



# Can social media influencer (SMI) power influence consumer brand attitudes? The mediating role of perceived SMI credibility

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## ARTICLE INFO

### Article history:

Received 22 September 2020

Received in revised form 12 February 2021

Accepted 24 March 2021

Editor: Aijaz A. Shaikh

### Keywords:

Influencer marketing

Instagram

Perceived social media influencer expertise

Perceived social media influencer trustworthiness

Brand attitudes

## ABSTRACT

Social media usage is pervasive, and brands must manage this channel carefully in order to meet their strategic goals. The role of social media influencers (SMI) is progressively becoming crucial for shaping consumer brand attitudes toward the firms' offerings. The purpose of this study is to empirically examine how SMIs can help brands build favorable brand attitudes and thus improve product acceptance and downstream business performance. Building upon naïve theory, consumer socialization theory and market signaling theory, we suggest that SMI power and SMI perceived source credibility are crucial in influencing consumer attitudes toward the brand. Using rich survey data from 231 U.S. social media users on Instagram the research employs confirmatory factor analysis (CFA) to assess the psychometric properties of the measures and path analysis to test the proposed hypotheses. Results indicate that while SMI power is positively related to consumer attitudes toward the brand and perceived SMI expertise and trustworthiness partially mediate that relationship. This study contributes to extant literature by demonstrating that SMIs' role in shaping consumer attitudes toward the brand is a multilevel function of SMI power, partially mediated through SMI expertise and trustworthiness. Therefore, it is incumbent on brands to pay close attention to their SMI promotional channel.

## 1. Introduction

As of July 2020, there were 3.8 billion people actively using social media worldwide, an increase of 35.7% over the past three years (Digital, 2020). As a business, such platforms are experiencing significant growth as well: for example, Instagram reported \$20 billion in ad revenue in 2019 (Frier & Grant, 2020). According to Hootsuite, the platform reached over 112.5 million active users by 2020 (a 5.4% increase over 2019), and is predicted to grow to at least 117.2 million in 2021 in the U.S. alone (Hootsuite, 2019). It is not surprising, then, that the popularity of social media personalities, or influencers, has also exploded: Social Media Influencers (SMI) are third party endorsers that attempt to shape consumer attitudes toward a brand (Freberg, Graham, McGaughey, & Freberg, 2011). According to Connolly (2017), a SMI is an expert in their field, has more than 10,000 followers, and actively shares information about products and engages with brands to help promote them. The content they share, apart from their product endorsements, in turn engenders followers' loyalty. This direct line of communication empowers influencers to generate social conversations, drive engagement, and ultimately set trends amongst what is usually a receptive and socially savvy audience (Mediakix, 2021). Research from Nielsen, Carat, and YouTube shows that collaborating with a YouTube influencer can give a brand four times more lift in brand familiarity than collaborating with a celebrity (Newberry, 2018).

Influencer marketing is on the rise and its market size worldwide more than tripled between 2017 and 2020, from three billion to 9.7 billion U.S. dollars in the three years alone (Statista, 2021a, 2021b). Global Instagram influencer market size alone grew from 1.3 billion U.S. dollars in 2018 to nearly twice that amount by 2020 (Statista, 2021a, 2021b). Influencers can be found virtually across all industries: from electronic gaming (Jian, Hua, & Parviainen, 2020) to cosmetics. Instagram alone accounts for over 500,000 active influencers with more than 15,000 followers, which constitutes 39% of all Instagram accounts. Among this group of active influencers, 81% have followings between 15,000 and 100,000 users (Droesch, 2019). Despite the impressive growth in overall social media usage, as well as that of SMIs in particular, academic and practitioner research has been relatively silent on the implications of the role of a SMI in shaping consumer brand attitudes, as well as the mechanisms behind their impact. This study follows the call of previous research and attempts to provide a "better understanding of what drives the success of influencer marketing" (Hughes, Swaminathan, & Brooks, 2019; Nafees, Cook, & Stoddard, 2020) in terms of their influence in shaping consumer brand attitudes. More specifically, this research attempts to answer the following questions: (1) what is the role of SMI power in influencing their followers' (consumer) attitudes toward the brand they promote, and (2) what role does perceived SMI credibility have in the relationship?

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Influencer marketing is relatively inexpensive when compared to the cost of creating banner ads, television ads, outdoor ads, etc. which are always an investment layer on top of the media spend (Ahmad, 2018; Bevilacqua, 2018). Furthermore, studies show that the perceived usefulness, persuasive intent, and the elicited consumer emotions, all affect consumer attitudes toward the featured brand (Wang & Jones, 2017). According to Statista (2019), the number of brand-sponsored influencer posts on Instagram has increased by 187.5% since 2017. At the same time, the effectiveness of SMIs in terms of consumers' post engagement is still low (Feehan, 2018). Therefore, it appears that there are still considerable gaps in terms of the academic and practitioner understanding of what characteristics of SMIs impact their followers' brand attitude. This research unifies several theoretical approaches on power and credibility and attempts to shed more detailed light on the role of SMI power and perceived source credibility. In doing so, the research highlights the crucial role which perceived SMI credibility, as well as its components, play in the relationship between SMI power and consumer brand attitudes.

In order to accomplish the above, this study empirically tests a conceptual model examining the effect of SMI power to influence consumer attitudes toward the promoted brand(s). Using rich survey data from 231 U.S. social media users on Instagram the research employs confirmatory factor analysis (CFA) to access the psychometric properties of the measures and path analysis to test the proposed hypotheses. The study is among the first wave of research to deeply integrate the construct of perceived SMI credibility in studying the overall impact of SMIs on consumer attitudinal measures. The paper continues with a review of extant literature and theoretical development, explication of the research method, a discussion of the results and ends with conclusions, limitations and directions for future research. In the next section, a discussion of prior research on the relationship between SMI and consumer behavior as well as the theoretical framework for this study is presented.

## 2. Literature review and theoretical development

The study builds on three interrelated theories - naïve theories in the context of social influence (Briñol, Rucker, & Petty, 2015; Cialdini, 2009), consumer socialization theory (Moschis & Churchill Jr., 1978) and market signaling theory (Spence, 1973). These have been proposed to explain the impact of SMI power on consumer attitudes toward the brand. The impact of SMI power on consumer brand attitudes is conceived of as the power of the influencer to increase the likelihood that a consumer will purchase a brand endorsed by the SMI. The following subsections describe these theories and review the theoretical literature within a marketing context.

### 2.1. Naïve theories in the context of social influence

Past research, as well as practitioner evidence suggests that SMI power is expected to have an impact on consumer attitudes in general. This attitude can be either positive or negative depending on how consumers perceive and interpret the influence of the SMI. For example: some consumers like an influencer-endorsed brand on Instagram because the influencer has a significant following (i.e., the influencer is popular) whereas others will dislike the brand for the same reason (the influencer is not unique). The two seem contradictory and are explained by the naïve theories of popularity and exclusivity. The naïve theory of popularity is the belief that a product (or a SMI) is desirable when it is popular. The naïve theory of exclusivity is the idea that some products are desirable when they are unique. This phenomenon is similar to the "bandwagon" and "snob" effects (e.g. Cialdini, 2009; Cialdini & Goldstein, 2004; Corneo & Jeanne, 1997; Deval, Mantel, Kardes, & Posavac, 2013; Hellöfs & Jacobson, 1999). Naïve theories are defined as informal, common sense explanations that people use in their everyday lives to make sense of their environment, often diverging from formal, scientific explanation of what happens in day-to-day life (Deval et al., 2013).

Consumers rarely have complete information regarding products about which they form judgements and so, use a variety of inferential strategies to

fill the gaps in their product knowledge prior to making decisions (Gunasti & Ross, 2009; Kardes, Posavac, & Cronley, 2004). Research suggests that similarly, consumers perceive SMIs and their various characteristics as sources of inference on which to draw conclusions about the SMIs themselves, or the brand(s) they promote.

### 2.2. Consumer socialization theory

Under consumer socialization theory, a SMI can be viewed as a "socialization agent," or a source of influence that transmits norms, attitudes, motivations, and behaviors to the consumer (Moschis & Churchill Jr., 1978). Accordingly, consumers acquire cognitions and behaviors from the socialization agent through three related processes: (1) modeling, (2) reinforcement, and (3) social interaction.

The notion is that a SMI acts as a computer-mediated socialization agent. As a result, consumers who follow a SMI are predisposed to acquire the norms, attitude, motivations, and behaviors of the SMI. Often, consumers mimic the SMI's behavior and attitude, and

are encouraged to behave in ways consistent with the SMI being followed, as they are educated by the SMI about the product and its use.

### 2.3. Market signaling theory

Drawing from the economics of information paradigm, Spence (1973) was the first to discuss signaling theory. The theory is relevant when asymmetric information exists between two parties such as sellers who have relatively more information about their products and buyers who have relatively less information about the seller's products. Information asymmetry is likely to exist during the purchasing process for experience or credence goods. For example, with experience goods buyers have difficulty assessing the quality of a product in the pre-purchase decision making stage. Examples include hotels, movies, and restaurants. With credence goods buyers not only have difficulty assessing the quality of a product in the pre-purchase decision making stage but also in the post-purchase stage. Examples include health care, automobile repair, and legal services (Benz, 2007).

Bloom and Reve (1990) defined a marketing signal as "...a marketer-controlled, easy-to-acquire informational cue, extrinsic to the product itself that consumers use to form inferences about the quality or value of that product p. 59." This definition implies that a marketing signal is a piece of information that a consumer can search out and process with minimal effort. They include warranties, the amount of advertising done for a product, the market position or size of the organization, the type of atmosphere where the product is sold, the size and uniqueness of a trade show, the manner in which customer contact personnel dress and speak, endorsers of a product, and symbolic gestures such as when organizations provide low cost favors as tokens of appreciation. Finally, price is another marketing signal (Bagwell & Riordan, 1991; Herbig & Milewicz, 1996).

The effectiveness of a marketing signal is determined to a large degree by the signaler's reputation and credibility (Herbig & Milewicz, 1996). A signaler that is reputable and credible has goodwill and increases the effectiveness of the marketing signal. According to Herbig and Milewicz (1996), a signaler's good reputation can positively impact a buyer's perception of the promoted product's quality. This investigation follows the aforementioned line of reasoning and suggests that a SMI builds credibility over time, as SMI's develop goodwill, expertise, and trustworthiness, and attract more followers through audience engagement. Therefore, a product endorsement can be perceived as a marketing signal, which is then interpreted by the SMI's followers, partially by taking into account the SMI's credibility.

### 2.4. The mechanisms by which the SMI affects consumer brand attitudes

Based on the above discussion of the naïve theory of social influence, consumer socialization theory and market signaling theory, increasing

SMI power is likely to result in more positive attitudes of consumers toward the endorsed brand. This may be because, as SMI power increases, consumers are likely to transfer SMI personal characteristics onto the promoted brand(s). Relatedly, an influential SMI's role as a socialization agent could predispose consumers to acquire some or all of their norms, attitudes, motivations, and behaviors, including the SMI's favorability toward the promoted brand(s). Finally, powerful SMIs' brand promotion(s) may serve as marketing signals: in essence, shortcuts that consumers are likely to use in order to process information about the promoted product with minimal effort.

**H1.** SMI power is positively related to consumer attitudes toward the brand.

Although the main relationship expectation is that perceived SMI power will be positively related to consumer attitudes toward the brand, previous research has demonstrated that perceived SMI credibility may impact the extent to which SMI power will result in changes to consumer attitudes toward the brand (Birnbaum & Stegner, 1979; Jin & Phua, 2014; Whitehead Jr., 1968), resulting in a mediated relationship.

#### 2.4.1. Perceived SMI credibility

As Herbig and Milewicz (1996) suggest, source credibility is one factor that determines the effectiveness of a marketing signal. Perceived source credibility has been defined as "judgements made by a perceiver... concerning the believability of a communicator (O'Keefe, 2002, p. 181)." Ohanian (1990) defined source credibility as "...a communicator's positive characteristics that affect the receiver's acceptance of a message (p. 41)." Commonly, perceived source credibility is conceptualized as a three dimensional construct which includes (1) expertise – the degree to which the perceiver believes the source to know the truth, (2) goodwill – the degree to which the perceiver believes a source has the perceiver's best interests at heart, and (3) trustworthiness – the degree to which a perceiver believes the source will tell the truth as s/he knows it (Jiménez-Castillo & Sánchez-Fernández, 2019; McCroskey & Teven, 1999; McLaughlin, 2016; Westerman, Spence, & Heide, 2011). In effect, brands leverage the perceived source credibility as a less institutionalized, thus more trustworthy outside source of product information (Kolo & Haumer, 2018). Next, the investigation discusses the three dimensional constructs that make up perceived SMI credibility.

**2.4.1.1. Perceived SMI expertise.** Expertise refers to the extent to which a speaker is perceived as capable of making correct assertions (Hoveland, Janis, & Kelley, 1953). Herron (1997) found that the quality of arguments affected persuasion only when the source had high expertise. Chebat, Filiatrault, Laroché, and Watson (1988) found that a low-expertise source was more persuasive than was a high-expertise source when participants had a favorable initial opinion toward the [object of] advocacy. Homer and Kahle (1990) found that under high-involvement, the high-expertise source was superior to the low-expertise source, but in a low-involvement condition, a high-expertise source was less influential than a low-expertise source. Following the above line of reasoning, this study suggests that the perceived source expertise of the SMI could mediate the relationship between SMI power and consumer attitudes toward the brand for the following reasons; first, as a SMI's power is constructed over time due to their continued audience engagement, they are likely to develop an increasing amount of expertise with their followers. Second, as consumers rely on SMIs to act as sources of brand information, they are likely to model the SMI's attitude toward the promoted brands, effectively resulting in increased perception of SMI expertise with the audience. Finally, as the SMI's power increases, the value of the SMI's marketing signal increases, likely due to the increase in perceived expertise achieved.

**H<sub>2</sub>.** Perceived SMI expertise mediates the relationship between SMI power and consumer attitudes toward the brand.

**2.4.1.2. Perceived SMI goodwill.** Hoveland et al. (1953) identified that source credibility was related to the source's perceived goodwill, which they referred to as the source's intention toward the receiver (McCroskey and Young (1981). McCroskey and Young (1981) identified goodwill as the source's "...attitude toward the well-being of the receiver (p. 25)."

McCroskey and Teven (1999) introduced a concept they called perceived caring, also termed goodwill, and proposed that it was composed of three elements: understanding, empathy and responsiveness. According to McCroskey and Teven (1999), understanding is knowing another individual's ideas, needs and feelings. Empathy is the ability of an individual to identify with another individual's feelings. Finally, responsiveness is one individual's attentiveness to another individual's communication. Based upon the former literature this research proposes that perceived SMI (source) goodwill will mediate the relationship between SMI power and consumer attitudes toward the brand because as a SMI's power is developed over time due to their continued audience engagement, they are likely to accumulate goodwill with their followers. Second, as consumers rely on SMIs to act as sources of brand information, who over time prove that they care about the audience and have their best interest at heart, effectively resulting in increased perception of SMI goodwill with the audience. Finally, as the SMI's power increases, possibly due to the accumulating perceived SMI goodwill, the value of the SMI's marketing signal increases.

**H<sub>3</sub>.** Perceived SMI goodwill mediates the relationship between SMI power and consumer attitudes toward the brand.

**2.4.1.3. Perceived SMI trustworthiness.** Hoveland et al. (1953) conceived of source credibility being related to the source's trustworthiness. They defined trustworthiness as "the degree of confidence in the communicator's intent to communicate the assertions...considered most valid (p. 21)." McGinnies and Ward (1980) found that trustworthiness was more impactful than expertise.

However, other studies have tended to show that trustworthiness alone may not be enough or maybe less important than expertise (Kelman & Hovland, 1953; Hovland & Weiss, 1951). Based upon the preceding literature this research proposes that perceived SMI trustworthiness will mediate the relationship between SMI power and consumer attitudes toward the brand. This relationship could be explained by the increase in SMI power that results from a sustained audience engagement which instills confidence in consumers about the trustworthiness of the SMI. The audience in this process is likely to extend the trustworthiness of the SMI to the brand they are promoting, thus mimicking the SMI's positive attitudes toward the brand.

**H<sub>4</sub>.** Perceived SMI trustworthiness mediates the relationship between SMI power and consumer attitudes toward the brand

It should be noted that slightly alternative formulations of source credibility have been proposed. For example, Lou and Yuan (2019) proposed that source credibility consists of three dimensions, expertise, trustworthiness, and attractiveness. Here, attractiveness has been regarded as being physical attractiveness or likeability. Furthermore, Munnukka, Uusitalo, and Toivonen (2016) proposed that source credibility was a four-dimensional construct composed of trustworthiness, expertise, similarity and attractiveness. Similarity referred to perceived likeness along demographic or ideological grounds of the source (SMI) and the receiver (consumer). Despite these slightly different variants, this paper follows the more traditional formulation of source credibility consisting of expertise, goodwill and trustworthiness.

McCroskey and Teven (1999) developed measurement scales for expertise, goodwill and trustworthiness, which are shown in Table 1. In this study, the entire scale taken together was conceptualized as the measure



**Table 1**

Measures of expertise, goodwill and trustworthiness as indicators of perceived source credibility.

Expertise ( $\alpha = .85$ )		
Intelligent	1 2 3 4 5 6 7	Unintelligent
Untrained	1 2 3 4 5 6 7	Trained
Inexpert	1 2 3 4 5 6 7	Expert
Informed	1 2 3 4 5 6 7	Uninformed
Incompetent	1 2 3 4 5 6 7	Competent
Goodwill ( $\alpha = .92$ )		
Cares About Me	1 2 3 4 5 6 7	Doesn't Care About Me
Has My Interest at Heart	1 2 3 4 5 6 7	Doesn't Have My Interest at Heart
Self-Centered	1 2 3 4 5 6 7	Not Self-Centered
Concerned With Me	1 2 3 4 5 6 7	Unconcerned With Me
Insensitive	1 2 3 4 5 6 7	Sensitive
Not Understanding	1 2 3 4 5 6 7	Understanding
Trustworthiness ( $\alpha = .92$ )		
Honest	1 2 3 4 5 6 7	Dishonest
Untrustworthy	1 2 3 4 5 6 7	Trustworthy
Honorable	1 2 3 4 5 6 7	Dishonorable
Moral	1 2 3 4 5 6 7	Immoral
Unethical	1 2 3 4 5 6 7	Ethical
Phoney	1 2 3 4 5 6 7	Genuine

Instructions: Please indicate your impression of the person noted below by circling the appropriate number between the pairs of adjectives below. The closer the number is to an adjective, the more certain you are of your evaluation.

Adopted from McCroskey and Teven (1999)

Whole scale  $\alpha = .94$

of perceived SMI (source) credibility. The correlations between the perceived SMI credibility score and three dimensions in the McCroskey and Teven (1999) study were: Expertise, .78; Goodwill, .89; and Trustworthiness, .92 demonstrating convergent validity. The reliability scores are in Table 1.

In developing the conceptual model, consideration must be given as to whether SMI source credibility acts as a mediator or moderator between SMI power and consumer attitudes toward the brand. According to Muller, Judd, and Yzerbyt (2005):

*“Both processes [mediation/moderation] focus on a given treatment effect, [in this case the effect of a SMI's power to alter a consumer's attitude toward a brand]. The issue of mediation addresses how that treatment effect is produced. Mediation analyses attempt to identify the intermediary process that leads from the manipulated independent variable to the outcome or dependent variable. The issue of moderation focuses on factors that influence the strength and/or direction of the relation between the treatment variable and the dependent variable (p. 852).”*

Holmbeck (1997) asserts that a mediator variable is one that specifies the mechanism by which the independent variable impacts the dependent variable. This paper suggests that perceived SMI credibility is an integral part of the process by which the SMI power can influence the brand attitudes of consumers. However, it is also possible that perceived SMI credibility could moderate the relationship between SMI power and consumer brand attitudes. If perceived SMI credibility moderates the relationship between SMI power and consumer brand attitudes, the expectation would be that the effect would diminish the impact of SMI power on consumer attitudes toward the brand when perceived SMI credibility is low.

Finally, perceived SMI credibility could also both mediate and moderate the relationship between perceived SMI power and consumer brand attitudes if perceived SMI credibility acts as a partial mediation variable. As Zhao, Lynch Jr., and Chen (2010) note, most articles examining mediation effects conclude that the impact of the mediator is only partial and is accompanied by a direct effect. If perceived SMI credibility is only a partial mediational variable, and a significant direct effect between SMI power and consumer brand attitudes remain after accounting for perceived SMI credibility, then perceived SMI credibility could also moderate the direct effect and act as a mediator/moderator variable. Since the main purpose of this study is to test for the mediational relationships of perceived SMI expertise,

perceived SMI goodwill and perceived SMI trustworthiness, we do not formally specify moderation relationships. However, from an exploratory perspective the research tested for the moderation between perceived SMI power and consumer attitudes toward the brand by the three dimensions of perceived SMI credibility (expertise, goodwill and trustworthiness).

Based on the previous discussion the conceptual model is advanced (see Fig. 1).

In the next section we present the research methods and explain data collection, measures and hypotheses.

### 3. Research method

#### 3.1. Data collection and descriptive statistics

The data were collected by Qualtrics using a panel of actual U.S.-based Instagram app users. In all, 231 complete observations were obtained. The respondents varied in age from a minimum of 16 to a maximum of 78 (mean = 38, standard deviation = 16). Most of the respondents were female (male = 16%, female = 84%). The educational attainment level for the sample included 41.1% high school, 22.1% two-year degree or technical education, 24.2% Bachelor's degree, 11.8% Master's degree and 0.9% Doctoral degree.

#### 3.2. Measures

The main model constructs included Instagram SMI power (the independent variable), perceived SMI credibility comprising of perceived SMI expertise, perceived SMI goodwill and perceived SMI trustworthiness (the mediating three dimensional variable) and consumer attitudes toward the brand (the dependent variable). Instagram SMI power was measured using a single item scale asking respondents how likely they were to buy a brand used/endorsed by the Instagram SMI they followed anchored by (1) extremely likely and (5) extremely unlikely (mean = 2.10, sd = .963), 31.2% responded extremely likely, 35.5% somewhat likely, 27.3% neither likely nor unlikely, 3.9%, somewhat unlikely, and 2.2% extremely unlikely.

Following Spears and Singh (2004), consumer attitudes toward a brand was measured by a 5-item scale asking respondents to think about a brand that an Instagram influencer used/endorsed. Then respondents were asked the extent to which they agreed with a series of statements: The Instagram influencer makes the brand appealing/unappealing, good/bad, pleasant/unpleasant, favorable/unfavorable, and likeable/unlikeable on a seven-point scale. Any scale item which was reverse coded, was recoded before actual analysis began.

Next, a confirmatory factor analysis (CFA) was conducted to test for reliability and validity of the consumer attitudes toward the brand construct. Results from the CFA are shown in Table 2. The results demonstrate convergent validity as all standardized regression coefficients are large and significant and the model fit is adequate. The scale composite reliability was computed to be .87.

The perceived SMI source credibility construct consisting of perceived SMI expertise, perceived SMI goodwill and perceived SMI trustworthiness was subjected to CFA to verify its psychometric properties. The results from running the initial model are shown in Fig. 2.

The null hypothesis was that there would be no difference between the theoretical perceived SMI credibility model and the data. That is, the parameter estimates would be strong, and the model would fit the data. As is shown in Fig. 2 and Table 3, the model parameter estimates were strong and statistically significant (that is they do not equal zero). Since all factor loadings were significant, the indicators were good measures of the factors demonstrating convergent validity. The composite reliability for expertise, goodwill and trustworthiness was .89, .88 and .95, respectively.

However, the model fit indexes suggested that the model might be modified ( $\chi^2/df = 3.156$ , RMR = .055, NFI = .874, CFI = .909, RMSEA = .097). Examination of the modification indexes suggested that correlations between some of the indicator errors could improve the model fit. Brown

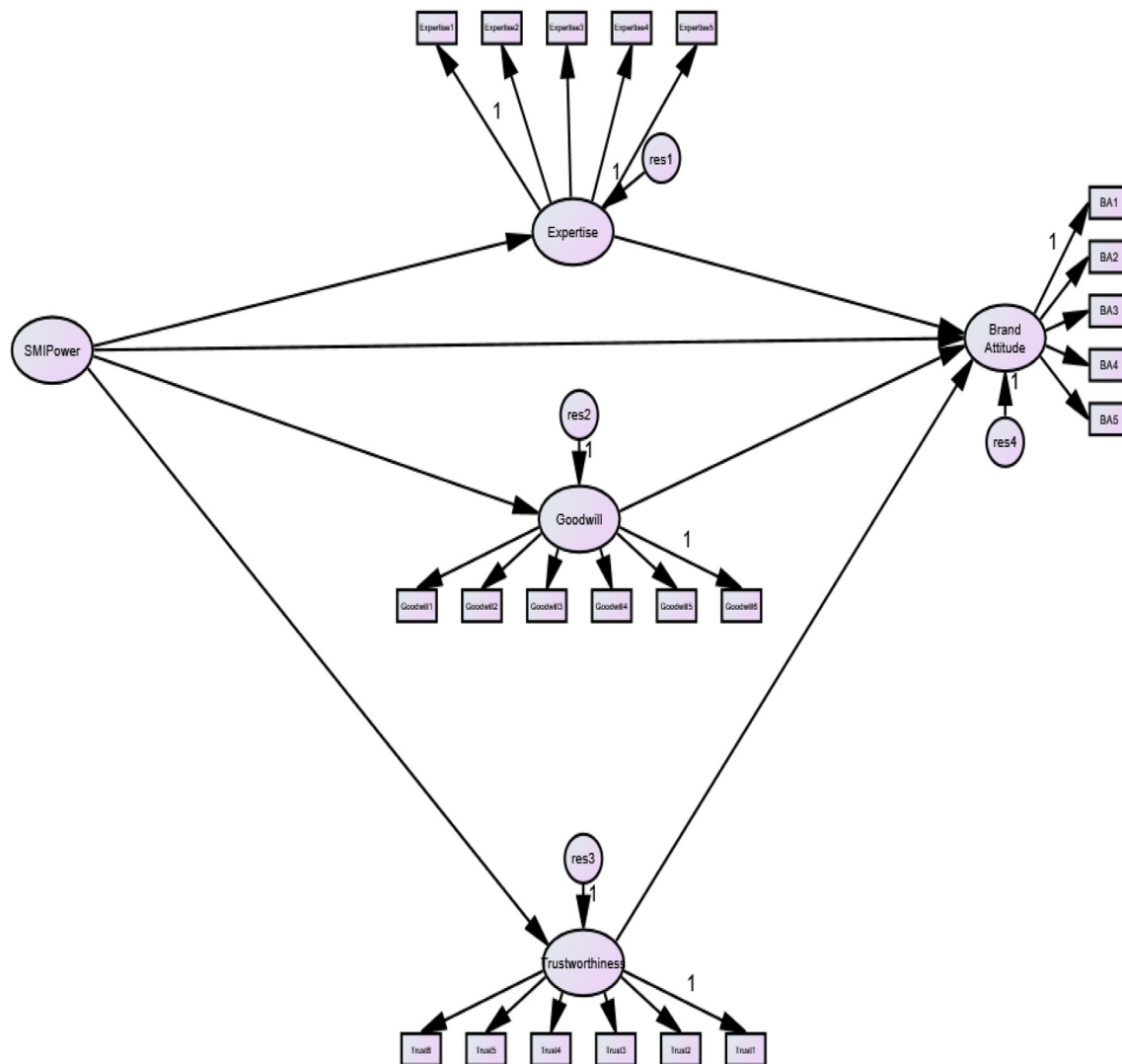


Fig. 1. Initial Conceptual Model.

(2003, 2015) has discussed correlated error variances in CFA models. Brown asserts that, compared to exploratory factor analysis' identification requirements that factor models must be specified where all measurement error is assumed to be random, CFA allows for the modeling of correlated measurement error. Correlated measurement errors can be justified based on source or method effects such as questionnaires that have reversed or similarly worded items. Lei and Wu (2007) also used a correlated error measurement model to improve model fit asserting that while the

relationships between the latent variables and indicators were significant, the indicators were not fully explained by the latent variables.

Four error correlations were added to the model to improve model fit. Within the goodwill construct these correlations were between: "cares/doesn't care about me" and "concerned/unconcerned with me" as well as: "has/doesn't have my interest at heart" and "sensitive/insensitive." Within the trustworthiness construct, the correlations were between: "moral/immoral" and "ethical/unethical" as well as: "ethical/unethical" and "genuine/phony." These are similarly worded items and therefore correlated measurement errors were justified (see Table 4).

The model fit improved ( $\chi^2/\text{df} = 2.456$ , RMR = .048, NFI = .905, CFI = .941, RMSEA = .080), suggesting an adequate model fit. A  $\chi^2$  difference test was conducted to test the null hypothesis that the model fit did not improve by adding correlated error terms ( $\chi^2$  difference = 91.04,  $\text{df difference} = 4$ ,  $p = 0.00$ ) rejecting the null hypothesis.

In summary, the results from the CFA provide support for the psychometric properties of the perceived SMI credibility construct. All parameter estimates were significantly different from zero demonstrating convergent validity and the three composite reliabilities were acceptable.

**Table 2**  
Maximum Likelihood Estimates for the Initial Attitude Measurement Model.

Indicator variable	Regression weight	Standard error	Critical ratio	P Value	Standardized weight
Appealing	1.000				.845
Look Good	.993	.060	16.462	<.001	.867
Pleasant	.938	.062	15.223	<.001	.825
Favorable	.938	.062	15.077	<.001	.820
Likable	.930	.063	14.750	<.001	.809

$\chi^2/\text{df} = 4.674$ , RMR = .016, NFI = .971, CFI = .977, RMSEA = .126

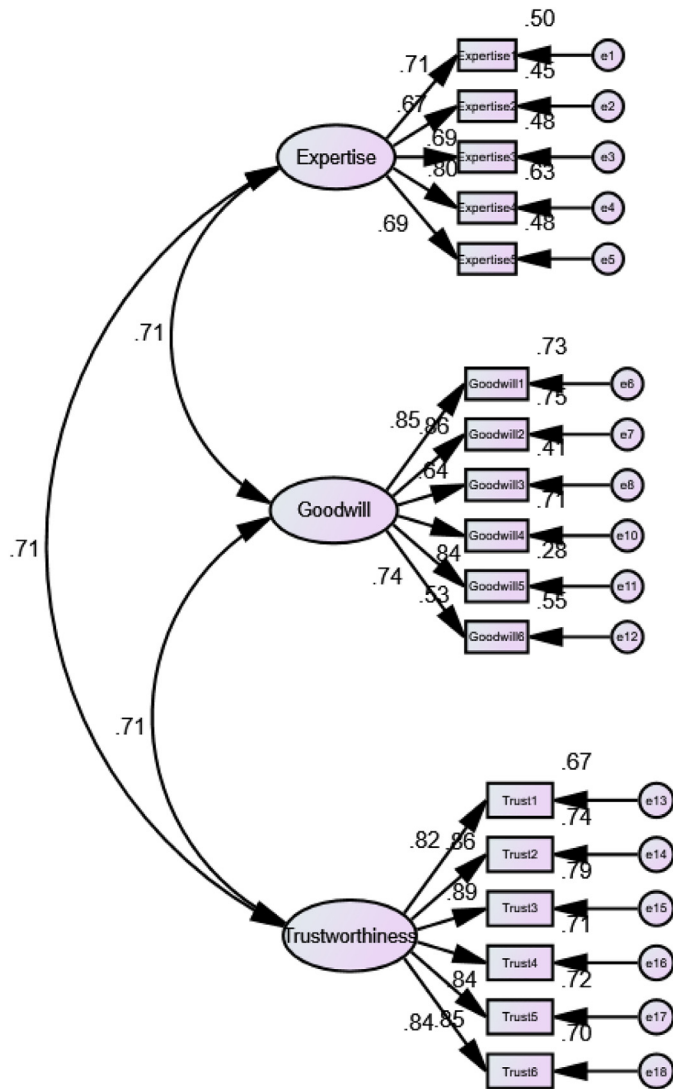


Fig. 2. Results from the Initial SMI Source Credibility Model.

Next, an attempt was made to establish that Perceived SMI expertise, goodwill and trustworthiness were separate but related latent variables within the perceived SMI credibility construct, an average variance extracted (AVE) calculation was made and the [Fornell and Larcker \(1981\)](#) criterion was applied where:

$$AVE = \frac{\sum_{i=1}^k \lambda_i^2}{\sum_{i=1}^k \lambda_i^2 + \sum_{i=1}^k Var(e_i)}$$

Here,  $k$  is the number of items,  $\lambda_i$  is the factor loading of item  $i$  and  $Var(e_i)$  is the variance of the error term  $i$ .

According to [Fornell and Larcker \(1981\)](#) if the average variance extracted "...is less than

.50, the variance due to measurement error is larger than the variance captured by the construct and the validity of the individual indicators and the construct is questionable (p. 46)." This expectation was not met as the AVEs for perceived SMI expertise was .6152, goodwill was .8817 and trustworthiness was .7636, which was larger than the variance due to measurement error. Furthermore, discriminant validity between perceived SMI expertise, goodwill and trustworthiness was established since the squared correlations between the variables were less than the AVE for each latent variable ( $r^2$  for perceived SMI expertise and goodwill = .50, perceived

Table 3

Maximum Likelihood Estimates for the Initial Source Credibility Measurement Model.

Indicator variable	Regression weight	Standard error	critical ratio	P value	Standardized weight
Expertise 1	1.000				.710
Expertise 2	.977	.105	9.315	< .001	.671
Expertise 3	.847	.088	9.613	< .001	.694
Expertise 4	1.009	.093	10.875	< .001	.796
Expertise 5	.846	.088	9.616	< .001	.694
Goodwill 1	1.000				.855
Goodwill 2	1.021	.061	16.669	< .001	.864
Goodwill 3	.692	.065	10.674	< .001	.639
Goodwill 4	1.012	.064	15.927	< .001	.840
Goodwill 5	.534	.064	8.364	< .001	.526
Goodwill 6	.657	.050	13.071	< .001	.740
Trust 1	1.000				.817
Trust 2	1.057	.067	15.875	< .001	.862
Trust 3	1.020	.061	16.701	< .001	.890
Trust 4	1.046	.068	15.313	< .001	.842
Trust 5	1.094	.070	15.535	< .001	.850
Trust 6	1.039	.068	15.229	< .001	.838

$\chi^2/df = 3.156$ , RMR = .055, NFI = .874, CFI = .909, RMSEA = .097

SMI expertise and trustworthiness = .50 and perceived SMI goodwill and trustworthiness = .55).

### 3.3. The structural model and analysis results

The structural model was constructed based on the hypothesized variable relationships (see Fig. 3). The analysis resulted in (1) no significant relationship between perceived SMI goodwill and consumer attitudes toward the brand ( $p = .904$ ) and (2) a poor fitting model ( $\chi^2/df = 3.183$ , RMR = .162, NFI = .829, CFI = .875, RMSEA = .097).

An examination of the standardized residuals revealed that each perceived SMI goodwill measure greatly contributed to the poor model fit. Based on the lack of relationship between the latent constructs of perceived SMI goodwill and consumer attitudes toward the brand, and the fact that each goodwill measure contributed to poor model fit, the decision was made to drop perceived SMI goodwill from the structural model. At this point, the research became exploratory. Goodwill was deleted from the structural model, two indicators for expertise and one for trustworthiness were sequentially dropped and two indicator error correlations were added to improve model fit. The final structural model fit was deemed adequate ( $\chi^2/df = 2.864$ , RMR = .780, NFI = .912, CFI = .941, RMSEA =

Table 4

Maximum Likelihood Estimates for the Correlated Errors Measurement Model.

Indicator variable	Regression weight	Standard error	Critical ratio	P value	Standardized weight
Expertise 1	1.000				.708
Expertise 2	.981	.105	9.298	< .001	.672
Expertise 3	.850	.089	9.587	< .001	.694
Expertise 4	1.015	.093	10.855	< .001	.798
Expertise 5	.847	.088	9.571	< .001	.693
Goodwill 1	1.000				.814
Goodwill 2	1.085	.072	15.174	< .001	.875
Goodwill 3	.731	.071	10.366	< .001	.642
Goodwill 4	1.024	.060	17.155	< .001	.809
Goodwill 5	.622	.070	8.925	< .001	.583
Goodwill 6	.714	.055	12.966	< .001	.765
Trust 1	1.000				.834
Trust 2	1.064	.062	17.048	< .001	.885
Trust 3	1.001	.058	17.254	< .001	.891
Trust 4	.989	.067	14.846	< .001	.812
Trust 5	1.007	.069	14.493	< .001	.800
Trust 6	.993	.066	15.021	< .001	.818

$\chi^2/df = 2.456$ , RMR = .048, NFI = .905, CFI = .941, RMSEA = .080

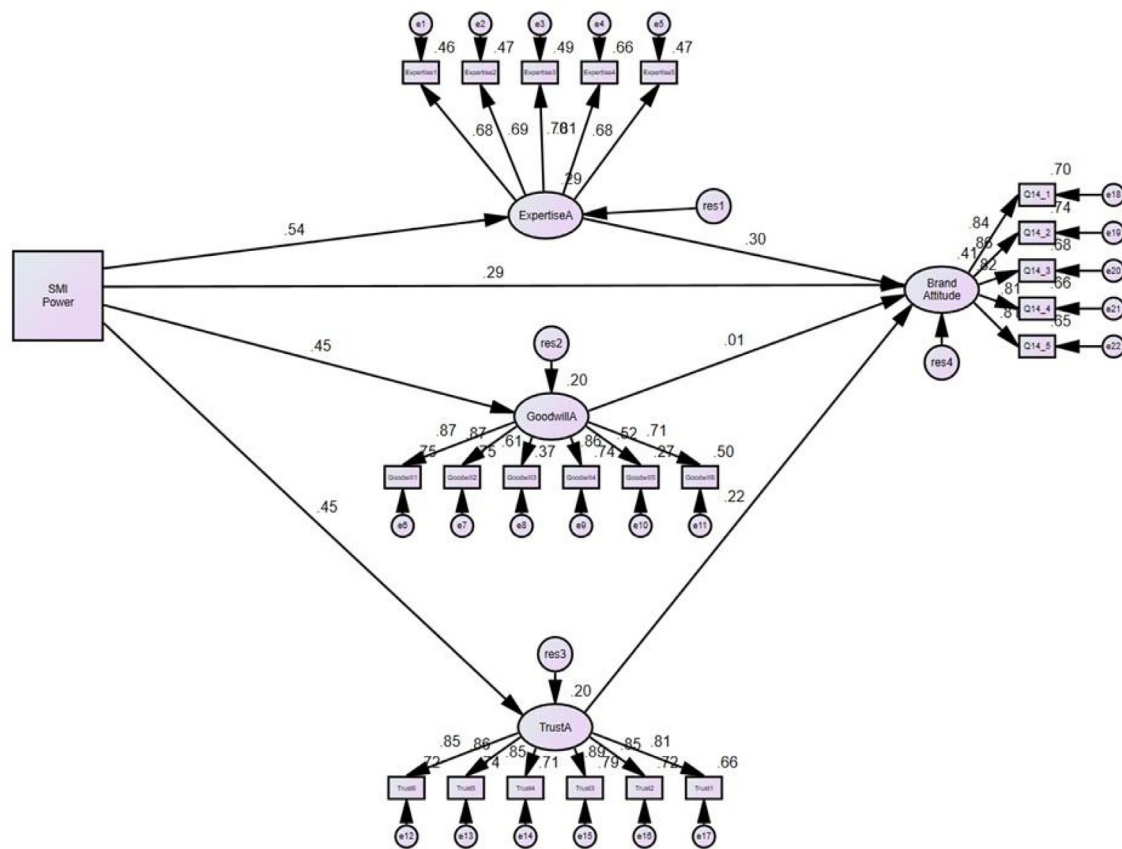


Fig. 3. Standardized Results.

.090) and all identified relationships were significantly different from zero ( $p < .001$ ).

The indicators for perceived SMI expertise, perceived SMI trustworthiness and consumer attitudes toward the brand were each summed. This allowed for the variable observations to be standardized and the tests for mediation and moderation could be assessed using path analysis. Standardization was necessary so that the distribution of observations for each variable were the same with a mean of zero and a variance of 1. This procedure allowed for the creation of moderator (interaction) variables.

The test for the direct relationship between SMI power and consumer attitudes toward the brand as well as the mediation of perceived SMI expertise and perceived SMI trustworthiness on the relationship between SMI power and consumer attitudes toward the brand were first examined. The procedure followed Baron and Kenny (1986), James and Brett (1984) and Judd and Kenny (1981).

#### 4. Results and discussions

The first hypothesis proposed that SMI power would be positively related to consumer attitudes toward the brand (H1). The second hypothesis proposed that perceived SMI expertise would mediate the relationship between SMI power and consumer attitudes toward the brand (H2). The third hypothesis proposed that there would be a mediating relationship of perceived SMI goodwill between SMI Power and consumer attitudes toward the brand (H3). The fourth hypothesis proposed that there would be a mediating relationship of perceived SMI trustworthiness between SMI power and consumer attitudes toward the brand (H4).

First, the standardized relationship between SMI power and consumer attitudes toward the brand was estimated. The standardized regression coefficient was .52 ( $p < .001$ ) supporting H<sub>1</sub>. Next, the mediator variables of perceived SMI expertise and perceived SMI trustworthiness were entered into the model. The standardized regression coefficient for the direct

relationship between SMI power and consumer attitudes toward the brand fell to .32 ( $p < .001$ ). The standardized regression coefficient between SMI power and perceived SMI expertise was .486 ( $p < .001$ ). The standardized regression coefficient between perceived SMI expertise and consumer attitudes toward the brand was .213 ( $p < .001$ ). Taken together these two results support the mediating relationship of perceived SMI expertise between SMI power and consumer attitudes towards the brand (H<sub>2</sub>).

The third hypothesis proposed that perceived SMI goodwill would mediate the relationship between SMI power and consumer attitudes toward the brand. This hypothesis was not supported because there was no relationship between perceived SMI goodwill and consumer attitudes toward the brand ( $p = .662$ ).

The standardized regression coefficient between SMI power and perceived SMI trustworthiness was .43 ( $p < .001$ ). The standardized regression coefficient between perceived SMI trustworthiness and consumer attitudes toward the brand was .231 ( $p < .001$ ). Taken together these two results support the mediating relationship of perceived SMI trustworthiness between SMI power and consumer attitudes toward the Brand (H<sub>4</sub>).

Moderator variables were created by multiplying the standardized independent variable by the standardized mediator variables (Power\*Expertise, Power\*Trust) and added into the model. These moderator variables were exogenous and therefore correlated with the independent variable SMI power. The standardized regression coefficients for each mediating variable were not significant (power\*expertise and consumer attitudes toward the brand = .05,  $p = .424$ ) (power\*trustworthiness and consumer attitudes toward the brand = -.04,  $p = .470$ ). Therefore, no moderating effect was found. The direct relationship between SMI power and consumer attitudes toward the brand was found to be partially mediated by perceived SMI expertise and perceived SMI trustworthiness. Table 5 shows the results from the path analysis.

Perceived SMI expertise and trustworthiness partially mediated the relationship between SMI power and consumer attitudes toward the brand.



**Table 5**  
Path Analysis Standardized Regression Results for the Mediation Model.

Relationship	Standardized estimate	C.R.	P	Hypothesis
SMI Power -> Brand Attitude	.518	9.153	<.001	H <sub>1</sub> Supported
SMI Power -> SMI Expertise	.486	8.441	<.001	H <sub>2</sub> Supported
SMI Expertise -> Brand Attitude	.213	3.624	<.001	
SMI Power -> SMI Goodwill	.419	7.000	<.001	H <sub>3</sub> Not
SMI Goodwill -> Brand Attitude	.025	0.437	.662	Supported
SMI Power -> SMI Trust	.430	7.231	<.001	H <sub>4</sub> Supported
SMI Trust -> Brand Attitude	.231	3.945	<.001	

A second analysis tested for a moderation effect of perceived SMI expertise and SMI power as well as perceived SMI trustworthiness and SMI power on the relationship between SMI power and consumer attitudes toward the brand. A modified path model was created to incorporate the SMI power\*perceived SMI expertise moderator and the SMI power\*perceived SMI trustworthiness moderator terms to determine the impact of introducing these interaction terms (moderators) into the model. This model is referred to as the direct relationship moderator only model. Neither moderator was significantly related to the dependent variable consumer attitudes toward the brand (SMI power\*perceived SMI expertise,  $p = .238$ , SMI power\*perceived SMI trustworthiness,  $p = .953$ ).

## 5. Conclusions, limitations and future research

This research explored the relationship between SMI power, perceived SMI credibility and consumer attitudes toward the brand. The perceived source credibility was measured using a three dimensional construct - perceived SMI expertise, perceived SMI goodwill and perceived SMI trustworthiness. Results indicate that while SMI power is positively related to consumer attitudes toward the brand, perceived SMI expertise and trustworthiness partially mediate that relationship.

The purpose of this research was to empirically test a conceptual model examining the effect of SMI power to influence consumer attitudes toward the brand. This research proposed that the perceived SMI expertise, goodwill and trustworthiness would mediate the relationship between SMI power and consumer attitudes toward the brand and the results uncovered a partially mediated relationship. This research explored relationships within the context of the Instagram social networking site which has emerged as the leading platform for influencer marketing. This is one of the first studies to explore these relationships within Instagram. Additionally, this research was not restricted to a specific product or service category.

First, the mechanisms by which the SMI power affects consumer attitudes toward the brand were reviewed. They included naïve theories in the context of social influence, consumer socialization theory and market signaling theory. Based on these theories the research proposed that perceived SMI power would be positively related to consumer attitudes toward the brand, that perceived SMI power would be positively related to perceived SMI credibility, and that perceived SMI credibility would be positively related to consumer attitude toward a brand.

### 5.1. Theoretical implications

This study makes the following theoretical contributions. First, it is the only research which combines three related, yet distinct theories in studying the complex relationship of social media influence on consumer attitudes: naïve theories of social influence, market signaling theory, and consumer socialization. In doing so, this research enriches the literature on SMI's role in shaping consumer brand attitudes by proposing that expertise, goodwill and trustworthiness are important theoretical constructs which mediate the relationship. Second, this research extends the field's theoretical understanding of the impact of the latent construct SMI perceived credibility and its component parts, as we find that SMI

trustworthiness and SMI expertise are more important in influencing brand attitudes than SMI goodwill. This may be because perceived goodwill is more difficult to capture via survey data than the other two components. In summary, we theoretically proposed and empirically tested the notion that SMIs act as computer-mediated socialization agents, consumers perceive SMI characteristics as sources of inference, and as their credibility increases over time, SMIs in turn influence consumer attitudes toward the brands they endorse, as the brands have taken on some of the (desirable) characteristics of the SMIs.

This study used the source credibility scale originally conceived by McCroskey and Teven (1999). Although perceived SMI expertise and perceived SMI trustworthiness were found to mediate the relationship between SMI power and consumer attitudes toward the brand, goodwill did not. As previously noted there are other conceptualizations of source credibility

For example, Lou and Yuan (2019) proposed that source credibility consists of three dimensions, expertise, trustworthiness, and attractiveness. Furthermore, Munnukka et al. (2016) proposed that source credibility was a four-dimensional construct composed of trustworthiness, expertise, similarity and attractiveness. Future research should investigate alternative conceptualizations of perceived source credibility to understand the dimensionality of the construct.

These results are consistent with those of Lou and Yuan (2019) and Ki and Kim (2019). Lou and Yuan (2019) found that the source credibility components perceived SMI expertise was positively related to consumer brand awareness. In addition, the perceived SMI trustworthiness was positively related to consumer purchase intentions. Finally, that perceived SMI trustworthiness was positively related to brand awareness and purchase intentions.

There are however, some notable differences between the findings of this research and that of Lou and Yuan (2019). First, Lou and Yuan (2019) reported an anomalous negative relationship between a SMI's trustworthiness and consumer brand awareness. This research showed that all perceived SMI credibility constructs (expertise and trustworthiness) were significantly and positively correlated with each other and, in turn, perceived SMI credibility was positively related to consumer attitudes toward the brand. Furthermore, our findings were more consistent with previous research (e.g., Ki & Kim, 2019).

### 5.2. Managerial implications

This study suggests that marketers closely examine and monitor a SMI's perceived SMI credibility as they engage influencers for promoting their brands. The implication from this research is that SMIs exhibiting high levels of expertise and trustworthiness are seen to have high-perceived source credibility. Conversely, those with low levels of expertise and trustworthiness are seen to have low perceived source credibility. Therefore, perceived SMI power to influence consumer attitude toward a brand is partially contingent on the perceived SMI's credibility.

This research has implications for SMIs as well. SMIs need to keep themselves relevant by constantly working on their expertise, and trustworthiness. For example, One (Couple) of the influencers listed by a respondent in our dataset are Murad and Nataly Osmann. They are one of the most influential travel blogger couples, as ranked by Forbes whose @FollowMeTo series has 469k followers. Individually, Murad Osmann (@muradosmann) has 4m followers and Nataly Osmann (@natallyosmann) has 1m followers. Murad Osmann is a Russian photographer who started the followmeto project with his wife Nataly. Their signature FollowMeTo pose (Fig. 4) went viral and has ever since gained a lot of popular media coverage like Forbes and the Huffington Post.

Through their posts on Instagram the couple has established expertise, goodwill and trustworthiness with their followers and over time gone on to endorse several travel and lifestyle brands such as promoting tourism for Saudi Arabia. They have also launched a series of their own travel and lifestyle products which borrows from their expertise, goodwill and trustworthiness. For example, Nataly has a yoga mat line which aligns well with her passion for yoga. Oravec (2017) noted that Murad and Nataly





Fig. 4. #Followmeto pose (<https://www.instagram.com/p/QiGd6/>).

secure a high level of follower engagement not by focusing on money rather carefully curating quality content, establishing a balance between visibility, exposure, and monetary considerations. They keep themselves relevant and consistent while also giving back to the community. Brand endorsement in such cases becomes a very natural outcome as the influencers are building on their passion. Perceived SMI credibility with the audience is high and as a result, the audience is now willing to mimic/listen to them. At this point, SMI power becomes significant and Influencers become a lucrative medium for brands to effectively reach their audience whose attitudes toward the brand is shaped by the SMI. In fact, consumer trustworthiness in the SMI is higher than consumer trustworthiness in the company (Weinswig, 2016). Table 6 lists the other influencers that the respondents follow on Instagram.

Conversely, there are many examples where SMIs fell from grace when expertise and trustworthiness were damaged (Brookes, 2019). Examples include the Swedish influencer Natalie Schlater who was accused of “humble-bragging” and narcissism due to her post about a farmer in the field from Bali, which was later removed. Other examples include Belle Gibson who faked her cancer story to connect with followers; Olivia Jade who got caught in her mother Lori Loughlin’s university admission scandal; Emma

Hallberg for posing as black while actually not being black; Yovana Mendoza for her false claim of being vegan; Logan Paul for posting a video about a suicide victim, etc. The rise of Influencer marketing has also seen an increase in “Scamstagrammer” (Instagram scams) (Newcomb, 2019). Whereas Influencer Marketing works wonders for engagement with a brand and will continue to grow, SMIs will have to focus on maintaining their perceived SMI credibility by cultivating their expertise and trustworthiness. Marketers on the other hand are recommended to build tools to effectively measure the impact of the Influencers they collaborate with.

We acknowledge several limitations that may also suggest directions for future research. For example, SMI power was a single item measure. Using a series of simulations Diamantopoulos, Sarstedt, Fuchs, et al. (2012) found that multi-item scales outperform single item scales in terms of predictive validity. Therefore, future research should use an enhanced comprehensive measure of SMI power than just a single item measure. In addition, this research did not examine the empirical model within the context of any product or service category, but the validity of this model may vary depending on the product or service context. Furthermore, this research focused on Instagram and the results from this study may not generalize to other SM and online platforms. Therefore, future research can test this model for other influencer marketing platforms such as Pinterest, Twitter, Facebook, etc. Another area for research could be to study the role of social media visibility of the brand (Reyneke, Pitt, & Berthon, 2011; Shaikh, Glavee-Geo, Tudor, Zheng, & Karjaluoto, 2018), in this case the SMI on consumer attitudes. Shaikh et al. (2018) proposed a social network brand visibility (SNBV) model in which brand awareness was found to be a significant predictor of product knowledge, which in turn is a significant predictor of purchase intention. It will be interesting to see how the high visibility of SMI’s in social media networks can affect brand attitudes and purchase intentions.

## Declaration of Competing Interest

None

## Acknowledgements

This work was supported by the Walker College of Business Dean’s Club Grant.

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Table 6

SMI and their Instagram verified Account Links retrieved 02.01.2020 sorted by #of followers.

SMI	Verified	# of posts	# of followers	#following
Murad and Nataly Osmann	@followmeto	747	447K	286
The Blonde Salad	@theblondesalad	4861	1M	111
Nataly Osmann	@natalyosmann	2347	1M	2022
Les Do Makeup	@lesdomakeup	411	1.6M	198
Murad Usman	@muradosmann	616	3.8M	946
Magnolia	@magnolia	3158	5.2M	393
Nipsey Hussle	@nipseyhussle	2177	5.8M	1968
Jeffree Star	@jeffreestar	6046	14M	158
Chrissy Teigen	@chrissyteigen	4383	33.9M	857
David Beckham	@davidbeckham	1296	65.3M	507
Beyonce	@beyonce	1939	163M	0
The Rock	@therock	5470	215M	395

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