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The impact of social media campaigns on the success of new product introductions

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ABSTRACT

Social media platforms can be a promising tool for retailers' marketing campaigns. Especially for the purpose of new product introductions, social media may facilitate social interaction and online word-of-mouth and therefore, may broaden the reach and accelerate the diffusion of information about the new product. The impact of online word-of-mouth communication and social interaction on consumer behavior has been extensively analyzed in previous research. However, little knowledge exists so far on the influence of social media campaigns on new product introductions. Therefore, the goal of this study is to analyze the impact of a social media campaign on the success of a new product introduction by using survey as well as behavioral data. The data stems from an online community related to a social media tryvertising campaign implemented to promote the introduction of new high-end binoculars. The results of a mediation analysis show that campaign-related factors positively influence consumers' attitude toward the new product, which in turn mediates the positive influence on purchase intention and recommendation behavior. Furthermore, a post-hoc analysis shows the importance of community members' activity on the success of the new product introduction.

1. Introduction

Social media exhibits a broad penetration with over 71% of Internet users all around the world staying connected with the help of social networking websites (eMarketer, 2017a). Moreover, 60% of the worldwide social network users can be reached just via Facebook (eMarketer, 2017b). Therefore, it is not surprising that manufacturers and retailers are increasingly using some form of social media marketing to promote their services or products (Baum et al., 2013; Davis et al., 2014; Kacker and Perrigot, 2016; Yadav et al., 2013; Yahia et al., 2018). According to Kaplan and Haenlein (2010), social media refers to online applications which enable Internet users to create and exchange content. Especially in the case of the market launch of new products, the implementation of social media campaigns may be beneficial for firms due to several advantages that these campaigns provide: first, more people can be reached in a shorter period of time (Cruz and Fill, 2008). Thus, many consumers may be reached due to social media's broad penetration and thus receive information about the firm's (new) product (Hu et al., 2018). Second, the spread of positive word-of-mouth via social networks may influence potential customers' decision making and possibly increase their purchase intentions (Jansen et al., 2009).

One special form of such social media campaigns that try to foster the impact of positive word-of-mouth are tryvertising campaigns. Tryvertising campaigns are an experience-based advertising approach where some product testers are motivated and incentivized to share their positive product experiences online (Oberhofer et al., 2014). In this case, firms have recognized that first-hand experiences from consumers that already tried the (new) product have been shown to have a higher impact on potential consumers than information stemming from the firm (Willemsen et al., 2011). Taken together, these advantages are beneficial for a successful new product launch and extensive previous research already investigated the impact of online word-of-mouth on product success (Chevalier and Mayzlin, 2006; Marchand et al., 2017; Zhu and Zhang, 2010). Therefore, the focus of this paper is to analyze the impact of a social media tryvertising campaign which is one special form of social media campaigns, on the success of a new product introduction

In particular, this paper addresses the following research questions: i) what is the impact of a social media tryvertising campaign on consumers' attitude toward a new product?, ii) what is the impact of a social media tryvertising campaign on consumers' purchase intention?, iii) what is the impact of a social media tryvertising campaign on

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consumers' recommendation behavior? and iv) what is the influence of actual testing the product on consumers' attitude, purchase intention and recommendation behavior?

To answer these questions, the authors analyze survey and behavioral data of a social media tryvertising campaign and its related online community on Facebook, which was implemented to support the market launch of a new durable product (i.e., high-end binoculars).

The remainder of the article is organized as follows: The following section reviews literature related to new product introductions, online communities, social interaction and information exchange as well as involvement. Then, our hypotheses are developed. In the next section, the social media tryvertising campaign as well as the data set are described and we provide the results of the hypotheses testing. The article concludes with a discussion of the findings, implications and limitations

2. Related literature

New products are important for the success of a firm but their introduction is risky since a lot of new products fail on the market (Hultink and Robben, 1995). To become successful on the market, a fast diffusion is necessary. Therefore, it is essential that potential consumers become aware of the new product. Subsequently, early adopters of new products may then speak favorably about their experiences and recommend the product to others (Füller et al., 2013). This is one of the reasons for why an increasing number of manufacturers and retailers use social media for their marketing purposes. By implementing social media campaigns, firms often use existing social networking websites (e.g., Facebook) to quickly spread the new product information and to benefit from the large number of potential customers they are able to reach this way. A special form of social media campaigns are tryvertising campaigns (Oberhofer et al., 2014). Previously, firms have already built on firm-created word-of-mouth communication. Here, they initiate the spread of word-of-mouth information by giving samples of the new product to selected customers while these consumers in turn are responsible for the diffusion of the word-of-mouth information (Godes and Mayzlin, 2009). By using tryvertizing campaigns, firms do not only provide information about the new product themselves via social networking websites but select certain consumers that are given the new product and are to tell others about their experiences. In times of increasing use of social media marketing, these campaigns combine the approach of product sampling with the strengths of social networks. By building upon an already existing online social network, notifications and users' status updates are automatically sent to one's direct friends due to user activity. These automated notifications and status updates might possibly lead to increased product awareness and eventually product adoption among one's direct friends on the social networking platform (Aral and Walker, 2011). In addition, the major part of the information published online consists of opinions and firsthand experiences of consumers that already have tried the new product (so called 'product testers'). Thus, the information about the new product is likely to be more credible and trustworthy than information published directly by the firm (Dellarocas, 2003; Park et al., 2007; Shareef et al., In press). By implementing a social media tryvertizing campaign using an already existing social networking website, an online community within this social network emerges (Hennig-Thurau et al., 2010). Online communities are defined as a group of Internet users (i.e., the community members) that interact with each other, share a common interest and exchange knowledge on that (Koh and Kim, 2004; Kozinets, 1999).

To investigate the impact of social media tryvertizing campaigns involving the development of an online community, this paper builds upon two streams of research related to social media and online communities: 1) social interaction and information exchange and 2) involvement.

The first stream of research that is important for this article is

research on social interaction and information exchange. As already mentioned, the members of online communities are able to interact with each other. Building upon this characteristic, online communities can be compared to social communities (Kim et al., 2004) which do not replace offline interaction but provide an important supplement to it (Kozinets, 1999). According to Hagel and Armstrong (1997), members of online communities are connected to others sharing the same interests (i.e., here the product that is new to the market). Thus, the development of an online community based on the similarity of the members' interests can be associated with the construct of homophily which is an explaining factor for group formation according to the similarity of individuals' characteristics (Brown et al., 2007). Homophily and therefore similarity between the community members might lead to more trust and understanding (Ruef et al., 2003) within the community which may also be of importance for the exchange of information. According to Hagel and Armstrong (1997), social interaction and hence building relationships with other community members allows the exchange of information and knowledge within the community which, in turn, is important for its success (Hinz and Spann, 2008). This information exchange in an online community that developed within the scope of a social media tryvertizing campaign to support the market launch of a new product is crucial since firms are interested in a fast dissemination of new product information (Cruz and Fill, 2008). In addition, information from other Internet users, especially from the product testers, is generally regarded as highly credible and more trustworthy than marketer-generated information (Dellarocas, 2003; Park et al., 2007).

The second stream of research that this study builds upon is involvement. First, Shang et al. (2006) as well as Dwyer (2007) point out that product involvement is one of the main reasons for Internet users to participate in an online community. An Internet user's involvement with (in this case) the new product leads to the search for information (Shang et al., 2006), because a lot of previous research associates consumers' product involvement with their information search behavior (Beatty and Smith, 1987; Bloch et al., 1986; Celsi and Olson, 1988). Therefore, an Internet user's involvement leads to his or her participation in the online community that is centered upon the product that is new to the market. Second, not only potential consumers' involvement with the new product is of interest but also their involvement with the social media campaign itself. According to Mangold and Faulds (2009), social media can be regarded as a component of a firm's marketing communication. Firms increasingly use social media campaigns as part of their marketing mix to spread the word about a new product and to achieve a fast dissemination of information (Baum et al., 2013; Cruz and Fill, 2008). Previous research showed that individuals' advertising involvement does influence or moderate the formation of brand attitude (Laczniak and Muehling, 1993), thus a community member's involvement with the social media campaign should also be influencing his or her attitude toward the brand (or in this case, toward the product). Furthermore, involvement is an important factor concerning the motivation for word-of-mouth communication and recommendation behavior (Hennig-Thurau et al., 2004). Therefore, the community member's involvement with both, the product and the campaign, is important for social media campaigns in general and tryvertizing campaigns in particular, a fast dissemination of the new product information and finally for the success of the new product introduction.

The success of new product introductions cannot be assessed easily since there is a multitude of dimensions and measures that can be included in its evaluation (Griffin and Page, 1993) and there is little consensus regarding its operationalization (Hart, 1993). In congruence with the goals of using social media for a firm's marketing purposes, a successful new product introduction is related to consumers' attitude toward the new product, their purchase intention and their positive word-of-mouth communication (Cruz and Fill, 2008; Griffin and Page, 1993; Lee et al., 2008; Park et al., 2007) which will eventually also impact the financial performance of the new product. Therefore, within

the scope of this article, the focus is put on these three aspects.

3. Hypotheses

Since the analyzed social media tryvertizing campaign is accompanied by the creation of an online community, being part of this community should have an impact on community members. Brown et al. (2007) link the impact on community members' behavior to the construct of homophily and to the strong tie connections between the members of the community. In congruence with this argumentation, feeling part of the community should also influence the community members. A community member's sense of community refers to his or her feeling of being a part of the community and belonging together, to his or her contact and interaction with other community members as well as to the importance the community has to him or her and vice versa (Kim et al., 2004; McMillan, 1996; Peterson et al., 2008). In addition, Bergkvist and Bech-Larsen (2010) were able to show a positive influence of consumers' sense of community on brand love. In addition, this paper's focus is the investigation of a social media campaign that was implemented to support the market launch of a new product. Hence, product-related measures are of importance, not brand-related ones. Therefore, being part of the online community is predicted to have a positive influence on the community members' attitude toward the product:

H1. Sense of community has a positive influence on the attitude toward the new product.

One of the main reasons for participating in an online community is involvement (Dwyer, 2007; Shang et al., 2006). As mentioned before, involvement is also one of the main reasons for engaging in word-of-mouth behavior (Hennig-Thurau et al., 2004). Building upon this literature, a community member's interest in the new product is assumed to positively influence his or her activity in the community. The more a community member participates, the more he or she interacts with other community members and the more connected he or she is within the community. Thus, a positive relation is assumed between sense of community and recommending the new product. This leads to the second hypothesis:

H2a. Sense of community has a positive influence on the intention to recommend the new product.

Sense of community has been shown to have a positive influence on customers' loyalty to the company and to a company's homepage (Kim et al., 2004). According to Liang et al. (2011), customer loyalty is often measured by indicators like customers' visits or customers' purchases. Furthermore, according to Kim et al. (2004), sense of community can be associated with a community member's purchase behavior on a company's homepage. In congruence with these findings of previous research, we therefore relate sense of community to community members' purchase intention and assume that:

 $\mbox{\bf H2b.}$ Sense of community has a positive influence on the intention to purchase the new product.

For years, product sampling has been an effective way to support the market introduction of new products (Marks and Kamins, 1988). Previous research was able to show that consumers' direct experiences with new products (i.e., product trial) may positively influence their attitude formation (for an overview see Kempf, 1999). Since we are investigating a social media tryvertizing campaign where several community members have been given the chance to try the product, we assume that being able to try the product that is new to the market is predicted to have a positive influence on product attitude:

H3. Being able to test the product has a positive influence on the attitude toward the new product.

In addition, researchers have also aligned product sampling to the

generation of word-of-mouth (Marks and Kamins, 1988). For the product testers of our tryvertizing campaign, positive experiences and satisfaction with the new product might be a reason for online word-of-mouth communication (Dellarocas and Narayan, 2006). Therefore, we assume that being able to try the new product should positively influence the intention to recommend the new product. Furthermore, the product testers in our study were additionally incentivized to speak about the product by giving the most active community members the chance to win the product. This leads to our following hypothesis:

H4a. Being able to test the product has a positive influence on the intention to recommend the new product.

McGuinness et al. (1995) investigated the impact of product sampling and various other sales promotion techniques on consumers' purchase behavior. While some forms of sales promotions have been shown to be more effective than others, all of them influence consumer purchases (McGuinness et al., 1995). Building on this research study, we assume that being able to try the new product should not only positively influence the product attitude and the intention to recommend the new product but also the intention to purchase:

H4b. Being able to test the product has a positive influence on the intention to purchase the new product.

In general, firms implement social media campaigns to quickly reach a multitude of people (Cruz and Fill, 2008), especially in the case of new product introductions. To achieve this, it is important that Internet users spread the word about the new product which could be done in terms of comments, pictures or videos (Hautz et al., 2014). In addition, there are various reasons for Internet users to share information with others (for an overview see Hennig-Thurau et al., 2004). Related to a social media campaign for a new product introduction, the motivation of the community members to engage in word-of-mouth communication might be stimulated by the interest in and involvement with the new product or the campaign in general (Mangold and Faulds, 2009). Since community members' main reason for being part of the community is the interest in and the enthusiasm about the new product (Kozinets, 1999), only sharing positive opinions is of importance since otherwise, community members would simply not participate in the online community. This leads to the following hypothesis:

H5a. The attitude toward the new product has a positive influence on the intention to recommend the new product.

Building upon research on the relation between attitude and behavior (Ajzen and Fishbein, 1977), a positive evaluation of the new product should positively influence a community member's intention to purchase. Thus, it is assumed:

H5b. The attitude toward the new product has a positive influence on the intention to purchase the new product.

Fig. 1 summarizes the conceptual model containing the five hypotheses that are going to be tested in our empirical study. We predict that our independent variables (i.e., sense of community and a dummy variable indicating if the community member is a product tester) positively influence the attitude toward the new product, which in turn mediates the positive influence on intention to recommend and intention to purchase.

We add two covariates: First, we control for the attention community members pay to the campaign in order to capture the amount of self-perceived cognitions about the campaign (Folse et al., 2010). Second, we control for the credibility members assign to the information provided in the online community since the credibility of social media information increases its influence on consumer decision making (Jiménez and Mendoza, 2013).

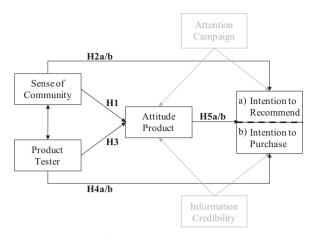


Fig. 1. Conceptual model.

4. Description of the social media tryvertising campaign

The empirical study tests the hypotheses developed in the previous section based on an international social media campaign and its associated online community implemented to support the market launch of a new durable product (i.e., high-end binoculars) that was targeted at a completely new set of customers (i.e., different from the company's existing customers). To quickly reach this new target group and to generate awareness and involvement with the new product, the firm implemented a social media campaign using an application on Facebook.

The campaign started before the product was launched and was about creating an online community, enlarging this community and about generating awareness of and interest in the new product. To become a member of the online community, users had to like the application that was set up for the new product on Facebook. To further keep community members active on the platform, they had to manage different gamification tasks and were able to post photos while every task was somehow related to the new product on the market. Then both a jury as well as the community selected certain community members to become product testers. These community members were given the new product, were able to try it and should share their experiences with the community in the form of writing product reviews and posting photos. To incentivize the community members to publish their experiences online and to actively participate in the community, the community members were able to collect points for their participation on the platform. The most active community members that collected the most points were able to win the new product. This way, user-generated information was published online and thus kept users talking about the new product. Since the opinions and experiences were published on the Facebook application, the content could be shared with other friends on Facebook, even with non-members of the community. In addition, Facebook sends automated notifications to one's direct friends informing them about one's actions on the Facebook platform. Thus, product awareness and further interest in the product and the campaign could be generated even outside the online community and possibly lead to new members joining the community.

As the campaign progressed, the community members were invited to take part in a survey to get additional information on their attitudes and behavior. Every member of the online community was sent a message via Facebook that included the link to the online survey whose data is used to test the hypotheses that were developed in the previous section.

5. Measures

Those community members that took part in the online survey were

asked to report their attention to the campaign on a 7-point scale with four items adapted from the scale used by Laczniak and Muehling (1993). Their attitude toward the product was assessed on a 7-point scale with four items adapted from the scales of McAlexander et al. (2002) and of Ziamou and Ratneshwar (2003). Their sense of community was measured using a 7-point scale with three items adapted from the scale of Peterson et al. (2008) as well the credibility of the information that was provided within the community by using a 7-point scale with five items adapted from the scale of Andrews et al. (2000). In addition, the community members were asked to report their intention to recommend the new product on a 7-point scale with six items adapted from the scales of Arnett et al. (2003) and of Harrison-Walker (2001). This scale comprised items that measured the intention to recommend the product in general as well as items that measured recommendation behavior within and outside the online community. Their purchase intention was operationalized by a single item, asking community members how likely they were to buy the new product in the future with scale anchors ranging from highly unlikely (1) to highly likely (7). Besides, they had to report user characteristics like their early adoption behavior using a 7-point scale with four items adapted from the scales of Steenkamp and Gielens (2003) and Goldsmith and Hofacker (1991) as well as their demographic data (see Appendix for details).

In addition to the survey data, the study collected behavioral data of the members of the online community. Of relevance is who published content on the Facebook application (i.e., photos or comments published by the community members in general as well as product reviews published by the product testers) and who liked the published content. With this information, it is possible to differentiate between active community members and inactive ones. Furthermore, where the privacy settings of the community members permitted observing the number of their direct friends on Facebook, this information was collected as well.

6. Results

The Facebook application generated 6221 members (i.e., the online community) until the time of the survey. Within the community, 128 photos were published which received 97 comments and 1956 likes from community members. In addition, 235 product reviews were published by 16 product testers. These product reviews generated 318 likes from other community members.

In total, 185 community members participated in the survey. In the following, for those community members of whom the Facebook-ID was known, on the basis of this ID, the survey data is matched with the behavioral data leading to a sub-sample of 171 community members (see Table 1 for details).

6.1. Reliability analysis

We checked the reliability of our measures (i.e., attention to the campaign, sense of community, information credibility, attitude toward the product and intention to recommend). Table 2 depicts the results of

Table 1 Survey data - Descriptives.

Construct	N	Min	Max	Mean	SD
Attention Campaign	171	1.75	5	4.65	1.33
Sense of Community	170	1	7	4.05	1.65
Information Credibility	171	1	7	5.89	1.01
Attitude	170	1	7	5.28	1.33
Product					
Intention to recommend	171	1	7	4.56	1.71
Purchase Intention	155	1	7	4.16	1.79
Early Adoption Behavior	171	1	7	4.05	1.25

Table 2 Results of the reliability analysis.

Construct	Number of items ^b	Standardized factor loadings ^b	Cronbach's alpha ^b	AVE ^b	CR ^b
Attention	4	0.854	0.851	0.599	0.854
Campaign		0.915			
		0.635			
		0.653			
Sense of	3	0.930	0.898	0.767	0.907
Community		0.963			
		0.713			
Information	4 ^a	0.940	0.942	0.816	0.946
Credibility		0.916			
		0.993			
		0.745			
Attitude Product	4	0.942	0.947	0.819	0.948
		0.941			
		0.822			
		0.910			
Intention to	6	0.932	0.953	0.783	0.955
Recommen-		0.948			
d		0.906			
		0.863			
		0.956			
		0.670			

 $^{^{\}rm a}$ One item of the original scale was dropped due to its low factor loading (< 0.3).

our reliability test. Due to a factor loading less than a minimum acceptable loading of 0.50 (Chin, 1998), one item of the construct 'information credibility' had to be deleted from the final model. Table 2 further indicates that the Cronbach's alpha of all constructs is well above the minimally acceptable reliability level of 0.70 (Nunnally, 1978), thus the constructs used in the model are reliable. The composite reliability is additionally reported. As Table 2 shows, the composite reliability of all constructs is well above a recommended level of 0.70 (Nunnally, 1978). In addition, the average variance extracted of all constructs is above 0.50 (Fornell and Larcker, 1981). These results imply that the measurement scales are reliable (see Appendix for details).

6.2. Test of hypotheses

Our hypotheses H1 to H5 represent two mediation models: in model a) the effect of sense of community and being a product tester¹ on the intention to recommend the new product is mediated by the attitude toward the new product, while in model b) the dependent variable is the intention to purchase. In both models, we control for attention toward the campaign and information credibility by including both variables as covariates.

We test our hypotheses using an SPSS macro for mediation analysis according to Hayes and Preacher (2013) that allows us to estimate a mediation model including various independent variables simultaneously. Since we have got two dependent variables (i.e., intention to recommend and intention to purchase), we estimate two different mediation models: model a) with intention to recommend and model b) with intention to purchase as dependent variable.

The results for the direct effects are depicted in Table 3 both for intention to recommend (panel a) and for intention to purchase (panel b).

As postulated by hypothesis H1, sense of community is supposed to positively influence the attitude toward the new product on the market.

Table 3Mediation analysis for intention to recommend (model a) and intention to purchase (model b).

Variables	Parameter	
DV: Attitude Product		
Constant	2.8778 (0.5669)***	
Sense of Community	0.1585 (0.0646)**	
Product Tester	0.6083 (0.3483)*	
Attention Campaign	0.1940 (0.0876)**	
Information Credibility	0.1391 (0.1051)	
No. of observations	169	
R-Squared	0.1915	
F-value (p-value)	9.7115 (< 0.001)	
_	a) DV: Intention to	b) DV: Intention to
	Recommend	Purchase
Constant	0.8902 (0.7300)	- 1.3933 (0.7012)**
Attitude Product	0.4318 (0.0935)***	0.9760 (0.0898)***
Sense of Community	0.1925 (0.0787)**	0.0713 (0.0756)
Product Tester	0.0712 (0.4208)	- 0.5167 (0.4042)
Attention Campaign	0.2518 (0.1064)**	- 0.0800 (0.1022)
Information Credibility	- 0.0864 (0.1265)	0.1391 (0.1215)
No. of observations	169	169
R-Squared	0.2940	0.4815
F-value (p-value)	13.5757 (< 0.001)	30.2794 (< 0.001)

Notes: Standard errors in parentheses.

The results of the mediation analysis support this relationship (0.1585, p = 0.0151). Thus, a higher sense of community does result in a more positive attitude toward the new product on the market. The results show that the more a community member feels part of the online community, the more he or she is connected to others in this community and the more the community is of importance to him or her (and vice versa), the more positive is his or her attitude toward the new product. Hypothesis H2a predicted that the higher a community member's sense of community, the higher the intention to recommend the new product. The more a member feels part of the online community, the more likely it is that he or she will recommend the new product to others. The path coefficient is positive (0.1925) and significant at the 5% level (p = 0.0155), thus hypothesis H2a is supported. Hypothesis H3 suggested that being a product tester positively influences the attitude toward the product that is new to the market. However, this relationship is not significant (0.6083, p = 0.0826). Therefore, we do not find support for a positive effect of being able to try and experience the product on the attitude towards it. Hypothesis H4a postulated that being a product tester positively influences the intention to recommend the new product. The direct effect on the intention to recommend the new product is not significant (0.0712, p = 0.8659), thus H4a is not supported by the results. Hypothesis H5a suggested a positive influence of product attitude on the intention to recommend and the results of the mediation analysis according to Hayes and Preacher (2013) support this suggested relationship (0.4318, p < 0.001).

The indirect effect of sense of community on intention to recommend through attitude toward the product can be calculated by multiplying the coefficients of the specific direct effects (i.e., 0.1585*0.4318) and results in 0.0684. To test this indirect effect for significance, the SPSS macro by Hayes and Preacher (2013) uses the bootstrapping method, which estimates the indirect effects by randomly resampling the data sample. For our analysis, we generated the bootstrap confidence intervals using 5000 bootstrap samples. The results of this approach show that this indirect effect is significant since the 95% bootstrap percentile confidence interval does not include zero (0.0158, 0.1576). For the indirect effect of being a product tester on intention to recommend through attitude toward the product, we perform the same analysis. This effect is positive (0.2627) and significant as well since the 95% bootstrap percentile confidence interval does not include zero

b Parameters after scale revision.

 $^{^{1}}$ In the analyses, the dummy variable 'product tester' is indicating if the community member had been chosen to being able to test the product (i.e., 1) or not (i.e., 0).

^{*} p < 0.1.

^{**} p < 0.05.

^{***} p < 0.03.

either (0.0176, 0.6041). Thus we can conclude that the effects of sense of community and being a product tester on intention to recommend the new product are mediated by the community member's attitude toward the product. In addition, the fact that someone is a product tester in a social media tryvertising campaign alone does not lead to more word-of-mouth communication. There is no direct effect on the intention to recommend the new product (see hypothesis H4a). With regard to social media marketing, this finding is of interest, because firms implement these social media tryvertising campaigns to reach many people in a short period of time (Cruz and Fill, 2008). Our results show that these campaigns do have an impact on online word-of-mouth communication (see hypotheses H2a and H5a), but that the fact that some of the online community members are given the possibility to try the product themselves alone does not guarantee the spread of new product information via social networking sites.

For using the intention to purchase as dependent variable, the results for the direct effects are depicted in Table 3 (panel b). We find consistent results for hypotheses H1 and H3. The results show that the influence of sense of community on the intention to purchase is not significant (0.0713, p = 0.3470), thus H2b is not supported. Hypothesis H4b hypothesized that being able to try the product leads to a higher intention to actually purchase the product that is new to the market. The results here show that this assumed relationship is not significant either (-0.5167, p = 0.2029) and thus hypothesis H4b is not supported. As postulated by hypothesis H5b, a more positive attitude toward the new product leads to a higher intention to purchase. The direct effect of product attitude on intention to purchase is positive (0.9760) and highly significant (p < 0.001), thus hypothesis H5b is supported by the results.

We find that the indirect effect of sense of community on purchase intention (0.1585*0.9760 = 0.1547) is significant (95% bootstrap percentile confidence interval is (0.0277, 0.2841)). However, the indirect effect of being a product tester on purchase intention through attitude toward the product is not significant (95% bootstrap percentile confidence interval is (-0.0258, 1.1667)). We thus conclude that only the effect of sense of community on the intention to purchase the new product is mediated by the community member's attitude toward the product. Furthermore, our results show that implementing a social media tryvertizing campaign does only partially influence the community members' purchase intention. While the results of model a) clearly demonstrate an influence of community members' sense of community on their intention to engage in word-of-mouth communication and recommendation behavior, we see by the results of model b) that the community members' feeling of belonging together and being part of this product-related community does not directly influence their intention to purchase the new product (see hypothesis H2b). We further see that the fact of being able to test the new product does not directly influence purchase intentions (see hypothesis H4b). However, the sense of community influence the attitude toward the new product which in turn is important for community members' future purchase behavior.

Based on the results of both model a) and model b), we also see that the attention community members pay to the campaign also significantly positively influences community members' attitude toward the new product. Therefore, it can be concluded that social media campaigns positively influence the success of a new product introduction.

6.3. Post-hoc analysis

Supporting the market launch of a new product with the implementation of a social media campaign, participation of community members is needed to further spread the word about the new product, keep people active on the platform and keep them talking about the new product.

However, no or little participation of community members may

have negative consequences for the firm. The results of the mediation analysis above have shown that the attention to the campaign as well as the sense of community positively influence potential customers' attitude toward the new product. As outlined above, involvement with the social media campaign and the product is important for the dissemination of the new product information, the attitude towards the product as well as for a successful market launch (Shang et al., 2006; Dwyer, 2007).

To further examine the expected relationship between activity and attitude towards the product, we analyze the behavioral data of the community members. For this analysis, activity in the community is defined as any action on the platform. Since community members were able to post photos, comments and product reviews (in the case of the product testers) or to like content on the Facebook application, this behavioral data was used for a differentiation of active and inactive community members. Community members provided 128 photos, 97 comments and 1956 likes in addition to 235 product reviews that generated 318 likes. Therefore, a dummy variable was created indicating if the community member was active or not. Out of the 6221 community members, 1042 members were active during the campaign. This means that those members showed at least one action on the platform (e.g., liking a photo). Based on the survey and behavioral data, a linear model regressed sense of community, attention to the campaign, information credibility, early adoption behavior and the dummy variable indicating whether the community member was active on the platform, on product attitude. Early adoption behavior (which was measured in the survey) is used as additional explanatory variable since it is assumed that individuals who are used to adopt new products on the market earlier than others might also have a more positive attitude toward new products on the market. The model is estimated as follows:

Attitude Product =
$$\beta_0 + \beta_1$$
·Sense of Community + β_2 ·Attention Campaign + β_3 ·Information Credibility + β_4 ·Early Adoption + β_c ·Active Participation + ε

The results depicted in Table 4 show the significant positive impact of sense of community and attention to the campaign on attitude toward the product. The results also show a significant positive influence of early adoption behavior. In addition, the variable indicating if the community member took an active or passive part significantly influences the community member's attitude toward the new product. To conclude, community members that are actively participating in the community and generating content on the platform do have a more positive attitude toward the new product on the market which is in turn relevant for their adoption and recommendation behavior.

Furthermore, an active participation on the platform may have additional positive effects. Since this social media campaign is using an existing social networking website (i.e., Facebook) to promote the new product, every community member's action on the platform may be

Table 4Regression results – Attitude product.

Variables	Parameter	
Sense of Community	0.146** (0.064)	
Attention Campaign	0.183** (0.087)	
Information Credibility	0.127 (0.104)	
Early Adoption	0.170** (0.075)	
Active Participation	0.510* (0.299)	
Constant	2.358*** (0.592)	
No. of observations	168	
R Squared	0.213	
F-Value (p-Value)	8.813 (0.001)	

Notes: Standard errors in parentheses. VIFs $<\,2.$

^{*} p < 0.1.

^{**} p < 0.05.

^{***} p < 0.01.

seen by his or her direct friends on Facebook via the news feed. Aral and Walker (2011) point out that automated notifications via already existing online social networks are beneficial for a fast diffusion of information and for product adoption within the network.

7. General discussion

Many retailers and manufacturers implement social media campaigns to support the introduction of new products. This research extends knowledge on the impact of social media campaigns by empirically investigating the impact of a social media tryvertizing campaign on the success of a new product introduction. The results show that campaign-related factors, namely the community members' attention to the campaign as well as their sense of community both positively influence the community members' attitude toward the new product on the market. This gives marketers the possibility to enhance consumers' attitude toward the new product by trying to increase their attention to the campaign and to strengthen their sense of community.

Since community members' sense of community also positively impacts the community members' intention to recommend the new product, marketers should pay particular attention to the specific design of their social media campaign to fully exploit the benefits they provide to turn their new product introduction into a success.

One possibility for firms to keep community members active could be to use elements of gamification within the scope of the campaign on a more or less regular basis. Increased activity of the community members is to raise their attention to the campaign and to what is going on in the community. In addition, increased activity on the platform fuels the interaction with other community members which might lead to a further increase in their sense of community. Both sense of community and attention to the campaign are noticeable factors for the success of the new product introduction. Especially in the case of social media campaigns that are implemented using existing online social networks, activity of the community members increases the reach of the campaign and accelerates the dissemination of the new product information. Via automated notifications the community members' direct

friends on the platform can be informed about the new product just by a member's actions in the community, thus letting many potential consumers know about the new product on the market.

In this study, we investigated one special form of social media campaigns, namely tryvertizing campaigns. The special characteristic of this kind of social media campaign is the fact that some members of the related online community are selected and are given the new product to being able to try it and to telling others online about their experiences they made. While this approach certainly has various advantages (e.g., first-hand experiences of other customers might be much more credible than published online by the firm), we find that only the fact of being a product tester does not enhance community members' intention to recommend or to purchase the product. Nevertheless, selecting various community members to become product testers - in combination with the incentive to select points for every activity on the platform - increases the activity on the platform. This in turn may positively influence the interaction of the community members and hence their sense of community as well as increase the reach of the campaign and the dissemination of the new product information. We conclude that social media campaigns in general and tryvertising campaigns in particular may be an effective means for supporting the market launch of products and to positively influence the success of the new product introduction.

Despite the gained insights into the impact of social media campaigns on the success of new product introductions, several limitations have to be acknowledged. First, only a limited number of community members took part in the online survey. This as well as privacy settings limited our ability to match the survey data with the behavioral data. Second, the data analyzed is limited to one product category. Analyzing social media campaigns that support the introduction of products from different categories might be an interesting subject of future research.

In addition and given the multitude of dimensions and measures to evaluate the success of a new product introduction (Griffin and Page, 1993), it might be interesting to analyze the impact of social media campaigns on the financial success of new product introductions by using additional accounting data.

Appendix

Constructs and Items

Attention to the Campaign (adapted from Laczniak and Muehling, 1993)

- 1) How much attention did you pay to the [brand name] campaign? b
- 2) How much did you concentrate on the [brand name] campaign? b
- 3) How involved were you with the [brand name] campaign? b
- 4) What kind of impression did you get about the [brand name] campaign? c

Sense of Community (adapted from Peterson et al., 2008)

- 1) I feel like a part of the [target group] community. $^{\rm d}$
- 2) I feel connected to the [target group] community. $^{\rm d}$
- 3) I have a good bond with others in the [target group] community. d

Information Credibility (adapted from Andrews et al., 2000)

- 1) not believable/ believable
- 2) untrustworthy/ trustworthy
- 3) not credible/ credible
- 4) of no use/of great use
- 5) I think the [target group] community is a reliable source of information. d

Attitude toward the Product (adapted from McAlexander et al., 2002; Ziamou and Ratneshwar, 2003)

- 1) I love the [product name]. d
- 2) What is your overall opinion of the [product name]? c
- 3) The [product name] is fun. d
- 4) The [product name] is one of my favorite products. d

Intention to Recommend (adapted from Arnett et al., 2003; Harrison-Walker, 2001)

- 1) In social situations, I often speak about the [brand and product name]. d
- 2) I bring up the [brand and product name] in conversations I have with friends and acquaintances. d
- 3) I share information about the [brand and product name] with others. d

Constructs and Items

- 4) Since I know the [target group] community, I mention the [product name] to others quite frequently. $^{\rm d}$
- 5) I bring up the [brand and product name] in conversations I have with friends and acquaintances outside the [target group] community.
- 6) All in all, when you talk about the [brand and product name] would you say that this communication was... $^{\rm c}$

Purchase Intention

1) How likely are you to buy the [product name] in the future? ^a

Early Adoption (adapted from Steenkamp and Gielens, 2003; Goldsmith and Hofacker, 1991)

- 1) In general, I am among the first to buy new products when they appear on the market.
- 2) I am very cautious in trying new and different products. [reverse coding] d
- 3) I enjoy taking chances when buying new products. d
- 4) Compared to my friends, I own a lot of products that are new to the market. d

Scale anchors: a) highly unlikely (1) to highly likely (7), b) none (1) to very much (7), c) very negative (1) to very positive (7), d) strongly disagree (1) to strongly agree (7).

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