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Using Digital Customer Communities as a Marketing Tool to Connect and Educate Customers in the Manufacturing Industry

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Abstract

The application of digital customer communities has been observed over the past years but primarily in the business-to-consumer sector. The COVID-19 crisis has affected positively the usage of digital tools in business-to-business, including customer communities. A digital customer community aims to connect individuals and share information between them. It has therewith a positive effect on the trust, loyalty and behavior of customers. The present study reviewed scholarly databases in an attempt to ascertain the current knowledge on the use and relevance of digital customer communities. Several studies have discussed the advantages of using digital customer communities in e-commerce, brand management or business cooperation, but a framework supporting the application of digital customer communities is lacking. The present study used content analysis to examine the existing academic knowledge. It recommends answering the three questions “What does the digital transformation change?”, “Why use customer communities?” and “What drives the customer experience?” when starting to consider using digital customer communities in business-to-consumer.

Introduction

Digitalisation is the challenge of the 21st century. During the COVID-19, crisis the speed at which business-to-business (B2B) companies have been using technology has increased dramatically (Ossiannilsson, 2020), and information technology has been used during the crisis to support organisations in improving process resilience (Remko, 2020). Before COVID-19, most B2B customer engagement was typically based on face-to-face meetings (Barari et al., 2020).

The manufacturing industry is one of the largest industries in the European Union (Eurostat, 2018), and it has been hypothesised that digital customer communities are not being heavily used as marketing tools to connect and educate customers within it (Chae et al., 2019; Orji et al., 2020). Digital media elements, such as social media, chats or videos, are well accepted as tools in customer communication, and the COVID-19 crisis has shaped the overall usage in a positive way (Bond et al., 2018; Klein & Todesco, 2021)

Using cooperation to generate value as well as to share risks or costs between partners is a well-known approach in managerial practice and in the academic literature. In the future, joint efforts and cooperation may receive more

attention. Customers and suppliers work together towards a joint target; this requires trust between the business partners and the individuals. The management of customer expectations and customer experiences thus moves in a new light for B2B organisations also (Rose et al., 2021). The use of communities in business is not a new phenomenon (Holtkamp & Bange, 2020), but lockdowns forced B2B organisations to change their day-to-day business practices which affected the acceptance of digital media elements, such as social media (Hu, 2021). Social media offers new ways of working with partners and how information is shared and customers are connected or educated (Chaker et al., 2022).

Engagement of Customers

Customer engagement means the commitment of an individual customer, and the better it is, the better the actual relationship between customer and supplier (Barari et al., 2020; Zhang & Du, 2020). It is understood to be a key success factor in achieving a successful long-term customer relationship. The engagement of a customer is critical for business success as a connection between actual customer engagement and the profitability of a customer (Harvard Business Review, 2014).

Customer engagement has received more attention in the most recent years of the digital transformation in the business environment. Customers used to be passive receivers of information in the relationship between supplier and customer. Through the ongoing digital transformation, the relationship of supplier and customer has developed. Today, the customer is often a value co-creator and has become an important as well influenceable element in the new product development and service innovation process (Rasool et al., 2020).

Different approaches are identified in the academic literature calculating customer engagement. In the study “The influence of brand experience and service quality on customer engagement”, the four dimensions of purchase engagement, referral engagement, influence value engagement and knowledge engagement are used to measure customer engagement (Prentice et al., 2019).

Customer engagement affects several components in the overall customer relationship model between a supplier and a customer, including trust, loyalty monetary evaluations, self-connection and intrinsic enjoyment (Li et al., 2020; Thakur, 2018). Furthermore, customer engagement is affected by actual customer satisfaction (Thakur, 2018). Thakur thus recommends to “put in place initiatives to increase customer engagement. Customer engagement arises out of experiencing the retail environment repeatedly” (2018, p. 57). The quality of service seems to be a universal condition for successful customer engagement (Prentice et al., 2019). The use of the two terms customer satisfaction and customer experience should be mentioned, as these terms are often used simultaneously in the academic literature (Prentice et al., 2019; Thakur, 2018). Customer experience means typically everything related to a supplier that affects the actual customer's perception and feelings about this supplier. Its core focus is the existing relationship between a supplier and a customer. It therefore includes all interactions between the two parties regardless how brief, intensive or successful the single interaction is. An essential component of customer experience management is to recognise the customer as an individual and to manage the customer in such a way. The management of many customer simultaneously seems to not be the intention of successful customer experience management (Kreutzer, 2018).

Managing customers individually and recognising them as co-creators in the value creation process leads to the need to form customer communities. The participation of customers in such a customer community leads to improved customer relationships and affects actual customer engagement (Algesheimer et al., 2010). A customer community is a place where different individual customers can connect. Its purpose is to enable customers to have conversations, answer questions and share ideas or information. It is also an additional service offered to customers by suppliers (Beckers et al., 2018). A customer community is furthermore a source of innovations of suppliers and a way to create or strength a connection or a context between individuals as well as business organizations (Weissenfeld et al., 2020).

An increase in the use of technology in B2B relations affects the relevance of digital customer communities (Adam et al., 2020) because of a higher degree of complexity in managing customers individually and its positive effect on customer behaviour. Independently of the location and the use of digital media devices, customers are able to exchange and share experiences (Weissenfeld et al., 2020).

Digital customer communities gain in importance as customer feedback on brands, supplier loyalty or ratings are more trustable. Customers have started, especially enabled through social media, to exchange views about their supplier experiences and exactions. That this has a very strong business-to-consumer (B2C) perspective but is also valid for the customer and supplier relationship in the B2B environment (von Rden et al., 2020) needs to be taken into account. Customer communities can be used to build business-oriented objectives, such as customer awareness, image and new customer acquisition (Holtkamp & Bange, 2020). Customer communities have also the potential to increase the likelihood of positive customer reviews and post-purchase activities (Wu et al., 2018). Xue and Wang's (2021) study showed that customer communities have the potential to positively affect customer loyalty and related profits. The management and maintenance of customer communities thus become important marketing tools beyond being a way to allow customers to rate products or provide feedback. It has a strong potential to positively support and enhance the sales activities of a business.

Customer communities have become an essential factor in customer experience management and a touchpoint along the customer journey. The customer journey itself has received increased attention in the B2C and B2B business world during the recent years of the digital transformation (von Rden et al., 2020; Zimmermann & Westermann, 2020). Often discussed in the academic literature is the use of social media to connect with individual customers. Customer communities are used to share information, to improve the actual customer experience or to understand the customer needs (Wibowo et al., 2021).

The management of customer communities is extremely dependent on the business of the supplier. Well known are the customer communities for the B2C business, such as clothes, food products or other consumer goods. Using and managing customer communities in the B2C environment is very similar, independently of the consumer goods sold. Often the establishment of a customer community is also used to promote a lifestyle or other customer experience to enhance marketing efforts and get customers closer to the business (Rowley et al., 2007). This is different in the B2B environment. Here which product is sold and whether the products can be similarly presented to the customer, like consumer goods, needs to be considered. This might be, for example,

software solutions (Holmström, 2004). A strong benefit of customer communities in the B2B environment seems to be in value co-creation. Customers can be cooperatively integrated into the process of value creation in order to share risks or combine skills (Novandalina et al., 2022).

Method

The engagement of customers and the usage of digital customer communities as a marketing element are discussed extensively in the literature. The COVID-19 crisis has increased the need for new ways to connect B2B professionals via any kind of communication as well as for the management of the actual customer engagement. This research study intends to understand the relevance of digital customer communities as a marketing tool in the manufacturing industry. As a primarily research approach for the data collection and evaluation, content analysis was used. This research study followed a stepwise process based on the “Preferred reporting items for systematic reviews” (Moher et al., 2009). In the research study “A systematic literature review and meta-analysis: The theory of planned behavior's application to understand and predict nutrition-related behaviors in youth”, this approach was successfully used and is therefore used as a references for this study’s similar research approach (Riebl et al., 2015).

To understand the relevance of digital customer communities as a marketing tool, the explicit aim of this research study is to gather the most current academic knowledge about customer communities in the B2B environment. On 8 March 2022, therefore, the scholarly databases ScienceDirect, Wiley and Emerald were used to search for research articles and journals. A search related to the occurrence of the terms “digital customer communities manufacturing industry” and “digital B2B customer communities” was undertaken. The verification of the literature found was based on the publication’s title, abstract and keywords. As the digital transformation is a fast ongoing occurrence and therefore to capture only the most recent and relevant academic knowledge about digital customer communities, published research studies since 2018 were taken into further consideration. In addition, only journals and research articles were selected as publications with current academic knowledge. The process of publication identification included research papers discussing models, frameworks, platforms and customer experiences.

From the search results of the scholarly databases ScienceDirect, Wiley and Emerald, the first 100 search results were systematically reviewed to verify their suitability for consideration as a source of current academic knowledge. The first fit-for-relevance scan of the search results was done by title. Of the publications evaluated as relevant for the research aim, the abstract and main content were reviewed. The quality of the relevance of such publications considered was analysed through reviewing the scope of each individual publication and its managerial implications.

This research study was designed to answer the following two research question:

RQ1: How are digital customer communities used in the manufacturing industry?

RQ2: Which elements affect the benefits of digital customer communities?

With these research questions, it is on the one hand expected that it will be possible to identify the elements required to develop a digital customer community and on the other hand to understand better how digital customer communities can be organised. The benefits of digital customer communities are seen as the driver to implement and maintain such communities. These research questions were developed to explore the known benefits of digital customer communities in the manufacturing industry as well as to understand existing frameworks or models supporting the usage of digital customer communities. To answer these research questions, publications discussing the most current practices and new ways of connecting customers for communication purposes were considered.

Results

In total the online library search identified 7.944 publications (journals and research articles) in the he scholarly databases ScienceDirect, Wiley and Emerald. The results are given using the search terms “digital customer communities manufacturing industry” and “digital B2B customer communities”.

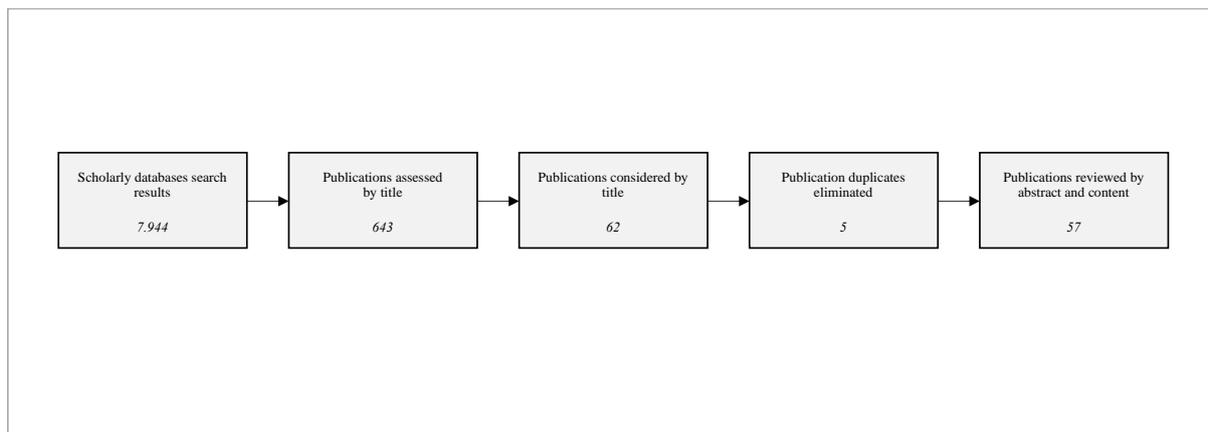


Figure 1. Identification Steps

The medium-large number of search results indicates that the topic has been discussed in the academic literature, but it has not evaluated deeply. To answer the research question, 643 publications were assessed by title to gain an overview of the topic in scope. A detailed review of all search results was not seen as relevant for the defined scope of this research study.

After assessing the 643 publications by title, 62 publications were taken forward for a detailed abstract and content review process. Only five duplicates between the scholarly databases ScienceDirect, Wiley Online Library and Emerald were identified and excluded from the detailed review. 57 publications were reviewed by abstract and content in detail (Figure 1).

The study’s findings showed that the scholarly databases ScienceDirect and Emerald publish more academic literature discussing digital customer communities in B2B than Wiley Online Library (Figure 2). The topic of digital customer communities has received a certain level of academic attention, but it seems that a more specific search is more successful than a broader search term. The term “manufacturing industry” appears to be more

relevant in the evaluation compared to the term “B2B”.

In total 6,531 publications in the scholarly databases ScienceDirect, Emerald and Wiley Online Library were found with the search term “digital customer communities manufacturing industry” compared to only 1,413 publications for the search term “digital B2B customer communities”. Wiley Online Library appears to be the publisher with the lowest impact on the topic, while ScienceDirect and Emerald are show more relevant search results.

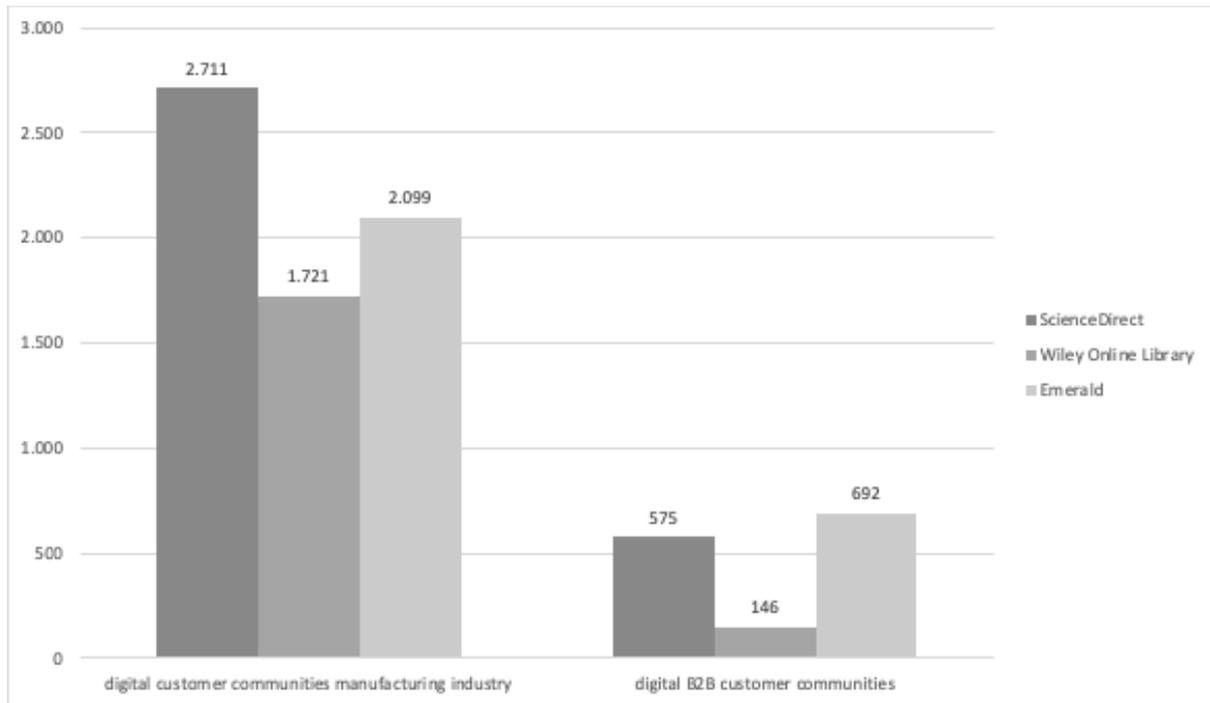


Figure 2. Scholarly Database Search Results

The in details reviewed 57 publications showed a relatively even spread for the years 2018, 2019 and 2020, while 2020 already indicated a small increase in publications (Figure 3). A massive increase in publications identified was found for the year 2021. The drop in 2022 might be explained by the search being executed on 8 March 2022. However, this limited view of 2022 with 7 publications already shows almost as many publications as in 2018 (10), 2019 (9) and 2020 (12).

The increase in 2021 might be explained by the COVID-19 crisis, which led to lockdowns and home-office situations in almost all countries around the world. This crisis has increased the speed at which technology is used in business circumstances, such as digital customer engagement and management. In the second half of the 20th century, the acceptance and usage of digital marketing, such as social media or videos, increased significantly, which also affected the customer engagement in B2B and the community management of B2B organizations (Rakshit et al., 2021; Tajvidi & Tajvidi, 2021). This might have changed the real-world B2B circumstances and academic researchers have been able to collect new and additional insights about digital customer communities for the manufacturing industry.

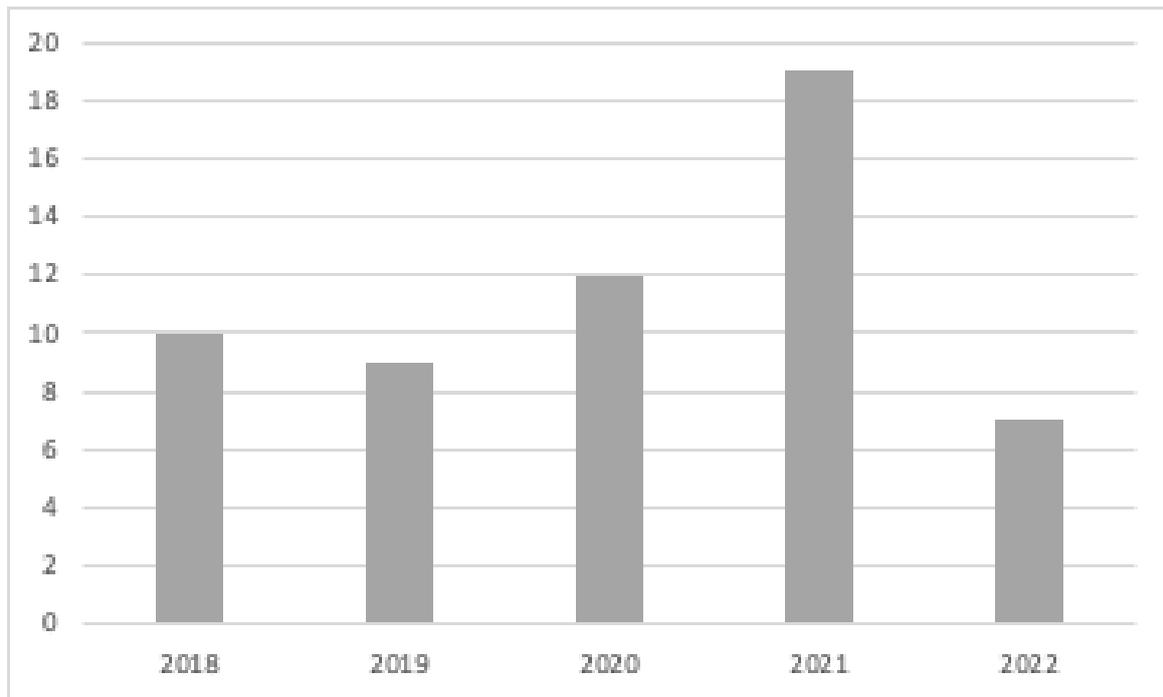


Figure 3. Identified Publications by Year

Discussion

During the detailed review process of the identified academic publications, it was found that social media is one of the dominating elements in discussions related to using, establishing or benefiting from digital customer communities. It seems that there is a strong relation between customers' social media activities and participation in a digital customer community. Social media is used to connect and to share information, for example for education purposes, between individuals and also in the B2B environment. The purpose of a digital customer community is seen as affecting customer engagement positively through supporting customers, for instance through online reviews after purchase (Bowen et al., 2021; Wu et al., 2018). Social media activities and digital customer community involvement have in common to share information and to connect individuals, which explains its close relationship (Beckers et al., 2018).

In addition to the increased importance of networks in today's B2B relationships, the adoption of platforms has received a higher level of importance. Platforms can be used to manage the complexity of solution networks in order to affect the customer experience positively. Platforms may offer the opportunity to connect customers in B2B environments to acquire knowledge or receive information from others (Wei et al., 2019). Social media platforms are especially established and used for communication, to share information as well as to create digital communities (Michaelidou et al., 2011). This explains additionally the strong relation between social media and customer communities in the B2B real-world and in the discussions in the academic literature.

From this perspective, in the paper entitled "Sharing is the name of the game: Exploring the role of social media communication practices on B2B customer relationships in the life sciences industry" by Rose et al. (2021), it is shown that customer-to-customer relations in the B2B environment positively benefit from brand communities.

They found a stronger level of trust between suppliers and customers. Marketing efforts may need to be adjusted, allowing the use of social media in B2B business activities to form and create customer communities to achieve an increased level of trust.

A common understanding in the existing academic literature seems to be that a digital customer community in the B2B environment can focus on a specific customer target group, like B2C communities (Chaker et al., 2022). Organisations active in the manufacturing industry typically serve a wide range of different customers, requiring different information or activities to operate in a digital customer community (Veile et al., 2020). Important to note is that B2B organisations have the opportunity and freedom to operate multiple digital customer communities organised for a specific customer target group.

The work of Mohapatra et al. (2021) explored the key factors impacting the manufacturing industry during the COVID-19 crisis. They found that big data is one of the advanced digital technologies that can be used to overcome the constraints of the COVID-19 restrictions. Digital customer communities have the potential to deliver additional and useful data used for big data analytics. Digital customer communities should not be underestimated as a source for customer data with respect to long-term benefits from using big data (Hofacker et al., 2020).

Discussion about B2C or brand communities seem to dominate the academic literature, whereas some recent academic publications have investigated customer community management, specifically under the umbrella of social media use. The research study of Chaker et al. (2022) found “that for inside salespeople, social media communities are one essential way to overcome limitations to being confined to a remote location and unable to visit their customers in person” (p. 134). Furthermore, they pointed out that on the one hand digital customer communities have the potential to boost sales activities through connecting to sales prospects or existing customers, whereas on the other hand, communities are used to network and build social connections with customers or other business partners. This shows the wide range of opportunities that digital customer communities may have and that they may add additional benefits to the business.

In the reviewed academic publications, it seems that the approach to creating or maintaining B2B digital customer communities is seldom explored, evaluated or discussed. A reason for this might be that B2B organizations are not yet deeply familiar with the benefits of using customer communities so that, for instance, case studies can be academically studied. As mentioned earlier, there seems to be a good and developed understanding of social media use in B2B environments, but the link to a truly managed digital customer communities has not been found in the most recent academic literature. There are academic publications in the more recent studies from 2012 or earlier (for example (Agnihotri et al., 2012)) that discuss B2B customer communities. This research study has specifically focused on the most recent years, starting in 2018. The COVID-19 crisis has affected positively the usage of digital tools, and organisations may be more open adopting digital customer communities today.

In the academic literature there seem to be a common understanding that digital marketing efforts and objectives in the B2B environment will change in the near and long-term future. The work from Hofacker et al. (2020) found

that seven areas are shaping the future of B2B relationships. These areas are cooptation, value co-creation, B2B branding, servitisation, innovation networks, relationship dynamics and power and trust. These seven areas have in common that customers and suppliers move closer together in their actual relationship. Whether this is through cooperation in developing new products or an increased link between B2B organizations to meet customer needs. Digital customer communities might be a critical element in this future business transformation, allowing individuals to connect to each other, to share information or to provide educationally relevant aspects.

Proposed Framework for Digital Customer Communities

The academic literature agrees that the digital customer community may be feasibly used to affect actual customer engagement. Less discussed in the academic literature is how to structure and manage digital customer communities, especially in the manufacturing industry. It appears that the focus of the academic literature is the exploration and the understanding of the benefits of digital customer communities, such as customer loyalty.

A positive side effect of the COVID-19 crisis might be seen in the acceptance of digital working behaviours across individuals and within the manufacturing B2B industry. Individuals and B2B organizations in the manufacturing industry have started adopting and using digital media elements, such as social media, more heavily since lockdowns forced almost the whole world to stay home (Klein & Todesco, 2021; Ossiannilsson, 2020). To support managerial staff in manufacturing industries considering digital customer communities in their day-to-day practices and constructing such, three questions are recommended to be discussed in order to benefit from such digital customer communities. Such questions shall function as an umbrella for the introduction of digital customer communities.

1. What does the digital transformation change?

The ways individuals work with each other, share knowledge, network and socialise are fundamentally different in the digital century (Rose et al., 2021; Wu et al., 2018). The employment of younger employees may bring new expectations regarding the usage of digital-technology-based solutions to day-to-day practices. In addition, the digital transformation allows manufacturing organisations to collect new data and draw new insights from it.

2. Why use customer communities?

The use of customer communities is recommended as an area to be considered to affect the level of customer trust and loyalty in the B2B environment (Rose et al., 2021). Offering customers an opportunity to share information, help each other and initiate co-created value seems to be a future trend. A digital customer community is the platform establishing the foundation to enable the B2B organizations' employees to work this way.

3. What drives the customer experience?

Trust plays a core role in customer experience management, and digital customer communities have the potential

to positively affect the trust of customers (Chaker et al., 2022). The advantage of digital customer communities is seen in providing and sharing new or additional information with customers, with respect to the business relationship. Digital communities are an efficient way to connect and educate customers.

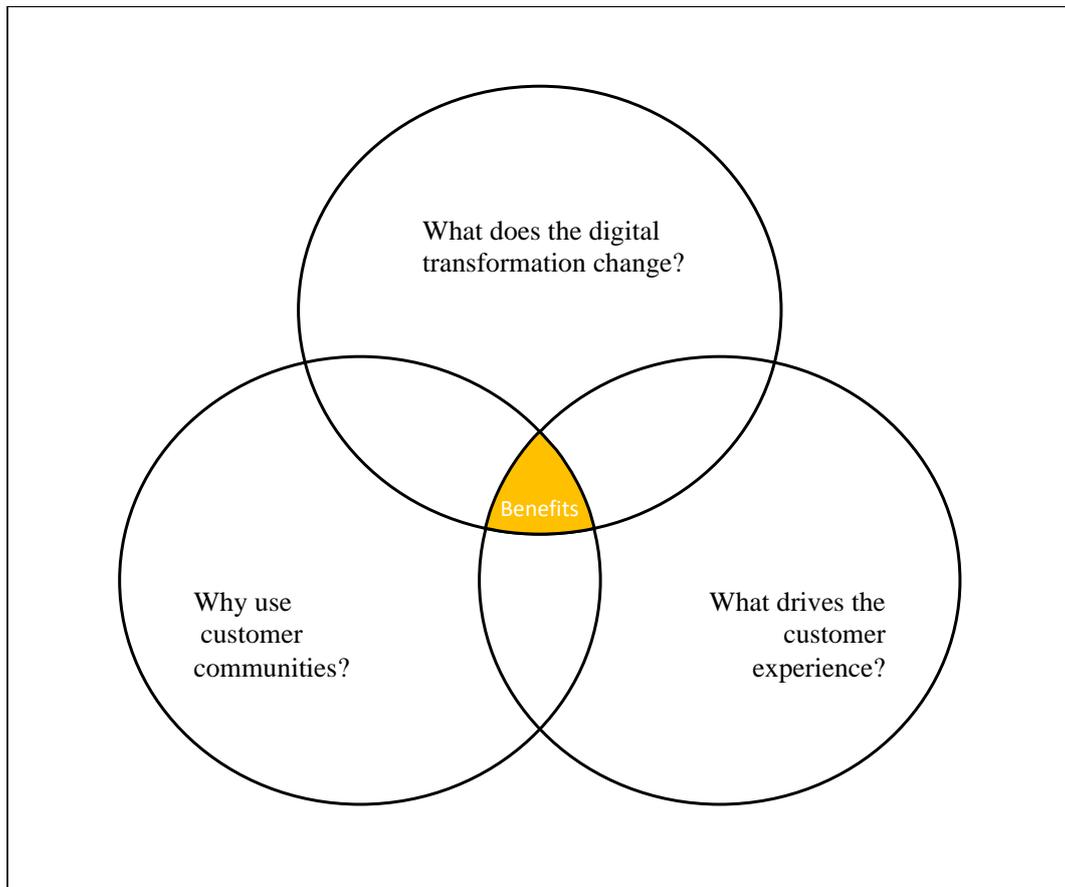


Figure 4. Recommended Areas for Discussion

The proposed framework is intended to provide an overview of how digital customer communities can be formed or prepared. This may lead to the need to develop new and additional skills on the part of the individuals maintaining the digital customer communities as well as of the B2B organizations attempting to operate the digital customer community (Beverungen et al., 2020). This proposed framework is not in contrast to the other academic knowledge debating the benefits of digital customer communities; it is seen instead as an extension. In answering these three questions, managerial staff have set the fundament to position the digital customer community.

Limitations and Future Research

This research has its key limitations in the relatively small number of journals and research articles analysed after the identification process. This limitation is accepted because of the number of reviewed publications by title to understand the relevance of the topic and to validate the opportunity to establish a framework. It seems that B2B customer communities were discussed before 2018, and future research is recommended to compare knowledge about B2B customer communities.

The objective of this research study was to understand the most current academic knowledge published in recent years to establish key areas for the proposed framework. The proposed framework intends to support future research focusing on an approach to establishing digital customer communities in the manufacturing industry. More research is needed to understand the long-term implications of digital customer communities on the sales and marketing presence in the manufacturing industry.

Conclusion

This research study has provided a brief overview of the current academic knowledge regarding the use of digital customer communities in the manufacturing industry. It has attempted to understand the relevance of digital customer communities for the relationship between supplier and customer, also in a post-COVID-19 time. It also outlines that in the future cooperation between customers and suppliers should receive more attention for the value-creation process. Digital customer communities might be an appropriate way to organise such joint efforts.

It is deemed relevant to discuss three main questions organising digital customer communities, which are “What does the digital transformation change?”, “Why use customer communities?” and “What drives the customer experience?” These questions are an attempt to support managerial staff considering setting up digital customer communities. The proposed framework, which offers an umbrella for the use of digital customer communities, might be used by researchers who wish to explore the subject further.

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