (3.129)**</td>
<td>-0.011 (0.177)</td>
</tr>
<tr>
<td>RWFA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>39%</td>
<td>51%</td>
</tr>
</tbody>
</table>

Table shows the standardized beta coefficients

**. Correlation is significant at the 0.01 (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

RWPP= Received Word-of-Mouth Product Praise

RWPA= Received Word-of-Mouth Product Activity

PEX= Extraversion

## Neuroticism

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>GWPP</th>
<th>GWPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>PNE</td>
<td>-0.074 (1.433)</td>
<td>0.058 (1.018)</td>
</tr>
<tr>
<td>RWPP*PNE</td>
<td>0.094 (1.006)</td>
<td>0.015 (0.215)</td>
</tr>
<tr>
<td>RWFP*PNE</td>
<td>-0.003 (0.034)</td>
<td>-0.085 (1.367)</td>
</tr>
<tr>
<td>RWPP*PNE</td>
<td></td>
<td>0.118 (1.530)</td>
</tr>
<tr>
<td>RWPA*PNE</td>
<td></td>
<td>0.062 (1.015)</td>
</tr>
<tr>
<td>RWPP</td>
<td>0.508 (8.887)**</td>
<td>0.007 (0.112)</td>
</tr>
<tr>
<td>RWPA</td>
<td></td>
<td>0.579 (10.118)**</td>
</tr>
<tr>
<td>RWFA</td>
<td>0.165 (2.655)**</td>
<td>0.026 (0.463)</td>
</tr>
<tr>
<td>R²</td>
<td>39%</td>
<td>52%</td>
</tr>
</tbody>
</table>

Table shows the standardized beta coefficients

**. Correlation is significant at the 0.01 (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

RWPP= Received Word-of-Mouth Firm Praise

RWFA= Received Word-of-Mouth Firm Activity

PNE= Neuroticism
### The Effect of Received Word-of-Mouth on Given Word-of-Mouth

#### Openness to experience

<table>
<thead>
<tr>
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<th>Dependent variable</th>
<th>GWPP</th>
<th>GWPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>POE</td>
<td></td>
<td>0.020 (0.338)</td>
<td>0.106 (2.085)*</td>
</tr>
<tr>
<td>POE</td>
<td></td>
<td>0.128 (1.994)*</td>
<td></td>
</tr>
<tr>
<td>RWFP*POE</td>
<td></td>
<td>-0.049 (0.726)</td>
<td></td>
</tr>
<tr>
<td>RWPA*POE</td>
<td></td>
<td>-0.020 (0.283)</td>
<td></td>
</tr>
<tr>
<td>RWPP*POE</td>
<td></td>
<td>-0.106 (0.465)</td>
<td></td>
</tr>
<tr>
<td>RWFA*POE</td>
<td></td>
<td>-0.062 (0.894)</td>
<td></td>
</tr>
<tr>
<td>RWPA</td>
<td></td>
<td>0.009 (0.152)</td>
<td>0.182 (2.938)**</td>
</tr>
<tr>
<td>RWF</td>
<td></td>
<td>0.555 (9.224)**</td>
<td></td>
</tr>
<tr>
<td>RWPP</td>
<td></td>
<td>0.481 (7.376)**</td>
<td>0.023 (0.352)</td>
</tr>
<tr>
<td>RWPP</td>
<td></td>
<td>0.0114 (1.176)</td>
<td>0.556 (9.401)**</td>
</tr>
<tr>
<td>RWPP</td>
<td></td>
<td>0.193 (3.142)**</td>
<td>0.014 (0.227)</td>
</tr>
<tr>
<td>RWPP</td>
<td></td>
<td>0.474 (8.331)**</td>
<td>0.044 (0.648)</td>
</tr>
<tr>
<td>RWPP</td>
<td></td>
<td>0.039 (0.523)</td>
<td></td>
</tr>
<tr>
<td>RWF</td>
<td></td>
<td>0.039 (0.726)</td>
<td></td>
</tr>
<tr>
<td>RWF</td>
<td></td>
<td>0.0190 (2.968)**</td>
<td>0.027 (0.370)</td>
</tr>
<tr>
<td>RWFA</td>
<td></td>
<td>0.067 (1.200)</td>
<td>-0.048 (1.036)</td>
</tr>
<tr>
<td>RWFA</td>
<td></td>
<td>0.039 (0.523)</td>
<td></td>
</tr>
<tr>
<td>POE</td>
<td></td>
<td>0.106 (2.085)*</td>
<td></td>
</tr>
<tr>
<td>POE</td>
<td></td>
<td>0.106 (2.085)*</td>
<td></td>
</tr>
<tr>
<td>RWFP*POE</td>
<td></td>
<td>-0.049 (0.726)</td>
<td></td>
</tr>
<tr>
<td>RWPA*POE</td>
<td></td>
<td>-0.020 (0.283)</td>
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</tr>
<tr>
<td>RWPP*POE</td>
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<td>-0.106 (0.465)</td>
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</tr>
<tr>
<td>RWFA*POE</td>
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<td>-0.062 (0.894)</td>
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</tr>
<tr>
<td>RWPA</td>
<td></td>
<td>0.009 (0.152)</td>
<td>0.182 (2.938)**</td>
</tr>
<tr>
<td>RWF</td>
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<td>0.555 (9.224)**</td>
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<td>RWPP</td>
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<td>0.481 (7.376)**</td>
<td>0.023 (0.352)</td>
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<tr>
<td>RWPP</td>
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<td>0.0114 (1.176)</td>
<td>0.556 (9.401)**</td>
</tr>
<tr>
<td>RWPP</td>
<td></td>
<td>0.193 (3.142)**</td>
<td>0.014 (0.227)</td>
</tr>
<tr>
<td>RWPP</td>
<td></td>
<td>0.474 (8.331)**</td>
<td>0.044 (0.648)</td>
</tr>
<tr>
<td>RWPP</td>
<td></td>
<td>0.039 (0.726)</td>
<td></td>
</tr>
<tr>
<td>RWF</td>
<td></td>
<td>0.039 (0.726)</td>
<td></td>
</tr>
<tr>
<td>RWF</td>
<td></td>
<td>0.0190 (2.968)**</td>
<td>0.027 (0.370)</td>
</tr>
<tr>
<td>RWFA</td>
<td></td>
<td>0.067 (1.200)</td>
<td>-0.048 (1.036)</td>
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<tr>
<td>RWFA</td>
<td></td>
<td>0.039 (0.523)</td>
<td></td>
</tr>
</tbody>
</table>

Table shows the standardized beta coefficients

**. Correlation is significant at the 0.01 (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 (2-tailed).

### Agreeableness

<table>
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<th>Dependent variable</th>
<th>GWPP</th>
<th>GWPA</th>
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<tbody>
<tr>
<td>PAG</td>
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<td>0.067 (1.200)</td>
<td>-0.048 (1.036)</td>
</tr>
<tr>
<td>PAG</td>
<td></td>
<td>-0.044 (0.528)</td>
<td></td>
</tr>
<tr>
<td>RWPP*PAG</td>
<td></td>
<td>0.039 (0.523)</td>
<td></td>
</tr>
<tr>
<td>RWPP*PAG</td>
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<td>0.114 (1.176)</td>
<td>0.056 (9.401)**</td>
</tr>
<tr>
<td>RWPP*PAG</td>
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<td>-0.058 (0.802)</td>
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<tr>
<td>RWPP*PAG</td>
<td></td>
<td>-0.024 (0.283)</td>
<td></td>
</tr>
<tr>
<td>RWPP*PAG</td>
<td></td>
<td>0.027 (0.370)</td>
<td></td>
</tr>
<tr>
<td>RWPP</td>
<td></td>
<td>0.474 (8.331)**</td>
<td>0.044 (0.648)</td>
</tr>
<tr>
<td>RWPP</td>
<td></td>
<td>0.039 (0.726)</td>
<td></td>
</tr>
<tr>
<td>RWPP</td>
<td></td>
<td>0.193 (3.142)**</td>
<td>0.014 (0.227)</td>
</tr>
<tr>
<td>RWPP</td>
<td></td>
<td>0.474 (8.331)**</td>
<td>0.044 (0.648)</td>
</tr>
<tr>
<td>RWPP</td>
<td></td>
<td>0.039 (0.726)</td>
<td></td>
</tr>
<tr>
<td>RWF</td>
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<td>0.193 (3.142)**</td>
<td>0.014 (0.227)</td>
</tr>
<tr>
<td>RWFA</td>
<td></td>
<td>0.175 (2.864)**</td>
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<tr>
<td>RWFA</td>
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<td>0.067 (1.200)</td>
<td>-0.048 (1.036)</td>
</tr>
<tr>
<td>RWFA</td>
<td></td>
<td>0.039 (0.523)</td>
<td></td>
</tr>
</tbody>
</table>

Table shows the standardized beta coefficients

**. Correlation is significant at the 0.01 (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 (2-tailed).

GWPP= Given Word-of-Mouth Product Praise
GWPA= Given Word-of-Mouth Product Activity
POE= Openness to experience
RWPP= Received Word-of-Mouth Product Praise
RWPA= Received Word-of-Mouth Product Activity
RWFA= Received Word-of-Mouth Firm Activity
RWFP= Received Word-of-Mouth Firm Praise
PAG= Agreeableness

R²= 39% 53%
### The Effect of Received Word-of-Mouth on Given Word-of-Mouth

#### Conscientiousness

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Dependent variable</th>
<th>GWPP</th>
<th>GWPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCO</td>
<td>0.060 (1,284)</td>
<td>0.035 (0.728)</td>
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</tr>
<tr>
<td>RWPP*PCO</td>
<td>0.020 (0.320)</td>
<td>0.023 (0.316)</td>
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</tr>
<tr>
<td>RWFP*PCO</td>
<td>-0.128 (1.421)</td>
<td>0.017 (0.312)</td>
<td></td>
</tr>
<tr>
<td>RWPA*PCO</td>
<td>0.030 (0.471)</td>
<td>0.030 (0.388)</td>
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<tr>
<td>RWFA*PCO</td>
<td>-0.032 (0.388)</td>
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<td></td>
</tr>
<tr>
<td>RWPP</td>
<td>0.478 (7.863)**</td>
<td>0.011 (0.168)</td>
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</tr>
<tr>
<td>RWPA</td>
<td>0.570 (9.503)**</td>
<td>0.008 (0.138)</td>
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</tr>
<tr>
<td>RWFP</td>
<td>0.201 (3.342)**</td>
<td>0.179 (2.895)**</td>
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<tr>
<td>RWFA</td>
<td>0.476 (7.464)**</td>
<td>0.179 (2.895)**</td>
<td></td>
</tr>
<tr>
<td>R^2</td>
<td>39%</td>
<td>51%</td>
<td></td>
</tr>
</tbody>
</table>

Table shows the standardized beta coefficients

**. Correlation is significant at the 0.01 (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
RWPP= Received Word-of-Mouth Product Praise
RWPA= Received Word-of-Mouth Product Activity
RWFP= Received Word-of-Mouth Firm Praise
RWFA= Received Word-of-Mouth Firm Activity
GWPP= Given Word-of-Mouth Product Praise
GWPA= Given Word-of-Mouth Product Activity
PCO= Conscientiousness

#### Product Level

#### Product innovativeness

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Dependent variable</th>
<th>GWPP</th>
<th>GWPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRIN</td>
<td>-0.055 (1,104)</td>
<td>0.232 (4.676)**</td>
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</tr>
<tr>
<td>RWPP*PRIN</td>
<td>0.131 (1.975)*</td>
<td>0.041 (0.662)</td>
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</tr>
<tr>
<td>RWFP*PRIN</td>
<td>0.032 (0.535)</td>
<td>0.008 (0.274)</td>
<td></td>
</tr>
<tr>
<td>RWPA*PRIN</td>
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<td>0.029 (0.628)</td>
<td></td>
</tr>
<tr>
<td>RWFA*PRIN</td>
<td></td>
<td>-0.005 (0.076)</td>
<td></td>
</tr>
<tr>
<td>RWPP</td>
<td>0.513 (8.397)**</td>
<td>0.476 (7.464)**</td>
<td></td>
</tr>
<tr>
<td>RWPA</td>
<td></td>
<td>0.178 (3.031)**</td>
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</tr>
<tr>
<td>RWFP</td>
<td>0.015 (0.257)</td>
<td>0.194 (2.876)**</td>
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</tr>
<tr>
<td>RWFA</td>
<td></td>
<td>0.194 (2.876)**</td>
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</tr>
<tr>
<td>R^2</td>
<td>40%</td>
<td>55%</td>
<td></td>
</tr>
</tbody>
</table>

Table shows the standardized beta coefficients

**. Correlation is significant at the 0.01 (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
RWPP= Received Word-of-Mouth Product Praise
RWPA= Received Word-of-Mouth Product Activity
RWFP= Received Word-of-Mouth Firm Praise
RWFA= Received Word-of-Mouth Firm Activity
GWPP= Given Word-of-Mouth Product Praise
GWPA= Given Word-of-Mouth Product Activity
PRIN= Product innovativeness
### Product involvement

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<td>GWPP</td>
<td>-0.039 (0.737)</td>
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<tr>
<td>PINV</td>
<td>GWPA</td>
<td>0.015 (0.220)</td>
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<td>0.164 (2.288)**</td>
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<tr>
<td>RWPP*PINV</td>
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<td>0.072 (1.060)</td>
</tr>
<tr>
<td>RWPA*PINV</td>
<td></td>
<td>-0.061 (1.054)</td>
</tr>
<tr>
<td>RWFP*PINV</td>
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<td>0.005 (0.078)</td>
</tr>
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<td>RWFA*PINV</td>
<td></td>
<td>0.080 (1.217)</td>
</tr>
<tr>
<td>RWPP</td>
<td></td>
<td>0.507 (8.665)**</td>
</tr>
<tr>
<td>RWPP</td>
<td></td>
<td>0.005 (0.070)</td>
</tr>
<tr>
<td>RWPA</td>
<td></td>
<td>0.501 (8.646)**</td>
</tr>
<tr>
<td>RWFP</td>
<td></td>
<td>0.197 (3.317)**</td>
</tr>
<tr>
<td>RWFA</td>
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<td>0.142 (2.432)**</td>
</tr>
<tr>
<td>R²</td>
<td></td>
<td>40%</td>
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</tbody>
</table>

<table>
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<th>Dependent variable</th>
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</tr>
</thead>
<tbody>
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<td>PRICE</td>
<td>GWPP</td>
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</tr>
<tr>
<td>PRICE</td>
<td>GWPA</td>
<td>0.016 (0.226)</td>
</tr>
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<td>RWPP*PRICE</td>
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</tr>
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<td>RWFP*PRICE</td>
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<td>-0.061 (0.994)</td>
</tr>
<tr>
<td>RWPA*PRICE</td>
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<td>-0.083 (0.872)</td>
</tr>
<tr>
<td>RWFA*PRICE</td>
<td></td>
<td>-0.010 (0.120)</td>
</tr>
<tr>
<td>RWPP</td>
<td></td>
<td>0.508 (8.309)**</td>
</tr>
<tr>
<td>RWPP</td>
<td></td>
<td>-0.016 (0.226)</td>
</tr>
<tr>
<td>RWPA</td>
<td></td>
<td>0.164 (2.570)**</td>
</tr>
<tr>
<td>RWFP</td>
<td></td>
<td>0.194 (2.828)**</td>
</tr>
<tr>
<td>RWFA</td>
<td></td>
<td>0.142 (2.432)**</td>
</tr>
<tr>
<td>R²</td>
<td></td>
<td>39%</td>
</tr>
</tbody>
</table>

* **Correlation is significant at the 0.01 (2-tailed).**
* *Correlation is significant at the 0.05 level (2-tailed).*
GWPP = Given Word-of-Mouth Product Praise
GWPA = Given Word-of-Mouth Product Activity
PINV = Product involvement
RWPP = Received Word-of-Mouth Product Praise
RWPA = Received Word-of-Mouth Product Activity
RWFP = Received Word-of-Mouth Firm Praise
RWFA = Received Word-of-Mouth Firm Activity

The Effect of Received Word-of-Mouth on Given Word-of-Mouth

---

Price

### Product involvement

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Dependent variable</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>PINV</td>
<td>GWPP</td>
<td>-0.039 (0.737)</td>
</tr>
<tr>
<td>PINV</td>
<td>GWPA</td>
<td>0.015 (0.220)</td>
</tr>
<tr>
<td>RWPP*PINV</td>
<td></td>
<td>0.164 (2.288)**</td>
</tr>
<tr>
<td>RWPP*PINV</td>
<td></td>
<td>0.072 (1.060)</td>
</tr>
<tr>
<td>RWPA*PINV</td>
<td></td>
<td>-0.061 (1.054)</td>
</tr>
<tr>
<td>RWFP*PINV</td>
<td></td>
<td>0.005 (0.078)</td>
</tr>
<tr>
<td>RWFA*PINV</td>
<td></td>
<td>0.080 (1.217)</td>
</tr>
<tr>
<td>RWPP</td>
<td></td>
<td>0.507 (8.665)**</td>
</tr>
<tr>
<td>RWPP</td>
<td></td>
<td>0.005 (0.070)</td>
</tr>
<tr>
<td>RWPA</td>
<td></td>
<td>0.501 (8.646)**</td>
</tr>
<tr>
<td>RWFP</td>
<td></td>
<td>0.197 (3.317)**</td>
</tr>
<tr>
<td>RWFA</td>
<td></td>
<td>0.142 (2.432)**</td>
</tr>
<tr>
<td>R²</td>
<td></td>
<td>40%</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Dependent variable</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PRICE</td>
<td>GWPP</td>
<td>0.014 (0.261)</td>
</tr>
<tr>
<td>PRICE</td>
<td>GWPA</td>
<td>0.016 (0.226)</td>
</tr>
<tr>
<td>RWPP*PRICE</td>
<td></td>
<td>0.136 (2.101)*</td>
</tr>
<tr>
<td>RWFP*PRICE</td>
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<td>-0.061 (0.994)</td>
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<tr>
<td>RWPA*PRICE</td>
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<td>-0.083 (0.872)</td>
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<tr>
<td>RWFA*PRICE</td>
<td></td>
<td>-0.010 (0.120)</td>
</tr>
<tr>
<td>RWPP</td>
<td></td>
<td>0.508 (8.309)**</td>
</tr>
<tr>
<td>RWPP</td>
<td></td>
<td>-0.016 (0.226)</td>
</tr>
<tr>
<td>RWPA</td>
<td></td>
<td>0.164 (2.570)**</td>
</tr>
<tr>
<td>RWFP</td>
<td></td>
<td>0.194 (2.828)**</td>
</tr>
<tr>
<td>RWFA</td>
<td></td>
<td>0.142 (2.432)**</td>
</tr>
<tr>
<td>R²</td>
<td></td>
<td>39%</td>
</tr>
</tbody>
</table>

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The Effect of Received Word-of-Mouth on Given Word-of-Mouth
Customer based brand equity

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Dependent variable</th>
<th>GWPP</th>
<th>GWPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBBE</td>
<td></td>
<td>0.331 (5.707)**</td>
<td>0.005 (1.560)</td>
</tr>
<tr>
<td>CBBE</td>
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</tr>
<tr>
<td>RWPP*CBBE</td>
<td>-0.123 (1.341)</td>
<td></td>
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</tr>
<tr>
<td>RWFP*CBBE</td>
<td>-0.033 (0.382)</td>
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</tr>
<tr>
<td>RWPP*CBBE</td>
<td></td>
<td>0.070 (0.813)</td>
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<tr>
<td>RWPA*CBBE</td>
<td>-0.011 (0.153)</td>
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</tr>
<tr>
<td>RWFP*CBBE</td>
<td>-0.076 (0.749)</td>
<td></td>
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</tr>
<tr>
<td>RWFA*CBBE</td>
<td>0.076 (1.014)</td>
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</tr>
<tr>
<td>RWPP</td>
<td>0.364 (6.053)**</td>
<td>0.022 (0.327)</td>
<td>0.534 (8.690)**</td>
</tr>
<tr>
<td>RWPP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RWPA</td>
<td></td>
<td>0.036 (0.576)</td>
<td>0.157 (2.454)*</td>
</tr>
<tr>
<td>RWFP</td>
<td></td>
<td>-0.014 (0.224)</td>
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</tr>
<tr>
<td>RWFP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RWFA</td>
<td></td>
<td>0.157 (2.454)*</td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>46%</td>
<td>53%</td>
<td></td>
</tr>
</tbody>
</table>

Table shows the standardized beta coefficients

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