

The Active Customer in Value Co-Creation Processes: The Importance for Companies Using the Example of Energy Cooperatives

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Abstract

Purpose

The aim of this work is to investigate the capabilities of an active customer and what he or she is able to provide better than an inactive customer along the five phases of the value creation process. Based on the example of energy cooperatives, concrete practical implications for the business models of energy cooperatives are derived.

Design/Methodology/approach

First, the paper analyzes and discusses the literature of the active customer with a focus on the value co-creation process. Second, empirical research based on 12 qualitative interviews is conducted and analyzed, adding to the discussion of co-creation in the context of energy cooperatives.

Findings

An 'Active Customer' is a person or group of persons in a defined market. The 'Active Customer' is willing to educate himself and acquire information in order to gain a differentiated view of the (specific) market/ market activities. The 'Active Customer' uses the acquired information to make conscious decisions after weighing the available options. The 'Active Customer' proactively exchanges information with other stakeholders in the (specific) market. In addition, the 'Active Customer' is a provider of intangible goods (knowledge, information).

Research limitations/implications

The research has certain limitations that require further research, for example, regarding the quantitative validation of the active customer. Future research should identify relevant indicators and describe different types of co-creation of the active and inactive customer in the energy sector.

Practical implications

In order for active customers to be able to participate appropriately in the process of co-creation, they need business models of energy cooperatives with low complexity, as multi-layered value creation stages in particular can overwhelm the active customer.

Originality/value

In the EU Directive 219/944 (Clean Energy Package "Clean energy for all Europeans package"), the EU has described the 'Active Customer' as the basis for a sustainable energy transition. With this study, a concrete operationalization of the 'Active Customer' is possible in practice using the example of energy cooperatives on the basis of the value co-creation process.

Keywords

Active Customer, S-D-Logic, Value Co-Creation, Customer integration

1. Introduction

The logic of Value Co-Creation is also followed by the EU with the project on democratization of the energy sector [Mucha-Kuś et al., 2021]. This has spawned bottom-up initiatives by energy end-users across Europe [Hoffman and High-Pippert, 2005]. In 2019, the EU completed a comprehensive update of its energy policy framework with the EU Legislative Package on Energy and Climate Policy - the Clean Energy for All

Europeans Package. One of the cornerstones of the package is the activation of the customer ("Active Consumer") [Directorate-General for Energy (European Commission), 2019]. This means involving citizens not only in the production, distribution, storage and end-use of renewable energy, but also encouraging active participation in energy markets and energy services markets [Soeiro and Ferreira, 2020], as well as in flexibility or energy efficiency programs. Customer (co-)ownership of renewable energy and other infrastructure assets for sharing local benefits is most often organized through energy communities. Energy communities represent an important Active Customer in the energy industry due to their inherent diversity of actors involved, their role in the diffusion of renewable energy solutions, and their participation in value creation. Value has long been recognized as fundamental to lasting customer relationships and sustained business success (Smith and Colgate 2007). In the co-creation ecosystem, value is created in a collaborative relationship between brands, customers, and stakeholders (Iglesias et al. 2013; Payne et al. 2008). The customer is an active creator of value both within and outside the traditional purchase and consumption experience (Vargo and Lusch 2004). Research on how customers engage in co-creation processes, as envisioned by the service-dominant (S-D) logic paradigm, is an exciting topic area. However, in my view, there is no research on in which phases of value co-creation the involvement of the Active Customer has an advantage over the integration of a Non-Active Customer. The customer, as an active value creator, is an important node to needed resources.

The activation of the customer, in the form of citizen energy cooperatives (Active Customers), is conditioned by success factors. These success factors of Active Customers in the energy sector can also contribute to their involvement in the process of value co-

creation, as well as the output of this process is more successful than non-active customers.

This study first analyzes and discusses the literature on the active customer in the energy sector with a focus on the value co-creation process. Second, an empirical study based on 12 qualitative interviews is conducted and analyzed, adding to the discussion on co-creation in the field of energy cooperatives. The context in which a customer becomes active and actively participates in the value co-creation process is elaborated.

2. Literature Review

The energy sector is a prime example of customer involvement in shared value creation. Renewable energy sources are a catalyst for a clean energy transition. At the same time, technological developments such as smart meters, solar panels and decentralized energy storage enable energy consumers to play a proactive role. EU energy regulation has gradually opened up national energy markets to promote competition and secure energy consumers' right to choose and participate.

In the following, an overview of the existing literature on the topic of active customers in the context of value co-creation in the energy industry will be presented in order to provide initial insights.

With the European Union (EU) Directive concerning common rules for the internal market in electricity and amending Directive [EU 2019/944], the EU has addressed the activation of the formerly passive customer in the EU's internal electricity market. In this directive, the EU defines the Active Customer. Above all, the EU stipulates to the member states that the Active Customer can participate in the value creation and design of the electricity market on a non-discriminatory basis. Furthermore, the Active

Customer is to be given barrier-free access (financial and bureaucratic) to the energy market.

Cseres (2018) argues in his paper that consumers have been assigned a central role in the energy transition in general and in the realization of sustainable, renewable energy sources in particular. He points out that in EU law, consumers are predominantly seen as market actors who help create markets and keep them functioning. In fact, in regulated markets, the consumer takes on a broader definition and function. The consumer is addressed as a "customer" and is given responsibilities in the process of market opening and restructuring, mostly in the form of exercising free customer choice and switching. By advocating for more efficient energy use and using or even generating their own renewable energy sources, consumers are seen as crucial actors in managing the energy transition. In this regard, he shows that the recently proposed new energy market design proposes far-reaching rules that could activate consumers to participate more actively in energy markets. Most of these rules are based on increased levels of transparent, comparable, and simple information. However, he also notes that most energy consumers remain inactive, uninterested, and disinterested in energy markets, and there is a need for more comprehensive social and economic approaches that incentivize and support a more active role for consumers in energy markets.

Abdelmotteleb et al. (2018) highlight some issues arising from the Active Customer due to the transformation of electricity grid users from passive to active players as a result of the decreasing cost of distributed energy resources. They argue that economic incentives must be created to efficiently route and incentivize these Active Customers while maximizing the economic efficiency of the system, as the current design of grid charges often no longer ensures the recovery of grid costs. The authors conclude their

paper with case studies that demonstrate how Active Customers respond to different frameworks.

In the work of Schweiger et al. (2020), it is shown that in recent years technical and socio-economic studies as well as practical experience have concluded that consumer integration and participation is crucial for smart energy systems. To achieve the challenging goals, individual consumers, the social environment, the physical environment, digital realities, and economic conditions must be considered and integrated into successful solutions and business models. They argue that integrating consumer feedback and preferences into the control loop is critical to reducing energy demand and leveraging energy services such as demand-side flexibility. Further, they demonstrate that in the past, consumers have often been portrayed as passive, uninformed individuals seeking to maximize selfish (material) gains. In this context, efforts to optimize an energy system often meant bypassing any active involvement of the consumer. This fundamentally negative understanding of the consumer's role was said to be too limited and, in some cases, outdated. Further, they argue that changes in our society, in the energy market, in technologies, and in the personal skills possessed by the average contemporary consumer (e.g., digital natives) create a beneficial environment for active consumer involvement.

A large number of papers deal with the advantages of Active Customers in the field of energy saving, energy shifting (Dead Side Management) or the active management of energy consumption through self-consumption of self-generated energy. The different authors agree that the future energy grid can only be used efficiently if the customers actively participated in the efficiently [see for example: Siano, 2014, Erdinc et al., 2015, Pothitou et al., 2016]. Pothitou et al. (2016) highlight that certain (environmental) values and knowledge influence conscious energy conservation in the home. In addition,

they find that there is a relationship between employment status and willingness to conserve energy.

In summary, it can be said that the activation of customers in the energy industry is an important process step in order to achieve the intended important goals of the policy, such as energy transition. It is precisely the involvement of the active customer in the process of shared value creation that is unavoidable in the energy industry. Not only with regard to the financing of the energy transition, but also to ensure its acceptance, bearing in mind the concerns and comments of the customers as well as their participation. However, the Active Customer in the energy industry is dependent on many factors. The EU Directive (2019/944) promotes the Active Customer in the internal electricity market in the European Union. Many EU member states have already implemented these EU requirements on the Active Customer. However, there is still no comprehensive integration of customers into the value creation process and thus no activation of the customer.

3. Community Energy Cooperatives: Success Factors

Joint action is one of the driving forces of the energy transition [Seyfang et al., 2014, Schoor and Scholtens, 2015, Koirala, 2016]. Customer (co-)ownership of renewable energy and other infrastructure assets for sharing local benefits is most often organized through energy communities. Yildiz et al. (2015) point out the high importance of energy communities as they represent a synthesis of technological and societal change. The communities can be defined in a narrow sense as a group of actors with a certain form of participation, a participation rate and frequency, and a restriction to a

Category	Explanation
A. Low-risk business models	The business model chosen is designed to be easy to master. The financial flows are easy to predict and an investment in this business model is considered economically safe. The political/legal framework is designed in favor of low-risk business models.
B. Productive exchange with relevant stakeholders	The CECOs are successful when they collaborate with other stakeholders. This requires support from communities and individual 'speakers.' A social fabric within and around the CECO is also beneficial. In addition, it is important that the CECO is offered reasonable investment opportunities at regular intervals.
C. Social cohesion	Sustainable local social networks are necessary for establishing and running energy communities. Successful CECOs operate in a clearly defined geographical area. As the CECO becomes part of the social environment, they also provide services outside the energy sector.
D. Principles for the organizational model	Certain values are conveyed through the concepts of civic energy and cooperativism. Thus, it seems that trust and environmental awareness are associated with CECOs. However, many CECOs have recruitment problems. Therefore, a connection with the climate change movement makes sense
E. Commitment of individuals	The CECO and its members (current and future) share a common 'vision.' The commitment of individuals with different skills must be high for a successful CECO. Motivation is based on the desire to actively participate in the transformation of the energy system. The board members have the power to influence the community but also carry the burden of the honorary work.

Table 1 Success Factors

geographic regionality [Holstenkamp and Degenhart, 2013]. In a survey of 12 citizen energy cooperatives in Germany, five success factors were identified and described. These success factors, which support citizen energy cooperatives to participate in the energy market in the long term, also have an influence on the activity of citizens as customers in the electricity market. These five success factors will be examined to identify the added value of the involvement of an active customer in the process of value creation cooperation. In the following, these five factors are briefly presented and explained (Table 1).

A. Low-risk business models

The general conditions in which the citizen cooperatives find themselves (e.g. few staff, voluntary work, small budget) lead the managers to prefer as little complexity as possible in the day-to-day business. The stability of the financial flows is one way to keep the complexity and risk of the business model as low as possible. CECO's often volunteer boards aim to hedge the risk of equity loss through a long-term commitment from members. It is made clear that, as far as possible, the business models of citizen cooperatives must be designed in such a way that they are easy to manage. This often requires a low complexity of these. A factor is the legal/political framework that must be designed in favor of this "simplicity" of the business models. With regard to investment in renewable energies, the design of the support mechanism is crucial.

B. Productive exchange with relevant Stakeholders

An important factor for CECOs is productive interaction with local stakeholders. These external stakeholders are a crucial factor in promoting citizen energy projects. Good communication from and with stakeholders, for example, can lead to collaborations that help to better implement projects. In particular, communication and possible co-

creation of value with municipalities, local energy providers and individual regional personalities and mayors is of high importance.

C. Social cohesion

Shared ideas are the basis for collaborative action in civic communities, as these are created through the joint action of individual stakeholders (citizens, local businesses, municipalities, etc.). Often these citizen cooperatives are created to solve a local problem together. The starting point for the foundation of a citizens' energy cooperative seems to be a common social milieu. This can arise from networks through friendships or other shared social activities. In addition, new members can be acquired quickly on the basis of existing social networks.

D. Principles for the organizational model

Citizen energy cooperatives have clear ecological and social principles. Cooperatives are associated, for example, with the concepts of "environmental awareness" and "trust." A successful CECO must maintain credibility in social and environmental terms. Citizen energy cooperatives are widely understood as drivers of the energy transition. They create, in harmony with different stakeholders, certain values that have been discussed and demanded locally.

E. Commitment of individuals

A citizen energy cooperative can only be successful if people with the different qualifications show commitment to the realization of the projects. The motivation for this commitment is the belief that they can make a difference through their actions. Often, it is individuals (Key Individuals) who establish and primarily operate the citizen energy cooperative. However, these "Key Individuals" need the resources of the members to achieve the goals of the cooperative.

4. What is an active customer?

In order to understand the advantages that an Active Customer has compared to a Passive Customer, there must be a deeper understanding of what is meant by an Active Customer in this paper.

Consumers contribute to production and innovation. They provide the company not only with information about needs, but also with solutions and provide products and services tailored to their specific needs and wishes [Di Giulio et al., 2012]. Blättel-Mink (2014) argues that active consumption gives customers three new roles: prosuming, co-innovation, and social innovation. However, customers who actively consume are not automatically to be understood as active customers in the sense of this paper. The distinction between "active" and "passive" customers was examined in detail by Cioffi and Garner (1996). Active customers are according to these authors those, which look for information, in order to be able to make a conscious and considered decision. In contrast, a passive customer is someone who has not searched for information and therefore has fewer conscious reasons for making a decision. Di Giulio et al. (2014) describe the Active Customer as a reflective consumer whose consumer actions are guided by conscious consideration of the available options. Especially in the field of the energy market, an Active Customer is increasingly required. Consumers are thus at the center of the Energy Union. The EU Commission proposes to reform the energy market to empower consumers and enable them to better control their energy choices. For citizens, this means better information, opportunities to become more active in the energy market, and better control of their energy costs [EU Commission, 2016]. Abdelmottaleb et al. (2018) argue that traditionally passive electricity customers become active consumers through distributed energy resources (DERs), such as self-generation, demand side management, and storage. Accordingly, the Active Customer is not a

consumer who enters into an interaction (purchase of goods/services) with a value provider in a fixed period. The EU describes the active customer in its Directive (EU) 2019/944:

"Active customer' means a final customer, or a group of jointly acting final customers, who consumes or stores electricity generated within its premises located within confined boundaries or, where permitted by a Member State, within other premises, or who sells self-generated electricity or participates in flexibility or energy efficiency schemes, provided that those activities do not constitute its primary commercial or professional activity;"

Derived from the different views of the Active Customer, this is understood in this paper as:

An 'Active Customer' is a person (group) in a defined market. The 'Active Customer' is willing to educate himself and acquire information in order to gain a differentiated view of the (specific) market/market activities. The 'Active Customer' uses the acquired information to make conscious decisions after weighing the available options. The 'Active Customer' proactively exchanges information with other stakeholders in the (specific) market. In addition, the Active Customer is a provider of intangible goods (knowledge, information).

Citizen energy cooperatives are a good example of the Active Customer. Citizen energy cooperatives have formed to pursue a specific goal. This goal is usually set by the civic energy cooperative after it has informed itself about the circumstances and identified a shortage of existing goods or services. Citizen energy cooperatives carefully weigh the options available to them to make an informed decision. Citizen energy cooperatives are Active Customers in a Value Co-Creation process. Citizen energy cooperatives unite multiple (Passive) actors in an internal network with a predominantly social context. The citizen energy cooperative can thus be understood as the Active

Customer from a network of Passive Customers. At the same time, citizen energy co-operatives are value providers for other actors in different networks.

5. Der Value Co-Creation Process

Value co-creation requires a multitude of actors in different roles with different resources [Akaka & Chandler, 2011]. These multiple actors form a network consisting of nodes and links. Nodes are understood by Ward & Reingen (1996) as actors and connections are based on logical or social links. These networks of actors with different resources connected by logical or social links. In addition, one of the most important characteristics of networks is that they enable both the transfer and generation of knowledge. This micro-level of value co-creation, that is, the networks that form the access to resources, are an important phase of the value co-creation process. However, access to resources is not enough to create value. Resources must also be adaptable within different networks of resources and relationships [Archpru Akaka et al., 2012]. Resource integration is followed by adaptation. In this phase, resources and existing available services are adapted so that resources can be integrated in the third phase. The integration of new resources can have an impact on the first two phases of value co-creation, since, on the one hand, the integration of resources opens up new possibilities for the adaptation of new resources and, on the other hand, new access to resources can be made possible [Archpru Akaka et al., 2012]. However, value is only created when the jointly developed products/services are also used by the

customer. The process of value co-creation is concluded with feedback and learning (Figure 1).

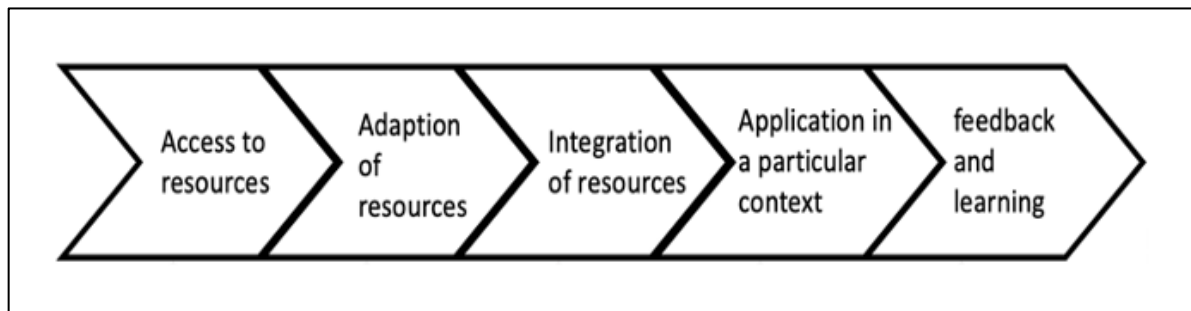


Figure 1 Phases of the process of Value Co-Creation

6. The Active Customer in the Value Co-Creation Process using the Example of Citizen Energy

S-D logic provides a complex and dynamic systems approach to value collaboration. In particular, this view of value-in-context emphasizes the importance of understanding the social context through which value is derived. In value co-creation, the customer is understood as a part of the value creation process that can integrate resources into the value creation process. A customer's view of value depends on his or her environment. On the basis of success factors of citizen energy cooperatives, the context in which a customer actively participates in the value co-creation process is to be shown. In particular, social contexts (consisting of interconnected relationships and resources) seemingly shape exchanges and influence value co-creation collaborations [Archpru Akaka et al., 2012].

Value co-creation fundamentally shifts the focus of value creation away from a firm's production. It suggests that all economic actors' access, adapt, and integrate resources to create value for themselves and others, and that knowledge is the core resource of all exchanges. The process of identifying and accessing resources is the starting point of the entire process. Reynolds and Miller (1992) believed that firms can acquire valuable and rare resources through their social networks.

Access to Resources

Citizen energy cooperatives must develop business models that represent little risk for the respective cooperative. The financial resources of a cooperative are realized through the contributions of the members. With a view to economic security, citizen energy cooperatives are interested in retaining their members in the long term in order to realize projects with the contributed capital of the members. The business models are therefore realized in the internal network of the cooperative. Here, the resources of the members flow together into the development of the business models. In addition to these internal networks, external networks are also formed around the energy cooperative. Energy cooperatives strive to interact actively with other actors in these networks. Thus, a close social and economic relationship with the municipality or regional personalities is an objective of the cooperatives in order to be able to access the resources of these actors in the long term. Often, energy cooperatives also emerge from a social context. Many energy cooperatives are founded from existing social networks. These can be friends, work colleagues or sports colleagues. It is also apparent that these networks are based on trust and shared norms and values. This facilitates access to resources within these networks. Likewise, citizen cooperatives often operate locally. This local context of the networks also strengthens access to resources. If the active customer is organized in the form of a citizen energy cooperative, the active customer consists of a network of active and non-active members. However, the non-active members have a high interest in supporting the active members and thus the active customer. The relatively high number of non-active members holds an equally large share of resources. Thus, a network of non-active customers can be reached through an active customer and the otherwise unavailable resources are accessible through the social context.

The citizen energy cooperative as an Active Customer is involved in various networks with a variety of actors. The Active Customer can get easy access to important resources through these networks, with social and/or local context. The Active Customer is also able to "store" the resources of the individual networks and to integrate them into other networks or to combine them with the resources of other networks.

Adaption of Resources

A simple business model is also an influential factor in the adaptation of the resources gained. Due to the low complexity of the business model, new resources can be easily adapted or combined. Likewise, resources from the different networks can be adapted and combined quickly, since communication about resources is often forced in these sustainable networks. Additionally, resources can be adapted quickly and purposefully through joint activities within these networks. Resources are specifically searched for within the networks. The knowledge about these resources is also based on the sustainable, often social networks that form around active customers. Based on a high confidence of the members, the active customer serves itself in the form of the citizen energy cooperative at the resources of the passive customers made available to it. Not every customer wants to and can be an active customer. Passive customers are however frequently ready to support active customers (make resources available). Passive customers make these resources available to the active customer likewise, if they cannot fully understand the possibilities of the resource combination. The active customer on the other hand is an informed customer, who can make certain decisions. Active customers know or inform themselves about the resources provided/exchanged and the combination possibilities with already existing (stored) resources.

In the form of the active customer, the citizen energy cooperative can influence other resources through its own resources. Through the socially connected networks, the

active customer also knows about the resources in these networks. The possibilities of the adjustment of these resources are given to it, by the productive co-operation with the other actors in the different, around the active customer formed networks.

Integration of Resources

The citizen energy cooperative forms sustainable networks. In these networks, the active customer shares his resources with the actors integrated in this network. Through common goals, which exist within these networks or as the basis of these networks, the actors know in which way the contributed resources can be adapted to their own resources. Through these common goals within these networks, which have social, but also economic contexts, there is a high level of trust in the actors of these networks. Based on a social context, the exchange of information within the internal network of the cooperative (passive and active members, as well as the active board members (active customers) is very pronounced. The actors of this internal network are aware of the existing resources to which the Active Customer (Board) has access and to what extent these can be combined with their own resources. The Active Customer is a facilitator of this communication.

The Active Customer is involved in active communication between the actors within a network. In networks in which the connections between the actors are based on a social context, this communication is particularly pronounced, since the individual actors in this social network establish a special relationship of trust with one another. Common values and norms in these networks can reinforce or establish this trust. Sharing ideas on how to adjust resources to achieve commonly defined goals is a fundamental principle of these networks. Discussion of these ideas can facilitate the integration of new resources or provide resources to adapt existing resources.

Application in a particular context

Simple business models are developed within a network to pool different resources from different actors for a specific purpose. The entirety of the actors within this network is interested in sharing information about the resources, so that each actor possesses the resources that are needed to achieve the set goal of the actor, the Active Customer is, since he pursues his own goal, particularly interested in the application of resources to achieve the goal. The Active Customer is active in specific networks. Through his social or economic links to the actors he has generated through his activities, or through which he is driven to his activities, the Active Customer uses to apply the shared resources in specific projects. For example, the citizen energy cooperative uses the resource 'land' provided by one actor with the information on how to use it (this information can come from another actor) with its own resources or with resources from other networks to achieve specific goals. At the same time, another actor can use the Applied Resource to offer further values (also in other networks).

The Active Customer knows how to apply the shared resources to achieve a specific goal. Through his activities, he simultaneously enables the application of the resources he has contributed to the network. Through the social connections within specific networks, the AC can make the best use of the shared resources. The special trust within these networks, which are in a social context, promotes the communication and exchange of resources based on mutual trust between the actors.

Feedback and learning

An Active Customer tries to get into exchange with relevant actors in a specific project/stay active. In the context of the networks in which the Active Customer moves, common goals are a value to be achieved. To achieve this goal, good communication within this network is a given. If a goal or a partial success is reached, an exchange of

information takes place among the actors. Joint activities can lead to further specific projects. An Active Customer is an actor in network with a social or economic connection between the actors. Within this network, there is an exchange based on trust. Feedback is actively solicited, as the Active Customer actively seeks new resources (knowledge) and wants to integrate other actors into networks (members/passive customers) that promote success within this network.

An Active Customer is receptive to feedback. At the same time, an Active Customer is able to provide feedback to other actors within different specific networks. the social context within the networks ensures that the feedback is accepted and analyzed. thus, the actors in this network can learn from the experiences of the joint activities.

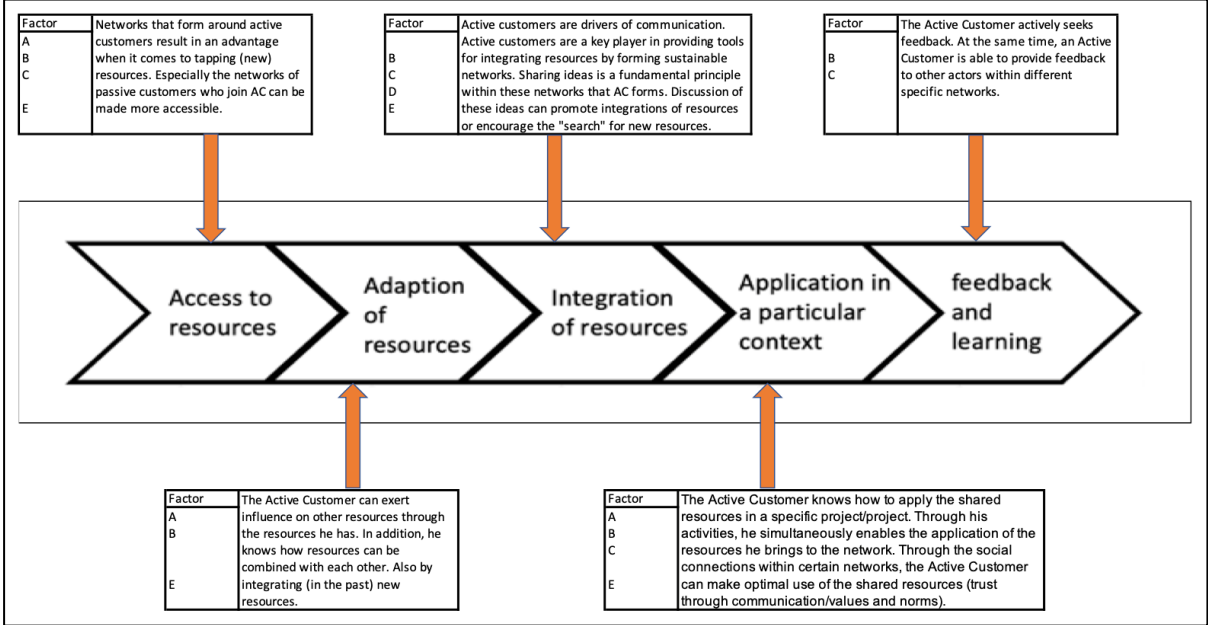


Figure 2 Influence of the Active Customer on the Value Co-Creation Process

7. Findings

Since a customer's view of value depends on his or her environment, a company must have a thorough understanding of the customer's sources of knowledge (e.g., institutions) and the social contexts that influence value creation. These include friends,

family, ethnicity, religion, occupation or professional identity, and other reference groups or affiliations [Archpru Akaka et al., 2012].

Citizen energy cooperatives are a good example of the Active Customer. On the one hand, citizen energy cooperatives also provide value to other actors in specific networks. On the other hand, in their role as Active Customer, citizen cooperatives are active in different networks and integrate resources into them or store provided resources in order to combine them with other resources (also from further networks).

Citizen energy cooperatives as value providers

Citizen energy cooperatives often emerge from social networks. Passive customers of energy and energy services jointly establish a cooperative that acts as an Active Customer and can offer value. As value providers, former inactive customers join existing networks to share their value proposition with the resources of other actors in that network and jointly create new value. It is recognizable that the social context of a network of passive customers leads to an activation. However, the Active Customer acts within this network (internal network) as a value creator. Even if we speak of members in this internal network of energy cooperatives, they can be understood as employees in the broader sense. In addition to monetary resources, they also contribute their human capital (knowledge, skills and abilities). These skills support the citizen cooperative, because many members do not want to be an active customer, but they support it. Citizen energy cooperative members contribute to production and innovation. In doing so, they provide the citizen cooperative not only with information about needs (common goals), but also with solutions. Some members can even draw on and provide their own products and services tailored to their specific needs. This is also described by Di Giulio et al. (2012) in the context of consumption.

The involvement, or access to the resources of the members grounds on social connections of the actors within the internal network of the citizen energy cooperative. These resources are combined and generate a common value. The citizen energy cooperative, as a product of this network. As an active customer in the energy market it stores the resources of its members in order to share them with other actors in other networks. It is to be noted that a social context within a network can animate customers to make resources available [see Bale et al., 2013]. In order for the citizen energy cooperative to continue to access, adapt and apply the resources of the members (internal network), the citizen energy cooperative is strongly interested in maintaining the social connections between itself and the members. The social context from which the citizen's energy cooperative emerged is also used to acquire new resources in existing social networks. It is precisely the social context within a network that, by building trust among the actors, seems to activate the customer and release access to resources. The citizen energy cooperative and its (current and future) members share a common "vision". The interaction of individuals with different skills must be pronounced for a successful citizen energy cooperative. Motivation is based on the desire to actively participate in the transformation of the energy system. Board members have the power to influence the resources of the internal network.

Citizen cooperatives as active actors in various networks

As an Active Customer, the citizen energy cooperative is also active as an actor in various networks. Different specific networks are formed around an Active Customer, or different specific networks exist in which the Active Customer would like to be integrated [see also Schoor et al., 2016].

As an Active Customer, the citizen energy cooperative acts in different networks. These networks have social as well as economic connections between the individual

actors. The provision of resources by the active customer or the saving of resources provided by other actors depends on the context of the respective network. In the survey of the citizen energy cooperatives on their own success factors, it was argued that cooperation with actors with whom there is a social connection is much easier than with actors who have a purely economic context. The success factors B to E: Productive exchange with relevant stakeholders, social cohesion, Principles for the organizational model, Commitment of individuals are all based on a social context. The sustainability of the forced sustainable networks arises from a regional, respectively local relation of the actors to each other. The citizen's cooperative acts specifically with actors from the local environment, because the citizen's cooperatives want to create value for the region. As an active customer who receives value offers from other actors (from the region), the citizen's cooperative actively strives to offer its own resources in order to jointly create value.

The Active Customer is activated by shared values and norms. Within a network with social connections between the actors, the customer seems to be most active. This can be based on trust.

8. Conclusion

A transition to a CO₂ neutral energy system is only possible if the acceptance of renewable energies by customers increases. Participation in renewable energy projects ensures that these projects find a higher acceptance. The end customer of the energy thus becomes a co-producer and creates, together with other actors, a specific, individual value.

Using the example of success factors for citizen cooperatives, it was shown that the elevation of the passive customer to an active customer has some advantages for the process of value co-creation. In the energy industry, the Active Customer is an

inescapable model. The Active Customer has access to resources that a traditional company does not have or has only insufficient access to. Through their diverse network activities, citizen cooperatives have broad access to resources that can be adapted to create value. An important resource for the energy industry is the acceptance of the population for the construction of renewable energy plants. This is becoming imperative for the transition to a decentralized, sustainable energy network. In addition, the energy cooperative offers the knowledge to implement resources in the value creation process. This is based on the conscious decision to use certain values or technologies. If the Active Customer is not aware of the application of certain resources, the Active Customer is interested in accessing the knowledge about adaptation, or implementation. This happens through the activities in networks.

It is shown that a passive customer is ready to be activated when integrated in networks with a social context. Further, Active Customers, driven by individual goals, become organizers of further networks. The example of citizen energy shows that an active customer can be involved in different networks with different roles. By its inherent resources, which an active customer stores, by its activities, within the different networks this is particularly valuable in the process of the value Co-creation. An Active Customer is able to transport certain resources from one network to another. This provides the opportunity for the other actors to access otherwise unavailable resources. Citizen energy cooperatives emerge from networks with a particular social context. The resources that are made available during the activation of the citizen energy cooperative (e.g. knowledge, values, wishes) can flow into the process of value co-creation in other networks.

In summary, it can be said that active customers emerge when they are integrated into networks that allow social connections between the individual actors of this network or

consist of them. Accordingly, it seems to be of high importance to establish social connections to customers (actors) within a network in order to activate them. An activated customer is interested in creating value of his own accord. The Active Customer supports this goal by providing resources. At the same time, the Active Customer is also capable of adapting resources of other actors and thus submitting its own value propositions.

Literature

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