UNIVERSITY OF TWENTE.

MASTER THESIS

DETERMINANTS OF ELECTRONIC WORD OF MOUTH PERCEIVED CREDIBILITY

A study of Cosmetic Purchasing Behaviour

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PREFACE

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ABSTRACT

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With the advent of eWOM phenomenon, the understanding of what makes an online review believable has attracted growing attention from both academics and practitioners. Drawing on the Dual Process Theory, this study examines four informational cues (Review Strength, Review Valance, Source credibility, Confirmation Prior Knowledge) and two normative cues (Review Consistency, Review Rating) which potentially used by consumers to evaluate the credibility of eWOM. The study is conducted with an online survey that involved members of Makeupalley.com, a popular online consumer review website for cosmetic products. Consistent with previous research, the findings of this study show that that informational cues, was the primary factors affecting review credibility. However, although existing studies also support the influences of normative factors, the analysis shows no significant relationship between the tested of normative factors and the consumer´s perception of online review credibility. Besides, the effects of informational based determinants on individual attitude toward the online cosmetic review also differs for participants from different age groups. Based on the research results, the study limitations, theoretical and practical implications is discussed

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CHAPTER 1 INTRODUCTION

The introduction gives readers general understanding of the overall research topic. This chapter starts with presenting the practical and theoretical background of this study. Next, the research problem and its significance will be discussed. Finally, the chapter also presents the objective of this study and research questions to answer.

1.1. Research Background

Nowadays, online product reviews have become one of the most influential information sources for potential buyers. Internet has transformed the way consumers gather information for their purchasing decisions. The advent of new media and online communication channels, such as blogs, emails, virtual communities, social media platforms, empowers consumers to easily interact and exchange product information and experiences with other users (Hennig-Thurau, et al., 2010). Online product review is one type of eWOM (Electronic Word of Mouth), where third parties share their experiences and opinions regarding product features and performance. Consumers perceive online reviews as more trustworthy and reliable than traditional media (Bickart & Schindler, 2001; Rodgers & Esther, 2000; Li & Zhan, 2011; Kaplan & Haenlein, 2010). 71% of respondents in a recent consumer survey would consult online reviews prior to purchasing a product or service (Nielsen, 2014).

The growing popularity and importance of online reviews has received substantial attention from both practitioners and scholars. From a managerial perspective, the eWOM phenomenon helps businesses to better capture consumer buying behavior, shopping experiences and expectations, then develop optimal business strategies (Constantinides & Fountain, 2008). Online reviews are considered as a "new element in the marketing communications mix and work as free sales assistants" (Chen & Xie, 2008, p. 477). This role is even more critical in case of experience goods such as cosmetic products, of which product performance evaluation is difficult prior to purchasing (Park & Lee, Information Direction, Website Reputation, and eWOM Effect; A moderating role of product types, 2009; Mudambi & Schuff, 2010). A recent research shows that sixty % of consumers reply on beauty blogs and online consumer reviews when buying cosmetics (Euromonitor, 2015). Accordingly, many companies in the cosmetic industry, such as L'Oréal, Unilever, and Sephora, have integrated user-provide review systems in attempt to improve sale and product popularity (Hennig-Thurau, et al., 2010; Chen & Xie, 2008).

Meanwhile, the effects of online reviews and relationship outcomes have been studied by many scholars from different perspectives such as brand reputation (Park & Lee, Information Direction, Website Reputation, and eWOM Effect; A moderating role of product types, 2009), product attitude (Lee, Park, & Han, 2008) and sales performance (Duan, Gu, & Whinston, 2008; Chevalier & Mayzlin, 2006). It is widely agreed among current studies that the perceived credibility of the online message is an essential element in shaping consumer´s behavior (Cheung & Thadani, 2012). Lis (2013) claims that

consumer´s perception of eWOM credibility can significantly and positively influence the information usage, and subsequently impact purchase intention. Compared with other purchase attitude dimensions, unravelling how consumers construct eWOM credibility would be a significant topic for understanding the process of eWOM usage. A number of current studies consider the multiple influencing factors of online review credibility including argument quality, argument quantity, argument valance and source credibility in measuring relationship outcomes; yet, the findings remain somewhat ambiguous and inconsistent, possibly due to varying measurement approaches (Hennig-Thurau, et al., 2010). Up to now, an integrated view of the measures that consumers depend on to evaluate reliable and trustworthy information is lacking in this area. Therefore, this study aims to explore and identify the related message and contextual features which consumers consider in assessing the credibility of online reviews of cosmetics. Moreover, the intention is also to verify the effect of perceived credibility of eWOM on the consumer´s usage of eWOM-based recommendations in making purchase decision regarding cosmetics.

1.2. Research Objective

Given the fact that information credibility plays a crucial role in affecting consumers´ attitudes, it is vital to understand the triggering factors of consumers' perceptions of credibility. This study focuses on the related message and contextual features of written online reviews. The purpose is to gain more understanding about the consumer decision making process, specifically examining the effects of online information credibility toward consumer information usage in the purchasing process of cosmetic products. The determinants are explored that influence a consumer's perceived online review credibility as predictors of online reviews influence on purchase intention. These purposes lead to the following research questions:

(1) What are the relevant determinants influencing consumer's perceived credibility of online cosmetic review?
(2) To what extent does the perceived credibility online cosmetic review of influences consumers´ information usage?

CHAPTER 2 LITERATURE REVIEW

This chapter reviews the important concepts and relevant previous literature on the research topic. In particular, the literature review is divided into three main parts. The first part (section 2.1) presents the concepts of word of mouth (WOM) and electronic word of mouth (eWOM). Then, in the second part (section 2.2) discuss the current trends of cosmetics market, cosmetics purchasing behavior and the effect of eWOM on cosmetics purchase decision. At last, the third part (section 2.3) clarifies the concept of credibility including the information credibility and perceived credibility of eWOM. This section also reviews the main determinants of eWOMs´ perceived credibility in existing literature.

2.1. Electronic Word of Mouth (eWOM)

In this section, the concepts of WOM and eWOM are presented in order to clarify the research context. This section also discussed the advantages and disadvantages of eWOM over the traditional WOM, and the important role on eWOM in consumers´ buying behavior as argued in the previous studies.

2.1.1. Word of Mouth (WOM)

Word of Mouth (WOM) is defined as an oral form of information passing between a non-commercial communicator and a receiver concerning a brand, a product, or service (Dichter, 1966). Kotler and colleagues (2008) emphasized the interpersonal aspect and defined WOM as "personal communication about a product between target buyers and neighbors, friends, family members and associates" (p. 272). In another definition, Dwyer (2007) described WOM as a network phenomenon in which people create bonds to others by exchanging of units disclosed (information/messages).

The importance of WOM in marketing communication has been widely recognized in existing literatures (Duan et al., 2008; Hennig-Thurau, et al., 2010) and is even considered as "one of the most influential resources of information transmission since the beginning of society" (Lee et al., 2008, p. 341). WOM information are driven from consumer´s perspective, and it reflects the products experience of users. Therefore, WOM results in more interactive, complete and relevant information for consumers (Lazarsfeld & Katz, 1955; Bickart & Schindler, 2001). Consumers consult WOM to reduce risk and uncertainty in making purchase decision (Silverman, 1997).

The persuasive effects of WOM on consumer's purchase decision associates with its credibility for consumers. Existing research states that people perceived recommendation from their peers as much more reliable and believable than formal advertisements and other influence sources (Mangold, 1987; Bickart & Schindler, 2001). As WOM communication take place within close social network, the source reliability and flexibility of interpersonal communication increase the message credibility (Day, 1971; Murray, 1991). This perception of credibility is a decisive factor that affects how receivers process the WOM messages.

2.1.2. Electronic Word of Mouth (eWOM)

While the WOM has always had a significant role in forming consumer opinions, the rapid development of Internet and Web 2.0 applications has created a new powerful form of information transmission, the electronic word of mouth (eWOM). eWOM is defined as "any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet" (Henning-Thurau, Gwinner, Walsh, & Gremler, 2004, p. 39). eWOM is closely associated to the application of user-generated content (UGC), and it mostly occurs on online review websites (e.g. IMDb.com), ecommerce websites (e.g. Amazon.com), blogs, electronic discussion board, online communities (e.g. Makeupalley.com), and online social networking platforms (e.g. Facebook, Twitter or YouTube) (Henning-Thurau et al., 2004).

Online consumer reviews (OCR) are one type of eWOM, which provide opinions and feedbacks of consumers about products or service. Mudambi and Schuff (2010) define online consumer reviews as "peer-generated product evaluations posted on company or third-party websites" (p. 186). Like other forms of eWOM, online reviews give consumers opportunities to evaluate price-quality performance and investigate and exchange product or brand experiences with their peers. Earlier studies show the great advantage of eWOM over the traditional WOM. "Internet lowers the cost of gathering and sharing information" (Huang et al., 2009, p. 56), and the UGC , such as online consumer reviews, allows consumer to somewhat experience and learn about target products in a more comprehensive way – before purchase (Lynch & Ariely, 2000). These pre-purchase experiences are often rather limited in offline setting. While traditional WOM communication is often constrained within certain social or geographical boundaries and time frame, eWOM features fast and extensive spreading information with large volume of transmitted messages, anonymous sources, and transcending space and time (Henning-Thurau et al., 2004). The effectiveness and convenience of eWOM communication encourages consumers to engage in digital social interaction, and more comfortably exchange opinions or express concerns for others.

Undoubtedly, online consumer reviews have transformed consumer´s behavior in decision making process. Just like WOM, eWOM has greater credibility, relevance and empathy evoking than other information sources (Bickart & Schindler, 2001). Hence, when consumers are not able to obtain pre-purchase experiences, they often seek for online peer opinion to reduce uncertainty, anxiety and risk regarding product quality and seller credibility (Huang et al., 2009). In other words, people tend to rely on online information to make even offline purchase decisions. In 2008, Opinion Research Group conducted a survey about buying behavior, in which 61% of the respondents claimed referring to online reviews, blogs, and other sources of online peer opinions before purchasing a new product or service. More recently, in a survey about global online consumption, Nielsen Research Company

reports that more approximately 71% of respondents would consult online reviews prior purchasing a product or service (Nielsen, 2014).

The effect of eWOM on consumer purchase decision has been studied intensively among existing literatures. Numerous empirical studies show that online reviews greatly influence consumer behavior and purchase decision (Chen & Xie, 2008). In an experimental study with 248 Korean college students, Lee and colleagues (2008) highlight the effects of online review sentiment on products' attitudes. In addition, a research of Chevlier and Mayzlin (2006), based on the data from Amazon.com and BN.com, find that online book reviews have a strong impact on book sales. Similarly, Duan et al. (2008) investigate the effect of movie reviews on Yahoo! Movie and BoxOfficeMojo, and discover the remarkable influence of these reviews on box office revenue. However, while many studies, as mentioned above focus on the success of eWOM, some question consumers' perceived credibility of online user generated content due to the absence of Internet source cues (Smith, Menon, & Sivakumar, 2005; Lis, 2013). The process of how consumers process and evaluate the credibility of eWOM in the digital context somewhat remains a gap among current literatures.

2.2. Cosmetic Products

This section presents the definition of cosmetics, and discuss the development of the cosmetic global market. Additionally, the categorization of cosmetics as experiences goods is discussed to explain the cosmetic purchasing behavior and the role of eWOM in cosmetics purchasing process.

2.2.1. Global Cosmetic Market

The European Union Cosmetics Regulation (Article 2-Regulation (EC) No. 1223/2009) defines cosmetic as "any substance or mixture intended to be placed in contact with the various parts of the human body … with a view exclusively or mainly to cleaning them, perfuming them, changing their appearance and/or correcting body odors and/or protecting them or keeping them in good condition." (EUR-Lex, 2009)

The cosmetic industry contains of five main segments: skincare, haircare, color (make-up), fragrances and toiletries (Schneider, et al., 2001). These diverse segments are supplementary and cover all the cosmetic needs and expectations of consumers. Women are generally recognized as the major group of cosmetics users. With the estimated worth of 180 billion Euros, cosmetic market is one of the most dynamic and innovative areas of global consumption (L'Oréal, 2014).. Fostered by the globalization and modern technology advancement and despite the dramatic changes in the worldwide economic, political, social and cultural environments, the global cosmetics industry has grown at a steady rate of 4.5% per year over the past two decades (Lopaciuk & Loboda, 2013). Moreover, the development of the cosmetic market continues to be driven by the growing attention for personal appearance and wellness, especially from the younger group of cosmetic consumers (16-34-year-old), and by the growing diversity of beauty trends and aspirations worldwide. The cosmetic industry is predicted to

continue to strive and generate strong growth rates for the upcoming years (Lopaciuk & Loboda, 2013). 'Based on the characteristics of the cosmetic industry described above, it is an interesting industry to investigate the effects of eWOM's perceived credibility.

2.2.2. The Effect of eWOM on Cosmetic Purchase Behavior

This study focuses on the effect of eWOM on consumer purchase decision regarding cosmetics. As in many other industries, the digital revolution changes the face of the cosmetics world. It has never been easier for consumers to go online and find all kinds of information about their interested cosmetic products, such as product attributes, consumer feedbacks, distribution outlets and price comparison. The Internet connects consumers from all over the world, it empowers them to exchange different beauty trends, tips, products reviews and recommendations with almost no constraint. The more consumers gain information about product alternatives, the more knowledge they require to cope with the increased complexity of the choice selection and purchasing process (Euromonitor, 2015). As a result, eWOM becomes one of the most important sources of information to purchase decisions regarding cosmetics.

Kotler et al. (2009) mentioned that peer opinions provide an indicative value to the consumer purchase process. This process consists of five main stages: (1) need recognition, (2) information search, (3) evaluation of alternatives, (4) purchase decision, (5) purchase and (6) post-purchase evaluation. Peer opinions serve as an external stimulus, which affects interests and awareness during the need recognition stage (Sheth, 1971). In addition, peer reviews also influence product expectations and perceptions during the information stages (Webster, 1991), and influences attitude during the evaluation of alternatives and purchase decision stages (Lynn, 1987; Woodside, Wilson, & Milner, 1992).

In the cosmetics market, purchasing cosmetics particularly involve a complicated and longer process, which is often substantially driven by other user´s opinions. Peer product opinions, in online context, can be found throughout various social media platforms in form of customer ratings, product reviews, blog posts, and demonstrations of products in video or image format. Online cosmetic reviews have strong influence on changing consumer (receiver) behaviors and attitudes toward a product or a brand including awareness, expectations, attribute judgment, perceived value and purchase intention (Buttle, 1998). A recent survey shows that 60% of respondents regularly consult beauty blogs and online consumer reviews for tips and product recommendations; more than 70% read online reviews to verify manufacturer claims and make purchase decisions (Euromonitor, 2015). Understanding the importance of eWOM, cosmetics manufactures such as L'Oréal, Procter & Gamble (P&G) and Unilever and cosmetics retailers such Sephora, Nordstrom and Douglas consider eWOM as a strategic communicating element to foster closer customer relationships and trigger sales. Many cosmetic selling

websites provide product reviews made by previous customers, some cosmetic brands even sponsor popular beauty bloggers to write about their products.

The effects of eWOM in purchasing cosmetics is explained in previous literatures in regard to product types. Based on the ability of consumers to discover the product quality prior purchase, Nelson (1970; 1974) classifies two main types of products: (1) search goods and (2) experience goods. While search goods are products with characteristics that are relatively easy to observe before purchase, the characteristics of experience goods are difficult to evaluate in advance. Based on Nelson's classification, cosmetic, in essence, is a classic example of experience good (Table 1, Nelson, 1974, p. 739).

Many researchers suggest the instrumental role of product types with the way consumers perceive eWOM. Huang el al. (2009) mentions the differences in consumer´s attitudes toward online reviews of a search good (e.g. laptop) and of an experience good (e.g. holiday destination). Consumers play a more active role in researching experience goods as they tend to spend more time to deeply scan the review information. This statement is supported by Park & Lee (2009) and Mudambi and Schuff, (2010). According to Park and Lee (2009), eWOM has higher impact on consumer´s purchasing decision for experience goods than for search goods. Experience goods, such as cosmetics, are commonly purchased based upon reputation and recommendation due to the difficulty to assess product quality before usage. As consumers perceived great uncertainty about product attributes, they need to seek more information to minimize the initial risks.

In addition, compared with reviews for search goods, reviews for experience goods are likely to be highly ambiguous, personal and subjective, since is based on individual judgments (Nelson, 1974). Consumers have to combine and compare information from different sources to evaluate and determine the true product value (Park & Lee, 2009; Huang et al., 2009; Mudambi & Schuff, 2010). The more consumers perceive an online review as reliable and trustworthy, the more likely they might follow the opinions suggested by the online messages. In other words, for experience goods such as cosmetics, the consumer's perceived credibility of eWOM influences the probability of the consumer to follow eWOM's message (Lis, 2013).

2.3. The Concept of Credibility

In this section, the concept of credibility is explained including the information credibility and perceived credibility of eWOM. Also, the deliberation on the information and source credibility in online context is discussed based on the nature of eWOM communication. Finally, this section also reviews the main determinants of eWOMs´ perceived credibility in existing literature in order to identify the research gaps and justify the significance of this study.

2.3.1. Information Credibility

As mentioned above, peer information is an indispensable factor of the cosmetic industry. Credible information bolsters the market and financial success of cosmetic products. It also fulfills the need to "reduce information asymmetry" (Tan & Chang, 2012, p. 579), lower uncertainty (Huang et al., 2009) and improve the purchase experiences of buyers (Chen & Xie, 2008). However, the extravagant amount of available and accessible information on the Internet calls the question of credibility (Metzger, 2007). Credibility is an important aspect of information quality, as it is helpful in assessing experience properties (Jain & Posavac, 2001) and mitigate performance skepticism, especially in case of experience goods (Weathers, Sharma, & Wood, 2007).

Information credibility is a complex concept, which has been widely discussed in research literatures. In a study about media credibility, Hovland & Weiss (1951) defined credibility as perceived trustworthiness, and perceived expertise of the information source, as interpreted by the receiver(s). Self (1996) describes credibility as a combination of several different concepts such as believability, trust, and perceived reliability (p. 421). More recently, Metzger (2007) explains credibility as compose of multidimensional factors, including expertise, trustworthiness, source attractiveness and dynamism (p. 2078). Although there is no universal agreement on the definition of credibility, it commonly represents the perceived believability of information and/or information source. (Kaye & Johnson, 2011). The concept of credibility associates closely with the concept of trust, related to individual confidence or belief (Flanagin & Metzger, 2000). Existing literatures consider credibility as a subjective perception, rather than an objective assessment of information (Gunther, 1992, p. 148; Fogg et al., 2001, p. 80). As credibility is determined by the receiver's judgments (Kaye & Johnson, 2011), it is not necessarily corresponding with the true quality of the message (e.g. accuracy). Therefore, in the context of this research, the term credibility will be referred to as perception of credibility of received information instead of direct evaluation of information practical quality.

2.3.2. The perception of eWOMs´ Credibility

Based on the general concept of credibility, eWOM's perceived credibility can be defined as the extent to which the receiver perceives the online information as believable, factual and unbiased (Chueng et al., 2009). As mentioned above, credibility is an essential factor to be considered when consumers evaluate the value of eWOM information. According to Wathen & Burkell (2002), the information persuasion process starts with the deliberate judgment of the receiver in terms of how credible the information source is. Furthermore, some studies confirm the important role of eWOM's perceived credibility with the recommendation usage of consumers (Chueng et al., 2009; McKnight & Kacmar, 2006; Lis, 2013). In other words, consumers are more likely to follow online advice which they feel credible and trustworthy. The deliberation on the information and source credibility elaborates to an even greater extent in the context of eWOM. This is believed to arise from the lack of non-verbal

communication, the anonymity of information sources, as well as the ease of content publication and distribution in the digital environment (Walther, 1992, Wathen & Burkell, 2002; Chueng et al., 2009).

The social information processing theory of Walther (1992) explains the impact of the computer mediated communication setting on readers' perceptions of the credibility of eWOM. According to Walther (1992), in face to face setting, audiences use many visual and vocal displays of non-verbal communication (e.g. eye contact, facial impression, body language, intonation, etc.) as leading indicators of communicator´s honesty and dependability. Online written communication, on the contrary, inhibits the physical interaction between different parties during information exchange. Consequently, the limited or absence of the non-verbal cues makes it difficult for the recipients to evaluate the reliability and trustworthiness of the online information sources (Lim & Van Der Heide, 2015).

The classic WOM communication features direct links between the informant and the receiver, thus, the information transmission, in an offline setting, is interpersonal and mainly active within a certain communal network (Henning-Thurau et al., 2004). In other words, in traditional WOM communication exists a prior social relationship or interpersonal tie between sender and receiver. Granovetter (1973), in a study about social networks, indicates that the strength of this interpersonal tie is signified by (1) the emotional intensity and intimacy level, (2) the amount of time engaging in mutual interactions in different contexts, (3) the reciprocal service which characterizes the relationship (p. 1361). It is believed that strong interpersonal ties associate closely with the issues of source trustworthiness which is noted earlier in cited literatures (Hovland & Weiss, 1951; Self, 1996; Metzger, 2007). As the recipient knows the sender, the credibility of the sender and the message is known to the receiver. People tend to trust and agree people that they are acquainted with, before, rather than complete strangers (Silverman, 1997).

Unlike WOM, eWOM is indirect and public communication with weak tie contacts (Henning-Thurau et al., 2004). The Internet enables consumers to share and receive different recommendations from all over the world at the convenience of their time; the evaluation of online reviews, nevertheless, is evident to be challenging (Smith et al., 2007; Lis, 2013). In eWOM communication, the sender and receiver are virtually stranger with little or no previous relationship or connection with each other. Although the anonymous communication certainly encourages comfortable exchange of opinions and experiences (Goldsmith & Horowitz, 2006), the hidden identity makes it difficult for consumers to shape perception about the senders and their competences (e.g. expertise level) (Schindler & Bickart, 2005; Lee & Youn, 2009). Ultimately, this also eliminates the ability of the receiver to determine the authenticity, credibility and quality of online recommendations.

Other concerns about credibility also originate from the ease of online information generation and diffusion. As Internet and modern communication technology lower the cost and widen the access to

information production and sharing, anyone can publish anything they like on Internet. Consequently, consumers face an excessive amount of available and accessible information online with little content filter or editorial review. Moreover, current literatures also highlight the lack of universal standards for posting and sharing information online (Metzger, 2007; Lee & Youn, 2009). Accordingly, online information can be falsely modified, plagiarized, manipulated, or construct anonymously under false identities (Johnson & Kaye, 2002; Metzger, 2007, p. 2078). This also accentuates the issue of distributing unreliable information from unreliable sources (Metzger, 2007).

Undoubtedly, the nature of digital communication makes it necessary for people to deliberate on assessing online recommendation. Because social media mostly lacks the role of professional gatekeepers to control information quality, it is the responsibility of consumers to evaluate the usefulness of eWOM and the credibility of its (unknown) sources. Accordingly, in attempt to compensate for the missing of non-verbal and interpersonal cues used in traditional WOM, people either pay greater attention to the remaining text-based cues or employ substitute cues provided by the Internet based platform to evaluate eWOMs´ credibility (Walther, 1992). Given the significant effect of eWOM s´ credibility on consumer´s eWOM usage, and the challenges in judging eWOM credibility, it would be a central subject in the learning process of eWOM usage to know how consumers construct online WOM credibility.

2.3.3. Antecedents of eWOM Credibility in Past Literature

Realizing the decisive role of eWOM credibility with consumer purchase decision, the number of both web shops and online review websites, e.g. Amazon.com, makeupalley.com, provide consumers or readers a special feature to vote on the helpfulness of the review. In academia, the subject of eWOM credibility and helpfulness has gained more attention from scholars. However, compared with other attitude perspectives, the determinants of eWOM's credibility remains relatively little known (McKnight & Kacmar, 2006; Lis, 2013). As mentioned earlier, credibility is often discussed as a given elucidation for the impact of eWOM communication (Hennig-Thurau, et al., 2010; Chevalier & Mayzlin, 2006), yet sole credibility is rarely the main object of study (Lis, 2013). Given that credibility is realized as a multi-dimensional concept, researchers widely agree that it can merely be captured thoroughly by multi-factor measures. However, the description regarding the basic underlying determinants of eWOM credibility are still relatively inconsistent. Most researches, up to now, apply the credibility model of the classic interpersonal communication to explain the perception of credibility in the digital environment. In cited literatures, this classic model is based on three major informational determinants: (1) message quality, (2) source credibility, and (3) receiver´s characteristics (Flanagin & Metzger, 2008). However, the focus of those studies is mainly in one or some specific aspects of the credibility assessment (e.g. linguistic quality, prior technical knowledge) without constructing an integrated view on how people perceive eWOM´s credibility.

Based on existing theory in the field of psychology and communication, Wathen and Burkell (2002) proposed an early conceptual model for how receivers assess the credibility of online information (see Figure 2-1). The authors indicate that the perception of credibility is the outcome of interactions between source characteristics, message characteristics and receiver characteristics. Such interactions happen in three stages: (1) evaluation of surface credibility of the website based on its surface characteristics including appearance and presentation, usability and interface design, and organization of information; (2) evaluation of message credibility based on characteristics of the source and

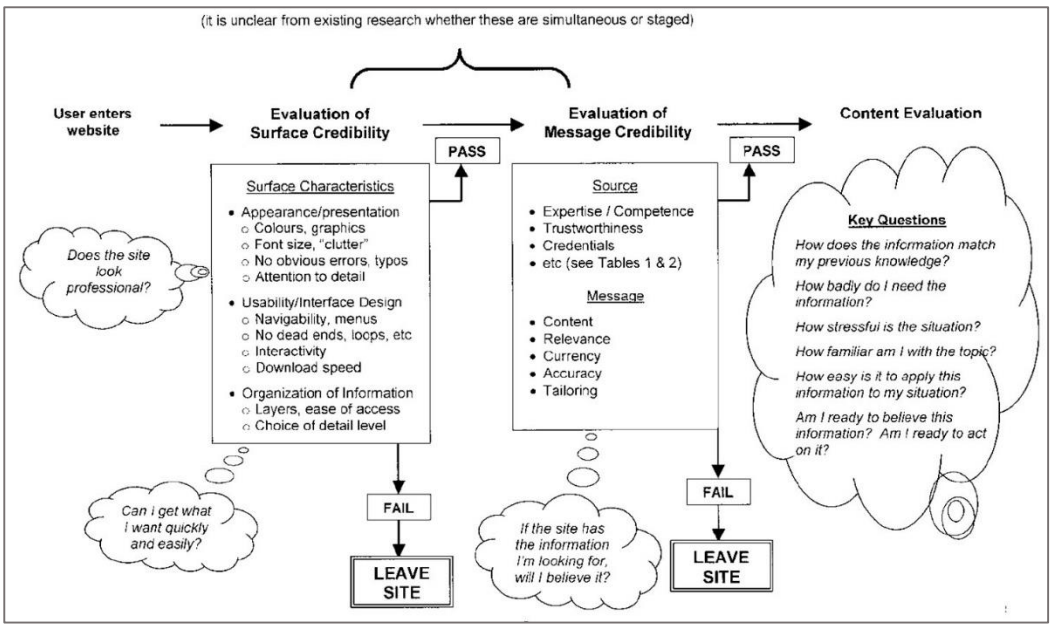

Figure 2-1: Proposed model for how users judge the credibility of on-line information (Wathen & Burkell, 2002)

message; (3) content evaluation involving the receiver's cognitive state at the time of evaluation. The authors also posit (but do not test) that if a receiver perceives that an online source is not credibly qualified at any stage, then he or she will exit the site without further evaluation (Wathen & Burkell, 2002). Accordingly, the model of Wathen and Burkell includes the significant aspects of the information receiver to the assessment process, and emphasizes the dependence of credibility rating on individual and situational factors (Metzger, 2007)

Brown, Broderick, & Lee (2007) argue that the interpersonal communication theories might be insufficient to explain eWOM behavior, due to missing face-to-face interaction (p. 3). Brown and colleagues adopt social network theory and describe online WOM as "the exchange of (tangible and intangible) resources between social actors (…), each kind of resource exchange is considered a social exchange relation, and individuals who maintain the relation are said to maintain a tie" (Brown et al., 2007, p. 4). Accordingly, the authors propose three key influential variables with the assessment of online information, namely: (1) tie strength, (2) homophily, and (3) source credibility. These three factors were examined by a field research consisting of thirty in-depth qualitative interviews followed by a social network analysis of an online community. The findings offer several significant theoretical

distinctions between online and offline conceptualizations of tie strength, homophily, and source credibility (Brown et al., 2007, p. 15). However, the determinants of eWOM´s credibility have not been specifically identified.

In a research of Mackiewicz (2008), the scholar analyzed 640 online reviews on four websites: Epinons.com, Allrecipes.com, Amazon.com and RateItALL.com. The review analysis emphasized on the motivations of reviewers; reviewer´s credibility assessment, and the language of the reviews. Based on the research results, Mackiewicz (2008) concludes that the linguistic characteristics of online reviews (e.g. content structure, grammar, vocabulary, punctuation and spelling) serve as proxy measures, signaling the experience and expertise of reviewers (p. 258, p. 262). Hence, because of the anonymity in the eWOM context, the perceived credibility of online reviews might be explained solely by the linguistic quality of the written recommendations. This notion is also supported by the research of Li and Zhan (2011). Li and Zhan (2011) study the persuasion effects of eWOM based on a data set of 1793 reviews of the Amazon Kindle (posted on Amazon.com in 2007 and 2008). The results confirm the association between the language intensity of the message with the perceived trustworthiness of the source. The authors suggest that although social cues about the source are less visible in online communication, consumers can derive source credibility from the linguistic features of the messages itself (Li & Zhan, 2011, p. 242).

In a qualitative study, O'Reilly and Marx (2011) investigate the credibility assessment mainly against technical background knowledge. They conducted semi-structure interviews with a group of young male consumers to examine the effect of eWOM among technically savvy online consumers. All chosen interviewees have good technical understanding about the Internet. According to the authors, they relatively represent the average knowledge level of the future generation of Internet users (O'Reilly & Marx, 2011). The research reveals that the assessment of the credibility of eWOM is based on four factors: (1) the polarity and quantity of posts, (2) the logic and articulation of posts, (3) the ability to find corroborating sources, and (4) the previous experience of participants with particular sellers (O'Reilly & Marx, 2011, p. 330). Among these four factors, O'Reilly and Marx (2011) highlight the effects of prior product experience on the information credibility rating. Specifically, when an individual is knowledgeable about the product, he/she is also more comfortable in evaluating the online advice and making purchasing decision. Additionally, the authors also suggest that beside apprising message and source features, an alternative to assess review credibility is to compare reviews of the same product/ service on other review websites (O'Reilly & Marx, 2011).

Further contribution in the field are made by Cheung and colleagues (2009). From a consumer´s perspective, the authors argue that when consumers evaluate the credibility of online information, they not solely consider the quality of argument, but also the value of the argument in the context. In their experimental study on Myetone.com (a popular Chinese online consumer discussion forum), the

authors follow the lens of the Dual process theory by Deutsch and Gerrard (1955) and classify the credibility determinants into to two main categories: (1) informational-based determinants including argument strengths and source credibility, and (2) normative-based determinants including recommendation consistency and review rating. The analysis results confirm the effects of both informational-based and normative-based determinants on the perception of eWOM review credibility. This notion of Chueng and colleagues provides a more integrated view on how people process and judge online information (Lis, 2013). Nevertheless, because the scope of the research focuses only on Chinese speaking sites, the authors suggests further cross-cultural research is necessary to generalize the effect of normative determinants on eWOM adoption (Chueng el al., 2009, p. 31).

Overall, it is widely agreed that the assessment of eWOM credibility involve a number of determinant factors which influence the formation of receiver´s perceptions. Present studies extend the knowledge on credibility assessment of WOM in digital communication by investigating whether the classic determinants of messages and source credibility of traditional WOM can be transmitted into online context. Besides interpersonal theories, scholars also consider both social network theories and psychology theories in attempt to conceptually approach to the credibility assessment. Although multiple credibility determinants have been conceptually and operationally described, an integrated view of these determinants remains missing in the published literature on this subjects.

CHAPTER 3 HYPOTHESIS DEVELOPMENT

This chapter starts with present the theoretical framework which is used in this study. Based on the chosen framework, the research variables and hypotheses about the relationships between these variables are defined. This chapter also provide general structure to later develop research strategy and support data analysis.

3.1. Theoretical Framework

Previously mentioned, published researches have adopted a number of different theories to study how consumers are influenced by the received online information (Table 3-1). Among them, the dual-process theory of information processing (Deutsch & Gerrard, 1955) and the technology acceptance model (Davis, 1989) were commonly used as theoretical base in the study of eWOM communication (Cheung & Thadani, 2012; Lis, 2013).

The dual-process theory is a persuasion theory originally formulated under the principle of psychology. It analyzes how different types of determinants affect the persuasiveness and credibility of information. It is believed that the dual-process theory provides powerful foundation to explain the information persuasion process and its influence on consumer attitude change (Cheung & Thadani, 2012; Lis, 2013). Therefore, this research adopts this theory as the theoretical framework to investigate the credibility determinants of eWOM, and the effect of eWOM´s perceived credibility on the recommendation usage of cosmetic product buyers.

Theoretical Foundation	Studies
Dual-process Theory	Cheung el al. (2009); Lis (2013)
• Elaboration Likelihood Model (ELM)	Sussman & Siegal (2003); Lee et al. (2008); Park & Kim (2008); Park & Lee (2009); Li & Zhan (2011)
• Heuristic Systematic Mode (HSM)	Gupta & Harris (2010); Watts & Zhang (2008); O'Reilly & Marx (2011)
Technology Acceptance Model (TAM)	Sussman & Siegal (2003); Shin & Kim (2008); Park & Lee (2009) ; Fan et al. (2013)
Interpersonal Theory	Walther (1992); Bickart & Schindler (2001); Wathen & Burkell (2002); Lee et al. (2008;)
Cognitive Fit Theory	Park & Kim (2008); Wu & Wang (2011)
Attribution Theory	Lee & Youn (2009); Qiu & Li (2010)
Social Tie	Brown et al. (2007); O'Reilly & Marx (2011)

Table 3-1: Theoretical Foundation of Previous eWOM Studies (adapted from Cheung & Thadani, 2012; Lis, 2013)

3.1.1. Dual-process Theory

Developed by Deutsch and Gerard (1955), Dual-process theory describes the influencing factors in the information evaluation process of an individual, which ultimately serve as imperative determinants shaping individual´s perception and behaviors. Based on the empirical findings of their research, Deutsch and Gerard (1955) suggest that the individual´s perception toward the credibility and persuasiveness of received information is affected by both individual self-judgment and normative influence from other receivers. This notion of Deutsch and Gerard (1955) has been investigated across

various environment settings such as neighborhoods, university, and workplace community, online community. Number of researches confirm the Dual-process is useful in explaining how effective communication is in both face to face and anonymous situations (Cheung et al. 2009; Lis, 2013). Hence, the Dual-process theory can be considered fitting in eWOM research, as eWOM communication involve the opinion exchange and discussion between anonymous parties.

Deutsch and Gerard explicated that influence is a social process which direct information receivers to conform the expectations of others and be affected by provided information. This reflects on two psychological needs of people in socialization which are the need to be right and the need to be liked (Deutsch & Gerrard, 1955). Accordingly, the authors posit the communication influence model via two distinct categories: (1) Informational based influences and (2) Normative based influences; both of which affect the way receivers perceive credibility and persuasiveness of received messages. Informational influence is an effect to conform information from others as "evidence about reality" (Cheung et al., 2009, p.32). It refers to the factual content of the received message, which obtained by receiver´s self-judgments. Existing studies highlight the role of informational influence when individual faces uncertainty due to the ambiguous stimuli or social controversy (Kelman, 1958; Deutsch & Gerrard, 1955). Additionally, as the informational influence is based on the self-judgment of receivers of given information, the relevant components such as the message content, characteristics of the information source and receivers are essential for credibility evaluation (Hovland et al., 1953). Normative influence, on the other hand, refers to the influence to conform to the norms/ expectations of others. There expectations implicitly or explicitly represent the preferences of the majority in a group or community. While informational influence focuses the content of the received information, normative influences emphasize the role of other´s opinion. According to Kelman (1958), informational influence associate with personal acceptance, whereas normative influences lead to public compliance.

In short, the dual-process theory provides the foundation to investigate the shaping of consumer´s perception about information credibility. Apply the dual-process theory in eWOM context, it expects that informational and normative factors simultaneously shape up the recipient's credibility judgment of online consumer review. Therefore, this study follows the framework of the dual-process theory and research both informational and normative determinants in eWOM communication.

3.2. Hypotheses Development

In this section, the research variables are identified from the discussed theoretical frameworks. The hypotheses about the relationship between these variables, then, are developed for further investigation.

3.2.1. Informational determinants

Informational influence arises the self-judgement of receivers about the content of the messages. Earlier mentioned, under informational influence, the recipient evaluates the received recommendation through relevant components which clarify the information attribute to receiver. Among previous literatures, four informational determinants have been studied widely in eWOM communication researches, including: (1) Argument Strength, (2) Argument Valance, (3) Confirmation of receivers 'prior belief, and (4) Source Credibility (Wathen & Burkell, 2002; Chueng et al., 2009; Li & Zhan, 2011).

Argument Strength

Argument Strength refers to the quality of the received information. Generally, it indicates the extent to which receivers considers the message argument as valid, comprehensive, and persuasive in conveying a certain opinion or preference. Existing studies have acknowledged the significant effects of argument strengths towards the attitudes of the recipients. Perceived strong arguments generate positive attitude of receivers towards the given information, and subsequently improve its perceived credibility. Perceived weak or invalid arguments lead to negative attitude towards the information and most likely consider it as unrealizable (Cheung et al., 2009).

Moreover, numerous researches have also proven the association between the argument strength and the perceived credibility in both physical and virtual communication setting. Especially in online context, argument strength is confirmed to be essential determinant in convincing the receivers (Petty & Cacioppo, 1986; Cheung et al., 2009). According to cited literatures, due to the hidden identity of digital information source, consumer turns to the content quality of the online message to evaluate the credibility and usefulness of the provided information (Mackiewicz, 2008; Li & Zhan, 2011). Park, Lee, and Han (2007) also investigates the eWOM acceptance of receivers and conclude that messages with strong arguments are believed as more objective and logical and hence more effective in changing reader´s attitudes toward reviewed products. Another argument by Lee (2009) state that strong reviews with factual objective arguments are more persuasive than weak reviews expressing subjective feelings and emotional comments. Therefore, one believes that in eWOM environment, ´the argument strength of the online message has an influencing role for how consumers judge the credibility of online product recommendations. Accordingly, the first hypothesis is formulated:

H1: Argument strength positively effects the perceived eWOM review credibility.

Argument Valence

Argument valence refer to the tone with which the message content is expressed. In other words, it suggests the direction, whether positively or negatively, to which the message is framed. In online review, positively framed reviews complement product experiences and focus on product 'strong attributes, whereas negatively framed reviews complaint the product´s poor features and emphasize

on its weakness (Ketelaar et al., 2015). Furthermore, beside positive and negative messages, online consumer reviews also can be framed as two-sided. Intrinsically, one-sided messages present solely one matter´s perspective to a matter, while two-side provide different opposing viewpoints. In case of eWOM, a two-sided review cover both the strong and week attributes of the products.

Argument valence takes form of numerical ratings (e.g. 5-point star recommendation) or by written content. Regardless of presented form, it is believed that argument valence signals the product quality or performance (Ketelaar et al., 2015). Given the signaling function for product quality, argument valence has been widely studied in eWOM´s literatures. The findings suggest that argument valence can have powerful influence in altering consumer´ attitudes, including purchase intention (Bickart & Schindler, 2001). This so called framing effect has been shown for numerous outcomes including brand evaluations, alternatives choice, buying behavior, and especially credibility perception (Cheung & Thadani, 2012).

Among published studies, there are conflicting notions on the asymmetrical effects of one-sided (positive or negative) reviews versus mixed (positive–negative) reviews on consumer´s perception. On one hand, several researchers question the helpfulness of mixed reviews, as they do not express definite opinion or clear preferences. The information inconsistences in mixed reviews may limited their value to receivers (Li & Zhan, 2011; Hartman, Hunt, & Childers, 2013). On the other hand, researches have also mentioned that two-sided reviews may be perceived as more credible than one-sided reviews (Mudambi & Schuff, 2010). Empirical findings reveal that the presence of both negative and positive comments in eWOM messages may beneficial, since it elevates consumers´ belief that the message claims reflect the actual features of products, rather than advertising content. One plausible explanation for this multilateral information is perceived as more credible and helpful than unilateral information by virtue of rarity (Ketelaar et al., 2015, p. 653). Given the dominance of positive product information, negative information is much rare, and less commonly observed by consumers. According to Fiske (1980), the negative cues draw more attention since our social setting is dominated by positive cues. Certainly, the presence of both positivity and negativity increases the credibility of the review. Moreover, Cheung and colleagues. (2009) explain that, from the consumer´s perspectives, a review, which mentions both positive and negative product aspects, does usually not originate from marketers or companies' personnel. Two-sided messages also indicate to some extent the risks involved in purchasing a certain product; and thus consumers consider them more useful in advoiding bad purchase decisions. Agreeing with this statement of Cheung and colleagues. (2009), Teng colleagues add that a two sided valence helps the receivers to be more confident that they understand the product better.

In other words, the incorporations of some unfavorable information may increase the perceived credibility of the source (Doh & Hwang, 2009). Thus, it is expected that consumers consider mixed

reviews to have higher credibility than positive-only or negative-only reviews. Accordingly, the following hypothesis is formulated:

H2: Two-sided reviews are perceived to be more credible than one-sided reviews.

Confirmation of Receivers' Prior Knowledge

Confirmation of receivers 'prior knowledge/beliefs refers to the degree to which the online product reviews confirm or disconfirm the consumer´s prior belief of the product. In other words, this informational determinant reflects how congruent the message is with the current product knowledge and experiences of the recipients (Cheung et al., 2009). Prior beliefs are captured from the previous experiences or perception of individuals; and hence, they represent highly useful and reliable source of information based on which individual judgment is made.

Empirical findings have shown that when receivers detect that the received information is consistent with their current knowledge of the reviewed product, they feel more confident to accept that information and subsequently comply with it in decision making (Fogg, et al., 2001; Park & Kim, 2008; Cheung et al, 2009). On the other hand, if the product review deviates from the consumer´s previous beliefs, (s)he may take a more skeptical attitude towards the received messages (Cheung et al., 2009). This determinant relates to the confirmation bias, which arises from the general tendency of people to seek affirmative supports to accommodate thoughts and preferences (Klayman & Ha, 1987).

Cheung and colleagues (2009) study the effect of confirmation of receivers´ prior belief on credibility of the received information. Based on the research results, the authors suggested that confirmation or disconfirmation of receivers 'prior belief have crucial influence on the way consumers evaluate the credibility of the product review. If the online review confirms the consumer´s existing expectations, consumers tend to believe and follow the information. Nevertheless, if the review objects the prior belief, the consumer is likely to discount its trustworthiness (Cheung et al., 2009). Thus, the following hypothesis is formulated:

H3: Confirmation of receivers 'prior knowledge positively effects the perceived eWOM review credibility.

Source Credibility

Source credibility describes how the recipient perceives the competences of the origins or source of the received information. It refers to the expected ability of the information source to generate accurate, valid and believable information (Cheung et al., 2009; Dou, Walden, Lee, & Lee, 2012). Previous researches have confirmed the significant effect of source credibility with the receiver´s acceptance of the message in both offline and online context (Cheung et al., 2009). In face to face communication, empirical findings have illustrated a positive correlation between the perceived attributes of communicators and their perceived persuasiveness of their message (Hovland & Weiss,

1951; Chaiken, 1980). According to Ba and Pavlou (2002, cited in Cheung et al., 2009), the similar effect could also be found in online communication between the virtual source credential and the credibility perception of eWOM messages, despite the anonymity effect. This was supported by Cheung and colleagues (2009; 2012), who mention that information originated from an online source with high credibility is more trust worthy and acceptable than one given by a low credible online source. Similarly, Li and Zhan (2011) conclude from their experimental study about the persuasiveness of eWOM that the credibility of the source influences how convincing the online message is to the receivers. Therefore, source credibility is expected to be an important determinant of the perceived trustworthiness of online reviews.

Existing literatures commonly identify two main constructs of source credibility including (1) source expertise and (2) source trustworthiness (Hovland & Weiss, 1951; Ohanian, 1990; Dou et. al, 2012). These two components are highly interrelated and jointly shape the receiver's perception of the message source credibility (Hovland & Weiss, 1951; 1953). Source expertise refers to the perceived knowledge, skills or experiences of a sender which signal the capability to provide accurate information (Ohanian, 1990). Source trustworthiness, on the other hand, regards the receiver´s confidences about the objectivity and honesty of the provided message (Hovland et al., 1953)

Regarding the source, expertise here relates to the understanding of the reviewed product or service is obtained by formal education and training, professional experiences, or actual product usage (Li & Zhan, 2011). In eWOM communication, as the identities of message sources are usually hidden, information receivers evaluate the expertise level of the source through more salient cues, such as profile information and online reputation of the senders (Chueng et al, 2009). By checking reviewer´s profile information, the quantity and quality of reviewer´s past recommendations, and his or her product usage experience, receivers approximate the virtual credentials (Mackiewicz, 2008). Previous researches have shown that information from high expertise sources has considerable influence on the audience (Cheung et al., 2009; 2012). People tend to value high expertise sources since they believe to receive high quality information. According to Wathen and Burkell (2002), the perception of high expertise minimizes the recipient´s doubt toward the accuracy and validity of the given information; hence a knowledgeable communicator is considered more credible. Moreover, the research of Li and Zhan (2011) suggests that due to their substantial knowledge and experiences, experts are more likely to provide stronger and more convincing arguments. Hence:

$H4_a$: Source expertise positively effects the perceived credibility of eWOM review.

Beside source expertise, source trustworthiness is also an important determinant for overall credibility of the information source. The perception of a sender´s objectivity and sincerity here is closely linked with the concept of trust (McKnight, Choudhury, & Kacmar, 2002). According to published literature, the trustworthiness of the source has positive influence on the way audiences judge the credibility of

the message. If receivers perceive the message sender as trustworthy, they are more likely to value the recommendation validity and credibility (Cheung et al., 2009). However, since the reviewer identity commonly stays hidden, it is hard for consumers to assess the construct of source trustworthiness. Consequently, similar with the case of source expertise, reviewers adopt indirect methods to judge the objectivity and sincerity of message source (Lis, 2013) Li and Zhan (2011) argues that conventional measures for offline source quality is not suitable for investigate online reviews. They propose to apply the parameter of language intensity to examine the source trustworthiness (p. 241). However, the operationalization of language intensity by Li and Zhan (2011) seems to overlap with the operationalization of argument quality suggested by other researchers, such as Mackiewicz (2008); Brown et al. (2007). According to Mackiewicz (2008), the presence of a reviewer´s personal information may elevate a receiver´s trust. The authors mentioned that receivers also often extract personal characteristics from the sender´s profile as provided by online platforms. This information serves as a cue for recipients, supporting their emotional and rational evaluation of source trustworthiness (Mackiewicz, 2008; Dou et al., 2012). The more recipients know about the identity of the sender, the more confident they are about the senders 'trustworthiness and expertise (Mackiewicz, 2008). Moreover, the personal information of reviewers (e.g. physical appearance, geographical location, demographic and social attributes) helps consumers to better relate with the recommendation, especially when the reviewers appear to share similar characteristics with the consumers. Brown et al. (2007) and Lis (2013) discussed this notion in their research under the concept of social homophile. Hence, based on the cited studies, the following hypothesis is formulated:

H_{4b}: Source trustworthiness effects the perceived credibility of eWOM review.

3.2.2. Normative determinants

While informational based determinants explain how receivers evaluate the credibility of eWOM based on receivers´ self-judgment, normative based determinants consider the crucial effect of others´ preferences in the credibility perception of eWOM. According to Cheung and colleagues (2009), the majority opinion or expectation of a product significantly influences the evaluation of eWOM credibility. Previous studies on eWOM´s perceived credibility have identified two major normative indicators: (1) Review consistency and (2) Aggregated review rating (Chueng et al, 2009; Lis, 2013).

Review Consistency

Review consistency refers to what degree the review is consistent with the experiences of others regarding the same product or service (Chueng et al, 2009). As mentioned earlier, the convenience of Internet grants consumers the access to a tremendous amount of product information. Such information originates from a variety of sources, generated by numerous product users; thus it can reflect diverse opinions concerning the same products. Chueng and colleagues (2009) suggest consumers also evaluate the reliability and helpfulness of different reviews by simply comparing them

to each other. Agreeing with this statement, O'Reilly and Marx (2011) concluded from their research that beside judging the actual content of the review, another way to assess review credibility is to compare reviews of the same product/ service on other review websites. The more congruent the review is compared with the majority´s preferences, the more credible the review is perceived by consumers.

A plausible explanation for the effect of review consistency may be that people tend to comply with norms or standards since they are widely accepted by others (Kelman, 1958). When the given message is somewhat consistent with the opinions of the crowd, receivers feel more comfortable and certain to trust and follow it. In contrast, if the recommendation is inconsistent with the normative opinions, receivers may be confused and more likely to discount the credibility of the provided information (Chueng et al, 2009). Thus, one expects the determining role of review consistency on the way consumers assess the credibility of online reviews. The next hypothesis, therefore, is:

H5: Review consistency positively effects the perceived credibility of eWOM review.

Aggregated Review Rating

Along with review consistency, aggregated review rating is another normative determinant of eWOM perceived credibility. Commonly, aggregated review rating is the average rating or score given by the audiences on a particular online review. As previously discussed, many e-commerce websites, and online review sites nowadays enable viewers to rate the online recommendation they have read (e.g. by scoring on a range from 1 to 5 stars). These ratings convey the viewer´s judgement on the helpfulness and credibility of the recommendation. Accordingly, the overall highly rated messages are relatively conformed and trusted by the majority of viewers, their contents reflect the preferences of the crowed. Conversely, the overall low rated reviews are deviating from the majority belief, hence their contents are either insufficient or not representative for the product attributes.

Similar to the determinant of review consistency, aggregated review demonstrates the attitudinal effect of the crowd´s opinion. Many researchers have stated the influence of overall review rating on credibility evaluation of consumers (Chueng et al, 2009; Lis, 2013). If a review is highly rated by most readers, it is presumably considered more credible than a low-rated review. Therefore, agreement among users´ perspectives is an essential factor concerning reviews´ credibility. Thus, the next hypothesis is:

H6: Aggregated review rating positively effects the perceived credibility of eWOM review.

3.2.3. Information Usage

Given the vital influence of WOM on a consumer's behavior, many scholars have attempted to identify the factors that contribute to consumer WOM usage in both offline and online contexts. Nonaka (1994, p. 18-19) explains the information acceptance and usage process as the internalization stage in

knowledge transfer, where the receiver conveys explicit information into internalized understandings. In accordance, Li and Zhan (2011) describe the usage of WOM could alter the attitude of a WOM receiver as a result of accepting what the communicator advocates. The authors also emphasize the usage decision of WOM as effective measure for WOM credibility and persuasiveness.

Prior researches have attempted to identify the elements that contribute to consumer WOM usage in purchasing process since it is challenge to verify the authenticity and source of WOM, especially in an online communication (Cheung et al., 2009; McKnight & Kacmar, 2006). Wathen and Burkell (2002) indicate the reader´s assessment of the message credibility as the vital early stage in an information using process in computer based communication. It directly decides to what extent a message receiver subsequently accepts to a follow the provided information. Therefore, if individuals perceive online information as credible, they are more confident to accept the online recommendations and apply them in making a buying decision (Wathen& Burkell, 2002; Chueng et al, 2009). This is related to the issue of trust in online communication. According to McKnight and colleagues (2002) information credibility, as an underlying dimension of trust, is a key elements influencing online consumer activities, for example the acceptance of another´s opinions. The empirical findings from their studies suggest the positive association between information credibility and consumers´ will to follow any given information from a website (McKnight et al., 2002). Similarly, Watts and Zhang (2008) describe the online information usage as the outcome of online review screening, which indicates positive credibility judgement. More recently, Chueng and colleagues (2009) took a different approach in their study when they investigated the informational and normative influences in consumer´s decision of using online information. Their findings, however, still confirm the positive effects of online review information credibility on the consumer´s acceptance of advocated advices.

In essence, despite the different research approaches, previous studies widely agree on the significant role of information credibility in information acceptance of consumers. Generally speaking, if consumers believes online information to be credible, they tend to agree and follow it. Conversely, less credible information poses more potential threats, hence it is unlikely to be valued by consumers (Cheung et al., 2009). In the light of cited studies, the last hypothesis is formulated as:

H7: The perceived credibility of eWOM review positively effects the receivers 'usage of advocated information.

CHAPTER 4 METHODOLOGY

This chapter presents the research model and the strategy for data collection and analysis. This includes the details of research method, sampling technique, operationalization of research variables and how the questionnaire was created based on each variable from the theoretical framework.

4.1. Research Model

The research model is formed based on the seven formulated hypotheses above (Figure 4-1). From left to right the model presents the variables of the proposed determinants (informational and normative), the perceived credibility of eWOM, and the information usage. The arrows between the variables symbolize the relation of the hypotheses, and the plus symbols (+) indicate positive effects.

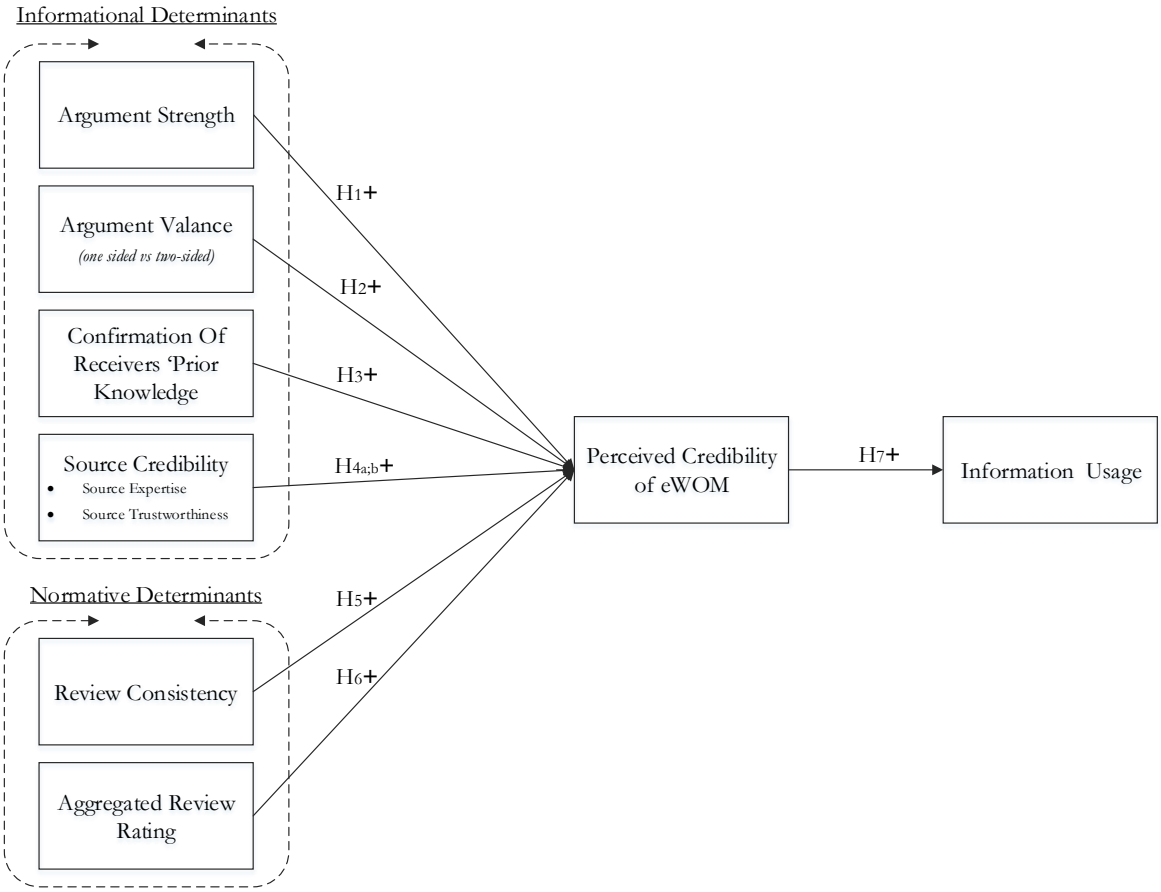

Figure 4-1: Research Model (adapted from Chueng, 2009 and Lis, 2013)

4.2. Quantitative Research Method

The objective of this thesis, to examine the potential determinants of the perceived eWOMs´ credibility and consumers´ usage intention of eWOM recommendations when purchasing cosmetics, is approached by deduction process. According to Saunders and colleagues (2009), explores existing theories or phenomenon, develops hypotheses and then tests their implications in given circumstances. In particular, this research start with the review of published literatures concerning

eWOM credibility and eWOM usage. The selected literatures include journal articles, books and statistic reports which are collected on scientific search engines: ScienceDirect (sciencedirect.com), Google Scholar (scholar.google.nl), and the Web of Science (webofscience.com) by some key words: "eWOM credibility", "online review", "consumer behaviors", and " eWOM usage". Based on the literature review, this research identifies seven possible determinants for eWOM information credibility and information usage as research variables. Subsequently, the eight hypotheses about causal relationship between these variables have been developed, as described and explained in the previous chapter. In order to empirically test the proposed hypotheses, this research adopts questionnaire instrument of quantitative method.

A quantitative approach is well suitable for the given deductive nature of this study. Questionnaire instruments provide a relatively effective way of obtaining vast number of data from a substantial population and the collected data can be translated in to numerical information for statistical analysis (Saunders et al., 2009), which is considered relevant for the generalizability of this research. Besides the preponderance of quantitative research methods, within the field of business research, this study also requires to obtain valuations for psychological and behavioral variables such as trust, belief and attitude (Bryman & Bell, 2007). This is critical to capture the intrinsic complexity of the field phenomenon of eWOM. Compared with other types of instruments, questionnaires require relatively less cost and effort. Moreover, obtained by using a questionnaire, the data are standardized, allowing easy comparison and compliance (Saunders et al., 2009). Because of the time and resource constraints of this research, a survey questionnaire is suitable option for the researcher to collect data and test hypotheses about correlations between various research variables through statistical analysis.

4.2.1. Questionnaire Design

This section explains the operationalization of the research constructs into measureable items. Based on the defined items, the questionnaire is designed and pre-tested with a pilot test to assess the overall quality of the questionnaire in term of content, structure and presentation.

4.2.2. Operationalization of Constructs

Each variable/ construct in the research model is operationalized using validated measures adapted from the existing literature. The measures may then alter to suit the current research context.

The impact of argument quality is operationalized into subscales of four items on message characteristics, adapted from Park et al (2007): Relevance of topic, Objectivity of the review, Understandability of the review and Sufficient evident supporting opinions. Following Cheung and colleagues (2012), and Li and Zhan (2011), the impact of argument valance-sidedness is measured on subscale of two variables including the overall tendency of evaluation of the review (positive/negative versus mixed tone) and the evaluation content of the reviews (one-sided versus two sided reviews). The impact of the construct "Confirmation of Prior Knowledge" is measured based on a two items

subscale adapted from Sussman and Siegal (2003), which involves the confirmation or disconfirmation of review information with the previous knowledge of receivers, and the confirmation or disconfirmation of review suggestions with the existing product impression of receivers. Based on a subscale of three items adapted from Sussman and Siegal (2003) and Cheung and colleagues (2008), the effect of source expertise is measured by the reviewer´s perceived topic knowledge, the reviewer´s product actual usage experience and the online reputation of the reviewer. From the measure of source trustworthiness, three items are adapted from Cheung and colleagues (2008), Mackiewicz (2008), and Lis (2013) respectively, including the perceived reliability of reviewer, the sincerity level of reviewer´s shared opinion, and the availability of reviewer's personal information. Next, the effect of review consistency is measured on subscale with two items, which are the consistency or contradict of the overall review suggestions with the suggested information by other reviews, adapted from Cheung and colleagues (2008, 2012). Also following the operationalization of Cheung and colleagues (2008, 2012), the impact of the review rating is measure on a subscale involving two items the review rating given by other participants, and the review helpfulness rated by other participants. Items for measuring Perceived Credibility are from Sussman and Siegal (2003), and Li and Zhan (2011), including the believability of the review, the factuality of the review, and the accuracy of the review, and the helpfulness of the review. Finally, the information usage construct is operationalized into a four items subscale, adapted from Sussman and Siegal (2003) and Cheung and colleagues (2008), which involves the receiver´s agreement with suggested information by the review, the knowledge contribution of the review with the receiver, the influence on receiver´s product attitude, and the influence on receiver´s purchase intention.

These operationalizing items are measured by having the participants specify their agreement level with a series of provided statement, based on a 5- point Likert scale. Table 4-1 presents the operationalized measures of research variables and their measuring statements in the questionnaire.

Construct	**Measures**	**Source**
Argument Strength (ARG)	1. Relevance 2. Objectivity 3. Understandability 4. Sufficient supporting evident	Park et al (2007)
Argument Valance (SIDE)	1. Overall tendency of evaluation 2. Evaluation content	Cheung et al. (2012), Li & Zhan (2011)
Confirmation of Prior Knowledge (KNOW)	1. Confirm/oppose pervious beliefs/knowledge 2. Confirm/oppose existing product impression	Sussman & Siegal (2003)
Source Expertise (EXPE)	1. Reviewer´s perceived topic knowledge 2. Product Usage experience 3. Rated online reputation	Sussman & Siegal (2003), Cheung et al. (2008)
Source Trustworthiness (TRUS)	1. Reviewer´s perceived reliability 2. Sincerity of reviewer´s shared opinion 3. Information availability of reviewer's	Cheung et al. (2008), Mackiewicz (2008), Lis (2013)
Review Consistency (CONSIS)	1. Consistent with other reviews 2. Contradicting with other reviews	Cheung et al. (2008), Cheung et al. (2012)
Review Rating (RATE)	1. Review rating given by other participants	Cheung et al. (2008),

	2. Review helpfulness rated by other participant	Cheung et al. (2012)
Perceived Credibility (CRED)	1. Believability 2. Factuality 3. Accuracy 4. Helpfulness	(Sussman & Siegal, 2003), (Li & Zhan, 2011)
Information Usage (IU)	1. Information agreement 2. Knowledge contribution 3. Product attitude influence 4. Purchase intention influence	Sussman & Siegal (2003), Cheung et al. (2008), Park & Lee (2009)

Table 4-1: Operationalization of Constructs

4.2.3. Questionnaire Design

The questionnaire is divided into three parts (Appendix 1). The first section is the explanation of the purpose of this research and a general appreciation for the participants. The second part contains questions about the personal demographic information and the daily Internet usage of the respondent. Questions in this section are designed as dichotomous question (e.g. gender), multiple-choice questions (e.g. age, time spending online).

Finally, in the third section, respondents are asked to answer the questions regarding their assessment and attitude over the online review of cosmetic/cosmetic products. This part consists of 34 statements, each of which is related to a specific hypothesized correlation between eWOM assessment determinants, eWOM credibility and information usage. Respondents are asked to retrieve an actual review they read on Makeupvalley.com, then indicate their agreement with the shown statements using a 5- point Likert scale (ranging from (1) as strongly disagree to (5) as strongly agree) (Likert, 1931). In this section, six items (belong to Argument Valance, Confirmation of Prior Knowledge, and Review Consistency) are designed with negatively reversed wording to minimized the threat of straight-lining effects. Straight-lining basically describes the situation where survey respondents answer a series of questions by the same value of rating scale (Malhotra, 2008). Straight-lining occurs when respondents lose their motivation to engage with a survey due to various causes. The reserved formulated items statements, for example "The advocated comment(s) in the review is consistent with other reviews" and "the advocated comment(s) in the review is contradict other reviews", serve as data quality check in order to identify unreliable or biased responses. The responses, which have the same answer for more than 2 reversed items, except all the answers were neural (3), will be excluded. This procedure has been done in order to improve the reliability of research outcomes.

4.2.4. Pilot test

In order to validate the developed measures, the questionnaire is pre-tested with a small-scale pilot study. The survey is administered to a convenient sample of 20 respondents with experience of online consumer reviews. They were invited to fill in the questionnaires and to provide necessary comments afterwards.

The pilot results reflect adequate construct reliability and validity. The respondents could understand the content of the questionnaire clearly. However, there are several feedbacks from respondents that need to be considered. Firstly, the language of the invitation email was reported as overly academic, this may hesitate potential respondents to carry out the survey. Secondly, some respondents commented that the section of the personal demographic information should come first. This allows respondents some time to process the survey without being overwhelmed by answering to complex statements at the beginning. Taking into account all feedbacks, the questionnaire has been adjusted accordingly.

4.3. Data Sampling and Collection

The primary data is collected through questionnaire based survey. The target respondents are cosmetics buyers who are experienced with online consumer reviews. Therefore, the scope of this study is focused on online cosmetic review sites. In particular, the chosen site for this study is Makeupvalley.com.

4.3.1. About Makeupalley.com

The MakeupAlley.com (referred to colloquially as MUA) is online review site dedicated to providing consumer to consumer cosmetic product information and beauty solution. It was launched in 1999 by a small New York based online community of devoted cosmetic consumers. Since then it has developed into a world-renowned social network and information exchange portal for cosmetic and lifestyle products all over the world. Ttill summer 2016, MakeupAlley.com has over 2 million registered members, features more than 2.5 million reviews of 150,000 cosmetic products written by beauty enthusiasts worldwide (Makeupalley.com, 2016). Ranked as one of top ten most influential cosmetic review sites by several reputable magazines, e.g. the New Work Times, the Harvard Business Review, Vogue and Cosmopolitan, MUA recorded 11 million daily unique visits in June 2016 with more than 45,000 posts daily (Louis, 2016).

In MUA, product reviews are posted by registered members. Figure 4-2 shows the current interface of the website. Product reviews contain product opinions, product rating (1 to 5), repurchase possibility. Besides that, other visitors can vote as to whether a review has been helpful to them or not. Products can be sorted in a variety of ways: by most reviewed, most popular or newest. Based on the number of their posted review and the review helpfulness rating, registered members could be promoted as top reviewers.

4.3.2. Data Collection

The questionnaire was initially executed through Googleform, a web-based online survey in order to gain advantages such as lower costs, faster responses and geographically unrestricted sample. 3000 invitation emails were randomly sent to members of Makeup Alley who are active online on the site during July 15th and 16th 2016. The data is collected in two-week period starting July 15th 2016. In total,

396 responses were collected, resulting in a response rate of 13.2 %. Amongst, 392 questionnaires were filled out completely, and only 379 that meet the requirement of the straight-lining check. The data from the completely filled questionnaires are retrieved for statistical analysis.

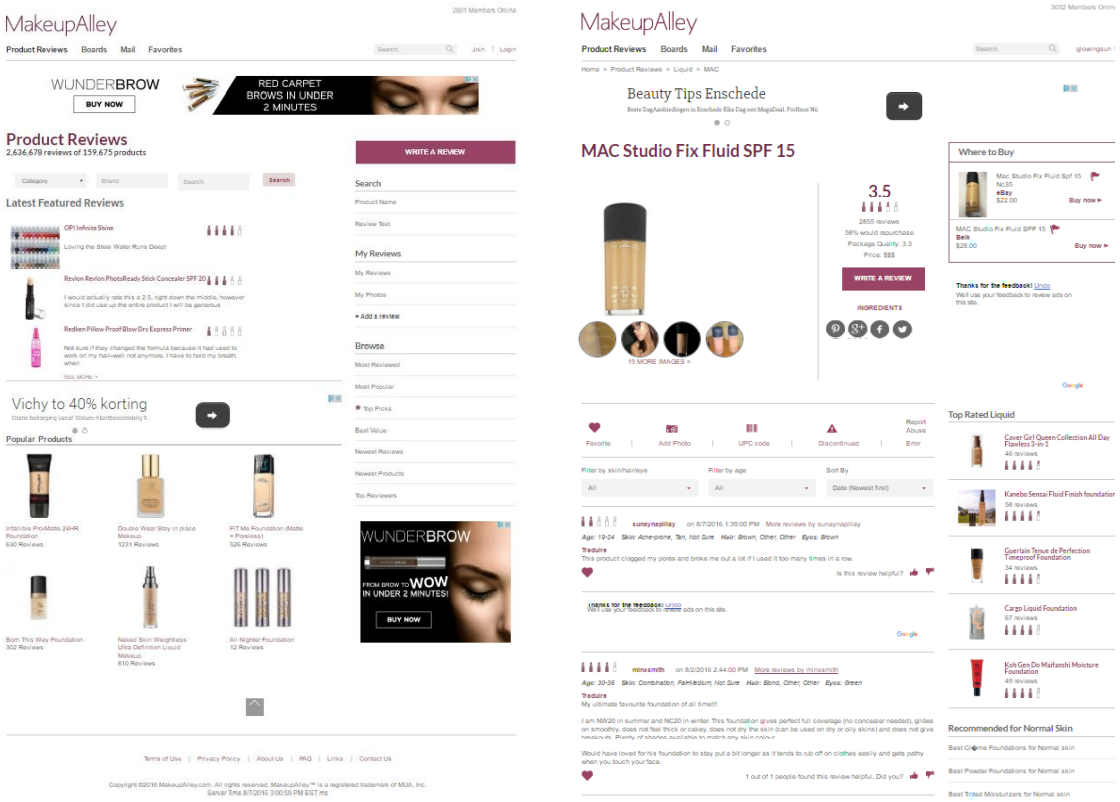

Figure 4-2:Makeupalley.com

4.4. Data Analysis

The statistical tool and data analysis approach to test the proposed hypotheses were analyzed through the SPSS version 24 statistical program. The questionnaire is designed as a web survey and responses are immediately stored in a form which can be directly exported to SPSS to make analysis possible. The data is analyzed by both descriptive statistics and inferential statistics. First, descriptive statistics (frequency, mean, standard deviation, etc.) were applied to present and describe the different characteristics of the participants and dataset. Then inferential statistics were used to measure the validity and reliability of research constructs (Principal Factor Analysis, Cronbach's alpha, Collinearity Diagnostics); estimate significance in the variable relationships (Multiple Regression Analysis); and determine the influential difference across various respondent groups (MANOVA); assuming the significance level of 0.05 (α=0.05).

CHAPTER 5 QUANTITATIVE RESULTS

In this chapter, main results will be discussed based on analysis of the dataset. The first section contains a descriptive overview of respondents group. The following section presents the measurement of constructs correlations and validity. Finally, the estimations for the significance in the variable relationships and the influence of respondent characteristics are explained.

5.1. General descriptive Characteristics of Respondents

When it comes to the general background of the participants the survey features four categories of information, including gender, age and nationality provide a demographic insight, whereas the numbers of hours spent on the internet on leisure activities connect the demographics to their daily digital experience.

		Frequency	Percent
Respondent Gender	Female	355	93.7%
	Male	24	6.3%
Respondent Age	Under 18	3	0.8%
	From 18 to 27	103	27.2%
	From 28 to 37	126	33.2%
	From 38 to 47	72	19.0%
	From 48 to 57	54	14.2%
	Above 57	21	5.5%
Numbers of daily spending hours on Internet for personal leisure actives	Less than 1 hour	28	7.4%
	From 1 to 2 hours	132	34.8%
	From 3 to 5 hours	156	41.2%
	More than 5 hours	63	16.6%
Respondent Nationality	Asia Pacific	44	11.6%
	Europe	73	19.3%
	North America	259	68.3%
	South America	3	0.8%
Total		**379**	**100.0%**

Table 5-1: General descriptive Characteristics of Respondents

In a feminine domain such as cosmetics it comes as no surprise that only 24 (6.3%) of the respondents were male, which leaves 355 (93.7%) females to add up for the total of 379 participants. Despite the obvious division of male and female participants, the category of age appears to be more fragmented as displayed in Table 5-1. Almost two third (232, 61.2%) of all respondents are younger than 37 years, which is in line with a common expectation that predominantly younger people are more actively involved on the internet. Despite the young trend, however, it is not to be ignored that one third (126, 33.2%) ranges between 37 and 57 years of age. Also, it is interesting to reveal that the group of seniors that are above 57 years' old contribute 5.5% (21) to the survey's results, whereas teenagers below 18 years of age account for only 3 voices (0.8%). In Table 5-1, the category of nationality is portrayed in a continental approach and exhibits a prevalence (68.3%) of North American nationalities due to the origin and popularity of the internet websites involved. Asia Pacific and Europe covers almost all other regions with 11.6% and 19.3% respectively. The last category refers to the internet usage in one's free

time. Remarkable in this context is the vast amount of hours spent online on a daily basis. More than half of the respondents (57.8%) state to use the internet for leisure for more than three hours a day. With 34.8% that covers 1 to 2 hours, it leaves only 7.4%, or 28 respondents, that declare to invest less than an hour in their digital experience for leisure. In other words, the respondents are majorly familiar with the world of internet and their time spent online offers more opportunities to dedicate their resources on online review sites (Table 5-1).

Respondent Gender	I often consult online consumer review sites when buying cosmetics									
	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Count	%	Count	%	Count	%	Count	%	Count	%
Female	6	1.7%	3	0.8%	9	2.5%	84	23.7%	253	71.3%
Male	3	12.5%	3	12.5%	3	12.5%	2	8.3%	13	54.2%

Table 5-2: Genders & Consultation of Online Review Site When Buying Cosmetics

Respondent Gender	I think online consumer review is a critical source to obtain product information, especially with cosmetics.									
	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Count	%	Count	%	Count	%	Count	%	Count	%
Female	0	0.0%	9	2.5%	15	4.2%	74	20.9%	256	72.3%
Male	0	0.0%	0	0.0%	6	25.0%	9	37.5%	9	37.5%

Table 5-3:Gender & Online Review As Critical Source of Information for Cosmetics

With a closer look at Table 5-2Table 5-3, it is indicated that male appear less dependent on online consumer review sites than females as males disagreed for the consultation with 25% and females with only 2.5%. In accordance, 25% of masculine respondents are non-positive about online consumer reviews being a critical source compared to only 6.7% of females. On a contrary note, however, 72.3% of all females strongly agree with the statement.

Respondent Age	I often consult online consumer review sites when buying cosmetics									
	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Count	%	Count	%	Count	%	Count	%	Count	%
Under 18	0	0.0%	0	0.0%	0	0.0%	3	100.0%	0	0.0%
From 18 to 27	9	8.7%	3	2.9%	9	8.7%	27	26.2%	55	53.4%
From 28 to 37	0	0.0%	0	0.0%	3	2.4%	32	25.4%	91	72.2%
From 38 to 47	0	0.0%	0	0.0%	0	0.0%	12	16.7%	60	83.3%

Table 5-4: Age Group & Consultation of Online Review Site When Buying Cosmetics

Respondent Age	I think online consumer review is a critical source to obtain product information, especially with cosmetics.									
	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Count	%	Count	%	Count	%	Count	%	Count	%
Under 18	0	0.0%	0	0.0%	0	0.0%	3	100.0%	0	0.0%
From 18 to 27	0	0.0%	6	5.8%	6	5.8%	31	30.1%	60	58.3%
From 28 to 37	0	0.0%	3	2.4%	9	7.2%	28	22.4%	85	68.0%
From 38 to 47	0	0.0%	0	0.0%	3	4.2%	6	8.3%	63	87.5%

Table 5-5: Age Group & Online Review As Critical Source of Information for Cosmetics

Table 5-4Table 5-5 unveil that the age group of 18 to 27 years is the only group to strongly disagree on often consulting online consumer review sites and totals on a remarkable 20.3% of non-positive votes. Except for 5.6% of 48 to 57 year olds, there is no other age group to disagree with the statement. The same does not hold for the topic of the critical source. Here, the slight disagreement (5.8%, 2.4%) ranges from age 18 to 37 and covers only two younger groups. The groups with a predominance to

strongly agree in both topics is the age group of 38 to 47 year olds (83.3%, 87.5%) as well as respondents above 57 (85.7%, 100.0%).

5.2. Construct Measurements

The measurement model was tested by examining the propriety of inferences made on the basis construct measurements (construct validity). First, the correlation between variables is explained by performing the principal factor analysis. Then, the Cronbach's alpha test was applied to indicate the convergent validity of constructs. Finally, considering variance inflation factors (VIF), the potential subject of multicollinearity is diagnosed.

5.2.1. Factor Analysis

The principal factor analysis defines the number of latent components underlying the correlation structures for the working dataset (Jolliffe, 2002). This is useful to test whether the items under the pre-group subscale is sufficiently correlated. Within this process, an orthogonal rotation (Varimax) for 29 items were used. As a result, the KMO (Kaiser-Meyer Olkin) test has a value of 0,799 with significant level of 0.000 that is higher than the needed 0.754 and can be classified as factorable (Table 5-6). The analysis recognizes 29 items into 9 components which explaining each group was not related to others (Table 5-7). Since each item has a factor loading of > 0.5 to its related factor, the consistency of all factor structure is confirmed (Jolliffe, 2002).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.745
Bartlett's Test of Sphericity	Approx. Chi-Square	4897.29
	df	406
	Sig.	0.000

Table 5-6: KMO and Bartlett's Test

Rotated Component Matrix[a]									
	Component								
	1	2	3	4	5	6	7	8	9
Source Trustworthiness									
TRUST1_ReviewerReliability	0.854								
TRUST2_ReviewerShareSincereOpinion	0.822								
TRUST3_AvailabilityReviewerAttributes	0.601								
Source Expertise									
EXPTSE1_ReviwerTopicKnowledgeable		0.796							
EXPTSE2_ReviewerUsageExperience		0.714							
EXPTSE3_ReviewerOnlineReputation		0.605							
Argument Strength									
STR1_Understability			0.735						
STR2_Relevance			0.727						
STR3_Objectivity			0.611						
STR4_Sufficiency			0.567						
Information Usage									
USAGE1_AgreeWithReview				0.832					
USAGE2_KnowledgeContribution				0.781					
USAGE3_ProductAttitude_Influence				0.606					
USAGE4_PurchaseIntention_Influence				0.568					
Confirmation of Prior Knowledge									
RCVR_KNOW1_OpposeKnownInfor					0.876				
RCVR_KNOW2_ConfirmKnownInfor					0.859				
RCVR_KNOW3_OpposeExistOpinion					0.925				
RCVR_KNOW4_ConfirmExistOpinion					0.893				

Perceived Credibility									
CRED1_ReviewBelievability						0.806			
CRED2_ReviewAccuracy						0.674			
CRED3_ReviewHelpfulness						0.660			
Review Rating									
RATE1_ConsideredHelpfulByOthers							0.821		
RATE2_HighlyRatedByOthers							0.774		
Review Consistency									
CONSIS1_ConsistentWithOthers								0.745	
CONSIS2_ContradictOthers								0.721	
Argument Valance									
SIDE1_Both_ProsANDCons									0.918
SIDE2_Only_ProsORCons									0.891
SIDE3_Both_PositiveANDNegative									0.878
SIDE4_Only_PositveORNegative									0.833
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization[a]. a. Rotation converged in 7 iterations.									

Table 5-7: Principal Factor Analysis

5.2.2. Convergent Validity

The collected dataset is tested to examining the convergent validity or internal consistency between the items and between the items within each of extracted factors. The convergent validity is measure using Cronbach's alpha test. The Cronbach's alpha value of all 30 independent items is 0.840, indicating high level of internal consistency between all measured items. Also, the Cronbach's alpha value for 9 extracted results above 0.7 which indicate adequate internal consistency between the items within each of extracted factors (Cronbach, 1951). Further, following table provide detail discussion about constructs of measurements with its Cronbach's Alpha (Table 5-8).

Construct	Items	Cronbach's alpha
Argument Strength	STR1_Understability STR2_Relevance STR3_Objectivity STR4_Sufficiency	0.704
Argument Valance	SIDE1_Both_ProsANDCons SIDE2_Only_ProsORCons SIDE3_Both_PositiveANDNegativeComments SIDE4_Only_PositveORNegativeComments	0.707
Confirmation of Prior Knowledge	RCVR_KNOW1_OpposeKnownInfor RCVR_KNOW2_ConfirmKnownInfor RCVR_KNOW3_OpposeExistOpinion RCVR_KNOW4_ConfirmExistOpinion	0.839
Source Expertise	EXPTSE1_ReviwerTopicKnowledgeable EXPTSE2_ReviewerUsageExperience EXPTSE3_ReviewerOnlineReputation	0.702
Source Trustworthiness	TRUST1_ReviewerReliability TRUST2_ReviewerShareSincereOpinion TRUST3_AvailabilityReviewerAttributes	0.715
Review Consistency	CONSIS1_ConsistentWithOthers CONSIS2_ContradictOthers	0.71
Review Rating	RATE1_ConsideredHelpfulByOthers RATE2_HighlyRatedByOthers	0.866
Perceived Credibility	CRED1_ReviewBelievability CRED2_ReviewAccuracy CRED3_ReviewHelpfulness	0.707

Information Usage	USAGE1_AgreeWithReview USAGE2_KnowledgeContribution USAGE3_ProductAttitude_Influence USAGE4_PurchaseIntention_Influence	0.705

Table 5-8: Convergent Validity

5.2.3. Collinearity Diagnostics

Multicollinearity is an undesirable phenomenon in which occurs very high inter-correlations or inter-associations among the independent variables in a regression model (Donald & Robert, 1967). In the presence of multicollinearity, the estimation of predictors 'effect on the dependent variable tends to be less precise and reliable. Collinearity diagnostic take into consideration both Tolerance and Variance Inflation Factor (VIF) to evaluate the problem of multicollinearity. The VIF indicates the variance of the regression coefficient, higher value of VIF reflects higher threat of multicollinearity. It is commonly accepted that a tolerance of less than 0.10 and a VIF of 10 and above indicates a multicollinearity presence (O'Brien, 2007). The results of the measurement model show that all VIFs are less than 2 and all Tolerance values are higher than 0.6, which suggests no detection of multicollinearity (Table 5-9).

Coefficients[a]			
		Collinearity Statistics	
Model	**Constructs**	**Tolerance**	**VIF**
1	Argument Strength	0.660	1.515
	Argument Valance	0.919	1.088
	Confirmation of Prior Knowledge	0.943	1.060
	Source Expertise	0.522	1.917
	Source Trustworthiness	0.614	1.628
	Review Consistency	0.745	1.343
	Review Rating	0.707	1.414
	Perceived Credibility	0.721	1.386
a. Dependent Variable: Information Usage			

Table 5-9: Collinearity Diagnostics

5.3. Hypotheses Testing

The significance in relationships between variables were estimated using Regression Analysis. This research proposed 8 hypotheses in total. Amongst, hypotheses H1, H2, H3, $H4_a$, $H4_b$, H5, and H6 posit that there are positive associations between independent variables (Review Quality, Review Valance, Confirmation of Prior Belief, Source Expertise, Source Trustworthiness, Review Consistency and Review Rating) and the dependent variable (Perceived Review Credibility). In addition, hypothesis H7 predicts the positive relationship between variable "Perceived Review Credibility" and variable "Information Usage". To test this effect, the Perceived Review Credibility was regressed onto independent variables, which potentially influences the dependent variable Information Usage. The support of hypotheses and the regression model is decided by the significant of the p-value on the research model.

5.3.1. Hypotheses with dependent variable "Perceived Review Credibility"

Testing hypotheses H1, H2, H3, $H4_a$, $H4_b$, H5, and H6, the results of the regression analysis indicate that overall the regression model accounts for 36.5% of the associations between the independent variables and the review credibility evaluation. The F-value is statistically significant, this signifies that the model did a good job of predicting the outcome variable and that there is a significant relationship between the set of predictors and the dependent variable ($F=20.442$, $p<0.001$, $R^2=0.365$).

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.528[a]	.378	.365	.491

a. Predictors: (Constant), Review Rating, Confirmation of Prior Knowledge, Argument Valance, Source Trustworthiness, Argument Strength, Review Consistency, Source Expertise

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.858	7	3.123	20.442	.000[b]
	Residual	56.671	371	.153		
	Total	78.529	378			

a. Dependent Variable: Perceived Credibility
b. Predictors: (Constant), Review Rating, Confirmation of Prior Knowledge, Argument Valance, Source Trustworthiness, Argument Strength, Review Consistency, Source Expertise

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
1		B	Std. Error	Beta		
	(Constant)	1.440	.262		5.490	.000
	Argument Strength	.165	.044	.202	3.795	.000
	Argument Valance	.113	.036	.140	3.099	.002
	Confirmation of Prior Knowledge	.074	.059	.077	1.255	.210
	Source Expertise	.069	.032	.097	2.155	.032
	Source Trustworthiness	.219	.046	.261	4.802	.000
	Review Consistency	.027	.031	.044	.863	.389
	Review Rating	.028	.026	.057	1.085	.279

a. Dependent Variable: Perceived Credibility

Table 5-10: Regression Model Outputs (Hypotheses H1, H2, H3, H4a, H4b, H5, and H6)

According to **Error! Reference source not found.**, there are statistical evidences that there is a p ositive relationship between the independent variables Review Quality ($p=0.0001<\alpha$), Review Valance($p=0.002<\alpha$), Source Trustworthiness ($p=0.0001<\alpha$), Source Expertise ($p=0.032<\alpha$), and the dependent variable Perceived Review Credibility. Therefore, hypothesis H1, H2, H4a, H4b are supported, hypothesis H3, H5, H6 are rejected. The regression outputs also indicate review's source trustworthiness has the greatest explanatory power (Beta coefficient: $\beta=0.261$), compare with Argument Strength (Beta coefficient: $\beta=0.202$), Review Valance (Beta coefficient: $\beta=0.140$), and Source Expertise (Beta coefficient: $\beta=0.097$). Thus, the regression line could be written as:

$$Y = 1.440 + 0.261X_1 + 0.202X_2 + 0.140X_3 + 0.097X_4 + 371$$

(with)

Y: Perceived Review Credibility
X_1: Source Trustworthiness
X_2: Argument Strength
X_3: Review Valance
X_4: Source Expertise

5.3.2. Hypothesis with dependent variable "Information Usage"

Testing hypotheses H7, the results of the regression analysis indicate that overall the regression model accounts for only 13.4% of the relationship between the independent variables and the decision of information usage. The F-value is statistically significant, this signifies that the model did a good job of predicting the outcome variable and that there is a significant relationship between the predictor and the dependent variable ($F=54.680$, $p<0.001$, $R^2=0.134$).

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.364[a]	0.137	0.134	0.457
a. Predictors: (Constant), Perceived Credibility				

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.423	1	11.423	54.680	.000[b]
	Residual	78.757	377	0.209		
	Total	90.179	378			
a. Dependent Variable: Information Usage b. Predictors: (Constant), Perceived Credibility						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
1		B	Std. Error	Beta		
	(Constant)	2.567	.228		11.252	0.000
	Perceived Credibility	.381	.052	.356	7.395	0.000
b. Dependent Variable: Information Usage						

Table 5-11: Regression Model Outputs (Hypotheses H7)

According to **Error! Reference source not found.**, there are statistical evidences that there is a p ositive relationship between the independent variables Perceived Review Credibility ($p=0.000<\alpha$) and the dependent variable Information Usage. Therefore, hypotheses H7 are supported. The regression outputs also indicate Perceived Review Credibility has the explanatory power (Beta coefficient: $\beta=0.356$). Thus, the regression line could be written as:

$$Y = 2.567 + 0.356X + 377 \text{ (with)}$$

Y: Information Usage
X: Perceived Review Credibility

5.3.3. Influence of respondent characteristics

In order to better understand the magnitude of each variable that influence different groups of respondents (genders and age groups), the variances of the mean value for each independent variable is tested using MANOVA. This analysis generates the comparison outcomes across respondent groups on various measured constructs. The detailed statistic outputs of the following analyses are given in Appendix 2.

The results of the MANOVA indicates no significant difference between men and women with the variable: Review Rating, Confirmation of Prior Knowledge, Argument Valance, Source

Trustworthiness, Argument Strength, Review Consistency, Source Expertise ($p>\alpha=0.05$) (Table 5-12). The lack of statistic evidence for significance might be explained by the unevenness of sample between two groups, due to the nature of the review site. As mentioned earlier, among 379 participants, only 24 (6.3%) were male, compared with 355 females (93.7%). Therefore, although no statistical significance is found, it is worth mentioning several differences in the mean value of the tested variables between two gender groups. Male respondents show marginally higher mean score than female with the variable: Review Quality (M=4.44 vs.4.43), Review Valance (M=4.36 vs. 4.13), Review Rating (M=4.31 vs.3.85) and Review Consistency (3.94 vs. 3.59). These outputs suggest that compared with women, men are more likely to be influenced by these factors when judging the credibility of a cosmetic online review. On the other hand, female respondents have slightly higher mean scores the male in the variable Confirmation of Prior Belief (M=3.56 vs. 3.54), Source Expertise (M=4.57 vs.4.53), and Source Trustworthiness (M=4.42 vs. 4.19), which indicates a higher influence of these factors on the perception of eWOM credibility among women.

MANOVA						
Constructs	Main Effects				Interaction Effects	
	Gender		Age		Gender*Age	
	F	Sig.	F	Sig.	F	Sig.
Argument Strength	1.697	0.194	5.767	0.000	1.152	0.284
Argument Valance	1.576	0.210	3.748	0.003	0.160	0.689
Confirmation of Prior Knowledge	0.002	0.967	4.551	0.000	0.014	0.906
Source Expertise	0.249	0.618	9.477	0.000	0.016	0.900
Source Trustworthiness	5.183	0.023	6.748	0.000	7.038	0.008
Review Consistency	0.389	0.533	0.465	0.802	0.466	0.495
Review Rating	4.432	0.036	3.723	0.003	0.468	0.495

Table 5-12: MANOVA Outputs Summary

Across six different age groups of respondents, the MANOVA test shows significant differences in the mean variances with the almost all tested variables, expects for Review Consistency ($F=0.465$; $p=0.802>\alpha$) (Table 5-12). Hence, the effects on Review Consistency are similar with respondents from all age groups. Significant differences between the age group of respondents are found in the factors of Argument Strength ($F=5.767$; $p=0.000$), Argument Valance ($F=3.748$, $p=0.003$), Confirmation of Prior Knowledge ($F=4.551$; $p=0.000$), Source Expertise ($F=9.477$; $p=0.000$), Source Trustworthiness ($F= 6.748$; $p=0.000$), Review Rating ($F=3.723$; $p=0.003$).

Among the respondents, the younger than 18 group, compared with other groups, has the lowest mean value for all test variables: Argument Strength (M= 3.58; SD=0.144); Argument Valance (M=3.67; SD=0.144), Confirmation of Prior Knowledge (M=2.67; SD=1.181), Source Expertise (M=3.33; SD=0.333), Source Trustworthiness (M=3.00; SD=0.001), Review Rating (M=2.00; SD=0.001). This suggests that the influences of the independent variables (except for Review Consistency with the highest mean of M=4.17; SD=0.289) is less significant on the way respondents who are younger than 18 evaluate the online review credibility. In contrast, the respondents who are older than 57 is mostly affected by the variable Source Expertise (M=4.90; SD=0.239), and least

influenced by variable Confirmation of Prior Knowledge (M=3.89; SD=0.610). With the respondents from the age from 18 to 27, the effect from the variable Source Expertise is the most significant (M=4.39; SD=0.606), and the Confirmation of Prior Knowledge exerts the least influence (M=3.62; SD=0.653). Similarly, the participants from 28 to 37-year-old also consider Confirmation of Prior Knowledge the least when assessing online review credibility, while Source Expertise plays the most important role with them in the evaluation process (M=4.63; SD=0.611). The same effects are also found with the respondents who are from 38 to 47 and from 48 to 57-year-old.

5.4. Result Summary

Both the regression model with dependent variable as Perceived Review Credibility (H1, H2, H4a, H4b), and the regression model with dependent variable as Information Usage (H7) generate relatively low predicted coefficient of determination value with the adjusted R^2 of 0.365 and 0.134 ($R^2<0.5$) respectively. The adjusted R^2 values show that only 36.5% and 13.4% of the dependent variable variance, in the two tested regression models, is predictable from the independent variables. According to King (1986), the lower value of adjusted R^2 indicates the moderately weak explaining power of the regression model. Nevertheless, lower values of R^2 is considered to be a common phenomenon in social research, due to the difficulties in studying human behavior (Achen, 1982). In this case, the low adjusted R^2 might be explained by the subjectivity nature of research constructs. In addition, the variable Perceived Review Credibility and Information Usage might also be influenced various moderating factors (e.g. receivers´ characteristic, product price, etc.).

As the test results, there is no significant difference in the effect of the measured variables on the perception of online cosmetic review credibility between men and women. Among different age group of respondents, there are significant differences are found in the influence of measured variables between the participants who are younger than 18 with the other age groups of respondents. This group of respondents shows relatively more neutral opinions about the influence of most independent variables on their credibility assessment of an online review, with an exception of the variable Review Consistency.

In conclusion, the results statistically support hypothesis H1, H2, H4a, and H4b (Table 5-13). Accordingly, this confirms that when considering cosmetic online reviews, message recipients are highly influenced on the Argument Strength, Review Valance Sidedness, Source Expertise, and Source Trustworthiness factors of the written reviews. On the other words, the higher level of perceived strength and sidedness of the reviews and the expertise and trustworthiness of the information source will be associated with significantly higher levels of perceived review credibility. Additionally, the variable source trustworthiness has the most substantial explaining power for the credibility perception of individuals on the received online message. Moreover, the support of hypothesis 7 indicates that, in the context of an online consumer cosmetic review site, the consumers' perception of eWOM

credibility positively associates with the consumer´s intention to use the given information in making a purchasing decision (Table 5-13). Based on the analysis results, hypothesis H3, H5, and H6 is not supported, which suggests more no significant predicting power of the normative determinants with the customers´ perception of online cosmetic review credibility.

Hypothesis		**Results**
H1	Argument strength positively effects the perceived eWOM review credibility.	Supported
H2	Two-sided reviews are perceived to be more credible than one-sided reviews.	Supported
H3	Confirmation of receivers 'prior knowledge positively effects the perceived eWOM review credibility.	Not Supported
$H4_a$	Source expertise positively effects the perceived credibility of eWOM review.	Supported
$H4_b$	Source trustworthiness effects the perceived credibility of eWOM review.	Supported
H5	Review consistency positively effects the perceived credibility of eWOM review.	Not Supported
H6	Aggregated review rating positively effects the perceived credibility of eWOM review.	Not Supported
H7	The perceived credibility of eWOM review positively effects the receivers 'usage of advocated information.	Supported

Table 5-13: Summary of Hypotheses Testing

CHAPTER 6 CONCLUSION

This chapter findings are discussed as how they address the research questions. Based on the published researches on the credibility of eWOM, the author applied the Dual Process Theory to examine the effects on studied determinants on how individuals assess the credibility of online consumer reviews, and on how that assessment influence their usage of advocated information, especially when buying cosmetics. The literature review shows already there many recognized determinants which are claimed to explained the perception of online information credibility. However, not all factors are sufficiently applicable in case of online cosmetic reviews. The findings of the research also provided adequate foundation to answer the research questions raised in the beginning of this thesis:

Question (1): What are the relevant determinants influencing consumer's perceived credibility of online cosmetic review?

Question (2): To what extent does the perceived credibility online cosmetic review of influences consumers´ information usage?

6.1. Determinants Influencing Consumer's Perceived Credibility of Online Cosmetic Review

Current literature claimed that the way people perceive the credibility of WOM information, especially in online context, are influenced by not only the individual´s self-judgement (informative factors), but also the opinion of others (normative factors). In this study, seven potential determinants were identified based on the Dual Process Theory. They include Review Quality, Review Valance, Confirmation of Prior Belief, Source Expertise, Source Trustworthiness, Review Consistency and Review Rating.

6.1.1. Informational factor: Argument Strength

The outcomes of the research confirm the role of argument strength with the perceived credibility of receivers, especially online cosmetic reviews. This finding is consistent with many prior studies by (Park et al., 2007; Cheung et al., 2009; Li & Zhan, 2011). As mentioned earlier, in both offline or online communication, the effectiveness of information exchange is highly influenced by the quality of the transmitted messages. Especially in virtual communication, the anonymity of information source prevents receivers to evaluate the credibility of eWOM through traditional social and non-verbal cues, receivers heavily rely on the content based cues to decide whether a review is credible or not. This research confirms the arguments of Park and colleague (2007) and Li and Zhan (2011), which highlight the positive effects of the linguistic and informational quality of a written online recommendation on the way consumer perceived the message. In particular, with the eWOM about cosmetics, strong reviews, which are perceived to be clear, logical, and persuasive with supporting evidence, have a stronger impact towards the attitudes of the recipients. Moreover, the analysis reveals that strong review quality also reflects the quality of the reviewers in terms of both levels of expertise and

trustworthiness. This supports the claims of Mackiewicz (2008) and Li and Zhan (2011) which consider argument strength as an alternative indication of the competence and reliability of an information source. According to the result of the survey, argument strength associates positively with the perceived review credibility. It represents the second strongest determinants to perceived credibility (H1: β=0.202; p=0.0001). This indicates that argument strength is the essential factor with recipients to evaluate the cosmetic online review credibility.

6.1.2. Informational factor: Argument Valance

Existing literature features diverging opinions about the different effects of one-sided (positive or negative) reviews versus mixed (positive–negative) reviews on consumer´s perception. While many researchers criticize that the content inconsistency of two-sided reviews might confuse recipients (Li & Zhan, 2011; Hartman, Hunt, & Childers, 2013), others propose two-sided reviews as more persuasive, reliable, and helpful for consumers (Cheung et al., 2009; Mudambi & Schuff, 2010). In this study, the findings show the determinants of argument valance is important factors in the eWOM perceived credibility of consumers. The statistical outputs demonstrate a positive relationship between argument valance with review credibility (H2: β=0.140; p=0.001). Accordingly, if the review contains both pros and cons about a product, it will be perceived as more credible. One plausible explanation for this is that two sided opinions are seen as being more neutral and objective, thus people tend to assess mixed reviews as unbiased recommendations (Cheung et al., 2009). Teng and colleagues (2014) suggest when both positive and negative attributes of the products are presented, receivers gain more confident towards the credibility of the suggestions. In addition, argument sidedness also reflects the argument strength. Two-sided reviews are often considered to be more informative and complete than one-sided comments.

6.1.3. Informational factor: Confirmation of Receivers 'Prior Knowledge

The results of this research show no sufficient statistical evident that Confirmation of Receivers 'Prior Knowledge is related to review perceived credibility (H3: β=0.077, p=0.210). This suggests that recipient' prior knowledge on the review topic or product is not explained their perception of review credibility of cosmetic. This outcome opposes the previous study by Cheung and colleagues (2009). In the research on an online review site, Cheung and colleagues (2009) claim that if the online message content confirms the existing knowledge and belief of the readers, they are more likely to perceive it as credible. The similar predicting significant impact of Confirmation of Receivers 'Prior Knowledge on individual credibility judgment also suggests in the experimental findings by Park and Kim (2008).

Unlike the claims in cited literature, in this research, a large amount of respondents reports relatively neutral attitude toward the variable Confirmation of Receivers 'Prior Knowledge (M=3.56, SD=0.644). This indicates that the receivers' prior knowledge on the review topic is irrelevant with their perception on review credibility. Hence, a consumer might trust an online cosmetic

recommendation with strong argument, even though they are either not familiar with the review topic, or have contradicting opinions with the recommendations.

A plausible explanation for the difference between the outcomes of this research with the posit of other mentioned studies might relate to the variation in research settings. It is worth to mention that the study of Cheung and colleagues (2009) and Park and Kim (2008) were conducted in East Asia. While Cheung and colleagues (2009) studied a Chinese online review site (Eopinion.com), and the research objects of Park and Kim (2008) were students from a Korean University, most of the respondents (87.6%) in this research are from Western countries (North America and Europe). According to Hamamura and colleagues (2008), the culture differences associate with the difference in thinking style. Particularly, individuals of East Asian heritage tend to be more conservative in thinking, while ones European and American heritage tend to practice more liberal thinking. Considering this theory, East Asian consumers seem to be more conservative and more often rely on their pervious beliefs. The European and American receivers, on the other hand, show more open attitude toward new information.

Another explanation lies in the motivation of consumer to seek for online cosmetic review. As mentioned earlier, the blooming of the worldwide cosmetic market allows a tremendous number of different products varieties and new product developments. According to a recent survey of Euromonitor (2015), 60% of participants consults online reviews for new tips and product recommendations. Hence, the main purpose for recipients to seek information, the reviews might provide them new information.

6.1.4. Informational factor: Source Credibility

The outcomes of the research confirm the role of source credibility with the perceived credibility of receivers, especially online cosmetic reviews. The analysis shows significant statistic evident for the positive relationship between the two sub-items of Source Credibility, including Source Expertise (H4a: $\beta=0.097$, $p=0.032$) and Source Trustworthiness (H4b: $\beta=0.261$, $p=0.0001$), and review perceived credibility. Moreover, source trustworthiness has a strong positive association with the perceived review credibility and represents the strongest determinants to perceived credibility.

This suggests that higher levels of perceived source expertise will explain significantly higher observed levels of perceived review credibility. This outcome complements the findings of the prior study by Cheung and colleagues (2009) and Sussman and Siegal (2003). Online communication features a weak interpersonal connection between reviewers and recipients, in which the true identities of both parties commonly remain concealed. Consequently, consumers seek for more salient cues to assess the expertise and trustworthiness level of an online reviewer. Considering the profile information, the quantity and quality of reviewer´s past recommendations, overall online reputation, and his or her product usage experience, receivers approximate the virtual credentials of the reviewer (Mackiewicz,

2008). Hence, the availability of receiver´s personal information improves the confidence of receivers to trust and follow the writer advice. It also helps consumers to better relate with the recommendation, especially when the reviewers appear to share similar characteristics with the consumers (Lis, 2013). In the other word, this study indicates the more a recipient knows about a reviewer, the more confident they are to trust and to follow the online recommendations. As mentioned earlier, the credibility of the information source is also related to the strength of the argument. The study of Li and Zhan (2011)and Wathen and Burkell (2002) mention that knowledgeable, experienced and reliable reviewers often produce stronger and more persuasive arguments.

6.1.5. Normative factors: Review Consistency and Review Rating

Prior researches propose the normative factors of review consistency and review rating as determinants of review perceived credibility (Cheung et al, 2009; 2012). Normative factors are argued be influential as the crowd effects, meaning people tend to follow the majority opinion. Cheung and colleagues (2009) argue that the higher levels of perceived consistency of a review with the majority of other reviews (on the basis of same discussed subject) will be associated with higher reported levels of perceived credibility. Similarly, the authors also claim if a review is highly rated by other audiences, consumers will consider it as more credible. However, survey results do not support the arguments by Cheung and colleagues (2009; 2012), regarding the effect of normative factors. The analysis outcomes indicate that the relationship between normative factors and review perceived credibility was not significant (H5: β=0.044, p=0.389; H4b: β=0.057, p=0.279). This suggests that the two constructs Review Consistency and Review Rating are irrelevant with the consumers´ perception of review credibility.

The variation in research settings, once again, might be a reasonable explanation for the outcomes of this research with the posit of the study of Cheung and colleagues (2009). According the culture dimension theory of Hofstede (2004), to while Asian countries are categorized as collectivism societies, the Western countries are considered as individualism societies. In collectivism societies, since people are highly integrated into "a strong and cohesive in-group" (Hofstede, 2004, p.76), they are more influenced by the norm values. Conversely, in individualism countries, as the ties between individuals are loose, the effect of an opinion of the majority on individuals 'perception and behavior is relatively milder (Hofstede, 2004). In the context of online cosmetic review, Review Consistency and Review Rating, as normative factors, might exert a stronger influence on the individuals´ perception in Asian countries, in comparison with Western countries.

In addition, another plausible explanation related to the nature of cosmetic. Categorized as experience goods (Nelson, 1974), the cosmetic reviews have tendency to be highly subject and personal (Mudambi & Schuff, 2010). Moreover, with the for this might be the highly diverse backgrounds of MUA members, the different in climate and living conditions could significantly differ the experiences of

different consumers with a same product. Therefore, the majority recommendations might not be optimal with all users. The high consistency between different reviews of the same products might simply be just marketing hype, this phenomenon might mislead the quality of the actual product attributes.

6.2. Perceived Credibility Online Cosmetic Review and Consumers´ Information Usage

According to the result of the survey, source trustworthiness has a strong positive association with the perceived review credibility (H7: β=0.356), p=0.0001). This confirms the positive relationship between review perceived credibility and the suggested information usage, which was widely agreed in current literature (McKnight et al., 2002; Wathen & Burkell, 2002; Sussman & Siegal, 2003). The individual´s perception about the credibility of a review directly decides to what extent message receiver subsequently accept and follow the provided information in the cosmetic buying process. Thus, higher levels of consumers´ perceived credibility of an online review will be associated with higher reported usage levels of online recommended information.

This also supports the argument of Watts and Zhang (2008) that states the online information usage is described as the outcome of online review screening, which indicates positive credibility judgement. In eWOM, if the audiences perceive the online recommendation as believable, they will learn from and use the advocated information. The usage of online reviews could influence the product attitudes purchase intention of receivers (McKnight et al., 2002;).

6.3. Conclusion

The purpose of this research is to gain more understanding about the consumer decision making process, specifically examining the effects of online information credibility toward consumer information usage in the purchasing process of cosmetic products. It also aims to explore the determinants that influence a consumer's perceived online review credibility as predictors of online reviews influence, including purchase intention, especially when buying cosmetics.

The advent of the Internet and Web 2.0 empowers eWOM communication between consumers. However, at the same time, the growing popularity of online information also brings many concerns regarding the eWOM credibility. Based on the current literature about the eWOM credibility, five informational and two normative based antecedents are identified, including Review Strength, Review Valance, Confirmation of Receivers 'Prior Knowledge, Source Expertise, Source Trustworthiness, Review Consistency, and Review Rating. Using the Regression Analysis, the significant predicting powers of Review Strength, Review Valance, Source Expertise, Source Trustworthiness with Perceived Online Credibility. This research is design research model to study the credibility online consumer reviews at the readers' perspective Moreover, the research findings also support the essential role of the consumer's perceived online review credibility with the decision to follow the recommendations in a making purchase decision.

CHAPTER 7 DISCUSSION

This chapter summarizes the research implications and explained several potential limitations of this particular research. Also, the author discusses research implications and some thoughts for the possible directions regarding future research.

7.1. Implications

This research contributes several implications in both scientific research and practical business field. First, despite the increasing popularity and importance of eWOM communication, our understandings of the eWOM phenomenon remains somewhat limited. The missing on more integrated knowledge about the principals and mechanism of eWOM constrains the ability of both researchers and business practitioners to utilize the influential power of eWOM. This research applies the Dual Process Theory in the context of an online consumer review site and measures that the effecting power of both informational and normative based determinants on the consumers 'perception. Understanding the impacts of these specific cues would clarify on how consumers use the information given in a review during the evaluation process. As the result, this study confirms the findings of prior studies and supports the significant influence of informational factors, including Argument Strength, Argument Valance, and Source Credibility. On the other hand, these research findings do not find any significant effects of normative cues on the consumer´s credibility perception.

In addition, our findings have some practical implication for business practitioners, especially for those who operate in the cosmetic industry. The suggestions majorly emphasize that importance of the properly design and management of online consumer review system. This research confirms the essential role of the consumers 'online review credibility perception with the possibility of online information usage. Hence, an effective online review system might become of the critical competitive competence for both online retailers and the third-party review sites. The understanding what informational cues consumers use in the evaluation of an online review serves as valuable guidance for marketers to better design and manage their online review systems. Consistent with prior studies, informational influences, including review quality, review sidedness, and source credibility, have found to have a strong effect on the perceived credibility. Consumers tend to more trust a review with strong supportive evidence and explanations. Thus, it is suggested that businesses should integrate such review systems which advocate and assist reviewers to produce higher quality reviews. For example, online review sites could provide a review format and guidelines with appropriate product/service dimensions that allow reviewers to express both positive and negative feedbacks. Moreover, especially with cosmetic review sites, the supplement of related images (product swatches) to enhance the quality of the review posts. Alternatively, the availability of reviewers´ information (e.g. profile information, and actual usage experiences) might validate the contributed review.

7.2. Limitations and Suggestions for Further Work

While the findings from this study come up with some meaningful results and it is also subjected to a number of limitations. First of all, the collected data for this research all come from only one online consumer review site (Makeupalley.com), the survey is also focus on only cosmetic reviews. Therefore, the generalizability of results to other review sites (e.g. different types of products) is limited. In addition, Makeupalley.com is well-known review site; the assumptions od members about review credibility may be differed with other site with lower reputation. The research outcomes are needed to be tested in different research contexts.

Secondly, due to the time constraint, the data was only collected in a period of two weeks. This results in a relatively small size (396), compared with the population size (over two million). This also might affect the representative of the outcomes. With thin the collected sample the number of case distribution between different respondent's groups (genders, age groups) are highly uneven. Some respondent groups (male respondents or respondents under 18-year-old) are two small.

Beside those suggestions for future research (e.g.) broaden the scope of the study) in which could improve the result quality of this study, there are several more suggestions to further extend the current model. First, the difference between different groups of respondents (female vs male, different age groups) could be examined. Also, the research model can be tested in different culture environment and investigates if people different cultural background may assess the online review in different ways.

APPENDIX

APPENDIX 1: Online Survey

INVITATION EMAIL
Subject: Online Consumer Review Survey

Dear Makeup Alley Member,

I am a master student from University of Twente (Netherlands). I am conducting a research about the credibility evaluation of website users with online cosmetic reviews. This survey aims to explore the factors that influence a consumer's perceived online review credibility as predictors of online reviews usage. This understanding will serve as a useful guide to predict the effect of online review on consumer purchase decision. Thus, your response is important for the attain of this understanding, and consequently for, the success of my research.

This questionnaire will take approximately 10 minutes to complete. All responses will be kept strictly confidential and only group statistics will be published. As an appreciation, you will automatically be entered in the lucky draw for three prizes of 20 USD each by completing the questionnaire.

I would appreciate if you could complete the questionnaire via the following link by 31st July 2016:

https://docs.google.com/forms/d/1kEAzMmoYlc4kzctTAkBpYOYjsLtncYU2oL5FA5g8lCM

If you have any question, please contact me at p.t.d.pham@student.utwente.nl.

Thank you very much for your time and cooperation.

Best Regards,

Duong Pham

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Faculty of Behavioural, Management and Social sciences (BMS)
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PO Box 217
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The Netherlands

QUESTIONNAIRE

A. Respondent Information

1. **What is your gender?**

☐ Male ☐ Female

2. **What is your age?**

☐ Under 18 ☐ From 39 to 48

☐ From 19 to 28 ☐ From 49 to 58

☐ From 29 to 38 ☐ Above 59

3. **How many hours a day do you spend on the Internet in personal leisure activities (not work related)?**

☐ Less than 1 hour ☐ 4 hours - 5 hours

☐ 1hour - 3 hours ☐ More than 5 hours

4. **What is your nationality?** ……..

B. Online Review Credibility

Please answer the following questions (Question 5 to Question 14) based on the way you evaluate the quality and credibility of online peer reviews that you have read on Makeupvalley.com. You may retrieve recent read product reviews to refresh your memory before answering the questions.

Please check the most appropriate answer to the question on a scale of 1 to 5, where "1" =strongly disagree and "5" = strongly agree.

	Strongly Disagree 1	2	3	4	Strongly Agree 5
1. General Experience (Yours) with Online Review and Online Review Sites					
Generally, I am familiar with online consumer review sites such as Makeupalley.com.	☐	☐	☐	☐	☐
Generally, I visit online consumer review sites such as Makeupalley.com very often.	☐	☐	☐	☐	☐
Generally, I often consult online consumer review sites when buying cosmetics.	☐	☐	☐	☐	☐
I often write my own review about cosmetics on online consumer review sites	☐	☐	☐	☐	☐
Generally, I think online consumer review is a critical source to obtain product information, especially with cosmetics	☐	☐	☐	☐	☐
In your opinion, you are more likely to trust an online review, when you think:					
2. Argument Strength					
The review argument is presented clearly and easy to understand.	☐	☐	☐	☐	☐
The review argument is relevant with the reviewed product(s).	☐	☐	☐	☐	☐
The review argument is objective and unbiased.	☐	☐	☐	☐	☐
The review argument provides sufficient supporting information/evidence (*). *(*) E.g. ingredient facts, scientific researches, product photo(s) or swatches*	☐	☐	☐	☐	☐
3. Argument Sidedness					
The review states both pros and cons of the reviewed product(s).	☐	☐	☐	☐	☐
The review states only either pros or cons of the reviewed product(s).	☐	☐	☐	☐	☐
The review states both positive and negative comments.	☐	☐	☐	☐	☐
The review states only either negative or positive comment(s).	☐	☐	☐	☐	☐

4. Receiver´s (Your) Prior Knowledge

The information from the review opposes what I had previously known.	☐	☐	☐	☐	☐
The information from the review confirms what I had previously known.	☐	☐	☐	☐	☐
The review opposes my existing impression(s)/opinion(s) of the reviewed product(s).	☐	☐	☐	☐	☐
The review confirms my existing impression(s)/opinion(s) of the reviewed product(s).	☐	☐	☐	☐	☐

5. Source Expertise

The reviewer is perceived to be knowledgeable about the discussed topic(s).	☐	☐	☐	☐	☐
The reviewer has actual usage experience(s) with the reviewed product(s).	☐	☐	☐	☐	☐
Based on the reviewer rating of the site, the reviewer is perceived as reputable (*).	☐	☐	☐	☐	☐

(*) Reviewer rating systems give rating/ marks on a particular reviewer (e.g. Top reviewer) based on the quantity or quality of reviewer's pervious reviews.

6. Source Trustworthiness	☐	☐	☐	☐	☐
The reviewer is perceived to be reliable .	☐	☐	☐	☐	☐
The reviewer shares his/her sincere opinion(s) about the reviewed product(s).	☐	☐	☐	☐	☐

The information about reviewer´s personal attributes (*) is available.

(*) e.g. physical appearance (hair type/color, skin type/color, eye color); geographical location; age; occupation.

7. Review Consistency

The advocated comment(s) in the review is consistent with other reviews.	☐	☐	☐	☐	☐
The advocated comment(s) in the review is contradict other reviews.	☐	☐	☐	☐	☐

8. Aggregated Review Rating

Based on the review rating, the review was considered to be helpful by other recipients	☐	☐	☐	☐	☐
Based on the review rating, the review was highly rated by other recipients.	☐	☐	☐	☐	☐

9. Perceived Review Credibility

In your opinion, you perceive a credible online review as:

A review is believable.	☐	☐	☐	☐	☐
A review is factual and accurate.	☐	☐	☐	☐	☐
A review is helpful.	☐	☐	☐	☐	☐

10. Information Usage

When you perceive an online review as highly credible, how does it influence your cosmetic purchasing behavior? (*)

I am more likely to agree with the review.	☐	☐	☐	☐	☐
Information from the review contributes to my knowledge of the reviewed product(s).	☐	☐	☐	☐	☐
The review influences my attitude toward the reviewed products.	☐	☐	☐	☐	☐
The review may motivate or demotivate my purchase intention.	☐	☐	☐	☐	☐

(*) Assumed that price is not a problem.

APPENDIX 2: MANOVA Outputs

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Argument Strength	379				
Argument Valance	379	2	5	4.43	0.558
Confirmation of Prior Knowledge	379	2	5	4.15	0.566
Source Expertise	379	2	5	3.56	0.644
Source Trustworthiness	379	2	5	4.57	0.474
Review Consistency	379	2	5	4.4	0.548
Review Rating	379	1	5	3.8	0.75
Perceived Credibility	379	1	5	3.88	0.913
Information Usage	379	2	5	4.35	0.54
Valid N	379				

Descriptive Statistics (Gender vs Age)					
Constructs	**Gender**	**Age**	**Mean**	**Std. Deviation**	**N**
Argument Strength	Female	Under 18	3.58	0.144	3
		From 18 to 27	4.26	0.711	88
		From 28 to 37	4.41	0.568	117
		From 38 to 47	4.54	0.398	72
		From 48 to 57	4.56	0.456	54
		Above 57	4.65	0.268	21
		Total	4.43	0.565	355
	Male	From 18 to 27	4.28	0.508	15
		From 28 to 37	4.69	0.167	9
		Total	4.44	0.456	24
Argument Valance	Female	Under 18	3.67	0.144	3
		From 18 to 27	4.13	0.549	88
		From 28 to 37	4.31	0.444	117
		From 38 to 47	3.95	0.672	72
		From 48 to 57	4.03	0.552	54
		Above 57	4.05	0.785	21
		Total	4.13	0.575	355
	Male	From 18 to 27	4.33	0.294	15
		From 28 to 37	4.42	0.451	9
		Total	4.36	0.353	24
Confirmation of Prior Knowledge	Female	Under 18	2.67	1.181	3
		From 18 to 27	3.62	0.664	88
		From 28 to 37	3.43	0.607	117
		From 38 to 47	3.74	0.653	72
		From 48 to 57	3.41	0.541	54
		Above 57	3.89	0.610	21
		Total	3.56	0.645	355
	Male	From 18 to 27	3.60	0.646	15
		From 28 to 37	3.44	0.635	9
		Total	3.54	0.633	24
Source Expertise	Female	Under 18	3.33	0.333	3
		From 18 to 27	4.38	0.650	88
		From 28 to 37	4.63	0.371	117
		From 38 to 47	4.57	0.401	72
		From 48 to 57	4.68	0.303	54
		Above 57	4.90	0.239	21
		Total	4.57	0.480	355
	Male	From 18 to 27	4.44	0.300	15
		From 28 to 37	4.67	0.500	9
		Total	4.53	0.392	24
Source Trustworthiness	Female	Under 18	3.00	0.000	3
		From 18 to 27	4.36	0.582	88
		From 28 to 37	4.43	0.530	117
		From 38 to 47	4.42	0.550	72
		From 48 to 57	4.46	0.482	54
		Above 57	4.71	0.338	21

		Total	4.42	0.549	355
	Male	From 18 to 27	4.40	0.258	15
		From 28 to 37	3.85	0.626	9
		Total	4.19	0.500	24
Review Consistency	Female	Under 18	4.17	0.289	3
		From 18 to 27	3.94	0.756	88
		From 28 to 37	3.73	0.800	117
		From 38 to 47	3.77	0.839	72
		From 48 to 57	3.73	0.556	54
		Above 57	3.71	0.699	21
		Total	3.59	0.758	355
	Male	From 18 to 27	3.93	0.495	15
		From 28 to 37	3.94	0.808	9
		Total	3.94	0.613	24
Review Rating	Female	Under 18	2.00	0.000	3
		From 18 to 27	3.85	0.933	88
		From 28 to 37	3.88	0.957	117
		From 38 to 47	3.72	1.054	72
		From 48 to 57	3.92	0.657	54
		Above 57	4.21	0.405	21
		Total	3.85	0.923	355
	Male	From 18 to 27	4.40	0.604	15
		From 28 to 37	4.17	0.661	9
		Total	4.31	0.622	24

Tests of Between-Subjects Effects

Source	Constructs	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Argument Strength	8.773a	7	1.253	4.265	0.000	0.074
	Argument Valance	8.745b	7	1.249	4.119	0.000	0.072
	Confirmation of Prior Knowledge	10.483c	7	1.498	3.803	0.001	0.067
	Source Expertise	11.406d	7	1.629	8.206	0.000	0.134
	Source Trustworthiness	11.145e	7	1.592	5.773	0.000	0.098
	Review Consistency	3.761f	7	0.537	0.954	0.465	0.018
	Review Rating	19.872g	7	2.839	3.564	0.001	0.063
Intercept	Argument Strength	1307.942	1	1307.942	4450.707	0.000	0.923
	Argument Valance	1151.570	1	1151.570	3796.830	0.000	0.911
	Confirmation of Prior Knowledge	814.906	1	814.906	2069.132	0.000	0.848
	Source Expertise	1341.751	1	1341.751	6756.763	0.000	0.948
	Source Trustworthiness	1166.140	1	1166.140	4228.602	0.000	0.919
	Review Consistency	1019.454	1	1019.454	1810.546	0.000	0.830
	Review Rating	988.304	1	988.304	1240.625	0.000	0.770
Gender	Argument Strength	0.499	1	0.499	1.697	0.194	0.005
	Argument Valance	0.478	1	0.478	1.576	0.210	0.004
	Confirmation of Prior Knowledge	0.001	1	0.001	0.002	0.967	0.000
	Source Expertise	0.049	1	0.049	0.249	0.618	0.001
	Source Trustworthiness	1.429	1	1.429	5.183	0.023	0.014
	Review Consistency	0.219	1	0.219	0.389	0.533	0.001
	Review Rating	3.531	1	3.531	4.432	0.036	0.012
Age	Argument Strength	8.473	5	1.695	5.767	0.000	0.072
	Argument Valance	5.683	5	1.137	3.748	0.003	0.048
	Confirmation of Prior Knowledge	8.962	5	1.792	4.551	0.000	0.058
	Source Expertise	9.409	5	1.882	9.477	0.000	0.113
	Source Trustworthiness	9.305	5	1.861	6.748	0.000	0.083
	Review Consistency	1.310	5	0.262	0.465	0.802	0.006
	Review Rating	14.831	5	2.966	3.723	0.003	0.048
Gender * Age	Argument Strength	0.338	1	0.338	1.152	0.284	0.003
	Argument Valance	0.049	1	0.049	0.160	0.689	0.000

	Confirmation of Prior Knowledge	0.005	1	0.005	0.014	0.906	0.000
	Source Expertise	0.003	1	0.003	0.016	0.900	0.000
	Source Trustworthiness	1.941	1	1.941	7.038	0.008	0.019
	Review Consistency	0.262	1	0.262	0.466	0.495	0.001
	Review Rating	0.372	1	0.372	0.468	0.495	0.001
Error	Argument Strength	109.027	371	0.294			
	Argument Valance	112.523	371	0.303			
	Confirmation of Prior Knowledge	146.115	371	0.394			
	Source Expertise	73.673	371	0.199			
	Source Trustworthiness	102.312	371	0.276			
	Review Consistency	208.897	371	0.563			
	Review Rating	295.545	371	0.797			
Total	Argument Strength	7553.688	379				
	Argument Valance	6633.250	379				
	Confirmation of Prior Knowledge	4954.625	379				
	Source Expertise	7988.000	379				
	Source Trustworthiness	7463.222	379				
	Review Consistency	5691.500	379				
	Review Rating	6017.000	379				
Corrected Total	Argument Strength	117.799	378				
	Argument Valance	121.268	378				
	Confirmation of Prior Knowledge	156.598	378				
	Source Expertise	85.079	378				
	Source Trustworthiness	113.457	378				
	Review Consistency	212.658	378				
	Review Rating	315.417	378				

a. R Squared = .074 (Adjusted R Squared = .057)
b. R Squared = .072 (Adjusted R Squared = .055)
c. R Squared = .067 (Adjusted R Squared = .049)
d. R Squared = .134 (Adjusted R Squared = .118)
e. R Squared = .098 (Adjusted R Squared = .081)
f. R Squared = .018 (Adjusted R Squared = -.001)
g. R Squared = .063 (Adjusted R Squared = .045)

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