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Establishing Virtual Communities: Only trial and error?

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Abstract: More and more firms make use of virtual communities to interact with customers, particularly in the light of open innovation. Although companies invest enormous effort in developing virtual communities just a minority of these succeed. That means that firms were either unable to recruit the critical mass of users or to motivate users to publish and discuss generated content on the platform. Looking at the literature there are several models explaining the systematic development of virtual communities. Nevertheless, there is a lack in terms of the establishment of communities. Thus, we aim at taking a closer look at a few success stories in this field. We conducted several qualitative expert interviews with platform developers of these examples. The results show that the interviewed experts use a generic approach, which is based on practical experiences. Using these insights platform developers can design a more systematic approach to establish communities.

Keywords: Online Communities; Introduction Model; Virtual Communities; Platform Developers;

1 Introduction

My Starbucks Ideas, Tchibo Ideas, Dell Ideastorm, Innocentive – These examples of virtual communities or, to be more specific, ideas communities are well-known and demonstrate the increasing importance especially for companies who use the crowdsourcing mechanism to get ideas for new products or services from their customers. But companies do not only use such communities in order to boost their innovative capability, they also use communities as a recruiting and marketing instrument (Bretschneider, 2012a). In addition to these examples, there is a profusion of virtual communities that do not generate the required information (Ransbotham and Kane, 2011) or reach the defined

goals. Despite this already known problem, the literature does surprisingly not deliver systematic approaches based on well-founded theories, which explain how virtual communities can continuously attract new users in order to get customers who will contribute the required information.

This article will address this research gap as it delivers a state-of-the-art analysis regarding the introduction models of platform developers of virtual communities in the field of B2C communities. Furthermore, it provides a first concept for a systematic process of establishing virtual communities. Thus, the following research questions will be answered: (1) How do platform developers of virtual communities establish their communities? (2) What can we learn from literature in order to establish virtual communities systematically?

For doing so, the next paragraph analyzes current research in the field of developing and establishing virtual communities. Afterwards, the methodology we conducted for the in-depth expert interviews is explained. Section 4 presents how platform developers establish virtual communities. The interviewed platform developers design, manage and maintain virtual communities on behalf of companies who want to interact with their customers via communities in order to gather solution and need information for example. Based on this, section 4 also synthesizes the results gained from the interviews and information on the adoption processes of innovation gleaned from recent literature in order to present a more comprehensive understanding of the establishment of virtual communities. A discussion of the results and a summary complete this article.

2 Recent Research

The literature provides a wide range of definitions regarding the term “virtual community.” The reason for this is that a lot of research fields such as information systems, psychology, education et cetera investigate the phenomenon of the virtual communities. Furthermore, some authors use the term “online community” instead of “virtual community.” Following (Panten, 2005), virtual community and online community can be considered as synonymous.

One of the first definitions understands virtual communities as “social aggregations that emerge from the net when enough people carry on those public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyber-space“ (Rheingold, 1993). (Hagel and Armstrong, 1997) also focus on the aspects IT support and building social relationships amongst the users. Thus, they consider virtual communities as “computer-mediated spaces where there is a potential for an integration of content and communication with an emphasis on member-generated content” (Hagel and Armstrong, 1997). Additionally, they emphasize the importance of user-generated content within an online community. Similar to this definition, (Preece, 2001) describes virtual communities as “any virtual social space where people come together to get and give information or support, to learn, or to find company. The community can be local, national, international, small or large.” So there is a comprehensive understanding about the term “virtual communities” and new definitions like “cyberspace(s) supported by computer-based information technology, centered upon communication and interaction of participants to generate member-driven content, resulting in a relationship being built“ (Lee et al., 2003)

or "groups of people who interact primarily through computer-mediated communication and who identify with and have developed feelings of belonging and attachment to each other" (Blanchard, 2004) only vary in facets.

Although, there is a clear understanding about what virtual communities are, there are still some blank spots in the recent literature especially when we look at the introduction stage of communities. The literature provides models like the "Community Building & Community Management Cycle" (CB&CM-cycle) (Leimeister and Krcmar, 2006) or the "Online Community Life-Cycle" (Iriberri and Leroy, 2009) that explains the lifecycle of an online community on an aggregated level. Nevertheless these models do not provide detailed insights. In order to be more specific, the following section will present the mentioned approaches in more detail.

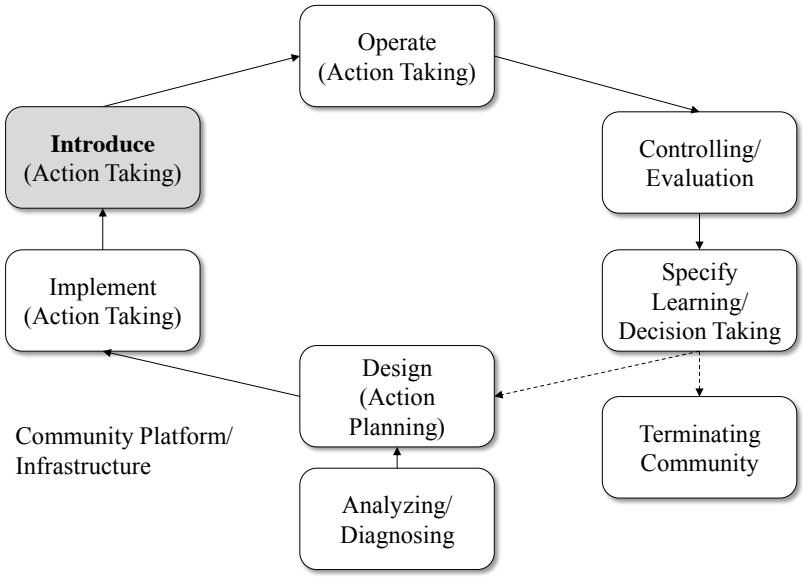

Figure 1 Community Building & Community Management Cycle (in accordance with (Leimeister and Krcmar, 2006))

The CB&BM cycle (see figure 1) consists of six phases: (1) "Analyzing/Diagnosing", (2) "Design", (3) "Implement & Operate" (4) "Controlling/Evaluation", (5) "Specify Learning/Decision Taking", (6) "Terminating Community". Beginning with the "Analysis", objectives and target groups have to be identified as well as the circumstances and the customer's needs in terms of information and interaction. The iterative system development process takes place in second phase "Design." After the phase "Implementation and Operation", where the virtual community is launched and the Community Management itself starts, the "Controlling Phase" takes over. During this phase, the platform developer evaluates KPIs, log files and conducts user surveys. Based on the gained results, the developer assesses the degree of goal attainment and thus decides if a new CB&CM cycle is needed or if the virtual community have to be terminated. Although this approach delivers a comprehensive understanding about the creation and operation of a virtual community, it ignores the gap between implementation and regular operation and does not pro-

vide any answers regarding how new users can be bound to the community. But indeed this phase is quite important for the success of a virtual community since during this phase users have to be acquired so that a living community can arise around the developed technical platform (see figure 1).

Apart from the CB & CM cycle (Iriberri and Leroy, 2009) developed a model that explains the lifecycle of a virtual community. The so-called "Online Community Life-Cycle" is a five-stage model consisting of the stages: (1) inception, (2) creation, (3) growth, (4) maturity, and (5) death. At the inception stage the vision for a community is codified based on the people's need, which is also confirmed by (Porter et al., 2011). In the creation stage the technical components are selected and implemented. After the implementation users join the community in order to participate and to satisfy their needs for information and communication. When the relationships in the community are strengthened and new users join the community in a regular way in order to share new ideas the community has entered the maturity stage. Some communities lose momentum, do not provide high-quality information anymore or lose interaction between users. If these aspects reach a certain limit, the community dies. Although this model provides a comprehensive view on the lifecycle, it also ignores the introduction process for a community. But indeed this phase is quite important for the success of a virtual community as during this phase users have to be acquired so that they get in touch with the online community, participate and support the development of a community culture. This is very challenging, and a lot of communities fail at this stage.

Consequently, considering the introduction of virtual communities, the diffusion of a new online community is a highly critical aspect as the diffusion and thus the adoption of a virtual community is a necessary requirement for the continuous community growth. (Rogers, 2003) identified five characteristics which have a significant impact on the adoption speed of innovations:

1. **Relative advantage:** The relative advantage describes the extent to which an innovation is perceived as better in regard to an already existing idea.
2. **Compatibility:** Compatibility describes the perceived extent to which an innovation is consistent with existing values, experiences and needs of the potential users.
3. **Complexity:** Complexity means the subjectively perceived degree of difficulty in terms of using the innovation.
4. **Trialability:** Trialability describes the extent to which an innovation can be tested by potential users.
5. **Observability:** Observability can be understood in terms of how the results or the benefits of an innovation are visible for other users.

Following the definition of (Rogers, 2003) an innovation is an idea, a method or an object that is perceived as new by an individual or a group.

Virtual communities can be considered as an innovation on an individual level. Thus, according to (Rogers, 2003) theory for the adoption of innovations every potential user passes the stages knowledge, persuasion, decision, implementation, and confirmation (see figure 2).

According to (Rogers, 2003), every potential user starts with the stage (1) "knowledge" in which, for the first time, he hears something about the innovation, in this case a new virtual community. Being in this phase, there are three needs that have to be addressed: (1) What is the innovation? (2) How does the innovation work? (3) Why does the innovation work? Especially the second question is highly relevant because the more complex a virtual community is, the more information about the underlying mechanisms is necessary.

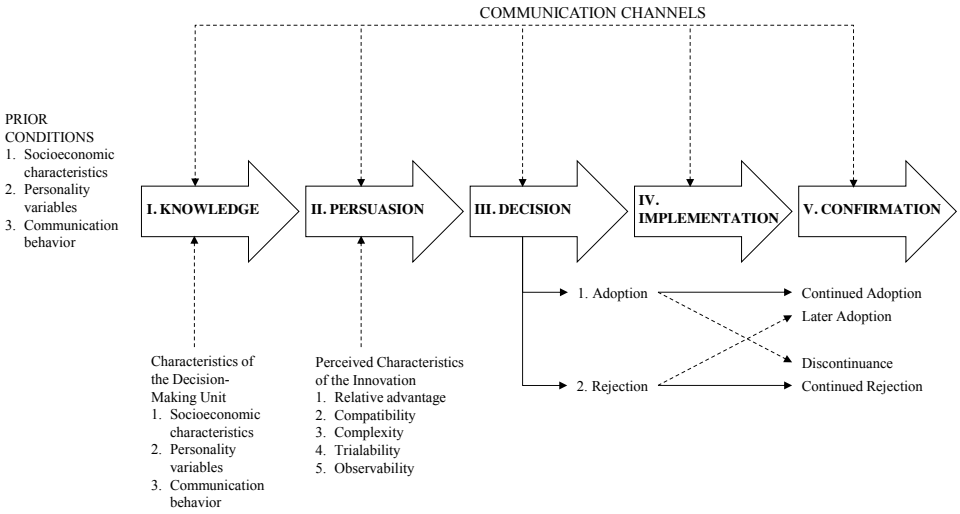

Figure 2 The five stages of the innovation-decision process (Rogers, 2003)

In the stage "persuasion", people develop a preliminary attitude regarding the new virtual community. This attitude can range from positive to indifferent or even negative, of course. Hence, rational arguments are not anymore the exclusive basis of decision-making in terms of using the virtual community. Feelings have a high importance at this moment. From now on, people also actively seek out further information and evaluate the gathered information about the virtual community. That is why the five characteristics have to be communicated intensively in order to increase the likelihood of a positive attitude.

The "decision" stage is the most critical stage as people decide for or against the virtual community at this point. If they are not willing to use it, the virtual community was not interesting enough for them, and they will probably forget about it. Otherwise, if people decide to use the virtual community, they enter the stage "implementation".

Looking back at the previous stages, the processes were mostly mental. With entering the implementation phase, people are becoming active on the one hand. On the other hand there are still some uncertainties in terms of the virtual community. These uncertainties arise through questions regarding the usage of the virtual community. Or potential users wonder how they can find and access the community. That is why people gather information actively. Hereby, change agents are very valuable as they can provide people with the required information. Thus they are simultaneously disseminators and can promote the innovation, respectively the virtual community.

Some people approach the "confirmation" stage. People who are in this stage review their decision for or against the virtual community. In order to generate a final decision, they look out again for information in order to reduce cognitive dissonances.

This model is often used to explain the adoption process of innovation not only in the discipline of innovation management but also in disciplines like communications or education (Sahin, 2006). Thus we assume that this model is also appropriate to explain the introduction of virtual communities. Furthermore, it provides a good structural framework in terms of presenting a state of the art analysis of the introduction process of platform developers.

3 Methodology

For doing so a series of in-depth interviews and content analyses were conducted. The research design of this interviews series is based on the classification scheme by (Paech et al., 2005). Following this approach, the goal of the interviews had to be defined at first. According to the research questions the interviews aim at a descriptive analysis of the existing introduction approaches of platform developers. The interviews are interpretive in order to get a comprehensive understanding of the approaches. The questions in the semi-structured interviews are open-ended. As our approach is an explorative approach, we developed the interview questions further and adapted them, based on the results gained in the first interviews. All interviews were recorded. After we conducted the interviews, we started with open coding in order to deduce similarities and differences between the approaches. Based on these findings, the results were compared with Roger's theory regarding the adoption of innovations in order to synthesize the practical approaches of platform developers and recent innovation theory.

Two of the interviewed experts are representatives of companies who develop and manage virtual communities for their business customers. The third expert worked for a German university and managed an idea community for a German ERP software company (see table 1).

Table 1 Details about the interviewed experts

Expert	*Position*
Expert #1	Expert #1 is an IT project manager at a German innovation company. This company mainly develops ideas communities for business customers.
Expert #2	Expert #2 worked for a German University where he conceptualized and piloted an ideas community for a German ERP software company.
Expert #3	Expert #3 is an associate of a British innovation company. This company mainly develops ideas communities for business customers.

4 Results

The results from the interviews are structured by using the five-stage innovation-decision process by (Rogers, 2003) (see table 2). According to this theory, the first three stages

knowledge, persuasion, and decision are not visible in contrast to the stages implementation and confirmation. In consequence, the allocation of the introduction measures of the platform developers to every of the first three stages would be very difficult to justify. That is why we combined the first three stages into one stage.

Interestingly enough, although the experts had no knowledge about this theory, all of them differentiated between measures that are targeted at raising awareness and at motivating people to engage in the virtual community. So, on the one hand they already follow this model unwittingly. On the other hand, all of the interviewed platform providers unanimously maintained that they use an individual generic approach in their projects. This fact is reflected in the applied introduction measures represented in table 2, which differ between the different platform developers.

All of these approaches have in common that one person is responsible for a whole community and simultaneously for a few community managers who handle the community management. This may evidence the high importance of a continuous and personal management of a community in order to acquire new community members, to motivate community members to publish content in the community et cetera.

Results in terms of the stages knowledge, persuasion, and decision

Basically, the general approach of awareness-raising measures in order to inform people and to generate a positive attitude towards the virtual community is twofold. On the one hand, the acquisition of new community members can be based on invitations (expert #3). On the other hand, the acquisition can be realized through word-of-mouth marketing and by using change agents promoting the virtual community (expert #1, #2). Both approaches are suitable and are derived from two different mindsets. Either the platform developers assume having a small group of experts will generate good ideas or the platform developers assume having a large number of community members will result in a large number of ideas in which a few good ideas will occur. Until now, it could not be determined which approach hold more promise. However, the invitation-based acquisition is costly, as the platform developers have to look out for potential community members. Thus, after a time-consuming evaluation of potential members, they send the invitations while the success rate could not be determined in advance.

Starting from the assumption that a large number of community members automatically leads to a few really good ideas, it is necessary to acquire members not only by using change agents but also by making use of social networks such as Facebook, for example. Especially the use of social networks is promising, as the probability for adopting a virtual community increases when people see that friends in their social network already adopted this specific virtual community (Katona et al., 2011). Furthermore, platform developers are able to gather information about the acquired community members and this information, in turn, is useful for targeting further potential community members (Katona et al., 2011). (Nitzan and Libai, 2011) go one step further and point out the possibility of supplementing demographic data about community members with information found in social networks in order to improve the analysis of community adoption. This approach has not been used by the interviewed experts until now, although it is a traceable and promising approach.

For the purpose of enriching the information shared in social networks, all platform providers implemented functionalities which allow sharing of content generated by users in the virtual community. Therefore, all postings of community members are shareable on Facebook, for example. By using this functionality the actual virtual community can reach a wide network of people who are potentially interested in the topic of the community. Hence, it is an effective awareness measure in order to inform people.

Apart from that, the interviewed experts (expert #1, expert #2) consider professional bloggers as a valuable instrument to promote the virtual community. These bloggers have a large number of followers as well as a solid reputation with them. Mostly, the bloggers are paid, and the platform developers supply them with finished text modules and phrases. (Kane et al., 2009) confirmed in the context of social media and community relation that prominent bloggers can be a powerful multiplier.

The platform developers do not explicitly emphasize the relative advantages of their communities in these communication measures. This is interesting because according to Rogers (2003), this criterion has a significant impact on the adoption rate. Confronted with this statement, the experts reciprocated that the focus on the communication of the community's targets would present the relative advantage of their community compared with competitive communities. All of the experts also emphasized the importance of an explicit definition of the community's target, which the community member must be aware of. Indeed, this is a simple measure but it is essential for making sense and as a consequence for motivating people to engage in the community.

Looking at the characteristic "observability" which innovations should have (Rogers, 2003) only one expert pointed out best practices (expert #2). They reported by using newsletters and postings in their community about users who got for examples internships, vouchers et cetera because of their intensive engagement in the community. Referred to (Rogers, 2003) they presented concrete outputs of the community. Thus new and current community members can see an impact caused by an engagement in the virtual community.

Another introduction measure is the implementation of fake accounts and fake user postings. These accounts and user posts are supposed to simulate activity in the new virtual community as well as to generate initial content. Expert #3 compared this introduction measure with an empty restaurant: If a new restaurant is totally empty, no one would probably go inside.

In addition to the web-based introduction measures, platform developers also use offline activities like printing posters (expert #2) in order to raise awareness. The response rate was not assessed, so no statements can be made in terms of the effectiveness until now.

Results in terms of the implementation stage

Two of three interviewed platform developers (expert #1, #2) sent personalized welcome messages to new members. The messages were not completely individualized because the personalization of messages is time-consuming. Although the messages only differ in small aspects (for example in personal salutation, latest information about the community et cetera), it is an effective tool to generate a sense of commitment and belonging to the community. Furthermore, it is a component for establishing human relationships within

the community. Sending standardized welcome messages is counterproductive as new members may get a negative attitude towards the virtual community (expert #1, #2).

Negative reaction of community members occurred seldomly and if so, mostly outside the virtual community in other communities. According to expert #2, contacting these community members and clarifying the contentious issues is mostly helpful and should be done to close the discussion.

Another measure within the implementation stage is sending out newsletters. In contrast to the welcome messages, personalizing a newsletter is not necessary according to the platform developers. These newsletters contain information about new community members, current topics, new user contributions, and planned activities. Not all of the interviewed platform developers tracked the response rate. Nevertheless, those platform providers who sent out newsletters mentioned a significantly higher visit rate of the virtual community.

The interviewed platform developers focus primarily on intrinsic motivation. One possibility to motivate community members is to elect a so-called "member of week". This can be a member who was very active in the community during one week for example (expert #3). It is also possible to motivate members by awarding status points which can be earned by publishing user comments, evaluating user posts or just being logged in. So when someone contributes to the community his reputation increase (Antikainen et al., 2010). These measures are directly linked to findings regarding the motivation of participants engaging in ideas communities. (Bretschneider, 2012a) revealed that social recognition is an important driver for the participation in a community. Moreover fun, self-marketing and altruistic based identification with the community are motivations for participating in a community. Additionally platform developers also sometimes make use of extrinsic motivation. When targeting at extrinsic motivation the awarded prices are always related to the particular community topic (expert #2, #3). Thus it is necessary to analyse the motivations of the community member in order to address these in an adequate manner and to activate the community members (Bretschneider, 2012b), (Bretschneider and Leimeister, 2011), (Porter et al., 2011).

Results in terms of the confirmation stage

Probably caused by budget restrictions, platform developers mostly ignored users, who are registered for a virtual community but do not engage actively in it. The only applied measure to reactivate such community members are currently newsletters. These newsletters contain information about the last developments in the virtual community, new activities, and new members et cetera. Moreover, the passive users are asked to engage in the virtual community again. This measure was applied by the platform developers on one occasion, and they did not control the response rate. Thus, it is difficult to claim whether this measure is an appropriate measure for reactivating passive community members.

Apart from this single measure, no activities were implemented. This is caused by the fact that motivating passive community members to re-engage in the community is very complex and cost-intensive, as login times have to be tracked and analyzed continuously in order to find passive community members. Convincing such community members is especially time-consuming and it is not certain whether the passive community member

can be convinced, due to the fact that the decision not to use the community anymore is always a conscious decision (Sahin, 2006), (Rogers, 2003).

Table 2 Measures of platform developers to introduce virtual communities

	Stages of the innovation-decision process regarding the adoption of a virtual community				
	I Knowledge	*II Persuasion*	*III Decision*	*IV Implementation*	*V Confirmation*
Expert #1	• Community manager is responsible for the community management • Clear target definition of the virtual community • Using change agents and social networks to inform target groups about the new virtual community • Sharing user activities in social networks • Fake accounts and postings			• Mostly intrinsic incentives • Personalized welcome messages for new users	• Use of newsletters
Expert #2	• Community manager is responsible for the community management • Clear target definition of the virtual community • Using change agents and social networks to inform target groups about the new virtual community • Using print media like posters • Presentation of best practices • Promoting advantages of the virtual community • Sharing user activities in social networks • Fake accounts and posting			• Use of newsletters • Mostly intrinsic incentives • Personalized welcome messages for new users • Direct communication with users having a negative attitude to the virtual community	• Use of newsletters
Expert #3	• Community manager is responsible for the community management • Clear target definition of the virtual community • Invitation-based recruiting of new members • Using social networks especially Facebook to inform target groups about new virtual community proactively • Fake accounts and posting			• Sharing user activities in social networks • Use of newsletters • Mostly intrinsic incentives	

Another interesting aspect is the fact that not all platform developers control the applied measures. Consequently, it is not possible to track which of the measures succeeded and which did not. In terms of channelling the measures in order to guarantee an efficient and effective introduction approach not tracking the response rate is counterproductive. Alt-

hough an all-encompassing controlling of introduction measures is not possible because of technical restrictions a minimum of tracking should be done in order to take counter-measures if some measures fail.

To sum up, platform developers use an individual generic approach. This approach is not based on the theory but rather on experiences made through former customer projects. That does not have to be bad. Nevertheless, there is a high risk of wasting the invested effort for developing and introducing a virtual community as this approach is a trial-and-error approach. Other than that, there is a high risk of knowledge drain when the employees, who managed the virtual community, leave the company, as the personal and tacit knowledge is not integrated and codified in the individual introduction approaches.

5 Conclusion

Recent literature does not provide comprehensive models explaining the introduction of virtual communities, although the introduction is a critical phase for the success of a virtual community. If platform providers fail in generating the critical mass of users, the community will die which means a total loss of the invested time and money. Therefore, this article presents the adoption theory by (Rogers, 2003) as an approach which can structure the introduction process. In order to get insights from practice, we conducted three in-depth expert interviews with platform developers.

The results confirm that the importance of social networks has an especially big relevance in order to attract new users. Social networks are an effective instrument to make use of word-of-mouth effects. Furthermore, the relevance of change agents for acquiring new users is confirmed, although not all developers make use of this important factor. The interviews also revealed that all developers are aware about the importance of the common interest of all users in a virtual community as well as about the sense of belonging to a community. So nearly all developers try to support these aspects as they contact their users in a personalized manner and present them results and new developments in the community, for example in the form of regular newsletters. Nevertheless, there is a lack in the applied measures of platform developers compared with the statements of Roger's theory regarding the adoption of innovations. For example, the aspects of testing and observing a community are not yet mentioned consistently. Also, platform developers do not promote the relative advantage of their community compared to competitor's communities. By presenting our results platform providers have a first guideline which can help to structure the introduction of new developed virtual communities.

Surprisingly, the platform developers can make no use of their customers as change agents. Mostly their customers do not engage intensively in the developed community (expert #1, #2, #3). This is due to the fact that there are a lot of uncertainties on customer side, as they do not know what they can expect from the community. Therefore they are mostly just observer and the platform developers are responsible for the community. Looking at the introduction model for electronic meeting systems (EMS) by (Klein and Krcmar, 2003) it is necessary to integrate the organizational perspective on the customer side and not only the individual level on the community member side, when we talk about virtual communities in the B2C field. Consequently, it would be very valuable when the customer of the platform developer participate proactively and continuously in

their community to motivate the community members. Community members who feel as a partner of the company behind the virtual community are more likely to contribute (Nambisan and Baron, 2010). That is why further research has to be done in order to develop a comprehensive introduction model for virtual communities which consider the individual as well as the organizational aspects.

This work is limited by the fact that the results are based on three interviews. Thus, further in-depth interviews have to be conducted to corroborate these results. Moreover, it must be said that some statements by the experts are based on personal appraisals and not on empirical data, for example regarding the impact of personalized welcome messages. This fact calls for further research. Additionally, the mentioned statements are based on the adoption theory by (Rogers, 2003) and adapted to the context of B2C virtual communities. Thus the statements have to be tested in order to validate the transferability.

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