The effect of sales configurator capabilities on the value perceived by the customer through the customization process

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Abstract

Literature has recently conceptualized five capabilities that a sales configurator should deploy in order to help avoid the product variety paradox, namely the risk that offering more product variety and customization to the market paradoxically results in a loss of sales. However, no studies have investigated the effect of such capabilities on the value that users derive from the experience of customizing their own products. To help narrow this research gap, in the present work we develop a number of hypotheses about the positive impact of such capabilities on the hedonic and creative value obtained by potential customers through the customization experience. We then test the hypothesized relationships and find empirical support for all of them.

1 Introduction

Sales configurators are software applications that support firms in identifying the complete and consistent commercial description of the product variant that best fits the customers' requirements among the company's offer [Forza and Salvador, 2008; Peng *et al.*, 2011]. The functions of a sales configurator include presenting the company's product space, meant as the set of products offered [Tseng and Piller, 2003], and preventing inconsistent or unfeasible solutions from being defined [Franke and Piller, 2003; Forza and Salvador, 2008].

Drawing upon prior research on sales configurators and customer decision processes, literature [Trentin *et al.*, 2013] has recently distilled five capabilities that a sales configurator should deploy in order to help avoid the product variety paradox. This is the risk that offering more product variety and customization to the customer, in an attempt to increase sales, paradoxically results in a loss of sales [Salvador and Forza, 2007].

However, no studies have analyzed the effect of these capabilities on the value that potential customers may derive from the experience of customizing their own products. Such a subjective value is posited by previous literature as increasing the customers' willingness to pay for mass-customized goods [Franke and Schreier, 2010; Franke *et al.*, 2010], and therefore it represents an important lever for mass customizers aiming at increasing their profitability. To help narrow this research gap, the present work develops and tests hypotheses about the positive impact of the abovementioned sales configurator capabilities on the value the customization experience provides to the potential customers.

2 Theoretical background and conceptual development

2.1 The value of the customization process

Consumer research has long recognized that shopping involves not only instrumental outcomes related to the merits of the goods or services acquired, but also experiential outcomes [Holbrook and Hirschman, 1982; Babin *et al.*, 1994]. The latter are emotional responses to the shopping experience that, when positive and rewarding, let customers obtain greater value from their shopping time [Holbrook and Hirschman, 1982; Babin *et al.*, 1994]. Greater perceived value, in turn, makes customers more willing to buy a product or pay a higher price for it [Baker *et al.*, 1992; Babin *et al.*, 1994; Franke and Schreier, 2010].

Experiencial value has been shown to influence customer's purchasing behaviour not only in the case of standard items, but also when products can be configured by using a Web-based sales configurator. Specifically, literature has unveiled that the value elicited by the configuration experience carry over to the evaluation of the self-configured product and increment the customer's willingness to pay [Franke and Schreier, 2010; Franke *et al.*, 2010; Merle *et al.*, 2010]. In particular, two types of experiencial values have been linked with the process of self-configuring a product, namely hedonic value and creative achievement value [Merle *et al.*, 2010].

Hedonic value

Hedonic value is defined as the value acquired from the experience's capacity to meet needs related to enjoyment, fun, or pleasure [Merle *et al.*, 2010]. In particular, with regard to a purchase situation, hedonic value reflects the consumers' appreciation for the shopping experience in

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itself, regardless of any instrumental value of the purchased product [Babin *et al.*, 1994].

The importance of fulfilling the customer's needs for enjoyment, fun, or pleasure through the shopping experience has long been advocated by the marketing literature [e.g. Hirschman and Holbrook, 1982; Babin *et al.*, 1994; Childers *et al.*, 2001]. For example, literature has uncovered that instilling those feelings in the customer is a way to foster unplanned shopping decisions [Babin *et al.*, 1994], repurchase intentions [Jones *et al.*, 2006; Scarpi, 2012] or the use of online forms of shopping [Childers *et al.*, 2001].

Similar findings have also been reported in the mass-customization literature. Recent studies have uncovered that consumers configuring their own products are likely to experience process enjoyment [Franke and Schreier, 2010; Merle *et al.*, 2010]. These feelings can derive, for example, from learning one's own preferences by using the configuration process and/or from playing an active role in the design of a good [Franke and Schreier, 2010]. Noteworthy, these mechanisms are not inflenced by the characteristics of the products eventually configured, rather they result from the characteristics of the configuration process itself. For this reason the hedonic benefit is said to be "process-oriented" [Franke and Schreier, 2010].

Creative achievement value

Creative achievement value is defined as the value acquired by the customer from the feeling of accomplishment related to the creative task of codesigning [Merle *et al.*, 2010]. The elicitation of this type of value has also been referred to as the "I designed it myself" effect [Franke *et al.*, 2010]. Here the term "design" is used as including the configuration of a product within a predefined solution space [Franke *et al.*, 2010].

The concept of creative achievement value finds its theoretical support in the psychology literature. When people successfully complete a challenging task by their own efforts, they feel a positive emotion of self-reward, namely, pride [Weiner, 1985; Lea and Webley, 1997]. In other terms, when someone attains an outcome that signals his/her success in dealing with a challenge, s/he feels pride [Weiner, 1985; Franke *et al.*, 2010]. For example, when one does a complex Jigsaw puzzle, a favourable outcome of the process (i.e. having the puzzle completed) constitutes a positive feedback on one's own competences [Schreier, 2006]. This, in turn, gives the individual a strong feeling of pride for having done it oneself [Schreier, 2006].

The feeling of pride has also been studied with relation to the product customization task. The completion of such a task has been shown to give customers a sign of their competence and effectiveness in creating something, thus eliciting feelings of pride "of authorship" [Schreier, 2006]. This happens because, when faced with a configurable product instead of a standardized product, the customer perceives the shopping experience as being more difficult [Franke *et al.*, 2010]. Therefore, a favourable outcome to the configuration experience (i.e. a customized product that fits the customer's wants) embodies one's success in overcoming a challenge through the investment of personal efforts, time, and attention [Franke *et al.*, 2010]. As the favorableness of the outcome of the experience is a prerequisite for the user's perception of pride, the creative achievement benefit is said to be "output-oriented" [Schreier, 2006].

2.2 Sales configurator capabilities to improve customers' perceived value through the customization process

In the following subsections we argue that five capabilities, identified by previous research as key in avoiding the product variety paradox [Trentin *et al.*, 2013], also allow a sales configurator to increase the value perceived by a customer through the configuration process. These capabilities are: benefit-cost communication, user-friendly product-space description, easy comparison, flexible navigation, focused navigation capabilities (see Table 1).

Capability	Definition
Benefit-cost communication	The ability to effectively communicate the consequences of the available choice options both in terms of what the customer gets (benefits) and in terms of what the customer gives (monetary and nonmonetary costs)
User-friendly product-space description	The ability to adapt the product space description to the needs and abilities of different potential customers, as well as to different contexts of use
Easy comparison	The ability to minimize the effort required of a potential customer to compare previously created product configurations
Flexible navigation	The ability to minimize the effort required of a potential customer to modify a product configuration that he/she has previously created or is currently creating
Focused navigation	The ability to quickly focus a potential customer's search on a product space subset that contains the product configuration that best matches his/her idiosyncratic needs

Table 1: sales configurator capabilities (Trentin et al., 2013)

Impact of sales configurator capabilities on hedonic value

Benefit-cost communication capability

When a sales configurator has high benefit-cost communication capability, during the configuration task the customer is given pre-purchase feedbacks on the effects of the available choice options [Trentin *et al.*, 2013]. This is done, for example, by explaining what potential needs a given choice option contributes to fulfill and which is the price for such an option.

One of the product benefits customers are typically interested in is the aesthetic or, more in general, the sensorial aspect of the product s/he is considering for purchase [Li *et al.*, 2001; Fiore *et al.*, 2005]. A sales configurator with high benefit-cost communication capability is able to convey these sensorial aspects, for example through 360° product representation, the presence of sound recording, or virtual try-on technologies [Fiore *et al.*, 2005]. This allows customers to understand whether the

sensorial aspects of the configured product fit their needs. At the same time users are also allowed getting in closer contact with the company's offer through their senses, which is a need customers generally have while shopping [Hirschman and Holbrook, 1982]. When the shopping experience involves higher sensorial relation with products, the consumer's fantasy and imagination are stimulated suggesting elements of fun and playfulness [Jeong *et al.*, 2009]. This, in turn, increases the hedonic value that is perceived through the shopping experience [Shih, 1998; Fiore *et al.*, 2005; Jeong *et al.*, 2009].

Based on the above argument we posit that:

H1: The higher the level of benefit-cost communication capability deployed by a sales configurator, the higher the hedonic value perceived by the customer through the configuration process

User-friendly product-space description capability

When a sales configurator has high user-friendly product-space description capability, customers do not have to process product information that is not comprehensible for them [Alba and Lynch, 1997; Trentin *et al.*, 2013]. This is because the system adapts information contents according to their needs and abilities [Trentin *et al.*, 2013].

Since information content is customized based on one's needs and abilities, users perceive that the configuration process is up to their skills. Only when potential consumers perceive that a computer-mediated environment is congruent with their own skills can fun and enjoyment potentially occur [Hoffman and Novak, 1996]. Differently the consumers either become bored (i.e., their skills exceed the challenges) or anxious (i.e.. the challenges exceed their skills) [Hoffman and Novak, 1996].

Moreover when the customers are able to understand the product space characteristics, while using the sales configurator they learn about new products released in the market or new trends. Since learning about new products or trends is a source of enjoyment and entertainment for consumers [Childers *et al.*, 2001; Parsons, 2002; Arnold and Reynolds, 2003], this increases the hedonic value they perceive through the configuration experience.

Therefore, we posit that:

H2: The higher the level of user-friendly product-space description capability deployed by a sales configurator, the higher the hedonic value perceived by the customer through the configuration process

Easy comparison capability

When a sales configurator has high easy comparison capability, customers do not have to rely on their limited working memory to recover and compare configurations they have previously created [Trentin *et al.*, 2013]. This is because the system supports the retrieval of saved configurations and their comparison, for example through their side-by-side display [Trentin *et al.*, 2013].

The transformation of the decision from a memory-aided to a computer-aided process increases the number of product configurations that potential customers can explore and add to their consideration set, given their level of mental abilities or time availability [Alba and Lynch, 1997]. Decreased constraint to the exploration of the company's product space augments the users' feeling of freedom and spontaneity perceived during the configuration process. These feelings in turn drive the potential customer to obtain higher hedonic value out of the experience [Babin *et al.*, 1994].

Based on the above argument we posit that:

H3: The higher the level of easy comparison capability deployed by a sales configurator, the higher the hedonic value perceived by the customer through the configuration process

Flexible navigation capability

When a sales configurator has high flexible navigation capability, customers can quickly make and undo changes to a current configuration or to previously created ones. This can be done, for example, through the use of bookmarks that redirect to previous steps of the configuration process [Randall *et al.*, 2005; Trentin *et al.*, 2013].

As going back to previous steps of the configuration is easier, the potential customer can conduct many trial-and-error tests to evaluate the effects of different choices made available by the company [Trentin *et al.*, 2013]. In this way, the exploration of the solution space is pursued more actively by the customer, compared to cases where excessive time/mental resources demands discourage customer's non-linear movements through the solution space. A more active role, in turn, makes the potential customer perceive the process as an exciting play, thus fulfilling his/her need for enjoyment and fun [Babin *et al.*, 1994; Arnold and Reynolds, 2003; To *et al.*, 2007].

Based on the above, we posit that:

H4: The higher the level of flexible navigation capability deployed by a sales configurator, the higher the hedonic value perceived by the customer through the configuration process

Focused navigation capability

A sales configurator with focused navigation capability does not force potential customers to go through and evaluate a number of product options that they regard as certainly inappropriate for themselves [Trentin *et al.*, 2013]. A way to do this is, for example, to provide starting points, that is, product configurations that are close to the customer's ideal solution and that may be further customized to meet customer's needs more accurately [Trentin *et al.*, 2013].

The restriction of the search only to a limited set of product solutions that are of interest to the customer, increases the likelihood that s/he soon finds something that raises his/her attention and engagement. This, in turn, leaves more time to the person to focus on what is more engaging and stimulating for him/her, thus increasing the enjoyment perceived during the configuration process.

Therefore, we posit that:

H5: The higher the level of focused navigation capability deployed by a sales configurator, the higher the hedonic value perceived by the customer through the configuration process

Impact of sales configurator capabilities on creative value

Benefit-cost communication capability

By delivering pre-purchase feedback on the effects of the available choice options, a sales configurator with high benefit-cost communication capability allows potential customers to understand the value that they can derive from these options [Trentin *et al.*, 2013]. The learning process enabled by such a capability makes a potential customer more confident that the product configuration s/he has selected is the one that best fits her/his needs within the company's product space [Trentin *et al.*, 2013]. In other terms, a configurator with high benefit-cost communication capability makes the customers feel they have obtained the most favorable outcome out of the configuration process and out of the efforts that they have invested in such a process. As pride arises when it is possible to attribute a favorable outcome to the self [Weiner, 1985], the benefit-cost communication capability has a role in augmenting the feeling of pride perceived by the users through configuring their own products. This feeling, in turn increases the creative achievement value that the customer derives from the customization process [Merle *et al.*, 2010].

Based on the above arguments, we posit that:

H6: The higher the level of benefit-cost communication capability deployed by a sales configurator, the higher the creative value perceived by the customer through the configuration process

User-friendly product-space description capability

By tailoring both information content and information format to the abilities of different potential customers, a sales configurator deploying user-friendly product-space description capability facilitates the users' understanding of the solution space characteristics [Trentin *et al.*, 2013]. Without such understanding, it would be difficult for the customer to complete the configuration task and obtain a product configuration that corresponds to one's expectations and needs [Fürstner *et al.*, 2012; Trentin *et al.*, 2013]. This, in turn, would make the customer attribute a negative outcome to the efforts employed in the process. Conversely, when potential customers, supported by the user-friendly product-space description capability, are able to obtain the needed products, they feel "smarter" than their counterparts (co-workers, neighbors, relatives). This is because they are able to co-designed a product instead of buying something created by somebody else [Schreier, 2006]. This makes them feel pride of authorship, and increses the creative achievement value derived from the process [Schreier, 2006; Merle *et al.*, 2010].

Based on the above arguments, we posit that:

H7: The higher the level of user-friendly product-space description capability deployed by a sales configurator, the higher the creative value perceived by the customer through the configuration process

Easy comparison capability

By enabling the comparison between previously created configurations, a sales configurator deploying easy comparison capability fosters the users' learning about the instrumental value they would derive from the product being configured. This is because, in assessing the value of a particular product solution, customers tend to rely on comparisons with other product alternatives [Simonson and Tversky, 1992; Simonson, 2005]. The learning process enabled by easy comparison capability makes a potential customer more confident that s/he is selecting the product configuration that best fits his/her needs [Trentin *et al.*, 2013]. As pride arises when a favorable outcome is ascribed to one's contribution [Weiner, 1985], higher easy comparison capability augments the feeling of pride perceived by the user through configuring their product.

Moreover, the possibility to compare previously saved configurations relieves the customer from manually or mentally recording relevant information (e.g., design parameters and product attributes) of the previously chosen configurations [Randall *et al.*, 2005]. In this way, the customer's mental abilities, or the time availability for manually recording information, become less salient and s/he is enabled to configure a higher number of products. By being able to configure a higher number of products, the customer can give free reins to his/her creativity, exploring multiple combinations of product features (for example different combinations of colors). This provides more chances for the evaluation of one's creative skills, and thus for eliciting pride feelings [Harter, 1985]. Pride, in turn, increases the creative achievement value that the customer derives from the customization process [Merle *et al.*, 2010].

Therefore, we posit that:

H8: The higher the level of easy comparison capability deployed by a sales configurator, the higher the creative value perceived by the customer through the configuration process

Flexible navigation capability

By enabling potential customers to quickly make and undo changes to previously created product configurations, a sales configurator with high flexible navigation capability enables users to conduct more trial-and-error tests to evaluate the effects of available choices [Trentin *et al.*, 2013]. This experimentation promotes potential customers' learning about the value they would derive from the product being configured. Such learning process makes potential customers more confident that the product configuration they have selected is the one that best fits their needs within the company's product space [Trentin *et al.*, 2013]. As the potential customers feel they have obtained the most favorable outcome out of the configuration process, they

feel proud of their accomplishment, which can be attributed to their own efforts [Weiner, 1985].

Moreover, as the users are able to conduct many trial-and-error tests, they can give free reins to their creativity, by exploring more combinations of product features. This, in turn, provides more chances for evaluating one's creative competences. As pride is a positive, self-rewarding emotion arising from the evaluation of one's competence [Harter, 1985; Schreier, 2006], a sales configurator with flexible navigation capability is likely to make the users experience stronger feelings of pride. This in turn increases the creative achievement value they obtain [Merle *et al.*, 2010].

Therefore, we posit that:

> *H9: The higher the level of flexible navigation capability deployed by a sales configurator, the higher the creative value perceived by the customer through the configuration process*

Focused navigation capability

A sales configurator with focused navigation capability prevents potential customers from going through a number of product options that they regard as certainly inappropriate for themselves [Trentin *et al.*, 2013]. As the size of their search problem is reduced, potential customers can spend more time and effort in exploring the product options for which their preferences are less certain. In addition, they can rely on more time-consuming, compensatory decision strategies for the resolution of between-attribute conflicts [Bettman *et al.*, 1990]. This makes them more confident that the chosen solution is the one that best fits their needs within the company's product space. As a consequence, the potential customers feel they have obtained an outcome that is really up to their personal capacities, rather than a sub-optimum obtained under time-constraints, and they are more likely to feel proud of themselves. Pride, in turn increases the creative achievement value that the potential customers derive from the customization process [Merle *et al.*, 2010].

Based on the above arguments, we posit that:

> *H10: The higher the level of focused navigation capability deployed by a sales configurator, the higher the creative value perceived by the customer through the configuration process*

3 Method

To test our hypotheses we conducted an empirical analysis using survey data collected from a sample of 675 sales configuration experiences made by 75 students at the authors' university (age range: 24-27; 30% females, mean expertise in using Internet to conduct transactions[1]: 3.95, standard deviation: 1.90). Each participant was asked to configure a product, according to his/her individual needs, on nine Web-based sales configurators for consumer goods and to fill out a questionnaire for each experience. In this questionnaires, participants had to rate the capabilities of each configurator and the level of hedonic and creative value they had derived from the configuration process. The items used to measure these constructs are reported in Appendix A.

The chosen data analysis method is the structural equation modeling, using LISREL 8.80. Following Anderson and Gerbing [1988], we decided to adopt a two-step approach, assessing construct validity before the simultaneous estimation of the measurement and structural models. Moreover, since our variables did not meet the assumption of multivariate normal distribution (Mardia's test significant at $p<0.001$) we applied the Satorra-Bentler correction to produce robust maximum likelihood estimates of standard errors and Chi-square.

4 Results

Prior to conducting the analysis, we decided to control for possible effects of participants' characteristics. Consequently, and consistent with prior studies [Liu *et al.*, 2006; Trentin *et al.*, 2013], we regressed our observed indicators on 75 dummies representing the participants in our study and used the standardized residuals from this linear, ordinary least square regression model as our data in all the subsequent analyses.

Confirmatory factor analysis (CFA) was subsequently employed to assess unidimensionality, convergent validity, discriminant validity, and reliability of our measurement scales. A CFA model specifies the posited relations of the observed variables to the underlying latent constructs, with these constructs allowed to correlate freely [Anderson and Gerbing, 1988]. Our CFA model showed good fit indices (RMSEA (90% CI)= 0.0576 (0.0531; 0.0623), Satorra-Bentler Scaled $\chi^2/df(df)$ = 2.80 (231), CFI=0.990, NFI=0.984), meaning that our hypothesized factor structure reproduced the sample data well.

The standardized factor loadings (S.F.L, see in Appendix A) were all in their anticipated direction, greater than 0.50 and statistically significant at $p<0.001$. Altogether, these results suggested unidimensionality (a set of empirical indicators reflect one, and only one, underlying latent factor) and good convergent validity (the multiple items used as indicators of a construct significantly converge) of our measurement scales [Campbell and Fiske, 1959; Anderson and Gerbing, 1988].

Discriminant validity, which measures the extent to which the individual items of a construct are unique and do not measure other constructs, was tested using Fornell and Larcker's [1981] procedure. For each latent construct, the square root of the average variance extracted (AVE) exceeded the correlation with all the other latent variables. This suggests that our measurement scales represent distinct latent variables [Fornell and Larcker, 1981].

[1] measured as in [Hernández et al 2010], on a seven-point Likert scale (7 = completely agree, 1 = completely disagree). Only one factor with eigenvalue higher than 1 was extracted, with a principal component analysis, 85% variance explained by this factor, Cronbach's alfa: 0.94.

Reliability of the measurement scale was assessed using both AVE and the Werts, Linn, and Joreskog (WLJ) composite reliability (C.R.) method [Werts *et al.*, 1974]. All the WLJ composite reliability values were greater than 0.70 and all the AVE scores largely exceeded 0.50 (see Appendix A). This indicates that a large amount of the variance is captured by each latent construct rather than due to measurement error [Fornell and Larcker, 1981; O'Leary-Kelly and J. Vokurka, 1998].

Finally, we examined the measurement model complemented by the structural paths corresponding to our hypotheses. All five sales configurator capabilities are posited as helping firms increasing the hedonic and creative value perceived by their potential customer through the configuration experience. Accordingly, these capabilities were restricted to impact both hedonic value and creative value. Results show that all the path coefficients of the estimated model are positive and statistically significant, indicating that all our hypotheses are supported. Table 2 reports the Lisrel estimates of the path coefficients, with standard errors in brackets.

	BCC	EC	UFDC	FlexN	FocN
HE	0.221 *(0.086*)*	0.102 *(0.037**)*	0.151 *(0.067*)*	0.283 *(0.065***)*	0.502 *(0.088***)*
CA	0.150 *(0.085§)*	0.166 *(0.035***)*	0.137 *(0.066*)*	0.267 *(0.055***)*	0.261 *(0.082***)*

Table 2: path coefficients of the estimated model

Significant at: *** p < 0.001; ** p < 0.01; * p < 0.05; § p < 0.10; BCC = benefit-cost communication; EC= easy comparison; UFD= user-friendly product-space description; FlexN= flexible navigation; FocN=focused navigation; HE= hedonic value; CA= creative achievement value

5 Conclusion

The present paper has developed and tested hypotheses about the positive impact of five sales configuration capabilities on the hedonic value and the creative value perceived by users through the customization process. These capabilities are: focused navigation, flexible navigation, easy comparison, benefit-cost communication, and user-friendly product-space description capabilities [Trentin *et al.*, 2013].

By finding empirical support for the hypothesized relationships between such sales configurator capabilities and the value provided by a configuration process, this work adds to the debate surrounding information technology support to mass customization [e.g. Blecker and Friedrich, 2007; Forza and Salvador, 2008]. Mass customization involves not only improving compatibility between product customization and the firm's operational performance, but also augmenting the value of the customization as perceived by the customer [Franke and Schreier, 2010; Franke *et al.*, 2010; Merle *et al.*, 2010]. The results of this study improve our understanding of how product configurators should be designed to foster such a value, which is a way for mass customizers to increase customers' willingness to pay for a customized product [Franke and Schreier, 2010; Franke *et al.*, 2010], and thus to increase the value of a mass customization strategy.

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Appendix A

Sales configurator capabilities[(a)]

Benefit-cost communication capability (AVE: 0.697; C.R.: 0.873):

- BCC1 Thanks to this system, I understood how the various choice options influence the value that this product has for me (S.F.L.: 0.858, P<0.001).
- BCC2 Thanks to this system, I realized the advantages and drawbacks of each of the options I had to choose from (S.F.L.: 0.792, P<0.001).
- BCC3 This system made me exactly understand what value the product I was configuring had for me (S.F.L.: 0.853, P<0.001).

Easy comparison capability (AVE: 0.796; C.R.: 0.939):

- EC1 The system enables easy comparison of product configurations previously created by the user (S.F.L.: 0.894, p<0.001).
- EC2 The system lets you easily understand what previously created configurations have in common (S.F.L.: 0.948, p<0.001).
- EC3 The system enables side-by-side comparison of the details of previously saved configurations (S.F.L.: 0.807, p<0.001).
- EC4 The systems lets you easily understand the differences between previously created configurations (S.F.L.: 0.913, p<0.001).

User-friendly product-space description capability (AVE: 0.730; C.R.: 0.890):

- UFDC1 The system gives an adequate presentation of the choice options for when you are in a hurry, as well as when you have enough time to go into the details (S.F.L.: 0.883, p<0.001).
- UFDC2 The product features are adequately presented for the user who just wants to find out about them, as well as for the user who wants to go into specific details (S.F.L.: 0.907, p<0.001).
- UFDC3 The choice options are adequately presented for both the expert and inexpert user of the product (S.F.L.: 0.766, p<0.001).

Flexible navigation capability (AVE: 0.614; C.R.: 0.826):

- FlexN1 The system enables you to change some of the choices you have previously made during the configuration process without having to start it over again (S.F.L.: 0.738, p<0.001).
- FlexN2 With this system, it takes very little effort to modify the choices you have previously made during the configuration process (S.F.L.: 0.788, p<0.001).
- FlexN3 Once you have completed the configuration process, this system enables you to quickly change any

choice made during that process (S.F.L.: 0.822, p<0.001).

Focused navigation capability (AVE: 0.724; C.R.: 0.913):

FocN1 The system made me immediately understand which way to go to find what I needed (S.F.L.: 0.857, p<0.001).

FocN2 The system enabled me to quickly eliminate from further consideration everything that was not interesting to me at all (S.F.L.: 0.790, p<0.001).

FocN3 The system immediately led me to what was more interesting to me (S.F.L.: 0.893, p<0.001).

FocN4 This system quickly leads the user to those solutions that best meet his/her requirements (S.F.L.: 0.860, p<0.001).

Perceived benefits of mass customization from a consumer viewpoint[(b)]

Hedonic value (AVE: 0.882; C.R.: 0.957):

HE1 I found it fun to customize this product (S.F.L.: 0.952, p<0.001).

HE2 Configuring this product was a really gratifying thing to do (S.F.L.: 0.908, p<0.001).

HE3 Customizing this product was a real pleasure(S.F.L.: 0.956, p<0.001).

Creative achievement value (AVE: 0.757; C.R.: 0.925):

CA1 I see myself as the author of the product which I configured (S.F.L.: 0.913, p<0.001).

CA2 I felt really creative while configuring this product (S.F.L.: 0.913, p<0.001).

CA3 The company gave me a lot of freedom while creating this product (S.F.L.: 0.913, p<0.001).

CA4 By personalizing this product, I had the impression of creating something (S.F.L.: 0.877, p<0.001).

[(a)] Trentin et al 2013 ; [(b)] Merle et al. 2010, adapted

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