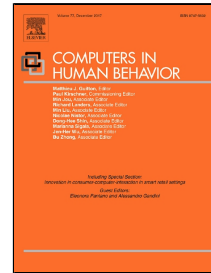


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Motivating Social Sharing of E-Business Content: Intrinsic Motivation, Extrinsic Motivation, or Crowding-out Effect?

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**Motivating Social Sharing of E-Business Content:  
Intrinsic Motivation, Extrinsic Motivation, or Crowding-out Effect?**

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## HIGHLIGHTS

- We examine users' motives for sharing commercial content on social networking sites
- Self-reports and a scenario-based experiment served to compare incentive models
- In self-reports intrinsic motives for sharing dominated
- In the experiment extrinsic incentives induced greater willingness to share
- The crowding-out effect is suggested to help explain this contradiction

**Motivating Social Sharing of E-Business Content:****Intrinsic Motivation, Extrinsic Motivation, or Crowding-out Effect?****Abstract**

This work examines users' motives for sharing commercial content on social networking services (SNS). We first interviewed Internet users to map sharing behaviors and SNS use (n=409). We then used a mixed-methods design combining self-reports and a scenario-based experimental manipulation to compare intrinsic and extrinsic incentive models among those who already shared commercial content (n=134). The findings reveal a contradiction between the self-reports, where intrinsic motives for sharing dominated, and the experimental manipulation, where extrinsic (financial) incentives induced greater willingness to share. We suggest two possible processes that may be at play in our results. First, based on the theory of planned behavior, whereby actions which are not motivated by financial incentives are associated with more positive normative beliefs, SNS users are likely to perceive – and therefore self-report – intrinsic motives for social sharing (e.g., altruism) as more important to them than extrinsic motives (e.g., financial rewards). Second, assuming that reported intrinsic motives are real and not a product of social desirability bias, financial incentives may dilute the impact of intrinsic incentives via a crowding-out effect, shifting users' motives for sharing e-commerce content from intrinsic reasons (e.g., enjoyment) toward extrinsic ones with the application of financial incentives (e.g., a discount). The findings have implications for planning incentive models that fit marketing communication strategies and enhance customer engagement efforts.

**Keywords:** E-business; intrinsic motivation; extrinsic motivation; crowding out; financial incentives; content sharing; social media.

**Motivating Social Sharing of E-Business Content:****Intrinsic Motivation, Extrinsic Motivation, or Crowding-out Effect?****1. Introduction**

The rising number and popularity of social networking services (SNS) (Boyd & Ellison, 2008), as well as the importance of e-business as a distribution channel, is increasingly drawing the attention of enterprises towards the use of SNS for commercial purposes (Liang, Ho, Li, & Turban, 2011; Mata & Quesada, 2014). Consumers' ability to announce a new purchase or post personal recommendations on social networking platforms brings traditional word of mouth (WOM) – long recognized as a crucial marketing tool (Arndt, 1967) – to the Internet context. Such content sharing via SNS, known as social sharing, thus introduces what may be a highly effective communications channel between businesses and their (potential) customers, one that is worthy of closer exploration. In particular, including share buttons on commercial websites seems a relatively easy way of stimulating such social sharing (Liang, Ho, Li, & Turban, 2011).

However, before share buttons can be confirmed as a truly effective marketing tool, several sets of questions need to be answered. One, of course, involves the extent to which share buttons increase purchases of the good or service among the sharer's social network contacts. A second set of questions entails the extent to which people are, in principle, willing to click share buttons under the right circumstances. Finally, assuming that (a) such sharing is in fact effective and (b) users do not have a default tendency to avoid it, a third set of questions relates to what motivates users to click these buttons, and how they can be persuaded to do so as often as possible. It is the last set of questions that are addressed in the present research.

The question of what motivates users to view online content, to respond to it, and to act in the online realm is frequently discussed. For example, studies have examined the motivations of Wikipedia content contributors (Yang & Lai, 2010), motivations for link-sharing through Facebook (Baek et al., 2011), motives for Facebook use and expressing one's "true self" (Tosun, 2012), motivations for using company-hosted Facebook pages (Pöyry, Parvinen & Malmivaara, 2013), psychological intrinsic motives for content sharing on Facebook (Fu, Wu & Cho, 2017), and motivations for participation and consumption on YouTube (Khan, 2017). Yet although a huge amount of content is shared on SNS, what makes users share content has not been thoroughly addressed in previous studies.

Fu, Wu and Cho's (2017) study is an exception. Employing focus group interviews and online surveys, Fu et al. identified six types of intrinsic motives for content sharing on Facebook. They also found that the effects of these psychological incentives depended on the content type (e.g., commercial message). Their findings provide a useful starting point for the study of sharing motivations in SNS in general, and also furnish insights into motives for sharing commercial content in particular. However, a few issues remained that should be addressed. First, Fu et al. focused solely on Facebook as an arena for content sharing. Second, they identified intrinsic motives for sharing, but ignored the possibility of extrinsic incentives. Finally, they relied solely on self-report survey techniques, but did not employ experimental methods which would allow claims of causality and might assist in revealing unconscious motives and priorities.

Baek et. al. (2011), who studied motivations for link-sharing through Facebook, also identified several types of intrinsic motives, but reported no extrinsic incentives. In their study, the identified content types were extracted from a pool of qualitative interviews and were not further studied or validated using quantitative techniques. These issues leave a gap

between what we, as scholars and as practitioners, know and what we should know about the sharing of commercial content on SNS. The present study aims to help fill this gap.

The current research focuses on social sharing of e-business content via share buttons as a subset of WOM in the Internet setting. Specifically, we apply motivational and behavioral theories of consumer behavior to explore SNS users' motives and incentives for social sharing of e-business content. Using a combination of self-reports and experimental manipulation, we compare three types of incentive models: one based on intrinsic motives, represented by altruism; one based on financial incentives; and the third based on financial incentives plus recognition from other SNS users. Our aim is to see past users' claimed motivations to identify their underlying reasons for using share buttons.

## **2. Literature Review, Research Questions and Hypotheses**

### **2.1. E-WOM, M-WOM, and Social Sharing of E-Business Content on SNS**

As noted above, WOM is well-established as a potent marketing tool (e.g., Anderson, 1998; López & Sicilia, 2013; Vázquez-Casielles, Suárez-Álvarez, & del Río-Lanza, 2013). Arndt (1967, p. 3) defines WOM as "oral, person-to-person communication between a perceived non-commercial communicator and a receiver concerning a brand, a product, or a service offered for sale." With the development of the Internet, electronic word of mouth (eWOM) has become increasingly important (Sun, Youn, Wu, & Kuntaraporn, 2006). Hennig-Thurau et al. (2004, p. 39) define eWOM as "any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet." A subset of eWOM is microblogging WOM (mWOM), defined by Hennig-Thurau, Wiertz and Feldhaus (2012, p. 7) as "any brief statement made by a consumer about a commercial entity or offering that is broadcast in real time to .... members of the sender's social network through a specific web-based service (e.g., Twitter)." Social sharing falls under the rubric of both eWOM and



mWOM as it adds the element of sharing online content via a special tool, such as Facebook's "Like" button, which integrates the SNS into the e-business space. In the present study, for convenience, we refer to all such tools or buttons as "share" buttons. Thus, extending Oxford's (2015) general definition of social sharing to the e-business context, we define social sharing as the practice of sharing commercial content from an e-business website or mobile application on a social media site or application using a share button.

Before we can examine users' motivations for sharing e-business content, it makes sense to ask just how much such sharing actually takes place. The first aim of this study is thus to describe the general SNS use and sharing habits of potential e-customers – i.e., e-business customers in developed countries where content sharing might be expected to be a common practice. Therefore, our first research question (RQ1) is:

RQ1: What are the SNS use and sharing habits of SNS users in countries with high levels of user engagement in digital technologies?

## **2.2. Extrinsic and Intrinsic Motives for Social Sharing**

Studies support the presumption that given the right motivations and the possibility of sharing, users will share content on SNS, thus justifying the implementation of share buttons (e.g., Hennig-Thurau et al., 2014). This leaves marketing managers wondering how best to motivate users' engagement in the firm's social media activities.

Herzberg's (1964) dual-factor theory holds that two types of factors affect motivation and satisfaction in the workplace. Those in the first group, known as hygiene factors, are external to the person (e.g., salary, work conditions, interpersonal relations with peers). These factors provide extrinsic motivation and help the individual avoid dissatisfaction. Those in the second group, called motivators, relate to intrinsic motivations and to increased satisfaction; examples include self-fulfillment, achievement, and sense of importance. We suggest that

motives for sharing e-business content in SNS can also be divided into intrinsic and extrinsic motives.

Tong, Wang, Tan and Teo's (2013) theoretical model identifies possible factors that increase consumers' intentions to contribute information in online feedback systems. They documented enjoyment of helping other consumers and influencing the company as being the main motives for participating in such a commercial information exchange. Cheung and Lee (2012) examined the motives that drive consumers to spread positive eWOM in online consumer-opinion platforms. They found reputation, sense of belonging, and enjoyment of helping other consumers as most significantly related to intentions to engage in eWOM. Pöyry, Parvinen and Malmivaara (2013) added insights from a study of consumer motives for using companies' Facebook pages. Among their participants, hedonic motivations indicate a higher tendency to participate in the virtual community compared with utilitarian motivations. Fu et al. (2017) identified psychological motives for content sharing in Facebook and categorized them into those deriving from self-interest (i.e., achievement, self-expression, avoiding loneliness) and communal motives (i.e., making connections, altruism, and group joy). As will be elaborated later, most of the motivations mentioned above can be considered intrinsic motivators in Herzberg's (1964) terms, since they refer to internal psychological reactions and processes.

A review of this literature suggests four broad theoretical categories of non-financial motives for sharing e-business content: self-enhancement; hedonism; community and belonging; and society and business community. Within these categories, for the purpose of this research, we can identify five potential motives: fun; altruism – helping other SNS users; altruism – helping the provider; recognition from other SNS users; and social connections. The first three of these motives can be considered intrinsic motives and the last two extrinsic

motives in Herzberg's (1964) terms. Table 1 summarizes the relevant literature on these five potential positive motives for sharing e-business content.

In this research we do not consider two additional motives that emerged from the literature review, namely venting negative feelings (e.g., Gretzel & Yoo, 2008) and advice-seeking (Hennig-Thurau, Gwinner, Walsh, & Gremler, 2004). These two motives are relevant in contexts such as forums, recommendations, and user reviews (e.g., TripAdvisor for hotel recommendations; Cheung & Lee, 2008). They are less relevant in the context of share buttons, which by their nature can only be used to convey a limited and specific kind of information, not to vent feelings or solicit advice.

**[Insert Table 1 about here]**

The literature reveals one more group of extrinsic motives for sharing e-business content in SNS, namely economic rewards (see the last row of Table 1). There is some evidence that such economic rewards and incentives – monetary rewards, discounts, free product offers, and the like – may be an effective means of increasing eWOM communication. For instance, Ryu and Feick (2007) found this to be the case with respect to a referral reward program.

The second objective of this study is therefore to map sharing motives as reported by users. More specifically, we explore to what degree users report each of the reviewed motives as a salient factor in motivating sharing of e-business content. Our second research question is therefore the following:

RQ2: What motives for sharing e-business content are most frequently reported by SNS users?

In this research, we build on the theory of planned behavior (TPB; Ajzen, 2006). The TPB holds that individuals tend to shape their actions based, in part, on the perceived values,

attitudes, and expectations of others (i.e., subjective norms). Further, the theory holds that people perceive actions which are not motivated by financial incentives as more socially acceptable (in other words, such actions are associated with positive normative beliefs). Moreover, under the TPB, social norms not only affect individuals' actions, but help shape their beliefs and attitudes about what is important to them. As such, people come to regard more socially desirable behaviors as those which they themselves favor. It follows that people are likely to perceive intrinsic motives for social sharing, such as altruism and fun, as more important to them than extrinsic motives, and especially extrinsic motives that might appear selfish, such as economic rewards or a pursuit of recognition from others. Hence our first hypothesis:

H1: Intrinsic motives for using share buttons will be reported more frequently than extrinsic motives – in particular, economic rewards (e.g., financial incentives) or recognition from others.

### **2.3. Intrinsic Motivators, Extrinsic Motives and a Potential Crowding-Out Effect: Do Self-Reports Fit Actual Preferences?**

Assuming that people will indeed report intrinsic motives for social sharing as more important, the question arises as to whether marketers can rely on such reports in developing strategies aimed at increasing user engagement with share buttons. Are intrinsic motives indeed more effective in improving users' willingness to share?

Dual-factor theory (Herzberg, 1964) suggests that what Herzberg called motivators (i.e., intrinsic factors) have a stronger impact on people's behavior than extrinsic factors because the former are inner psychological processes aimed at increasing positive feelings like satisfaction, while the latter only help to avoid dissatisfaction and prevent the loss of existing motivation. However, other theoretical frameworks provide support for extrinsic

factors as motives for sharing e-business content on SNS. Behavioral psychology, for instance, offers reinforcement theory (Skinner, 1958), whereby individuals learn to repeat actions that are accompanied by specific rewards (positive reinforcement). Another example is social exchange theory (SET; Emerson, 1976). The social exchange perspective argues that individuals make decisions about their relationships (both social and economic) based on subjective cost-benefit analysis, with the aim of maximizing the benefits to themselves. Therefore, it is suggested that financial incentives (e.g., a discount) or social rewards (e.g., recognition from others) will be preferred over intrinsic factors (e.g., helping other consumers).

Finally, the crowding-out effect (Frey & Jegen, 2001) may be involved in these dynamics. Crowding-out describes a phenomenon whereby extrinsic motivators such as monetary incentives can overshadow or even undermine intrinsic motivators, paradoxically leading, in some cases, to a negative effect on social preferences. Our research indicates that in self-reports, having an intrinsic motivation is considered important in social sharing. Therefore, in including the crowding-out effect into the theoretical concepts considered we follow Frey and Oberholzer-Gee (1997), who recommended that “the use of price incentives needs to be reconsidered in all areas where intrinsic motivation can empirically be shown to be important” (p. 753). Such motivational crowding out has been discussed in the contexts of recycling (Nov & Ye, 2008), information sharing (Tong, Wang, & Teo, 2007), and sustainable behavior (Bowles & Polanía-Reyes, 2012).

In the present case, the crowding-out effect suggests that people might indeed begin sharing e-business content for intrinsic reasons (e.g., in order to help their friends or the business, or simply because, as described above, social norms lead them to perceive intrinsic motivations as more important to them). Later, however, financial incentives could shift their motivations toward extrinsic ones.

Our last two research questions therefore ask, first, whether people's willingness to share e-business content is actually motivated more by intrinsic or extrinsic factors, in a way that can be revealed by experimental data; and second, whether SNS users' subjective self-reports about their motivations for using share buttons match their actual choice behavior.

Formally, we consider:

RQ3: Do intrinsic or extrinsic motives for using share buttons dominate among SNS users under experimental conditions?

RQ4: Do SNS users' subjective self-reports about their motivations for using share buttons reflect their choices under experimental conditions?

It should be observed that providing WOM typically incurs costs for the consumer, such as time spent in communicating the virtues of the company or product (Gatignon & Robertson, 1986). In the case of share buttons, which take almost no time to click, the main cost they carry derives from the identity disclosure that accompanies button clicking. This increases the possibility that users will be included in marketers' lists, opening themselves up to intrusions from human or digital sales agents. Such unwanted interactions may involve a waste of time and emotional discomfort. There is also the issue of users' loyalty to their SNS friends. Clicking on share buttons can be perceived as spamming the list, generating emotional discomfort for both sides to the interaction. Hence, within the SET framework (Emerson, 1976) any cost-benefit calculation involving share buttons should come down on the side of financial rewards which are explicitly perceived as compensating for the costs, and not on the side of the intrinsic factors (e.g., the fun or altruism-related benefits listed in Table 1) which involve internal processes. We argue that this is true even though the receiving of economic rewards can be sometimes considered to be selfish (Jin & Huang, 2014) and hence carry additional social costs. Hence, H2 posits:

H2: Incentive models which are based on extrinsic rewards (e.g., a discount) will increase willingness to use share buttons more than incentive models which are based on intrinsic motivations (e.g., helping the provider).

There is evidence that the impact of financial incentives is greater when both sides to a virtual social interaction (i.e., the user and at least one member of his or her online social network) are rewarded (Jin & Huang, 2014; Ryu & Feick, 2007). Rewarding both sides to the interaction reduces the social costs related to economic rewards and to spamming friends by making a behavior considered to be selfish (sharing to receive a financial reward) into a somewhat altruistic one (sharing to reward a friend) (Jin & Huang, 2014). Hence, we posit:

H3: Financial incentive models in which both sides to the interaction are rewarded will increase willingness to use share buttons more than financial incentive models in which only the user is rewarded.

To sum up the foregoing, we predict that the self-reported influence of intrinsic motives will be higher than the reported influence of financial motives for using share buttons (H1), but that willingness to share under experimental conditions will be higher when participants are offered financial incentives than when only intrinsic motivations are at stake (H2). We further hypothesize that the greatest willingness to share will occur when financial incentives reward both parties to the interaction (H3).

### 3. Method

We employed a mixed-methods design to answer the four research questions. The research project included four steps.

### 3.1. Step 1 - Literature Review

First, a comprehensive review of the literature on social media and content sharing revealed possible motives that drive the users of e-business platforms to share e-business content on SNS. We grouped the described motives into categories, employing the taxonomy development process described by Nickerson, Varshney, and Muntermann (2012). While we did not strive to develop a formal taxonomy, this method helped us to derive categories in a structured way. During this process, we followed an iterative, empirical-to-conceptual coding process (see also Lacity, Khan, Yan, & Willcocks, 2010). This method was a way of turning the different terms for sharing motivations employed by different authors into suitable categories.

To begin this process, an information systems researcher and a research assistant independently grouped the motives identified through the literature review into categories. In the second step, the researchers compared and discussed their groupings and arrived together at an agreed set of categories. Both researchers then assigned the motives to these categories in the third step. Finally, the categories and motives were reviewed by a marketing researcher, who suggested changes based on a marketing context. The classification was finalized when all parties were in agreement.

The six motives examined are presented in Table 1. During this process, we used Herzberg's (1964) dual-factor theory to distinguish between extrinsic factors (e.g., money, friends) and internal psychological factors (e.g., altruism, fun). We categorized three of the six motives (financial rewards; recognition from other SNS users; and social connections) as representing extrinsic motives, and the other three (fun; altruism – helping other SNS users; and altruism – helping the provider) as representing intrinsic motives.



### 3.2. Step 2 - Developing A Taxonomy of Incentive Models

Once the terms were harmonized, incentive models and suitable scenarios were developed. The classification process produced three incentive models. M0 (intrinsic motives) includes scenarios that do not offer economic incentives for content sharing; the main motives it activates are the two forms of altruism. M1 (financial incentives for the user) relates to scenarios that financially reward users who share content via share buttons, and only those users; the main motive it activates is economic rewards. The final incentive model, M2 (two-sided financial incentives), covers scenarios that extend rewards for content sharing to “friends” or “followers” of the user – i.e., to those who are informed via the SNS that the user has “liked” or “followed” a particular product or brand by clicking the share button. These scenarios are designed to activate two extrinsic motives: economic rewards and recognition from other SNS users. See Table 2.

### 3.3. Step 3 - Survey of SNS Users

The third step in the research aimed to describe general sharing habits and SNS use, and to explore reported sharing motives of potential e-customers. For this purpose, a survey was conducted in Israel and Germany during 2015. These are countries characterized by comparably high levels of technological development as well as user involvement in digital technologies (Levina & Vilnai-Yavetz, 2015). In both countries the level of Internet use is very high, with 87% of the German (DESTATIS 2016) and 85% of the Israeli (Bezeq, 2016; ICBS, 2017) population (ages 10 and up) connected to the Internet in 2015. Therefore, a survey of Internet users was employed. Survey participants were randomly sampled from the Israeli population by a professional agency, using an online representative survey tool, and from the German population by a university expert via SNS. The Israeli respondents voluntarily participated in the survey and the German respondents were offered the opportunity to participate in a lottery for a 50€ Amazon.de gift card. A pre-test with eight

students who were not included in the study sample was used to refine the survey items and the scenarios used in the experiment (see below).

**3.3.1. Survey sample.** The initial sample comprised 409 Internet users (199 German and 210 Israeli respondents), of whom about 55% were female. They ranged in age from 18 to over 68, with the median age 28-32. This initial sample was used to collect data on general SNS use and sharing behavior. The survey included a screening question in which respondents were asked whether they had ever shared content from an online shop. Those respondents who answered yes to this screening question ( $n=134$ ; 33% of the respondents in the initial sample) served as the sample for the sharing motives portion of the survey and for the experimental stage of the study. The 134 participants in the final sample were similar to the initial sample in their demographic characteristics (57% female, age range 18 to over 68, median age 28-32).

**3.3.2. Survey questionnaire.** The survey portion of the study was based on a questionnaire comprising 30 items divided into three parts.

**3.3.2.1. Background information.** Nine questions were designed to map self-reported sharing behaviors and SNS use. Users were asked to report their favorite SNS (choosing from a list all answers that apply), frequency of use (e.g., how often do you use social media networks during a typical week?) and e-business behavior (e.g., how often do you visit online shops or shopping platforms?), responding on a 7-point scale, where 1 = “never” and 7 = “multiple times a day”. The screening question (have you ever shared content from an online shop; yes or no/don't know) concluded this portion of the survey.

**3.3.2.2. Self-report measures.** The sharing motives part of the survey comprised 18 items, three for each of the six identified motives. The three intrinsic motives (i.e., motives reflecting inner psychological factors) were altruism – helping other SNS users (Cronbach's  $\alpha = 0.71$ ), altruism – helping the provider (Cronbach's  $\alpha = 0.75$ ), and fun (Cronbach's

alpha = 0.72). The three extrinsic motives (i.e., motives representing external factors) were financial incentives (Cronbach's alpha = 0.7), recognition from other SNS users (Cronbach's alpha = 0.81), and social connections (Cronbach's alpha = 0.7). All responses were on a 5-point Likert scale, where 1 = "strongly disagree" and 5 = "strongly agree". For the purpose of the analysis, the two altruism motives were combined into one category (6 items, Cronbach's alpha = 0.78; see section 4.2). The full list of items can be found in Table 1.

**3.3.2.3. Demographics.** Finally, three demographic items (gender, age, and country) were recorded. To allow for repeated-measures moderation analysis (see below, under Findings), the age variable was recoded to create a new dichotomous variable, with younger SNS users defined as 27 years and less, and older SNS users as older than 27. The age of 27 was chosen as our cut-off point based on literature suggesting differences in consumption patterns between younger and older Millennials (see Gilboa & Vilnai-Yavetz, 2010). Millennials (also known as Generation Y, Nexters, and Echo Boomers) were born in 1977–1999 (Olsen, Thach, & Nowak, 2007), and hence ranged in age from 16 to 38 in 2015 (the year our data were collected). All Millennials grew up in a period characterized by rapid technological change (Cheung, Harker, & Harker, 2008), and as a result, members of this cohort are known to be technologically savvy; they adopt new technologies eagerly and often manage their social lives through social network sites such as Facebook, cell phone texting, and instant message software (for a review see Gilboa & Vilnai-Yavetz, 2010). Nonetheless, the differences between younger and older Millennials are such that older Millennials may be more similar to age cohorts preceding them in terms of their SNS use (see Gilboa & Vilnai-Yavetz, 2010). We therefore set our age cut-off point at 27, the midpoint between 16 and 38.

#### **3.4. Step 4 - Experiment**

The final step was aimed at identifying participants' actual motives for clicking share buttons. An experimental approach was employed to compare the three incentive models.

**3.4.1. Design.** First, respondents read the instruction: “Imagine you are visiting an online shopping website and you have found a product that you like, or you like the shop as a whole.” Then, each of the models was operationalized through two or three possible scenarios, each comprising a few lines (as recommended by Aguinis & Bradley, 2014). For instance, one scenario for M0 read, “There is a pop-up window on the website with the text: ‘We will be really happy if you tell your friends about us!’ Under this text there is a share button.” For each scenario, participants were asked whether they would be likely to click the share button (on a 5-point scale, where 1 = “does not apply” and 5 = “applies”). The full set of scenarios is presented in Table 2.

A within-subject experimental design was employed; i.e., each respondent received and reacted to all the scenarios (in a random order). This experimental design reflects the real world in that Internet users are often exposed to multiple offers or requests from e-business providers to use share buttons for sharing commercial content.

**[Insert Table 2 about here]**

**3.4.2. Manipulation check.** To test the content validity of the experimental scenarios we conducted a manipulation check (64 respondents, men and women aged 19 to 59 from Germany and Israel, none of whom participated in the experiment). The respondents were asked to what degree they thought each of the scenarios represented the various motives extracted from the literature review (for the manipulation check, the two forms of altruism were treated as a single motive). To reduce the possibility of social desirability bias (De Jong, Pieters, & Fox, 2010), we used a psychological projection approach, asking respondents to evaluate the motivations of another person rather than to focus on their own motives.

Initially, seven scenarios were developed, with M0 designed to be captured by S01, S02 and S03, M1 by S11 and S12, and M2 by S21 and S22. Most of the findings validated our

assumptions. Scenarios S11 and S12 were clearly perceived as reflecting a financial incentive, with a financial motive identified by 91% and 94% of the respondents, respectively. The other motives identified for these scenarios (altruism, fun, and recognition from other SNS users) were cited at very low levels. Similarly, scenarios S21 and S22 were clearly identified as reflecting financial incentives (81% and 84% of the respondents, respectively) and, to a lesser but still significant degree, recognition from other SNS users (25% and 30% respectively). A smaller number of respondents also identified S21 and S22 as reflecting altruism (17% and 15% respectively). Overall, scenarios S21 and S22 can thus be considered as activating primarily extrinsic motives in the terminology of Herzberg (1964), and as having a two-sided extrinsic nature, directed toward the user and toward others.

With respect to S01 through S03, the findings were less clear-cut. S01 read, in full, "Imagine you are visiting an online shopping website and you have found a product that you like, or you like the shop as a whole. Then, you realize that there is a share button for your favorite SNS." While the dominant motive for using this button was, as expected, altruism, this was cited by only 52% of the respondents, and other motives also received a relatively high number of mentions (financial incentives 42%, recognition from other SNS users 22%, and fun 19%). As this scenario could not be classified as activating any specific motive, it was excluded from the analysis.

For both S02 and S03, the two altruism motives received a high number of mentions (77% and 72% respectively), with all other motives identified to a lesser degree (between 3% and 30%). In the only exception, the financial incentives motive was cited by 31% of the respondents for S03. However, we believe this can be explained by the wording of this scenario, in which the mention of a 10% reduction may have misled readers into assuming that a financial incentive was being offered (careful reading of the scenario reveals that the 10% discount is not linked to the decision to share, and therefore is not offered as an

incentive). In light of this, given that this motive was mentioned by less than a third of the respondents (and significantly fewer than the altruism motives), we considered S02 and S03 to be validated as reflective of the altruism motive.

In short, taken as a whole, the manipulation check results support our division between the three incentive models (or groups of motives). They also clarify the theoretical motive or motives most associated with each scenario: altruism for the M0 scenarios, financial incentives for the M1 scenarios, and financial incentives plus recognition from other SNS users for the M2 scenarios.

**3.4.3. Experiment sample.** As noted above, only the 134 respondents who reported having already shared content from an online shop, and who had self-reported their sharing motives in the survey, took part in the experiment. The characteristics of this sample are reported above (section 3.3.1).

## 4. Findings

### 4.1. SNS Use and Sharing Habits

To address RQ1, we mapped the SNS and e-business behavior of the initial sample (N=409). A large majority (about 90%) reported having a Facebook account, followed by Google+ (about 37%), Instagram (33%), YouTube (30%), LinkedIn (22%), and Twitter (20%). When asked what SNS they visit most frequently, about 80% responded Facebook, with the rest divided among Instagram, YouTube, and Google+. Local preferences were also detected, with Pinterest, Xing, and Tumblr mentioned by 10-30% of the German users, but hardly at all by Israeli users. Finally, approximately 9% of the sample reported having no SNS accounts at all.

Regarding frequency, 83% of the full sample reported visiting SNS at least once a day. Regarding their SNS activity, 89% agreed or somewhat agreed that they read content posted on SNS, 38% that they comment on posts from others, 31% that they write or post content like articles or pictures, and 33% that they re-share content and posts by others within the same SNS. Fifty-one percent of the participants said they had shared online content from one SNS to another (e.g., found content on YouTube and shared it on Facebook). In addition, 87% reported visiting online shops or shopping platforms at least once a month, and 60% reported doing so at least once a week, with 67% making at least one online purchase per month.

As mentioned earlier, 33% of the sample said they had shared e-business content such as a product description, image or commercial offer. These respondents (N=134) constitute the sample for the sharing motives items and the experiment.

#### **4.2. Sharing Motives: Self-Reports**

The next analysis addressed RQ2 and H1, using the results from the sharing motives portion of the survey (see section 3.3.2 and Table 1). As described above, for the analysis, the two altruism motives were combined into the same category. Hence we had five motive categories.

To begin the analysis, we used multiple paired T-tests to compare the two intrinsic motives to the three extrinsic motives for each user (using  $\alpha=.01$  due to multiple tests). The results of these analyses showed that each of the intrinsic motive categories (altruism and fun) was more frequently reported than each of the extrinsic motives (financial incentives, recognition from other SNS users, social connections). The only exception was fun and social connections, where fun dominated as expected but only at the  $p < .05$  level; thus, this was not reported as significant. See Table 3.

**[Insert Table 3 about here]**

Thus far, the results support H1, which predicted that intrinsic motives would be reported more frequently than extrinsic motives. To continue testing H1 and to prepare the ground for answering RQ4 (on subjective self-reports vis-à-vis choices under experimental conditions), we used a repeated-measures model to compare the three self-reported motive categories that emerged from the manipulation check as most reflective of each of the three competing incentive models: altruism (M0); financial incentives (M1, M2); and recognition from other SNS users (M2). The motive reported by a given user served as the within-subjects factor, and the possible moderators – user gender and age – as the between-subjects factors.

Supporting H1, intrinsic motives for social sharing (represented by altruism) were more frequently reported than the two extrinsic motives (financial incentives and recognition from other SNS users); Wilks' Lambda=.702,  $F=26.8$ ,  $p<.001$ , Eta squared=.179. Post hoc comparisons show that all three mean differences are significant at the .001 level. See Table 4.

**[Insert Table 4 about here]**

### **4.3. Willingness to Share as a Function of Incentive Type: Experimental Results**

**4.3.1. Effects of incentive models.** We next turned to the experimental results to address RQ3, RQ4, H2, and H3. Since each respondent was exposed to all three experimental conditions (see section 3.4.1), the incentive models were compared based on a within-subjects design, and a repeated-measures model was used to analyze the data. A mixed-model ANOVA was chosen as most appropriate for the study variables, in that the independent variable (type of incentive model) and the moderators (participant gender and age) were categorical variables, while the dependent variable (willingness to share) was a continuous variable. Type of incentive model was defined as the repeated measures (within-subjects)



factor, and the possible moderators as the between-subjects factors. The model is presented in Figure 1.

**[Insert Figure 1 about here]**

Supporting H2, the results show that M0 (altruism – intrinsic motivation) elicited lower willingness to share compared to M1 (financial incentives for the user) and M2 (two-sided financial incentives); Wilks' Lambda=.870,  $F= 30.35$ ,  $p< .001$ , Eta squared=.101. Post hoc comparisons show that mean differences for the intrinsic incentive model (M0) elicited significantly lower willingness to share than the two financial incentive models. However, H3 was not confirmed. The two financial incentive models yielded similar results, whether the user alone (M1) or both the user and friends (M2) were offered a reward. See Table 5.

**[Insert Table 5 about here]**

In short, the experimental findings show that extrinsic motives for using share buttons dominate among SNS users (RQ3), and that SNS users' subjective self-reports about their motives for using share buttons do not match their choices when several incentive models are applied and different sharing opportunities are suggested (RQ4). In accordance with our rationale for H1 and H2, we found that users self-reports highlighted intrinsic motivations, but in the experiment they preferred the sharing opportunities which were accompanied by financial incentives.

**4.3.2. Effects of age and gender.** With respect to the survey results, in addition to the main effect of motive type, we also found an interaction effect of age group (younger vs. older users) on self-reported motives. Specifically, while intrinsic motives received higher scores than financial incentives for both older and younger respondents (older: intrinsic=3.4, financial=2.6, recognition from other users=3.1; younger: intrinsic=3.2, financial=2.7,

recognition from other SNS =2.9), intrinsic motives received significantly higher scores from older compared with younger respondents, whereas financial motives received significantly higher scores from younger compared with older respondents.

With respect to the experimental results, in addition to the main effect of type of incentive model on willingness to share, there is also a main effect of age group on willingness to share: younger respondents' willingness-to-share scores for all three models (M0: 2.0, M1: 2.5, M2: 2.5) are lower than those of the older respondents (M0: 2.9, M1: 3.1, M2: 3.1). No main effect or statistical interaction was found for gender in self-reports or willingness to share.

## 5. Discussion

This study examined self-reported motives for content sharing among SNS users in two developed countries, Germany and Israel, and compared those motives with those arising out of a scenario-based experiment in the same sample.

We predicted, and showed, that the SNS users sampled would be more likely to self-report intrinsic motivations for sharing (H1), but that extrinsic rewards would be more salient in an experimental setting (H2). A third hypothesis, predicting that participants would be most willing to share when the scenario offered two-sided financial incentives (for the user and friends/followers) was not confirmed. Below we discuss these findings.

### 5.1. SNS Use and Sharing Habits

We began by investigating our respondents' SNS use and sharing habits (RQ1). The most popular and most often visited SNS was, by far, Facebook, followed by Google+, Instagram, YouTube, LinkedIn, and Twitter. Differences between countries in local preferences were also detected, with SNS like Pinterest, Xing, and Tumblr popular with the German but not Israeli users. With respect to sharing behavior, about half of our respondents

said they engage in social sharing on SNS, while a smaller proportion share e-business related content. These findings accord with previous results about SNS use and sharing behavior (Utz, 2015; Yang & Wang, 2015).

## **5.2. Extrinsic and Intrinsic Motives for Sharing E-Business Content: Self-Reports versus Experimental Findings**

As noted earlier, previous findings (Hennig-Thurau et al., 2014) support the notion that when share buttons for e-business content are available, some proportion of users will click them. The question is, what motivates these users?

As we expected, our respondents (SNS users who reported previously sharing commercial content online via share buttons) were more likely to self-report intrinsic motives – altruism or enjoyment – for sharing e-business content, as compared with extrinsic motives (financial incentives and recognition from other SNS users). Also as predicted, in the experimental setting, the financial incentive models (M1 and M2) yielded higher actual sharing willingness compared to the intrinsic motivation model (M0).

It is well-known that people are biased to present themselves to others in a way that they perceive as being more socially desirable (De Jong et al., 2010), and that intrinsic motives are perceived as more socially acceptable than extrinsic ones, based on the TPB (Ajzen, 2006). These theories explain why users are more likely to self-report intrinsic motives as their main motivators for any given action even if financial incentives or social benefits, such as recognition from other SNS users or social connections, actually have a greater pull. Our findings, which show that respondents were more likely to self-report intrinsic motives, are in accordance with the findings of Baek et al. (2011) and Fu et al. (2017). In their studies, qualitative open-ended techniques yielded mainly self-reported intrinsic motives (e.g., achievement, self-expression, altruism). No financial incentives were

extracted from the qualitative data as a reason for content sharing on Facebook based on their participants' reports.

However, these findings invite us to delve deeper into the role played by intrinsic and extrinsic motives in sharing decisions, and the dynamics between them. In particular, we argue that crowding-out theory (Frey & Jegen, 2001) may help explain the apparent gap between respondents' stated and actual motives for content sharing. Assuming that the intrinsic motives cited are real and not solely a product of social desirability bias, under the crowding-out model, financial incentives dilute the impact of the original intrinsic incentives. Hence, while users might begin sharing e-business content for intrinsic reasons (e.g., because they enjoy it), their motivations shift toward extrinsic ones with the application of financial incentives (e.g., a free product). These findings are similar to the conclusions of Deci et al. (1999), whose meta-analysis in a work-related context showed that extrinsic rewards undermined the free-choice intrinsic motivation of employees.

Another issue that calls for attention when dealing with incentives and motives for content sharing is the way terms like "intrinsic motives" or "psychological incentives" are used in different contexts. In our study, based on Herzberg's (1964) conceptualization, we categorized all internal psychological motives (i.e., fun, altruism – helping other SNS users, and altruism – helping the provider) as intrinsic motivators, distinguishing them from motivations based on extrinsic incentives, whether economic (e.g., a free product or a coupon) or non-economic (e.g., recognition from other SNS users; see Tables 1 and 2). Fu et al. (2017) examined social and psychological incentives as motivators of content sharing on Facebook. They divided them into two broad categories, based on self-interest (achievement, self-expression, loneliness) and communal incentives (connection, altruism, and group joy), and showed that those incentives related to self-interest were associated with increased reported willingness to share commercial content on Facebook. More altruistic motives (such as those

defined as intrinsic in the present study) were not linked to commercial content sharing intentions. As such, Fu et al.'s findings are similar to our own in that acting on the basis of both the extrinsic incentives we identified and Fu et al.'s self-interest incentives can be considered somewhat selfish behavior. Future research should consider how the use of different terminology may influence how we describe and understand what motivates commercial content sharing in SNS.

It should be noted that although both financial incentive models in the present study produced higher apparent willingness to share compared to the intrinsic motivation model, our third hypothesis, positing that the M2 incentive model (rewarding both sides to the interaction) would be more effective than M1 (where only the user was rewarded), was not supported. The effects of both models were similar. This was surprising, given that rewarding both sides to the interaction should reduce the higher social costs potentially related to financial rewards by allowing the user to self-present in a less selfish, more altruistic way (Ryu & Feick, 2007). However, we suggest that the actual power of financial incentives documented in the current study shows that users feel good about being rewarded and need no excuses, or partners to share their reward with, to dispel the image of selfishness. This indicates that rewarding only the sharing user might be sufficient to reinforce the desired sharing behavior. The practical implication is that marketing communication efforts can be made cheaper for the firm by directing these efforts only to the user and not toward her or his friends or followers.

### **5.3. Age and Gender as Possible Moderators**

Following Orchard, Fullwood, Galbraith and Morris (2014), who identified age and sex as key variables in SNS research, we examined these variables as possible moderators. We found clear age differences in both the self-report and experimental results. As noted earlier, we categorized respondents by age into two groups, older (more than 27 years) and

younger (27 years and less). With respect to the self-reports, while both older and younger users report intrinsic motives more frequently than financial incentives, intrinsic motivations were reported more often by older (versus younger) users and financial incentives by younger (versus older) users. Although McAndrew and Jeong (2012) found that younger people were more active Facebook users, our finding makes sense in light of societal stereotypes as well as empirical findings about younger people, who are not thought to display strongly altruistic attitudes (Kooij, De Lange, Jansen, Kanfer, & Dijkers, 2011). Indeed, in modern Western societies, individuals born in the 1980s and 1990s (i.e., those known as Millennials or Generation Y) are believed to be more self-centered and materialistic than their older compatriots (Glass, 2007). In addition, Orchard et al. (2014) found evidence that in terms of their motivation for using SNS, older users are more motivated than younger users by the need to conform with others. Finally, Bergman et al. (2011) showed that Millennials' reasons for using SNS are more narcissist in nature (e.g., having as many SNS friends as possible, wanting their SNS friends to know what they were doing). Older users may thus have felt more impelled to self-report motives which are considered socially appropriate, as per the TPB (Ajzen, 2006).

With respect to the experimental findings, we found a main effect of age on willingness to share e-business content, with older participants more willing to share than younger ones for all the sharing motivation models. We suggest that younger participants' perceived self-efficacy (Bandura, 1986) is lower than that of older users. Self-efficacy is people's beliefs about their capacity to undertake a certain behavior; in the context of sharing e-business content on SNS, it can be defined as users' self-assessment of their capacity to provide valuable shopping or product advice. A certain confidence in one's own expertise – a quality that older users can be assumed to have to a greater extent than younger users – is a prerequisite for participation in social sharing. In addition, young people are more socially

sensitive. They are therefore more likely to be concerned about the risk that sharing e-business content will end with embarrassment or dissatisfaction on the part of the user or recipient, thereby threatening the relationship between the two (Folkes, 1984).

Gender differences have been documented in various aspects of online virtual environments, such as Second Life (Guadagno et al., 2011), Facebook activities (McAndrew & Jeong, 2012), and Facebook self-presentation using profile photos (Tifferet & Vilnai-Yavetz, 2014). However, unlike Orchard et al. (2014), who found gender differences in their participants' motivations for using SNS, we found no gender differences in either self-reported or experimental preference for intrinsic versus extrinsic incentives. These findings support the claim that gender roles are less pronounced in digital social spaces (Hernández, Jiménez, & José Martín, 2011) compared to brick-and-mortar retail environments.

#### **5.4. Managerial Implications**

Studying individuals' motivations for sharing commercial content on social media can be useful in two situations: when the company creates a product that is at least somewhat worthy of the buzz it generates, and that people want to share; and when the buzz is created mainly through marketing, not due to qualities of the product or experience itself.<sup>1</sup> As such, the results of the current study are relevant for both producers and marketers. For product manufacturers, insights into individual online sharing behavior can be used to help guide the development of products that are worth spreading the word about. For marketing companies, understanding sharing behavior can help in designing content that will attract the attention of the Internet community.

The contradiction between our findings from the self-reports (where intrinsic motives for sharing dominated) and the scenario-based experiment (where financial incentives induced

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<sup>1</sup> We thank an anonymous reviewer for this insight.

greater willingness to share) suggests that in real-world settings, sharing may be accompanied by a certain cognitive dissonance (Festinger, 1957), whereby people feel that their behavior does not accord with their values, beliefs, or attitudes. To increase sharing behavior, marketers should aim to reduce such dissonance and make customers feel good about their sharing behavior. This might be done by using financial incentives as “rewards” for behavior that is described in more altruistic terms – for instance, asking users to help the provider spread the word about a new product (an act that would potentially help both the provider and other users), with a discount on their next purchase as a sign of gratitude.

As noted above, we found no difference between the user-only and two-sided financial incentive models. Therefore, our findings suggest that marketers can reduce their costs by limiting their financial incentives to the user only. Finally, our findings regarding the effect of age, and non-effect of gender, on both sharing likelihood and incentive type suggest that marketers interested in segmenting users to achieve a more effective reward program would do better to focus their efforts on age or on non-demographic factors, but not gender.

### **5.5. Limitations and Future Research**

The sample on which this research is based was collected from two technologically developed countries using an online survey. Data collection approaches varied to some extent between the countries, as described in the method section. In Israel survey participants were sampled from the Israeli population using an Internet survey, and they completed the survey on a voluntary basis, while in Germany a SNS survey was conducted, with the response rate increased by offering a lottery. While the main results were similar between the two countries, the study should be replicated with samples from additional settings using alternative recruitment tools.

Second, social sharing of e-business content is not only influenced by personal factors but also by contextual forces, such as cultural differences or the e-visibility of firms (Levina



& Vilnai-Yavetz, 2015). The development of a sharing culture may be an important driver for users' subsequent sharing behavior. Future research could integrate such factors into the experimental design employed in the current work, to explore their relative impact and the possibility of moderation.

Third, we argued that, under the TPB (Ajzen, 2006), social norms influence not only individuals' actions, but their self-perceptions and attitudes. As such, we suggested that people are likely to perceive intrinsic motives for social sharing, such as altruism and fun, as more important to them than extrinsic motives, especially those which might appear selfish. However, it is well-established in social science research that people tend to present themselves in self-reports based on the perceived social desirability of a given behavior (De Jong, Pieters, & Fox, 2010). Hence, the possibility that the self-reported motives in the present study reflect social desirability bias rather than respondents' actual beliefs – thereby casting doubt on crowding-out to explain our experimental findings – cannot be discounted.

With respect to the crowding-out effect, the findings of this study offer fertile ground for future research. Our experimental design could not verify that the rise we observed in preferences for extrinsic rewards came at the expense of intrinsic motivations. Future research should include additional experimental conditions which enable this to be tested. For instance, following Tong et al. (2007), users can be asked about their intrinsic motivations to share e-business content under two experimental conditions – with and without extrinsic incentives. Comparing the extrinsic incentive condition with the non-incentive condition on the intrinsic motivation measure will provide the required data to prove the involvement of the crowding-out mechanism in commercial content sharing.

Likewise, our models M1 and M2 were designed to reflect financial incentives, and our manipulation check shows that they indeed did so. However, some degree of altruism

could also have been at play in these models. Future research should aim to more sharply differentiate between intrinsic and extrinsic factors underlying people's behavior.

Finally, all the variables were measured using self-reports, which raise the possibility of common-method or same-source bias (Podsakoff, MacKenzie, & Podsakoff, 2011). However, as the experimental stimulus (type of incentive model) was manipulated and not self-reported, the relations between this variable and the other measures are not susceptible to common method variance issues.

## 5.6. Conclusions

In this paper, we explored motivations for sharing e-business content via share buttons on SNS. We show that user statements about their sharing motives were inconsistent with their intentions as elicited through a scenario-based experiment. The main contribution of this study is its identification of the actual power of extrinsic motivations in general and financial incentives in particular, even though SNS users report intrinsic motivations as their main reasons for using share buttons on SNS – a phenomenon that could be explained by the crowding-out effect. The findings of the current study, therefore, may add sharing e-business content on SNS to other contexts in which crowding-out is thought to exist, such as recycling (Nov & Ye, 2008), information sharing (Tong et al., 2007), and sustainable behavior (Bowles & Polanía-Reyes, 2012).

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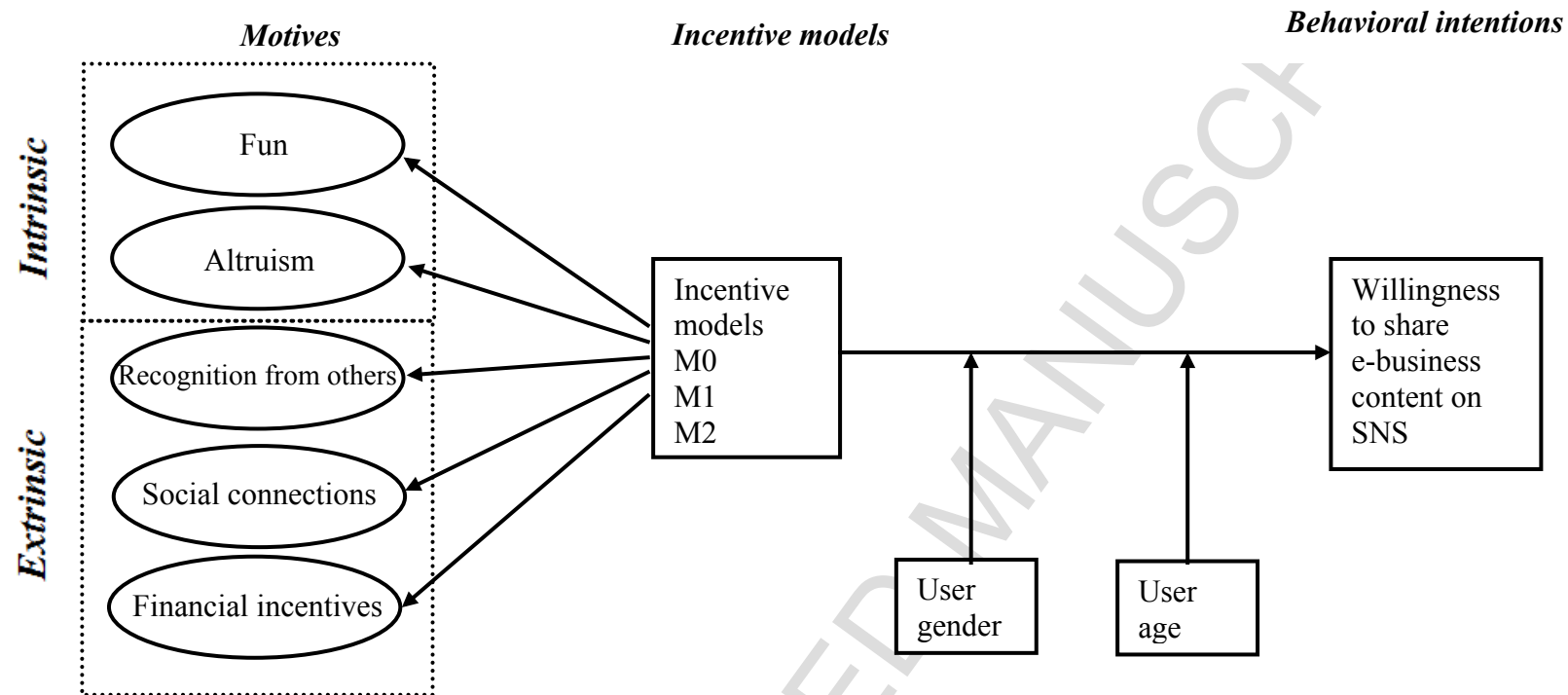


Figure 1. *Theoretical model: The impact of incentive models on willingness to share*

*Note:* M0= intrinsic motives (includes scenarios that do not offer economic incentives for content sharing); M1= financial incentives for the user (relates to scenarios that financially reward users who share content); M2= two-sided financial incentives (covers scenarios that extend rewards for content sharing to “friends” or “followers” of the user).

Table 1. *Motivation to share e-business content: Theoretical basis, sharing motives, and self-reported survey items*

| Motivation category     | Sharing motive; intrinsic or extrinsic (Herzberg, 1964) | Adapted from   | Questionnaire items<br><i>I share e-business content such as images, product descriptions or offers on SNS, because...</i>   |
|-------------------------|---|--|--|
| Self-enhancement        | Recognition from other SNS users (extrinsic)            | Gretzel et al., 2008; Hennig-Thurau et al., 2004; Munar et al., 2014; Yoo et al., 2013 | 9b-8...I feel good telling others about my finds.<br>9b-10...I am happy if others like my content and comment on it.<br>9a- 2...It shows that I know about a certain topic or a product. |
| Hedonism                | Fun (intrinsic)   | Gretzel et al., 2008   | 9a-10...I enjoy sharing my finds with others.<br>9a-8...I think it is enjoyable to collect products or images in this manner.<br>9a-1...I enjoy sharing on SNS.                          |
| Community and belonging | Social connections (extrinsic)                          | Hennig-Thurau et al., 2004; Munar et al., 2014; Yoo et al., 2013                       | 9b-6...It allows me to communicate with friends.<br>9a-11...I like to exchange views about shared interests.<br>9b-7...It helps me feel connected with my friends.                       |
|                         | Altruism –  | Gretzel et al., 2008;  | 9a-3...I want to help others find a great  |

| Motivation category            | Sharing motive; intrinsic or extrinsic (Herzberg, 1964)               | Adapted from   | Questionnaire items<br><i>I share e-business content such as images, product descriptions or offers on SNS, because...</i>  |
|--------------------------------|---|--|---|
|                                | helping other SNS users (intrinsic)                                   | Hennig-Thurau et al., 2004; Munar et al., 2014; Yoo et al., 2013     | product.<br>9b-1...I want to point out a good offer to others.<br>9a-4...I like to help others with advice.   |
| Society and business community | Altruism – helping the provider & supporting the platform (intrinsic) | Gretzel et al., 2008; Hennig-Thurau et al., 2004; Munar et al., 2014 | 9b-9...I want to support an online shop or brand that I like.<br>9a-9...I really like the product or shop and want to contribute to its success.<br>9b-2...I look forward to the product and want to reward the online shop or the brand. |
| Economic rewards               | Financial incentives (extrinsic)                                      | Hennig-Thurau et al., 2004; Yoo et al., 2013                         | 9a-7...I get a reward with my current order.<br>9a-6...I get a discount on my next purchase.<br>9b-4...I can save money on my next purchase.  |

Table 2. *Motivation to share e-business content: Experimental conditions/incentive models*

| Incentive models<br>(experimental<br>conditions)                               | Sharing motives   | Scenario (experimental stimuli)  |
|--|---|--|
| M0<br><br>Intrinsic motivation <sup>a</sup>                                    | Altruism – helping<br>the provider                            | S02: ...there is a pop-up window on the website with the text:<br>“We will be really happy if you tell your friends about us!”<br>Under this text there is a share button.   |
|  | Altruism – helping<br>other SNS users                         | S03: ...there is a pop-up window on the website with the text:<br>“Welcome! As a new customer you will receive a 10%<br>discount”. You see a gift code and you can use a share button<br>to tell your friends about the offer. |
| M1<br><br>Financial incentives<br>for the user                                 | Financial incentives  | S11: ... you get 5% off if you share the product with your<br>friends via a share button.  |
|  | Financial incentives  | S12: ... there is a pop-up window on the website with the text:<br>“Save 5€ on your purchase if you tell your friends about us!”<br>Under the text is a share button.  |
| M2<br><br>Two-sided financial<br>incentives<br>(Rewarding user and<br>friends) | Financial incentives<br>& recognition from<br>other SNS users | S21: .... you AND your friends get a free product if you share<br>a product via a share button.  |
|  | Financial incentives<br>& recognition from<br>other SNS users | S22: ... there is a pop-up window on the website with the text:<br>“You AND your friends get a 5€ discount on your purchase if<br>you tell them about us!” Under the text is a share button.                                   |

<sup>a</sup>Note: Scenario S01, "... there is a share button for your favorite SNS," was excluded from the analysis after the manipulation check, due to lack of theoretical clarity.

Table 3: Multiple paired T-test results comparing self-reported motive categories for sharing e-business content (n=134)

| Motive category              | Self-reported influence of motivation to share (1-5) – Mean (SE) | T value  |
|------------------------------|--|----------|
| Intrinsic-Altruism           | 3.3 (0.08)   | -7.30**  |
| Extrinsic-Financial          | 2.6 (0.09)   |          |
| Intrinsic-Altruism           | 3.3 (0.08)   | -3.51**  |
| Extrinsic-Recognition        | 3.05 (0.11)  |          |
| Intrinsic-Altruism           | 3.3 (0.08)   | -3.78**  |
| Extrinsic-Social connections | 3.1 (0.10)   |          |
| Intrinsic-Fun                | 3.2 (0.10)   | -5.78*** |
| Extrinsic-Financial          | 2.6 (0.09)   |          |
| Intrinsic-Fun                | 3.22 (0.10)  | -2.44**  |
| Extrinsic-Recognition        | 3.05 (0.10)  |          |
| Intrinsic-Fun                | 3.2 (0.10)   | -2.38(*) |
| Extrinsic-Social connections | 3.1 (0.10)   |          |

Notes: (\*)  $p < .05$ ; not reported as significant. \*\* $p < .01$  and \*\*\* $p < .001$  were used due to multiple tests.

Table 4: *Repeated measures results for the differences between self-reported motives for sharing e-business content (n=134)*

| Motive category                              | Reported influence of motivation to share (1-5) – Mean (SE) | F value | Post hoc comparisons (mean differences) |             |
|--|---|---------|---|-------------|
|  |   |         | Financial                               | Recognition |
| Altruism - Intrinsic                         | 3.34 (0.08)   | 26.8*** | .73***                                  | .31***      |
| Financial - extrinsic                        | 2.61 (0.09)   |         | ---                                     | -.42***     |
| Recognition from other SNS users - extrinsic | 2.03 (0.11)   |         | ---                                     | ---         |

\*p< .05    \*\*p< .01    \*\*\*p< .001



Table 5: *Repeated measures results for the impact of type of incentive model on willingness to share e-business content (n=134)*

| Model type     | Willingness to share<br>(1-5) – Mean (SE) | F value  | Post hoc comparisons<br>(mean differences) |         |
|----------------|---|----------|--|---------|
|                |   |          | M1   | M2      |
| M0 (intrinsic) | 2.48 (0.08)                               | 30.35*** | -.37***                                    | -.39*** |
| M1 (financial) | 2.84 (0.09)                               |          | ---  | N.S.    |
| M2 (two-sided) | 2.87 (0.09)                               |          | ---  | ---     |

\*p< .05    \*\*p< .01    \*\*\*p< .001