

The Customer Experience and Insight (CXI) Research Group presents

Driving product design

The firm–customer relationship in mass customisation

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Driving product design: the firm–customer relationship in mass customisation

Mass customisation introduces new roles for customers by involving them in the design process. Understanding the complexities of how they participate in this process can help firms strike a balance between customer experience and organisational priorities.

By Jessica Pallant

Retail has reached a tipping point when it comes to the role and participation of customers in the product creation process, with an increasing number of products available that can directly fit an individual customer's needs. In the UK, Amazon Custom allows sellers to list products with customisation options and customers are able to select the customisation details required at the point of purchase.¹ Amazon has also been exploring the possibility of selling customised clothing online, with items tailored to the measurements of individual customers.

Amazon is by no means the first – nor will it be the last – company to integrate customisation into their product offering. Across product and service organisations of all sizes, customers are increasingly demanding individually tailored experiences to fit their specific needs. Nike, for example, has patented a VR system that allows users to immerse themselves in computer-simulated environments where they can customise their own sneakers.² Lancôme, meanwhile, has developed customised foundation using three different scans of a customer's skin tone, and Toyota has created a video campaign that uses

100,000 different video clips to customise an ad based on the viewer's individual interests. What these examples have in common is that they demonstrate how customisation is becoming a part of both consumers' everyday lives and firms' strategic choices.

Advances in technology and improved customer interactions have made it easier for brands to offer customisation on a mass level. In particular, online platforms have simplified the customisation process while offering enhanced control to customers. However, mass customisation can be a double-edged sword, increasing value for some customers but also increasing the cost for others – for example, in the form of additional effort required during the design process or by attracting a price premium.

It is therefore imperative for firms to understand the dynamic nature in which customers can interact with them, including who is ultimately in control of the customisation and the effects that this can have on the customer experience. This will enable firms to build strategies to better serve customer needs while mitigating any potential negative effects.



FIRM-DRIVEN DESIGN

Mass customisation based on firm-driven design keeps the responsibility for the core design of the product or service with the firm. For example, at IKEA, customers purchase flat-pack furniture kits and assemble them in their own home. The product itself has been designed by IKEA, and only the final assembly of the product relies on the customer, involving the customer at a late stage in the production. However, the idea of 'hacking' IKEA furniture is becoming more prevalent, with blogs such as IKEA Hackers providing inspiration and ideas to repurpose and cus-

tomise the brand's furniture further.³ This highlights the various extents to which a customer can involve themselves in the process, from simply assembling the piece of furniture as instructed by the firm to 'hacking' a unique solution. Importantly, though, the core structure and design of the product is developed by IKEA, and therefore still exemplifies firm-driven design.

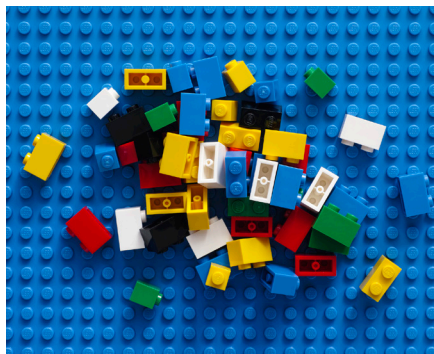
Alternatively, a customer may engage with the firm early on in the customisation process, for example when commissioning an architect to design a house. The customer initiates the process based on a specific need and is thus involved at an early stage. However, the architect retains control of the design as the customer might not have a clear picture of the outcome, nor the necessary skills required to develop it. Therefore, while customisation processes are typically linear, this kind of process is often iterative; the customer and the firm have a continual dialogue, with the customer imparting expertise and knowledge throughout the development of the product. Ultimately, the skills and knowledge of both sides (firm and customer) help shape the outcome for everyone.

Customers who actively engage in customisation of a product in a firm-driven design setting experience more beneficial results than those who take no part in the process in traditional production models.⁴ However, despite the benefits, some customers are more prone to engaging than others. Time is a major resource that customers need to contribute towards the process, and research has shown that customers with more discretionary time are more prone to engage and experience the beneficial results of doing so.⁵

Customers' willingness to participate in this type of customisation process can also be affected by their perceived self-efficacy⁶ and propensity for do-it-yourself projects.⁷ Customisation, in turn, can increase perceived value of products through the 'I designed it myself' effect, whereby customers feel a sense of subjective ownership as 'creators' of the product.⁸ Similarly, the 'I made it myself' effect improves not only customers' perceptions of brand image, but also their sensory perception of the product itself. For example, customers were more likely to enjoy the taste of a meal kit from a provider such as HelloFresh or Marley Spoon if they had prepared the meal themselves rather than if they were offered a sample prepared in store.⁹ Clearly, active engagement in customisation processes can enhance customer evaluation of the resulting product or service, even if they are not in control of the product or service design.

However, involving customers in design and production processes does not always lead to positive outcomes, with higher levels of involvement intensity of sometimes leading to less satisfactory experiences for

customers. One way to mitigate this adverse effect is to provide immediate support to customers during the customisation process through, for example, online support systems. The problem is that it can be challenging to provide this immediate support to customers, particularly those engaging at the late stage of production without direct contact from a service employee (such as in their own home).



CUSTOMER-DRIVEN DESIGN

At the other end of the spectrum is customer-driven design, or 'co-design'. While the term 'co-creation' can be used broadly to refer to creativity shared by two or more people, 'co-design' refers more specifically to designers working together with customers not trained in design in developing and designing products.¹⁰ Typically, this type of customisation involves the customer either in the R&D stage or at an execution stage, allowing the customer to drive the final product design. For example, LEGO Digital Designer allows customers to propose and build LEGO models using virtual bricks in a computer-aided design manner. In providing this service, LEGO is stimulating, translating, and harnessing customers' imagination and creativity. Customers have complete design control with access to LEGO bricks and pieces in many colours to build any model imaginable. In this model, firms are required to relinquish design control and give it to customers.¹¹

Customers can also retain control of the final design but only interact with a firm at the point of production. In this model, the firm selects a 'base' product and a number of attributes or components for the customer to choose from in order to develop their customised item/product. For example, with NikeiD, the customer chooses a 'base' shoe and can then customise various aspects, such as the fabric, colours and laces, perhaps adding a name or initials to the shoe.

An even simpler example of this is The Daily Edited, a company that sells monogrammed leather accessories with customisable zippers. Customers can choose to have initials or a name stamped into the leather in various positions and select from a variety of zipper colours and types. A more complex

example is Shoes of Prey, a shoe manufacturer that allows consumers to customise their 'perfect shoe' within a set range of options: first, they choose from four shoe styles including mules, pumps, sneakers and sandals; then, they have the opportunity to select fabric, style, heel height and design features from a list predetermined by the company. This results in many thousands of possible customer-driven design combinations.

Early user involvement (as in the LEGO example) improves satisfaction for both the customer and the firm. This is due, in part, to customers communicating directly with the firm, rather than having information filtered and potentially distorted through different communication channels external to the firm. Customers can also generate ideas that are more innovative and better matched to their needs than those generated by professional developers; on the other hand, professional developers' ideas are more technically feasible.¹² It is therefore vital to strike a balance between customer-generated ideas and the firm's technical capabilities. If this balance can be struck, however, the benefits include:¹³

- Increased idea generation through access to a wide pool of customers' experiences
- Better quality products and therefore higher customer satisfaction
- Increased customer loyalty
- Higher perceived customer value for future collaboration
- Increased intention to co-design.

Furthermore, this type of customer involvement has positive effects on the firm's innovation processes, product quality, speed of decision-making, and individual and group creativity. Customers, however, have to wait until the product is produced to experience the benefits of co-design, even if they are involved early in the development process.

CO-DESIGN CONSIDERATIONS

Mass customisation introduces multiple and varied roles for customers by involving them in the design process. In order to realise the mutual benefits of doing so, including increased customer satisfaction and improved organisational capabilities, it is critical for firms to understand the complexities involved. Whether using firm-driven or customer-driven design approaches, there are considerations that need to be taken into account such as the customer's willingness to co-create, their ability to do so, and their need for individualised products and services. Better understanding how customers participate in the design process can help firms maximise positive outcomes and mitigate potential negative outcomes for both the firm and customer, striking a balance between customer experience and organisational priorities.

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About CXI Research Group

The Customer Experience and Insight (CXI) Research Group is part of Swinburne Business School.

CXI is a full-service research group that conducts leading-edge research centred on experience to build customer-led strategy and innovation.

The CXI team specialises in a range of qualitative and quantitative research methods and frameworks. Our four pillars of expertise span the fields of retail and consumer behaviour, sport and wellbeing, service innovation, and employee experience.

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