

# The relationship between social media marketing activities and brand equity with the mediating role of consumer's benefits and experience on luxury beauty

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## ABSTRACT

Background: The rapid growth of the beauty industry and the increasing number of luxury goods consumers in Indonesia have made social media marketing a crucial tool for brands in the beauty sector. Understanding the relationship between social media marketing activities and consumer-based brand equity can provide valuable insights for businesses looking to maximize their brand's presence and engagement on social media platforms. Methods: This study examines the impact of social media marketing activities on consumer-based brand equity, with social media benefits and brand experience as mediating variables. Data was collected through a 5-point Likert scale questionnaire distributed to 471 respondents, aged 25-44 years, who purchase and follow luxury beauty brands on social media. The data was analyzed using the Structural Equation Modeling-Partial Least Squares (SEM-PLS) technique to evaluate direct and mediating effects. Findings: The study reveals a significant direct and mediating effect of social media marketing activities on consumer-based brand equity. Additionally, it finds a direct and mediating effect of social media marketing activities on social media benefits, indicating that effective marketing strategies can enhance both brand equity and the perceived benefits consumers derive from social media interactions with brands. Conclusion: This research demonstrates the importance of social media marketing activities in strengthening brand equity and enhancing social media benefits. The findings suggest that luxury beauty brands can improve their consumer relationships and brand perceptions by optimizing their social media strategies, with a focus on brand experience and benefits. Novelty/Originality of this article: This study contributes to the literature by highlighting the mediating role of social media benefits and brand experience in the relationship between social media marketing and consumer-based brand equity, particularly in the context of luxury beauty brands in Indonesia. The use of SEM-PLS provides a robust framework for understanding the complex dynamics of social media marketing in the beauty industry.

**KEYWORDS**: brand equity; brand experience; luxury beauty brands; online brand community; social media marketing.

#### **1. Introduction**

The growth of social media has reflected people's need for interpersonal interaction; social networking sites have successfully brought conventional communication activities to the virtual world. This phenomenon pushes companies to use social media as a crucial part in their marketing strategy (Chen & Lin, 2019). Social media marketing efforts consist of five principal dimensions: entertainment, interaction, trendiness, customization, and word

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of mouth (WOM) (Godey et al., 2016; Kim & Ko, 2012). Prahalad & Ramaswamy (2004) stated that consumers aren't just interested in buying products, but also in creating an experience with other consumers as a collective. In its advancement, consumer communities on social media are considered to be increasingly important, whereas not only is it used to promote the brand among consumers but also to maintain the relationship between the brand and consumers (Hollebeek et al., 2014). Users, or said consumers, participate in community activities through social media platforms and exchange their knowledge with one another.

The theory of Uses and Gratifications (U&G) (2018) explains that consumers are interested in social media marketing activities or in joining online communities to satisfy or gain cognitive, social and personal integrative, as well as hedonic benefits from doing so (Dholakia et al., 2009; Nambisan & Baron, 2009; Verhagen et al., 2015). Moreover, consumer's interest in social media marketing activities also serves as a way for them to gain sensory, affective, behavioral, and intellectual experiences (Hamzah et al., 2014; Zarantonello & Schmitt, 2010). Social media gratification and consumer's experience significantly influence how one uses and behaves towards a brand on social media. Hence, it is essential to understand consumer's experience and gratification to better influence brand perception in the minds of consumers through social media marketing activity (Gao & Feng, 2016). In accordance with Kamakura & Russel (1991), consumer-based brand equity occurs when consumers know the brand well and are able to memorize strong brand characteristics in their minds. Consumer-based brand equity (CBBE) can be measured through brand awareness, perceived quality, brand associations, and future purchase intentions (Aaker, 1991).

In the previous study about luxury fashion, Zollo et al. (2020) expressed that social media benefits and brand experience positively influence the relationship between social media marketing and consumer-based brand equity. Nevertheless, the study had its own limits where the scope of research only examines luxury fashion and uses college and university students aged 18-20 as its sample, therefore deemed as unsuccessful to represent the population of social media activity and luxury goods consumers. In contrast with the previous study, this study focuses on the context of luxury beauty with second-order techniques and a more in-depth path variable. Luxury beauty as a topic was chosen in accordance with the recommendation of Zollo et al. (2020); to expand the context of study to the category of fast-moving consumer goods. In addition, this study examines respondents who are regular treaters of luxury goods which are people aged 25-44 years who make up 64% of the total luxury goods consumers (Buckle, 2019).

Middle upper households in Indonesia have significantly grown over the last few years (World Bank, 2020) and have succeeded to push the demand growth of the luxury goods market in Indonesia. On the other hand, the beauty and personal care industry is considered to be resistant towards the economic recession due to a lipstick effect, akin to what we've seen during the global economic recession in 2008. During the pandemic, people's awareness towards their own health and welfare has swelled. Selfcare products, specifically skincare, has now become a primary need for the majority of Indonesian citizens, especially for women. If skincare was considered to be a luxury good before, it has become a lifestyle now due to urbanization growth. The pandemic has also caused a shutdown in brick-andmortar retailers which then accelerated the uprising and rapid use of e-commerce. As stated by L'Oreal, e-commerce has increased more than 60% in Thailand and Indonesia in Q1 2020. Tokopedia as a popular e-commerce platform in Indonesia also reported a threefold rise in sales for the health and personal care category in March 2020 (Wang, 2020). Furthermore, as reported by Hootsuite Indonesian Digital Report 2020, active social media users in Indonesia have reached 160 million users with an average usage time of 3 hours 26 minutes each day. As 99% of active users are engaging through their mobile phones and are dominated by women, social media platforms are an ideal marketing channel for luxury beauty brands in Indonesia (Kemp, 2020).

Based on the apprehensions mentioned above, including the adoption of the research model used by Zollo et al. (2020), the researcher is interested in investigating the

relationship between social media marketing activities and consumer-based brand equity. Thereafter examine mediation impacts of consumer experience of the brand and gratifications gained from the brand's social media account on the relationship between social media marketing activities and brand equity in the industry of luxury beauty. This study is aimed to analyze the influence of social media marketing activities on consumer-based brand equity on luxury beauty, identify mediation impacts of brand experience on the relationship between social media marketing activities and consumer-based brand equity on luxury beauty, identify mediation impacts of brand experience on the relationship between social media marketing activities and consumer-based brand equity on luxury beauty, identify mediation impacts of social media benefits on the relationship between social media marketing activities and consumer-based brand equity on luxury beauty, analyze the influence of social media marketing activities on social media benefits on luxury beauty, identify mediation impacts of brand experience on the relationship between social media marketing activities and consumer-based brand equity on luxury beauty, analyze the influence of social media marketing activities on social media benefits on luxury beauty, identify mediation impacts of brand experience on the relationship between social media marketing activities and consumer-based brand equity on luxury beauty, analyze the influence of social media marketing activities on social media benefits on luxury beauty, identify mediation impacts of brand experience on the relationship between social media marketing activities and social media benefits on luxury beauty.

#### 1.1 Consumer and social media

The Internet has changed human values and lifestyles, for instance the way an individual interacts with its social environment, read news, listen to music, and buy film tickets through online channels as opposed to a movie theater (Doury, 2011). Even so, a study shows that individuals who buy online and offline have different values and lifestyles that affect their behavior as well as having different intentions (Swinyard & Smith, 2003). Online channels are relatively newer and more accessible thus making it easy for consumers to compare products and prices, meanwhile offline channels allow consumers to explore a product physically and directly meet sales agents (Grewal et al., 2004). Degeratu et al. (2000) refers to information theory which explains that consumers give greater importance to knowledge attributes or information about a product that had been obtained at the time of purchase. As several aspects of product information are more accessible online, some attributes are deemed to be of greater importance for online channels than for offline channels, and vice versa. Online and offline consumer behaviors are different even though consumers are generally more interested in the internet, the progressively increasing popularity of online channels and consumer behavior still make up the foundation of each individual's lifestyle and values (Díaz et al., 2017).

The theory of Uses and Gratification reviews the influence of media on humans and explains how the audience uses media to fulfill their personal needs and gain gratifications once their needs are fulfilled (Ruggiero, 2000). Once users acknowledge the gratifications gained from media, they will develop a positive behavior which reinforces said media, which then affects the behavior that facilitates a continual use of said media (Lo & Leung, 2009). The acquired social media gratifications could affect consumer's social participation in terms of attitude towards social media, which in turn results in behavioral outcomes such as confidence in the brand, commitment, and WOM (Kamboj, 2020). User gratification of social media could be categorized into five needs; (1) cognitive needs, where users consume media to reap knowledge, information, and facts, (2) affective needs, which are comprised of all types of emotions, joys, and moods, (3) personal integrative needs, which are a need for self-worth where users consume media to reassure and stabilize their self-status as well as to achieve credibility within their own circle, (4) social integrative needs, which are comprised of their need to socialize with family, friends, and public relations through which they could achieve from social networking sites such as Facebook Twitter, and Instagram, (5) hedonic needs, where users consume media as a way to escape from reality (escapism) and to release the self of tension and stress.

Social media marketing activity, which is a way to communicate with consumers, have a power to enhance the brand's image (Tsai & Men, 2013), brand equity, consumer feedback (Godey et al., 2016), consumer equity (Kim & Ko, 2012), and the brand's success (Phan et al., 2011). The study of Kim & Ko (2012) shows that marketing campaigns for luxury brand communities include five main dimensions; entertainment, interaction, trendiness, customization, and word of mouth. Five of these dimensions result in a significant impact to brand equity, purchase intention, et cetera (Chen & Lin, 2019). Quoted from Algarabat (2017), entertainment is one of the main consumer stimuli that motivates users to explore social media for the sake of obtaining relaxation and escapism (Courtois et al., 2009; Manthiou et al., 2013; Park et al., 2009). Godey et al. (2016) defines interaction through social media as an activity to share information and exchange opinions with other people. Godey et al. (2016) defines trendiness as the newest information-spreading process and the trendiest in terms of brand. Godey et al. (2016) also characterizes customization as how far social media channels provide information queries and services that can be customized by consumers. Godey et al. (2016) defines WOM as how far consumers pass information and upload brand-related contents on social media.

#### 1.2 Consumer and brand

Pine & Gilmore (1999) defines experience as consumer activity or involvement with a company that they deem meaningful and fun. Consumer experience can be good, indifferent, or even bad (Berry et al., 2002). Brand experiences as defined by Brakus et al. (2009) is "subjective, consumer's internal response, sensation, feeling, cognition, and behavioral reaction that is emitted from stimuli out of parts of the brand such as brand identity, packaging, and how the brand communicates with its environment". Therefore Brakus et al. (2009) states that brand experience occurs when a consumer makes contact or is exposed to the brand. Furthermore, Beig & Nika (2019) summarizes the four dimensions of experience; (1) sensory dimension, comprised of sensory and aesthetic attributes, (2) affective dimension, comprised of emotions generated from the brand, (3) behavioral dimension, focused on behaviors related to brand experience such as consumer lifestyle, (4) intellectual dimension, comprised of analytical and imaginative thinking as a result of consumer interaction and experience with the brand.

As defined by Aaker (1991), brand equity is "an abundance of brand asset categories which are related with the name or symbol of a brand that could increase or decrease the value given from a product or service". From a marketing perspective, brand equity is consumer's perception and knowledge related to the brand and are generated from company marketing activities (Aaker, 1991; Keller, 1993; Pappu et al., 2005). Quoted from Beig & Nika (2019), brand equity has two definitions which are; company-based brand equity – focused on financial values which can be created by the brand for the company (Farquhar et al., 1991), and consumer-based brand equity – focused on consumer perception towards the brand (Aaker, 1991; Keller, 1993; Pappu et al., 2005; Yoo & Donthu, 2001). Quoted from Aaker (1991), consumer-based brand equity has four dimensions, which are (1) brand awareness/association; (2) perceived quality; (3) brand loyalty.

In the economy, luxury goods have a demand that grows faster compared to potential buyer's income. Luxury goods are the opposite of necessity goods where its demand grows much slower compared to potential buyer's income (Beierlein, 2014). The elasticity of luxury goods income always has a value bigger than one, which means relative changes in demand is usually greater than relative changes in income hence factually, luxury goods demand is quite flexible (Kasztalska, 2017). The difference between luxury goods and nonluxury goods lies in three dimensions; functionalism, experientialism, and symbolic interactionism (Vickers & Renand, 2003). Luxury brands are associated with consumer perception towards price, quality, aesthetic, scarcity, uniqueness, and association with a high non-functional aspect (Heine, 2012). Furthermore, beauty is generally considered to be a characteristic of individuals, objects, and places deemed as pleasant (Yin & Pryor, 2012). Consumers, normally women, use cosmetic products to improve their appearance and create "a positive statement about themselves" (Craik, 1993), and promote their selfworth (Creekmore, 1974). Nowadays, luxury goods consumers are dominated by young millennials (25-36 year olds) and older millennials (35-44 year olds) that have entered their career stages and entered the peak of their spending age in shopping. The generation that dominates luxury goods market grew up in a digital era, likes to be trendsetters, and is the generation who rearranged the value of particular goods and services in a new form of consumerism, and is also the generation who gives new perspective to the relationship between brands and consumers (Buckle, 2019).

#### 2. Methods

This study is a quantitative study with descriptive conclusive design in a non-contrived setting, where design for marketing phenomena can be measured and defined evidently (Boru, 2018) and solely focuses on occurrence and actual environment. This study aims to describe the influence of social media marketing activities felt by consumers, which is mediated by brand experience and social media benefits, on the brand equity of luxury beauty brands. A quantitative study method is applied to examine said relationship using self-administered questionnaires comprised of 46 indicators and employing Likert 1-5 scale as a measurement tool, which was dispersed online in a cross-sectional data gathering technique, where the survey is done once for many subjects (Malhotra, 2012).

In data gathering, this study uses a non-probability sampling with purposive or judgmental sampling technique which is a strategy where respondents are intentionally selected corresponding to the study criteria to provide information (Maxwell, 1996). The respondent criteria applied for this study are aged 25 – 44 years old (early adulthood) or born between 1977 to 1996, avid social media user – spends 2 hours per day minimum to explore social media, have bought a luxury beauty product, follows luxury beauty brand account(s) on social media. In data analyzing and processing, this study uses a Structural Equation Model (SEM) approach based on Partial Least Square (PLS) using the SmartPLS v.3.2.9 application to test the study's hypotheses.

#### 3. Results and Discussion

According to the pre-test (Table 1) studies with 34 respondents, it can be concluded that all study variables are reliable as the Cronbach's Alpha values are greater than 0.6. Moreover, this study's 46 indicators have qualified for the validity standard. However, 4 study indicators do not meet the minimum value of factor loadings – greater than 0.5 – where three indicators (BE1, BE2, and SMB9) are important variables to examine in this study. Therefore, the researcher decides to review the questions on the three indicators, confident in increasing the validity indicator and reducing ambiguity experienced by respondents in the next stage (main test).

<u>Table 1. Pre-test s</u> Latent Variable	Indicator		Va	Rel	Reliability		
		КМО	Bart lett	Factor Loading	Status	Cron bach Alpha	Status
SMMA	SMM1	0.587	0.000	0.802	Valid	0.877	Reliable
Entertainment Dimension	SMM2			0.792	Valid		
SMMA	SMM3			0.573	Valid		
Interaction	SMM4			0.621	Valid		
Dimension	SMM5			0.613	Valid		
SMMA	SMM6			0.595	Valid		
Trendiness Dimension	SMM7			0.577	Valid		
SMMA	SMM8	0.587	0.000	0.583	Valid	0.877	Reliable
Customization Dimension	SMM9			0.818	Valid		
SMMA	SMM 10			0.753	Valid		
WOM Dimension	SMM 11			0.709	Valid		
SMB	SMB1	0.806	0.000	0.655	Valid	0.936	Reliable

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Cognitive	SMB2			0.743	Valid		
Dimension	SMB3			0.732	Valid		
SMB	SMB4			0.882	Valid		
Social	SMB5			0.859	Valid		
Integrative	SMB6			0.890	Valid		
Dimension							
SMB	SMB7			0.837	Valid		
Personal	SMB8			0.809	Valid		
Integrative	SMB9			0.414	Invalid		
Dimension	SMB10			0.553	Valid		
SMB	SMB11	0.806	0.000	0.745	Valid	0.936	Reliable
Hedonic	SMB12			0.839	Valid		
Dimension	SMB13			0.789	Valid		
BE	BE1	0.820	0.000	0.479	Invalid	0.891	Reliable
Sensory	BE2			0.342	Invalid		
Dimension	BE3			0.725	Valid		
BE	BE4			0.775	Valid		
Affective	BE5			0.645	Valid		
Dimension	BE6			0.848	Valid		
BE	BE7			0.730	Valid		
Behavioral	BE8			0.761	Valid		
Dimension	BE9			0.691	Valid		
BE	BE10			0.726	Valid		
Intellectual	BE11			0.727	Valid		
Dimension	BE12			0.677	Valid		
CBBE	CBBE1	0.744	0.000	0.696	Valid	0.810	Reliable
Brand Loyalty	CBBE2			0.654	Valid		
Dimension	CBBE3			0.645	Valid		
CBBE	CBBE4	0.744	0.000	0.799	Valid	0.810	Reliable
Perceived	CBBE5			0.793	Valid		
Quality							
Dimension							
CBBE	CBBE6			0.760	Valid		
Brand	CBBE7			0.749	Valid		
Awareness /	CBBE8			0.730	Valid		
Association	CBBE9			0.740	Valid		
Dimension	CBBE			0.035	Invalid		
	10						

In this study, there are 471 respondents in total who meet the study criteria. Out of 471 respondents, 86.72% or 405 respondents identify as female, meanwhile 13.27% or 62 respondents identify as male. The majority of respondents are aged 25 to 34 years old with a statistic of 76.85% or 362 respondents, whereas respondents aged 34 to 44 years old amount to 109 respondents or 23.14%. The majority of respondents domicile in the Jabodetabek area (Jakarta-Bogor-Depok-Tangerang-Bekasi) with a total of 241 respondents or 51.16%. Occupying second place are respondents who live in Java outside of Jabodetabek with 141 respondents or 29.93%. Next, the majority of respondents amounting to 202 respondents or 42.88% are employees of the private sector. 94 respondents or 19.95% take care of household affairs and 77 respondents or 16.34% are students. The study of Putri et al. (2017) analyzes luxury beauty consumers and found that the majority of its consumers - respondents on the study who are students - have cosmetic expense per month of less than IDR 500,000 (64.58%); IDR 500,001-IDR 1,000,000 (30%); IDR 1,000,001-IDR 1,500,001 (5%). In their social media preference, Instagram occupies first place with 443 users in total or 32.38%, followed by Youtube with 237 users or 17.32% in second place. Lastly, the brand preferred by respondents is SKII which sits in first place with 136 respondents or 8.99% who buy its products. Overtaking in second place is Dior with 108 respondents or 7.14%, followed by Kiehls with 103 respondents or 6.18%.

In the outer model analysis, the researcher found that all variables in this study are reliable which could be seen in the value of composite reliability and a composite reliability value greater than 0.7. Next, it can be acknowledged that 45 indicators in this study have qualified the requirements for a minimum AVE value and outer loading value, both of which are greater than 0.50 which beckons all variables as valid.

In the inner model, data processing using a bootstrapping technique is done to analyze the significance value on every variable in this study, where a linking path could be considered as a significant influence if the value of T is greater than 1.645 and value of P is less than 0.05. The significance test of path coefficients in this study shows that: (1) The BE variable significantly influences all dimensions in CBBE and SMB variables with the exception of SMBCog, (2) The SMBCog, SMBHdn, and SMBPrs variables significantly impacts BE, CBBE, and SMB variables. This study also analyzes indirect effects on all study variables where its results are shown in detail in Table 2. This study's hypotheses are tested using a significance level of 0.05 and is classified as one-tailed, where hypotheses items are deemed as positive influence and significant if the value of T on linking path is greater 1.645. The SmartPLS application is used to process path coefficients in a structural model, the following table show the results of path diagram in this study:

This study highlights the strong influence of social media marketing on luxury beauty brands, particularly when it provides entertainment, interaction opportunities, trends, and customization options. These features significantly contribute to enhancing consumer loyalty, perceived quality, and brand awareness. The findings align with previous research, such as Godey et al. (2016) and Kim & Ko (2012), which emphasized the importance of social media activities in strengthening brand equity. Consumers who engage with these interactive and entertaining platforms are more likely to develop a positive perception of the brand. Therefore, social media plays a critical role in fostering stronger relationships between luxury beauty brands and their customers.

Hypotheses	Hypothesis Statement	T Val	Result
H1a	Social Media Marketing Activities felt by consumers	1.679	Data
	positively influences Brand Loyalty dimension in		supports
	Consumer-Based Brand Equity.		hypothesis
H1b	Social Media Marketing Activities felt by consumers	1.871	
	positively influences Perceived Quality dimension in		
	Consumer-Based Brand Equity.		
H1c	Social Media Marketing Activities felt by consumers	2.041	
	positively influences Brand Awareness/Association		
	dimension in Consumer-Based Brand Equity.		
H2a	Brand Experience mediates the relationship between	2.058	
	Social Media Marketing Activities perceived by		
	consumers with Brand Loyalty dimension in Brand		
H2b	Equity.	1.717	
HZD	Brand Experience mediates the relationship between	1./1/	
	social Media Marketing Activities perceived by consumers with Perceived Quality dimension in Brand		
	Equity.		
H2c	Brand Experience mediates the relationship between	1.921	
1120	Social Media Marketing Activities perceived by	1.721	
	consumers with Brand Awareness/Association		
	dimension in Brand Equity.		
H3.aI	Cognitive dimension in Social Media Benefits mediate	0.288	Data does not
	the relationship between Social Media Marketing		support
	Activities perceived by consumers with Brand Loyalty		hypothesis
	dimension in Brand Equity.		J F
H3.aII	Cognitive dimension in Social Media Benefits mediate	4.446	
	the relationship between Social Media Marketing		

#### Table 2. Hypotheses findings

H3. allI	Activities perceived by consumers with Perceived Quality dimension in Brand Equity. Cognitive dimension in Social Media Benefits mediate the relationship between Social Media Marketing Activities perceived by consumers with Brand	3.059	Data supports hypothesis
H3.bI	Awareness/Association dimension in Brand Equity. Social Integrative dimension in Social Media Benefits mediate the relationship between Social Media Marketing Activities perceived by consumers with Drand Levelty dimension in Brand Equity	1.589	Data does not support hypothesis
H3.bII	Brand Loyalty dimension in Brand Equity. Social Integrative dimension in Social Media Benefits mediate the relationship between Social Media Marketing Activities perceived by consumers with	1.783	Data supports hypothesis
H3. bIII	Perceived Quality dimension in Brand Equity. Social Integrative dimension in Social Media Benefits mediate the relationship between Social Media Marketing Activities perceived by consumers with Brand Awareness/Association dimension in Brand Equity.	0.500	Data does not support hypothesis
H3.cl	Personal Integrative dimension in Social Media Benefits mediate the relationship between social media marketing activities perceived by consumers with brand loyalty dimension in brand equity.	0.476	
H3.cII	Personal integrative dimension in Social Media Benefits mediate the relationship between Social Media Marketing Activities perceived by consumer with Perceived Quality dimension in Brand Equity.	2.815	Data supports hypothesis
H3. cIII	Personal Integrative dimension in Brand Equity Personal Integrative dimension in Social Media Benefits mediate the relationship between Social Media Marketing Activities perceived by consumers with Brand Awareness/Association dimension in Brand Equity.	2.200	
H3.dI	Hedonic dimension in Social Media Benefits mediate the relationship between Social Media Marketing Activities perceived by consumers with Brand Loyalty dimension in Brand Equity.	1.094	Data does not support hypothesis
H3.dII	Hedonic dimension in Social Media Benefits mediate the relationship between Social Media Marketing Activities perceived by consumers with Perceived Quality	4.446	Data supports hypothesis
H3. dIII	dimension in Brand Equity. Hedonic dimension in Social Media Benefits mediate the relationship between Social Media Marketing Activities perceived by consumers with Brand	2.613	
H4a	Awareness/Association dimension in Brand Equity. Social Media Marketing Activities felt by consumers positively influence Cognitive dimension in Social Media Benefits.	8.167	
H4b	Social Media Marketing Activities felt by consumers positively influence Social Integrative dimension in Social Media Benefits.	6.885	
H4c	Social Media Marketing Activities felt by consumers positively influence Personal Integrative dimension in Social Media Benefits.	8.813	
H4d	Social Media Marketing Activities felt by consumers positively influence Hedonic dimension in Social Media Benefits.	6.786	
Н5а	Brand Experience mediates the relationship between Social Media Marketing Activities perceived by consumers with Cognitive dimension in Social Media Benefits.	0.955	Data does not support hypothesis

H5b	Brand Experience mediates the relationship between Social Media Marketing Activities perceived by consumers with Social Integrative dimension in Social Media Benefits.	2.170	Data supports hypothesis
H5c	Brand Experience mediates the relationship between Social Media Marketing Activities perceived by consumers with Personal Integrative dimension in Social Media Benefits.	2.248	
H5d	Brand Experience mediates the relationship between Social Media Marketing Activities perceived by consumers with Hedonic dimension in Social Media Benefits.	2.127	

With positive experience felt by consumers, effective social media marketing activities can increase brand equity in consumers' minds. The study done by Koay et al. (2020) which examines the perception of social media marketing activities and consumer-based brand equity, asserted that positive consumer perception towards a brand's social media marketing activity can generate a prospect in forming experience and a positive internal subjective feedback (such as sensation, feelings, and cognition) towards the brand. Beig & Nika (2019) who examines brand experience and brand equity, found a direct and indirect effect present in the relationship between brand experience and consumer-based brand equity. This suggests that positive brand experience has a complimentary mediation effect that can bridge social media marketing activities and consumer-based brand equity.

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Hypothesis	Hypothesis Result
H1	All hypotheses valid – H1a H1b H1c
H2	All hypotheses valid – H2a H2b H2c
Н3	7 of 12 hypotheses valid – H3aII-aIII, H3bII, H3cII-cIII, H3dII-dIII
H4	All hypotheses valid – H4a H4b H4c H4d
Н5	3 of 4 hypotheses valid – H5b H5c H5d

The study findings reveal that online marketing activities that offer entertainment, interaction opportunities, Word-of-Mouth (WOM) sharing, a trendy impression, and customization options effectively enhance consumer participation in social media communities. These activities fulfill consumers' social, personal integrative, and hedonic needs, leading to greater engagement with the brand. However, despite these positive effects on participation, the study found that three of these dimensions – entertainment, interaction, and WOM – did not significantly improve consumer loyalty and brand awareness. This suggests that while consumers are more involved with the brand through these activities, it does not necessarily translate to a stronger connection or recognition of the brand. Consequently, the findings indicate that additional factors beyond these dimensions may be necessary to foster greater loyalty and brand awareness in consumers.

This is a result of a psychographic behavior of modern luxury shoppers who are the respondents in this study, which, (1) luxury goods shopping is usually impulsive or are intended for gift-giving – in a study by Deloitte (2017) about the cause of greater expense in millennials, 20.5% millennials buy high-end luxury goods for special occasions only, thus being a part of an online brand community in social media does not guarantee an increase in brand loyalty (Wintermeier, 2021), (2) a change in luxury consumers' preference, where consumers insist a brand to be 'woke' on current issues. Consumers are more concerned with the environment as well as social and political issues, thus they expect brands to show their stance in sustainability, racial, and gender issues, (3) purchase of luxury goods helps consumers to build a narrative of themselves relating to status, wealth, and personal quirks, where the purchase of luxury goods becomes a symbol that could lead consumers closer to

an ideal version of themselves. However, when a product could not bring consumers closer to an ideal version of themselves, consumers feel powerless of that narrative and become reluctant to repeat their interaction with the brand (Wintermeier, 2021), (4) millennials prefer to buy and consume products from luxury brands instead of directly participating in social media communities (Zollo et al., 2020) and such is related to different consumer behaviors in online and offline channels. Therefore, it can be concluded that social media marketing activities cannot stand alone in building consumer-based brand equity, where the role of brand experience in offline channels are necessary due to a strong influence in increasing brand equity. Moreover, the linking in this hypothesis is classified as no effect non-mediation.

This finding perpetuates that when online marketing activities done by the brand provides informational content related to its products and how-to – simultaneously providing entertainment, a tool to interact directly, and other social media marketing activity dimensions, consumers can directly gain cognitive gratifications that satisfy their curiosity and three other dimensions, therefore contributing in increasing perceived quality and awareness in the consumer's mind. Hence, marketers must understand the motivation or personal encouragement of consumers to get involved in online brand communities. The study of Choi et al. (2016) about the application of Uses and Gratification theory also supports the significance in this hypothesis, where findings showed that consumers are prompted to engage or get involved with a brand to reap gratifications and information about products and newly developed products. Thus, this hypothesis shows that social media benefits have a complimentary mediation effect on the relationship between social media marketing and consumer-based brand equity.

#### 4. Conclusions

This study is carried out by using Partial Least Squares – Structural Equation Modeling as data processing technique, using SmartPLS v.3.2.9 application with a total of 471 respondents aged 25-44 years old who domicile in Indonesia and are buyers and followers of luxury beauty brands' social media account. Modifications were done to the case subject and respondent criteria, where the researcher shifts the study context to the fast-moving consumer goods category – to luxury beauty brands and encloses respondents who are regular treaters of the luxury goods market, the age group of 25-44 years old. A significant difference towards the study method begets several study findings which makes this study different from the referred study (Zollo et al., 2020).

This study finds that social media marketing activities (SMMA) directly and indirectly, through consumer's experience towards the brand (BE), is able to influence consumerbased brand equity (CBBE) and its three dimensions which are loyalty to the brand (CBBE Loyal), perceived quality (CBBE Quality), and awareness of the brand (CBBE Awareness). Benefits or gratifications reaped through social media (SMB) is also found to be able to mediate the SMMA-CBBE relationship, where Cognitive (SMBCog), Social Integrative (SMBSoc), Personal Integrative (SMBPrs), and Hedonic (SMBHdn) dimensions mediate SMMA with the Perceived Quality dimension in CBBE, and three dimensions of SMB (SMBCog, SMBPrs, and SMBHdn) mediate SMMA with the Brand Awareness/Association dimension in CBBE. This study also shows that social media marketing activities (SMMA) directly influences benefits or gratifications in social media for consumers (SMB) and its four dimensions which are Cognitive (SMBCog), Social Integrative (SMBSoc), Personal Integrative (SMBPrs), and Hedonic (SMBHdn). Furthermore, consumers' experience towards the brand (BE) is found to be able to mediate the relationship between SMMA and the three dimensions of SMB; Social Integrative, Personal Integrative, and Hedonic.

This study has several limitations that should be acknowledged. Firstly, the research focuses solely on luxury beauty brands, which means that the findings may not be applicable to other sectors or industries. Additionally, the beauty industry encompasses a wide variety of product categories, which could further limit the generalizability of the results. Secondly,

the respondents in this study were not fully representative of different geographic locations, genders, or demographic backgrounds, which may impact the diversity of the findings. Lastly, this study is based on the work of Zollo et al. (2020) and did not alter their study model, but rather adapted it by changing the research context and the scope of respondents.

To enhance future research, several recommendations are suggested. Future studies could explore different contexts outside the beauty and fashion industries, particularly focusing on luxury goods in other categories. Specifically, research could delve deeper into distinct product categories within the beauty industry, such as skincare or cosmetics. It is also recommended to examine Generation Z respondents, as they are beginning to gain purchasing power and engage with luxury goods. Furthermore, future research should ensure a more varied frequency distribution of respondents across demographics. Following Zollo et al. (2020), future studies are encouraged to test their hypotheses using alternative methods, such as experimental designs, and to incorporate multi-group analysis to explore cross-generational or cross-cultural effects. Finally, researchers could expand the study model by incorporating other factors that may influence luxury goods purchasing behavior, such as social media usage, skepticism toward advertisements, or ethical consumption. Exploring the role of brand communities and how members perceive their connection to the brand could also offer valuable insights and provide a fresh perspective to the research model.

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The authors declare no conflict of interest.

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#### References

- Aaker. D. (1991). *Managing brand equity: Capitalizing on the value of a brand name*. The Free Press.
- Beierlein, J. G., Schneeberger, K. C., & Osburn, D. D. (2014). *Principles of agribusiness management*. Waveland Press, Inc.
- Beig. F. A., & Nika. F. A. (2019). Brand experience and brand equity. *Vision: The Journal of Business Perspective.* 23(4). 410-417. <u>https://doi.org/10.1177/0972262919860963</u>
- Berry. L. L. Carbone. L. P., & Haeckel. S. H. (2002). Managing the total customer experience. *MIT* Sloan Management Review. 43(3). 85–89. https://sloanreview.mit.edu/article/managing-the-total-customer-experience/
- Boru. T. (2018). Chapter Five Research Design And Methodology 5.1. Introduction Citation: Lelissa TB (2018); Research Methodology. (Doctoral thesis. University of South Africa. Pretoria. South Africa). <u>https://doi.org/10.13140/RG.2.2.21467.62242</u>
- Brakus. J. J.. Schmitt. B. H.. & Zarantonello. L. (2009). Brand experience: What is it? How is it measured? Does it affect loyalty?. *Journal of Marketing.* 73(3). 52-68. <u>https://doi.org/10.1509/jmkg.73.3.52</u>
- Buckle. C. (2019. March 05). The luxury market in 2019: Consumer trends and behaviors. https://blog.globalwebindex.com/chart-of-the-week/luxury-market-2019/
- Chen. S., & Lin. C. (2019). Understanding the effect of social media marketing activities: The mediation of social identification. perceived value. and satisfaction. *Technological Forecasting and Social Change.* 140. 22-32. https://doi.org/10.1016/j.techfore.2018.11.025
- Choi, E. K., Fowler, D., Goh, B., & Yuan, J. (2016). Social media marketing: applying the uses and gratifications theory in the hotel industry. *Journal of Hospitality Marketing & Management*, *25*(7), 771-796. <u>https://doi.org/10.1080/19368623.2016.1100102</u>
- Courtois. C.. Mechant. P.. De Marez. L. & Verleye. G. (2009). Gratifications and seeding behaviour of online adolescents. *Journal of Computer-Mediated Communication.* 15(1). 109-137. <u>https://doi.org/10.1111/j.1083-6101.2009.01496.x</u>
- Craik. J. (1993). The Face of Fashion: Cultural Studies in Fashion. Routledge.
- Creekmore. A. M. (1974). *Clothing related to body satisfaction and perceived peer self (Rep.)*. East Lansing. Michigan: Michigan State University. Agricultural Experiment Station.
- Deloitte. (2017). Bling it on. What makes a millennial spend more? <u>https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/consumer-</u> <u>business/deloitte-uk-young-luxury-shopper-2017.pdf</u>
- Degeratu, A. M., Rangaswamy, A., & Wu, J. (2000). Consumer choice behavior in online and traditional supermarkets: The effects of brand name, price, and other search attributes. *International Journal of Research in Marketing*, *17*(1), 55–78. <u>https://doi.org/10.1016/s0167-8116(00)00005-7</u>
- Dholakia. U. M.. Blazevic. V.. Wiertz. C.. & Algesheimer. R. (2009). Communal service delivery. *Journal of Service Research.* 12(2). 208-226. https://doi.org/10.1177/1094670509338618
- Díaz, A., Gómez, M., & Molina, A. (2017). A comparison of online and offline consumer behaviour: An empirical study on a cinema shopping context. *Journal of Retailing and Consumer Services, 38*, 44–50. <u>https://doi.org/10.1016/j.jretconser.2017.05.003</u>
- Doury, N. (2001). Successfully integrating cinemas into retail and leisure complexes: An operator's perspective. *Journal of Retail & Leisure Property*, *1*(2), 119–126. https://doi.org/10.1057/palgrave.rlp.5090113
- Farquhar. P. H.. Han. J. Y.. & Ijiri. Y. (1991). *Recognizing and measuring brand assets.* (Report No. 91–119). Marketing Science Institute.
- Gao. Q. & Feng. C. (2016). Branding with social media: user gratifications. usage patterns. and brand message content strategies. *Computers in Human Behavior.* 63(1). 868-890. https://doi.org/10.1016/j.chb.2016.06.022
- Godey. B. Manthiou. A. Pederzoli. D. Rokka. J. Aiello. G. Donvito. R. & Singh. R. (2016). Social media marketing efforts of luxury brands: Influence on brand equity and consumer

- behavior. *Journal of Business Research.* 69(12). 5833-5841. <u>https://doi.org/10.1016/j.jbusres.2016.04.181</u>
- Grewal, D., Iyer, G. R., & Levy, M. (2004). Internet retailing: enablers, limiters and market consequences. *Journal of Business Research*, *57*(7), 703–713. <u>https://doi.org/10.1016/s0148-2963(02)00348-x</u>
- Hamzah. Z. L. Syed Alwi. S. F. & Othman. M. N. (2014). Designing corporate brand experience in an online context: A qualitative insight. *Journal of Business Research*. 67(11). 2299-2310. <u>https://doi.org/10.1016/j.jbusres.2014.06.018</u>
- Heine. K. (2012). The Concept of Luxury Brands. http://upmarkit.com/sites/default/files/content/20130403 Heine The Concept of Luxury Brands.pdf
- Hollebeek, L. D., Glynn, M. S., & Brodie, R. J. (2014). Consumer brand engagement in social Media: Conceptualization. scale development and validation. *Journal of Interactive Marketing*. 28(2). 149-165. <u>https://doi.org/10.1016/j.intmar.2013.12.002</u>
- Kamakura. W. A. & Russell. G. J. (1991). *Measuring Consumer Perceptions of Brand Quality with Scanner Data: Implications for Brand Equity*. Report Number 91-122. Marketing Science Institute.
- Kamboj. S. (2020). Applying uses and gratifications theory to understand customer participation in social media brand communities. *Asia Pacific Journal of Marketing and Logistics.* 32(1). 205-231. <u>https://doi.org/10.1108/apjml-11-2017-0289</u>
- Kasztalska, A. (2017). THE ECONOMIC THEORY OF LUXURY GOODS. International Marketing and Management of Innovations: *International Scientific EJournal, 2*. www.IMMI.ath.bielsko.pl
- Keller. K. L. (1993). Conceptualizing. measuring. and managing customer-based brand equity. *Journal of Marketing.* 57(January). 1-22. https://doi.org/10.1177/002224299305700101
- Kemp. S. (2020. February 18). Hootsuite (We are Social): Indonesian Digital Report 2020 (Rep.). <u>https://datareportal.com/reports/digital-2020-indonesia</u>
- Kim. A. J., & Ko. E. (2012). Do social media marketing activities enhance customer equity? An empirical study of luxury fashion brand. *Journal of Business Research*. 65(10). 1480-1486. <u>https://doi.org/10.1016/j.jbusres.2011.10.014</u>
- Koay. K. Y., Ong. D. L., Khoo. K. L., & Yeoh. H. J. (2020). Perceived social media marketing activities and consumer-based brand equity. *Asia Pacific Journal of Marketing and Logistics*. 33(1). 53-72. <u>https://doi.org/10.1108/apjml-07-2019-0453</u>
- Lo. O. W. Y. & Leung. L. (2009). Effects of gratification-opportunities and gratificationsobtained on preferences of instant messaging and e-mail among college students. *Telematics and Informatics.* 26(2).156-166. <u>https://doi.org/10.1016/j.tele.2008.06.001</u>
- Malhotra. Naresh K. (2012). Marketing Research: An Applied Orientation. Prentice Hall.
- Manthiou. A., Chiang. L., & Tang. L. (2013). Identifying and responding to customer needs on Facebook fan pages. *International Journal of Technology and Human Interaction*. 9(3). 36-52. <u>https://doi.org/10.4018/jthi.2013070103</u>
- Maxwell. J. A. (1996). *Qualitative research design: An interactive approach*. In Applied social research methods series (Vol. 41). Sage Publications. Inc.
- Nambisan. S.. & Baron. R. A. (2009). Virtual customer environments: Testing a model of voluntary participation in value co-creation activities. *Journal of Product Innovation Management.* 26(4). 388-406. <u>https://doi.org/10.1111/j.1540-5885.2009.00667.x</u>
- Pappu. R.. Quester. P. G.. & Cooksey. R. W. (2005). Consumer-based brand equity: Improving the measurement–empirical evidence. *Journal of Product & Brand Management.* 14(3). 143–154. <u>https://doi.org/10.1108/10610420510601012</u>
- Park. N.. Kee. K. F. & Valenzuela. S. (2009). Being immersed in social networking environment: Facebook groups. uses and gratifications. and social outcomes. *Cyberpsychology & Behavior.* 12(6). 729-733. <u>https://doi.org/10.1089/cpb.2009.0003</u>
- Phan. M.. Thomas. R. & Heine. K. (2011). Social media and luxury brand management: the case of Burberry. *Journal of Global Fashion Marketing.* 2(4). 213-222. https://doi.org/10.1080/20932685.2011.10593099

- Pine. B. J.. & Gilmore. J. H. (1999). *The Experience Economy: Work Is Theatre and Every Business a Stage*. Cam-bridge. MA: Harvard Business School Press.
- Prahalad. C., & Ramaswamy. V. (2004). Co-creation experiences: The next practice in value creation. *Journal of Interactive Marketing*. 18(3). 5-14. <u>https://doi.org/10.1002/dir.20015</u>
- Putri, A., Persada, S. F., & Wibawa, B. M. (2017). Analisis Deskriptif dan Tabulasi Silang pada Konsumen Produk Kosmetik Kategori Merek Mewah: Studi Kasus 6 Universitas di Kota Surabaya. Jurnal Sains dan Seni ITS, 6, 260–264. http://ejurnal.its.ac.id/index.php/sains\_seni/article/viewFile/25662/4640
- Ruggiero. T.E. (2000). Uses and gratifications theory in the 21st century. *Mass Communication & Society.* 3(1). 3-37. https://doi.org/10.1207/S15327825MCS0301\_02
- Swinyard, W. R., & Smith, S. M. (2003). Why people (don't) shop online: A lifestyle study of the internet consumer. *Psychology and Marketing*, 20(7), 567–597. <u>https://doi.org/10.1002/mar.10087</u>
- Tsai. W. H. S., & Men. L. R. (2013). Motivations and antecedents of consumer engagement with brand pages on social networking sites. *Journal of Interactive Advertising*, *13*(2),76-87. <u>https://doi.org/10.1080/15252019.2013.826549</u>
- Uses and gratification theory. (2018. December 11). <u>https://www.communicationtheory.org/uses-and-gratification-theory/</u>
- Verhagen. T., Swen. E., Feldberg. F., & Merikivi. J. (2015). Benefitting from virtual customer environments: An empirical study of customer engagement. *Computers in Human Behavior.* 48, 340-357. <u>https://doi.org/10.1016/j.chb.2015.01.061</u>
- Vickers. J. S., & Renand. F. (2003). The marketing of luxury goods: An exploratory study Three conceptual dimensions. *The Marketing Review*. 3(4). 459- 478.
- Wang. S. Y. (2020. July 20). Mapping the effects of coronavirus on beauty and personal care in southeast asia. <u>https://blog.euromonitor.com/mapping-the-effects-of-coronavirus-on-beauty-and-personal-care-in-southeast-asia/</u>
- Wintermeier, N. (2021). Who is the Luxury Consumer? A Guide to the Psychology of Luxury. *Crobox*. <u>https://blog.crobox.com/article/luxury-consumer-psychology</u>
- WorldBank.(2020).Indonesia'sOverview.<a href="https://www.worldbank.org/en/country/indonesia/overview">https://www.worldbank.org/en/country/indonesia/overview</a>Overview.
- Yin. B., & Pryor. S. (2012). Beauty in the Age of Marketing. *Review of Business & Finance Case Studies*. 3(1). 119-132. 2012. https://srn.com/abstract=2094701
- Yoo. B.. & Donthu. N. (2001). Developing a scale to measure the perceived quality of an Internet shopping site (SITEQUAL). *Quarterly Journal of Electronic Commerce.* 2(1). 31– 45. <u>https://sites.hofstra.edu/boonghee-yoo/wp-</u> content/uploads/sites/32/2019/08/2001\_QIEC\_SITEQUAL.pdf

Zarantonello. L.. & Schmitt. B. H. (2010). Using the brand experience scale to profile consumers and predict consumer behaviour. *Journal of Brand Management.* 17(7). 532-540. https://doi.org/10.1057/bm.2010.4

Zollo. L., Filieri. R., Rialti. R., & Yoon. S. (2020). Unpacking the relationship between social media marketing and brand equity: The mediating role of consumers' benefits and experience. *Journal of Business Research*. 117. 256-267. <u>https://doi.org/10.1016/j.jbusres.2020.05.001</u>

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Appendix 1. Validity test

Item		AVE	BE	CBBE Awr	CBBELyl	CBBE Qual	SMBCog	SMBHdn	SMBPrsn	SMBSoc	SMMA
BE	BE1	0.500	0.531	0.379	0.204	0.336	0.398	0.114	0.245	0.194	0.342
	BE 10		0.748	0.318	0.477	0.181	0.247	0.442	0.450	0.432	0.449
	BE 11		0.656	0.044	0.336	0.008	0.060	0.483	0.346	0.382	0.340
	BE12		0.699	0.283	0.452	0.211	0.230	0.447	0.464	0.488	0.442
	BE2		0.392	0.462	0.225	0.409	0.391	0.120	0.279	0.232	0.291
	BE3		0.725	0.110	0.378	0.033	0.099	0.523	0.393	0.379	0.372
	BE4		0.676	0.390	0.332	0.278	0.344	0.362	0.414	0.440	0.380
	BE5		0.601	0.020	0.295	0.006	0.095	0.423	0.280	0.290	0.300
	BE6		0.768	0.356	0.467	0.270	0.263	0.461	0.438	0.457	0.439
	BE7		0.720	0.256	0.395	0.152	0.208	0.432	0.460	0.429	0.428
	BE8		0.718	0.330	0.384	0.278	0.251	0.375	0.405	0.428	0.437
	BE9		0.635	0.114	0.387	0.102	0.146	0.444	0.314	0.363	0.333
CB BE Lyl	CBBE1	0.719	0.462	0.404	0.847	0.292	0.221	0.366	0.362	0.387	0.374
	CBBE2		0.446	0.451	0.838	0.357	0.239	0.335	0.312	0.357	0.357
	CBBE3		0.527	0.361	0.858	0.260	0.264	0.437	0.405	0.429	0.420
CB BE Qual	CBBE4	0.742	0.247	0.560	0.315	0.845	0.299	0.126	0.269	0.209	0.315
	CBBE5		0.239	0.549	0.296	0.878	0.361	0.099	0.261	0.183	0.304
CB BE Awr	CBBE6	0.580	0.389	0.788	0.532	0.482	0.384	0.310	0.385	0.420	0.399
	CBBE7		0.223	0.734	0.273	0.503	0.268	0.118	0.231	0.191	0.254
	CBBE8		0.342	0.788	0.334	0.494	0.339	0.191	0.347	0.293	0.291
	CBBE9		0.193	0.734	0.256	0.490	0.337	0.114	0.247	0.224	0.323
SMB Hdn	SMB11	0.802	0.537	0.220	0.388	0.095	0.267	0.898	0.609	0.599	0.526
	SMB12		0.540	0.240	0.395	0.143	0.357	0.901	0.606	0.619	0.513
	SMB13		0.553	0.222	0.428	0.110	0.303	0.888	0.651	0.621	0.521
SMB Cog	SMB1	0.656	0.270	0.340	0.246	0.278	0.811	0.282	0.366	0.382	0.418
	SMB2		0.293	0.362	0.231	0.306	0.822	0.311	0.415	0.444	0.409
	SMB3		0.260	0.370	0.218	0.350	0.797	0.247	0.394	0.438	0.398
SMB Soc	SMB4	0.711	0.492	0.380	0.404	0.257	0.513	0.553	0.645	0.849	0.516
	SMB5		0.485	0.332	0.382	0.132	0.417	0.554	0.642	0.851	0.461
	SMB6		0.519	0.257	0.384	0.176	0.379	0.626	0.639	0.829	0.504
SMB Prsn	SMB7	0.625	0.437	0.241	0.270	0.193	0.364	0.573	0.794	0.664	0.507
	SMB8		0.516	0.300	0.363	0.210	0.386	0.644	0.826	0.694	0.540
	SMB9		0.401	0.369	0.352	0.266	0.377	0.460	0.744	0.515	0.453
	SMB10			0.368	0.354	0.293	0.398	0.519	0.795	0.541	0.501

SMMA	SMM1	0.500	0.246	0.306	0.240	0.325	0.304	0.213	0.281	0.206	0.579	
	SMM10		0.430	0.338	0.328	0.280	0.364	0.395	0.506	0.447	0.717	
	SMM11		0.491	0.169	0.360	0.072	0.202	0.549	0.528	0.460	0.675	
	SMM2		0.285	0.333	0.205	0.355	0.368	0.221	0.284	0.235	0.567	
	SMM3		0.391	0.250	0.298	0.199	0.356	0.351	0.384	0.416	0.659	
	SMM4		0.359	0.210	0.315	0.147	0.361	0.479	0.417	0.481	0.668	
	SMM5		0.398	0.223	0.309	0.150	0.328	0.520	0.462	0.463	0.690	
	SMM6		0.265	0.367	0.200	0.320	0.414	0.142	0.290	0.258	0.570	
	SMM7		0.443	0.342	0.296	0.297	0.290	0.393	0.491	0.397	0.660	
	SMM8		0.447	0.295	0.357	0.266	0.360	0.404	0.428	0.403	0.713	
	SMM9		0.441	0.292	0.347	0.275	0.360	0.440	0.458	0.412	0.746	_