Customer Engagement in Technology-Based and High-Contact Interfaces

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INTRODUCTION

In today's dynamic marketplace characterized by demanding customers, increased competition, and economic downturns, firms find themselves in a quandary about how to gain competitive advantage in a cost-effective manner. One popular strategy involves engaging customers in the creation and development of products and services (Lovelock and Wirtz, 2007). For instance, firms like Starbucks, Lego, Unilever, and H.J. Heinz have been found to stimulate customers to share new ideas in company-managed virtual environments (Sawhney et al., 2005, Breidbach et al., 2014, De Ruyck and De Wulf, 2013). In other cases, customers are encouraged to design their own solutions in collaboration with the firm (Franke and Piller, 2004, Thomke and von Hippel, 2002). Nike, for instance, encourages its customers to design their own shoes by means of NikeID, an online design tool integrated in their website.

In keeping with the aforementioned examples, customers can engage with the firm through shared inventiveness and co-design (Bolton and Saxena-Iyer, 2009, Mustak et al., 2013, Vargo and Lusch, 2008). In recent years, these discretionary behaviours with a brand or firm

focus - after and beyond transactions - have also been labeled as customer engagement behaviours (van Doorn et al., 2010, Jaakkola and Alexander, 2014). Customers engagement behaviours encompass not only customer behaviours seeking to benefit the firm (cf. customer voluntary performance or customer citizen behaviors), but also customer behaviours that are driven by customers' motivational drivers instead of those originating from the firm (Brodie et al., 2011, van Doorn et al., 2010). Although customer engagement behaviour researchers often incorporate customers' communication about a brand or firm – such as customer referrals and word-of-mouth – as important behavioral manifestations of customer engagement, this chapter focuses solely on customer engagement behaviours in the creation, development, and delivery of new products and services.

Previous research holds that customer engagement behaviours in new product and service delivery processes contribute to the firm's performance in three ways. First, these customer engagement behaviours help firms to define and create unique and/or personalized experiences for customers (Prahalad and Ramaswamy, 2003, Fang et al., 2008). Specifically, firms can more easily enter into a dialogue with customers engaged in the creation and development of new products and services, which allows for progressive learning from and about customers and improves their understanding of the customers' experience context (Payne et al., 2008, Sawhney et al., 2005). Second, customer engagement behaviours are associated with productivity and efficiency gains and consequently with decreased costs for new product and service development (Hoyer et al., 2010), in that customers facilitate the generation of new ideas (Blazevic and Lievens, 2008), the speed of innovation (Fang, 2008), and the marketability and launch of new products and services (Melton and Hartline, 2010). Third, customer engagement allows to build stronger relationships with the customers, as a result of which firms can better retain, sustain, and nurture their customer base and

consequently generate long-term profitability and lifetime value instead of short-term gains (Kumar et al., 2010, van Doorn et al., 2010).

As a result of the aforementioned customer-related and firm-related benefits, firms increasingly recognize the value of customer engagement and consequently opt for a customer engagement strategy (*i.e.*, a strategy deployed to boost customer engagement with the brand or firm). To achieve this end, company-customer contact interfaces – such as internet platforms – are adjusted to allow engagement behaviours to take place. Generally, firms use a combination of technology-based interfaces (i.e., technologies – such as websites, social media, and mobile apps – that mediate interactions between customers and the firm) and high-contact interfaces (i.e., employees that mediate interactions between customers and the firm) to interact with their customers. In this chapter, we elaborate on the implications of a customer engagement strategy for the design and development of these company-customer contact interfaces, thereby explicitly taking into consideration that firms offer multiple company-customer contact interfaces and thus use multi-interface systems (Berry et al., 2010).

In both high-contact and technology-based interfaces, firms can introduce tools that foster customer engagement in new product and service development and innovation. To do so, firms need tools that anticipate customers' motivational drivers to engage with the brand or firm. In this chapter, we discuss three widely used tools - experimentation, community-building, and gamification - that can help management achieve better results in engaging customers in new product and service development (De Ruyck and De Wulf, 2013).

The chapter is organized as follows: First, we elaborate on the key characteristics and motivational drivers of customer engagement. Second, drawing from self-determination theory, we discuss how engaged customers expect unique combinations of extrinsic, internalized extrinsic and intrinsic benefits. We then show how firm investments in

respectively experimentation, community-building, and gamification can help generate these benefits. More particularly, the integration of these tools in technology-based and high-contact service interfaces helps firms to encourage and support customers in showing shared inventiveness, co-design, and other discretionary behaviours. We conclude this chapter by discussing the hurdles to benefit from engaging customers in multi-interface systems.

KEY CHARACTERISTICS OF CUSTOMER ENGAGEMENT

Customers who engage in the creation, production, and delivery of products and services co-construct their own experiences and solutions (Pine and Gilmore, 1999). In other words, this type of customer engagement reflects customers' interactive, co-creative experiences with a focal object/agent such as a brand or firm (Brodie et al., 2011). Although customer engagement takes place by virtue of interactions with a focal object/agent, behavioural manifestations of customer engagement can occur in interactions between the focal object/agent and/or other actors (Brodie et al., 2011, Jaakkola and Alexander, 2014, Verleye et al., 2014). Customers can, for instance, give input for new products and services to frontline employees, or they might report new product and service suggestions in a survey directed to the firm. In other cases, customers may launch ideas for product and service innovations in interactions with other customers rather than in interactions with the firm and its employees.

Next, customer engagement behaviours in interactions with the firm and/or other actors can exist in both offline and online environments. On the one hand, firms can encourage their customers to participate in user meetings, face-to-face interviews, and brainstorming or focus groups (Alam, 2002, Schirr, 2012). On the other hand, customers might post ideas in virtual customer environments (e.g., new product and service ideas posted on www.MyStarbucksIdea.com) or design their own products and services by means of user innovation toolkits and self-design tools (Franke and Schreier, 2010, Thomke and von Hippel,

2002). The occurrence of customer engagement behaviours in offline and online environments implies that customer engagement can have not only a local scope (*e.g.,* when customers verbally communicate a new product or service idea to employees) but also a global scope (*e.g.,* when customers post new product and service ideas on the world wide web). As a result, firms need to take into consideration that their initiatives to boost customer engagement can have a broad geographic scope.

Furthermore, customer engagement occurs not only among customers who consume products and/or services of a brand or firm but also among customers who do not directly consume these products and services. Family members of nursing home residents and parents of school children, for instance, do not consume nursing home or educational services themselves but they can give suggestions for service improvement to the nursing home or school personnel (Verleye et al., 2014). These examples illustrate that engagement behaviours can occur in the broader network of customers and/or other stakeholders. Jaakkola and Alexander (2014) argue that "organizations can improve and differentiate their offering by incorporating the broad range of resources that customers and other stakeholders are willing to invest through codeveloping or augmenting behaviours" (p. 257). As a consequence of this observation, firms might benefit from taking the broader network of customers and/or other stakeholders into consideration when opting for a customer engagement strategy.

As mentioned before, customer engagement is driven by customers' own and unique purposes and intentions and not by the purposes and intentions of the firm (Jaakkola and Alexander, 2014). As a result, customer engagement behaviors are voluntary and the result of (multiple) motivational drivers (van Doorn et al., 2010). In other words, customers decide whether or not to make voluntary resource contributions in terms of - among others - time, money, and/or actions, by which the expected returns are – in line with social exchange theory

- an important driver to engage in the creation, development, and delivery of products and services by voluntary resource contributions (Verleye, 2015).

Finally, it is not inconceivable that customers' voluntary resource contributions do not accord to the purposes or intentions of the firm (Jaakkola and Alexander, 2014, Brodie et al., 2013, van Doorn et al., 2010). In 2014, the initiator of www.IkeaHackers.net was asked to close this fan IKEA fan site, because IKEA argued that the fan site violated its brand rights by allowing their users to post ideas to turn IKEA furniture into classy and unique furniture (De Muynck, 2014). Although a worldwide storm of protest hampered IKEA to proceed, this example illustrates that customer engagement is not necessarily beneficial to the firm (Jaakkola and Alexander, 2014, van Doorn et al., 2010). Moreover, customer engagement behaviours can even have detrimental effects for the firm and its stakeholders. Customers can, for instance, become competitors of the firm by developing competing versions of new products and services (Hoyer et al., 2010) or organize public actions against a firm (van Doorn et al., 2010). In these situations, customers are disengaged instead of engaged with the firm (Kumar et al., 2010). In the next section, we focus on motivational drivers of customer engagement.

MOTIVATIONAL DRIVERS OF CUSTOMER ENGAGEMENT

Social exchange theory holds that people who put more resources and effort into an activity – such as customers engaged in the creation, development, and delivery of products and services – are motivated by the expected returns (Blau, 2004). The literature on customer motives to engage in the creation, production, and delivery of new products and services confirms that customers expect different benefits in return for their engagement (see Table 1).

Insert Table 1 about here

Several researchers group the six categories of motivational drivers of customer engagement into broader categories. Etgar (2008), for instance, identifies three broad categories. The first category refers to economic benefits, including reduction of risks associated with receiving inappropriate products or services (cf. pragmatic benefits) and a compensation in line with the effort made (cf. economic benefits). The second category refers to social benefits, including both opportunities for social contact (cf. social benefits) and better status and social esteem (cf. personal benefits). The third category refers to psychological benefits, which include enjoyment, fun, and excitement (cf. hedonic benefits) and learning and mastering new skills and techniques (cf. cognitive benefits). Hoyer et al. (2010) propose a similar categorization, except for the fact that cognitive benefits are considered as a separate category of expected co-creation benefits. All aforementioned categorizations are − as also acknowledged by Füller (2010) − in line with self-determination theory focusing on motives behind people's choices, in that the these drivers can be plotted on a continuum going from more intrinsic benefits (hedonic and cognitive benefits) over internalized extrinsic (social and personal benefits) to more extrinsic benefits (pragmatic and economic benefits).

Recent research shows that intrinsically and extrinsically motivated customers have different preferences in relation to the design of service interfaces (*i.e.,* employees and/or technologies that mediate the interactions and relationships between customers and firms) (Verleye, 2015). To ensure that engaged customers get rewarding experiences, firms need to understand customers' drivers to engage in the creation, production, and delivery of products and services. If customers are intrinsically interested, firms might benefit from integrating hedonic elements into their service interfaces. In return, service interfaces with pragmatic and economic benefits might encourage extrinsically interested customers to engage in the creation, production, and delivery of products and services. In a lot of situations, however,

firms want to attract a wide variety of customers. In these situations, firms might benefit from integrating multiple, different benefits into their high-contact and technology-based interfaces. Specifically, the multi-interface system thus needs to (1) signal the potential benefits of customer engagement, and (2) aid engaged customers to act in ways that help them to get the expected benefits (Verleye, 2014). By balancing the expected benefits of engaging in the creation, development, and delivery of products and services with the benefits received throughout the new product and service development and delivery process, firms can generate rewarding experiences for engaged customers (Zeithaml et al., 1990, Verleye, 2015).

ENGAGEMENT TOOLS IN MULTI-INTERFACE SYSTEMS

In this section, we present three tools to incorporate customer encouragement and support into multi-interface systems. These tools include experimentation, community-building, and gamification, because these tools anticipate extrinsic, internalized extrinsic and intrinsic motivational drivers of customer engagement and are often used in practice (De Ruyck and De Wulf, 2013).

Experimentation

To encourage and support customers to engage in new product and service development, firms can provide their customers with *experimentation tools.* These tools allow customers to create, develop, design, and test products and services in a more effective and efficient way (Franke and Schreier, 2010, Thomke and von Hippel, 2002). As a result, experimentation contributes to developing products and services that better meet customers' needs (i.e., pragmatic value) in a more efficient way (i.e., economic benefits), although the benefits can extend beyond these extrinsic benefits in both technology-based and high-contact interfaces.

An example of the integration of experimentation toolkits in technology-based interfaces is the "Do Us a Flavor" website of Lay's. This website provides tools to engage customers in the creation of new flavors for potato chips. Customers can use the "Create My Flavor" tool to

design and visualize their own chip styles (e.g., flavor name and main ingredients) and the "Flavor Gallery" tool to learn more about favorite flavors per location and their friends' favorite flavors (more information: see www.dousaflavor.com). By offering these tools, the "Do Us a Flavor" website of Lay's signals the opportunity to engage in the design of a personalized product in an efficient way (cf. economic benefits). Moreover, these tools also allow customers to learn their preferences iteratively (cf. cognitive benefits). Previous research confirms that customers learn their preferences iteratively until the optimal product or service is created if experimentation toolkits allow for visualization and trial-and-error experimentation (Thomke and von Hippel, 2002, Franke et al., 2008).

Furthermore, firms can also provide customers with experimentation toolkits in high-contact interfaces. One such example comes from German manufacturer of personal care products Beiersdorf. To preserve its status as provider of popular body care brands such as NIVEA and Eucerin, the company's research center invested in on-site bathrooms designed solely for the purpose of gaining insight into how characteristics of creams, shaving foams, shampoos, and soaps are experienced, judged and desired by their customers. To gather this information, Beiersdorf product developers observe how customers use a variety of products and actively discuss usage, habits and expectations stemming from these customers (more information: see www.beiersdorf.com). By participating in this initiative, customers gain new knowledge about the company, its products, and body care (cf. cognitive benefits). In the meanwhile, it is not inconceivable that highly engaged customers also get social and personal benefits from engaging in Beiersdorf's product development processes, because it allows them to connect with Beiersdorf product developers and signal these connections to their peers.

To ensure that experimentation toolkits in high-contact interfaces aid customers in getting the expected benefits, firms need to invest in customer-oriented employees. Customer

orientation implies that employees do not only need to seek dialogue with customers, but also need to find ways to process what they learn from customers to keep the customers' interest and bring the dialogue forward (Prahalad and Ramaswamy, 2000). In technology-based interfaces, firms need to invest in developing user-friendly tools. User-friendliness involves information provision to use the innovation tools, since this helps customers to use these tools more efficiently (Zeithaml et al., 2002). Next, firms also need to avoid technology failures (e.g., temporarily unavailable online tools) and/or process failures (e.g., tool not remembering choices made in an earlier stage), because these failures decrease the customer experience (Meuter et al., 2000). Zeithaml et al. (2002) confirm the importance of reliability (i.e., technical functioning of the website and its functions) and fulfillment (i.e., accuracy of service promises) to generate a better customer experience.

Community-building

To ensure that customers also have opportunities to obtain social benefits in return for their engagement in the creation, development, and delivery of new products and services (cf. internalized extrinsic benefits), firms can also invest in building customer communities. Although customers can also create their own communities (e.g., Ikea Hacking), this section specifically focuses on firm initiatives aimed at creating opportunities for customers to connect with one another and the firm. In technology-based interfaces, firms can build customer communities in various ways. On the one hand, firms can use several external social media platforms – such as Twitter and Facebook – to encourage customers to connect with the firm and one another. Social media can connect customers with firms and one another by providing access to online content and facilitating communication (Hollebeek et al., 2014). The "Do Us A Flavor" contest of Lay's, for instance, started with a big media campaign, by which social media were used to create buzz around the contest and by which Lay's fans and followers could actively discuss the contest. Participants were also encouraged to promote

their own potato style via these platforms. On the other hand, firms can integrate a virtual customer community within their own, internal interfaces. Starbucks, for instance, offers a direct link on its website to the company-owned webpage 'mystarbucksidea.com', which is an online community where customers can share and comment on ideas for new products and services. This community allows customers to connect with each other and company representatives that manage the community (cf. social benefits) and enables them to learn from one another (cf. cognitive benefits).

To improve the customer experience, virtual customer communities – such as mystarbucksidea.com – need to be continuously monitored in order to guarantee the working of the platform and to avoid situations in which customer ideas don't get posted or community members start offending each other's ideas (Meuter et al., 2000, Weijters et al., 2007). Hence, company monitoring and support are key to the success of these communities. Zeithaml et al. (2002), for instance, underline the importance of assisting customers when problems occur (cf. responsiveness) and allowing customers to communicate with the firm (cf. contact). At the MyStarbucksIdea website, a couple of Starbucks employees - labeled as "Starbucks Idea Partners" - are appointed to listen to customers' ideas and answer and ask questions. Moreover, My Starbucks Idea members can also support one another by commenting on each other's ideas (more information: see www.mystarbucksidea.com). In other words, both company-to-customer support and customer-to-customer support can aid customers to get the expected benefits and consequently improve their customer experience.

In some situations, firms may benefit from bringing customers physically together by means of events. In 2013, for instance, the potato chip styles of the three finalists of the "Do Us a Flavor" contest in Belgium ended up in all retail outlets of Lay's and Lay's also organized a closing event for all finalists, fans, press, and other interested parties to announce the winner and hand over the financial award to the finalists. By doing so, the finalists get

appreciation for their input, which can increase their status and self-esteem (cf. personal benefits). In the meanwhile, these events allow finalists, fans, press, and other interested parties to connect with one another, because they experience the same event (cf. social benefits). Therefore, while the underlying mechanisms are the same in offline and online community-building, we consider events as an interesting community-building mechanism in high-contact interfaces, which can complement virtual customer communities.

Gamification

To anticipate customers' need for hedonic and cognitive returns for their engagement in new product and service development and innovation (cf. intrinsic benefits), firms might opt for gamification. Gamification involves inserting (video) game dynamics in customer-firm interfaces, and often involves specific competition (e.g., gathering more points than others) and cooperation (e.g., helping each other to reach target goals) mechanisms aimed at stimulating desired behaviours (Harman et al., 2014, Bailey et al., 2015). For example, mystarbucksidea.com explicitly incorporates multiple game elements into the online community to ensure that their members experience fun in interacting with the platform (cf. hedonic benefits). Moreover, all members can vote for other customer's ideas and become part of the Leaderboard if they get high scores from other customers (more information: see www.mystarbucksidea.com). As a consequence of gamified functionalities as voting and influence scores, customers can increase their self-esteem and status by visualizing their achievements (cf. personal benefits). Another example involves FoldIt, which is a 3D online puzzle developed by the University of Washington in collaboration with the biochemistry industry. The aim of this application is to help advance one of biology's most prominent problems today: the folding of proteins. As this folding can be done in numerous ways and the current professional research community is limited, Foldit brings in the help of outside players who compete folding proteins in the best possible and most efficient way. In doing so,

they advance science by discovering new solutions complex mathematical models had not uncovered before (more information: see www.fold.it). The players involved can experience multiple benefits: the fun of solving a puzzle (cf. hedonic benefit), an increased self-esteem upon finding more efficient ways to solve a puzzle (cf. personal benefits), an increased knowledge of biology (cf. cognitive benefits) and a sense of community (cf. social benefits).

Although gamification is most often applied in a technology-based context, its benefits can also be introduced in high-contact interfaces. Looking back at Lay's "Do Us A Flavor" contest, multiple gamification elements were adopted in offline events. For instance, Lay's battles were organized in supermarkets where people got to taste and vote for the different new flavors that were developed. In doing so, customer cannot only derive pleasurable experiences from the battles (cf. hedonic benefits), the discussion amongst and competition between fans of different flavors results in social experiences (cf. social benefits).

To ensure the success of gamifying the company-customer interfaces, firms need to ensure customers are intrigued and challenged by the gamified elements (e.g., obtaining a specific badge) in order to ensure continuous levels of customer engagement (Zichermann and Cunningham, 2011). Specifically, this implies developing games that do not exceed the skill-level of the customer base and allow them to reach specific target goals (Novak et al., 2000). However, firms should guarantee a minimum level of challenge in the long run as people might lose interest if they can achieve specific targets too easily and the gamified element loses its fun-factor. Hence, negative outcomes – such as not reaching a specific level of achievement or reaching it too easily – might cause customer to disengage in the long run. Ideally, gamification also enables immediate gratification through real-time feedback (e.g., whether or not one has obtained a badge; notification if other customers like your posts, etcetera), while allowing the customer to share his/her achievements with his friends and family (Zichermann and Cunningham, 2011). Importantly, firms should be prudent with

automatic sharing of customer achievements as they may harm the customer's self-esteem (e.g., when a customer performs worse than his/her friends). Therefore, it is advisable to let the customers choose whether or not they want to publicly share their current accomplishments on the gamified platform.

Combinations

Many companies combine experimentation, community-building, and gamification in order to create compelling environments that foster engagement behaviours. OpenIDEO, for instance, explicitly integrates experimentation, community-building and gamification in its online interface. This open innovation platform, managed by design company IDEO, attempts to bring together people from all over the world to solve social problems by means of collaborative thinking (cf. community-building). Every social cause that is discussed is backed-up by one or more sponsoring firms with a specific interest in solving this issue. At all times, multiple challenges are posted in which members can contribute their ideas and solutions. Other members can comment, vote and 'applaud' potentially valuable research ideas that they feel would advance the project (cf. gamification). Furthermore, every member is assigned a specific 'Design Quotient' that is based on his/her number of research ideas, comments and votes on the platform, and reflecting the status of that member (cf. gamification). OpenIDEO also provides all its subscribers with specific design tools that can help them think of and develop their research ideas (cf. experimentation tools) (more information: see www.openideo.com).

As illustrated by the case of OpenIDEO, online interfaces lend themselves to simultaneous integration of experimentation, community-building, and gamification. The integration of these tools, however, can also extend beyond the boundaries of a specific interface. The "Do Us A Flavor" contest of Lay's, for instance, combines online experimentation, community-building, and gamification (cf. www.dousaflavor.com) with community-building and

gamification in high-contact interfaces (cf. events and battles in supermarkets). In other words, firms can also opt for integrating experimentation, community-building, and gamification in the multi-interface system. By doing so, firms can further increase the likelihood of customers engaging in the creation and development of new products and services.

BENEFIT-INHIBITING HURDLES FROM ENGAGING CUSTOMERS IN MULTI-INTERFACE SYSTEMS

To ensure that firms benefit from investing in tools to encourage and support customer engagement in multi-interface systems, it is not sufficient to signal the potential benefits and ensure that customers also get the expected benefits. Additionally, it is of the utmost importance that engaged customers use the interfaces in ways that do not harm the firm (cf. key characteristics of customer engagement). Firms, for instance, might be hurt by customers using their interfaces to spread negative word-of-mouth or acting as competitors by developing competing versions of the firm's products and services (Hoyer et al., 2010, Prahalad and Ramaswamy, 2000). To avoid this situation, firms might benefit from providing engaged customers with information about their role. Drawing from role theory, this process of giving guidelines to customers has been labeled as customer socialization (Verleye, 2014). In the next paragraphs, we elaborate on the concretization of customer socialization in high-contact and technology-based interfaces.

Regarding technology-based interfaces, customers are often asked to create an account and accept the terms and conditions of use. The terms of use of MyStarbucksIdea, for instance, stipulate that users are - among others - prohibited from "creating any frames at any other sites pertaining to any portion of this site", "posting submissions or using the site in such a way that damages the image or rights of Starbucks, other users or third parties" or "using the site to send or post harassing, abusive, or threatening messages" (Starbucks, 2015). By doing

so, Starbucks attempts to avoid that customer engagement in the MyStarbucksIdea platform harms the firm and/or its stakeholders. Additionally, these terms of use also specify the firm's rights in relation to customer input (e.g., "You give Starbucks a non-exclusive, free, worldwide license for the duration of the applicable author's rights, to publish your remarks, ideas, graphics, photographs or other information communicated to Starbucks through this site") (Starbucks, 2015). In sum, clarification of the role expectations can help firms to ensure that their investments in customer engagement in new product and service development in technology-based service interfaces benefit both customers (cf. motivational drivers) and firms (cf. new product and service development).

In high-contact interfaces, firms need to ensure that customer engagement does not consume too many resources. Moreover, customer engagement in high-contact interfaces can also harm the firm by placing an excessive burn on frontline employees. Previous research has merely shown that customers who engage in the firm's processes often claim less responsibility than the firm for failure and more responsibility than the firm for success in situations where they take over tasks from the frontline employees (Bendapudi and Leone, 2003). Since customers who engage in the creation, development, and delivery of new products and services also take over tasks previously performed by frontline employees, it is not inconceivable that these employees experience job stress. To avoid job stress among frontline employees, firms might benefit from informing customers about their role in new product and service development initiatives. A case study in nursing homes, for instance, revealed that these organizations invest in role alignment discussion between customers and frontline employees in combination with written role information in folders and brochures (Verleye et al., 2014). By investing in communication about the role expectations, firms can avoid that customer engagement in new product and service development harms the firms and/or its frontline employees.

CONCLUSION

This chapter shows that customer engagement has the potential to generate both customer-related benefits (unique and personalized customer experiences) and firm-related benefits (productivity and efficiency gains and/or long-term profitability). To achieve these benefits, firms need to find ways to encourage their customers to engage in the creation, development, and delivery of new products and services. Drawing from social exchange theory, this chapter holds that people who put more effort into an activity – such as engaged customers – are motivated by the expected returns. Specifically, customer engagement is – in line with self-determination theory - seen as a unique function of extrinsic, internalized extrinsic and intrinsic benefits. Therefore, firms need to anticipate these benefits into their multi-interface system through respectively experimentation, community-building, and gamification, but the concretization depends on the level of technologization.

In technology-based interfaces, firms can encourage and support their customers to engage in the creation and development of products and services by providing experimentation toolkits, creating virtual customer communities, or adding gamification elements to the company-customer interface. By doing so, firms signal the potential benefits of engaging in the creation, development, and delivery of products and services. To support customers in also getting the expected benefits in technology-based interfaces, firms need to ensure that experimentation tools, communities, and games are user-friendly. In high-contact interfaces, firms can similarly encourage their customers to engage in the creation and development of products and services by means of experimentation toolkits, community events, and gamification. In all these initiatives, it is important that employees and/or other customers are open to customer engagement and support the input of engaged customers to ensure a rewarding customer experience.

User-friendly online tools, communities, and games in technology-based interfaces and customer-oriented employees in high-contact interfaces help to generate compelling experiences for customers engaged in new product and service development initiatives. However, these initiatives are a necessary but insufficient condition for firms to benefit from opting for a customer engagement strategy. Drawing from role theory, firms need to inform customers about their role - including rights and duties - when engaging in the creation, development, and delivery of products and services. By doing so, firms can avoid that customers feel exploited and ensure that customers do not harm the firm.

In sum, we used social exchange theory, self-determination theory and role theory to advance our understanding of the implications of a customer engagement strategy for the design and development of multi-interface systems. It is not inconceivable that the design of compelling multi-interface systems requires initial investments. Kumar et al. (2010) hold that these investments have the potential to generate higher profits in the long run through the creation of customer engagement value. In the meanwhile, Hoyer et al. (2010) argue that the trade-offs between the costs and benefits of customer engagement in general − both in the short and the long run − deserve further investigation. Therefore, future research is warranted on the trade-offs between the creation of customer engagement value and the investments needed to design multi-interface systems that generate value for the customer and the firm.

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Table 1. Different Motivational Drivers for Customer Engagement.

		HEDONIC BENEFITS	COGNITIVE BENEFITS	SOCIAL BENEFITS	PERSONAL BENEFITS	PRAGMATIC BENEFITS	ECONOMIC BENEFITS
Motivational drivers in general	Etgar (2008)	Enjoyment, excitement, and fun	Learning and mastering new skills and techniques	Opportunities for sharing activities with persons of similar interests and desires	Better status and social esteem	Reduction of risks associated with receiving inappropriate products or services and higher level of customization	A compensation in line with the effort made (such as a cost reduction)
	Hoyer et al. (2010)	Enjoyment of contributing and intrinsic motivation	Gain technology, product or service knowledge	Strengthening of ties with relevant others	Increased status and social esteem		Monetary prizes or profit sharing from the firm that engages in co-creation with them, or intellectual property rights
Motivational drivers in technology-based interfaces	Nambisan & Baron (2009)	Pleasurable experiences	Knowledge about products, services, and technologies	Strengthened relational ties among co-creation actors	Status and self-efficacy		
	Füller (2010)	Intrinsic playful tasks	Opportunities to keep up with new ideas and develop skills	Opportunities to connect with like-minded people	Self-efficacy and recognition	Solutions that better meet personal needs	Monetary rewards