

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

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The value of the shopping experience

Difficult to gain competitive advantage only through costs reductions

[Woodruff, 1997; Kumar et al., 2010]

Firms are striving to provide customers with more value than competitors

[e.g. Parasuraman 1997; Woodruff, 1997; Huber et al., 2001]

- Value represents the worth of the **benefits** the customers receives in exchange for what they give

[Zeithaml, 1988]

The experience of self-configuring a product can provide the customer with benefits

[Merle et al., 2010]

Creative achievement benefit

Creative achievement benefit is acquired by the customer from the feeling of accomplishment related to the creative task of co-designing *[Merle et al., 2010]*

The concept of creative achievement benefit finds its theoretical support in the psychology literature

- When **successfully** overcoming a challenging task one feels a positive emotion of self-reward, namely pride

[Stipek, 1983; Weiner, 1985; Lea and Webley, 1997]

The configuration experience can elicit feelings of pride “of authorship”

- A self-customized **product that fits the customer’s wants** embodies one’s **success** in overcoming a challenging task (i.e. the configuration task)

[Franke et al., 2010]

Hedonic benefit

Hedonic benefit is defined as the benefit acquired from the experience's capacity to meet needs related to enjoyment, fun, or pleasure *[Merle et al., 2010]*

In a purchase situation, hedonic benefit reflects the consumers' appreciation for the shopping **experience in itself**, regardless of any instrumental value of the purchased product

- It results more from fun and playfulness than from task completion

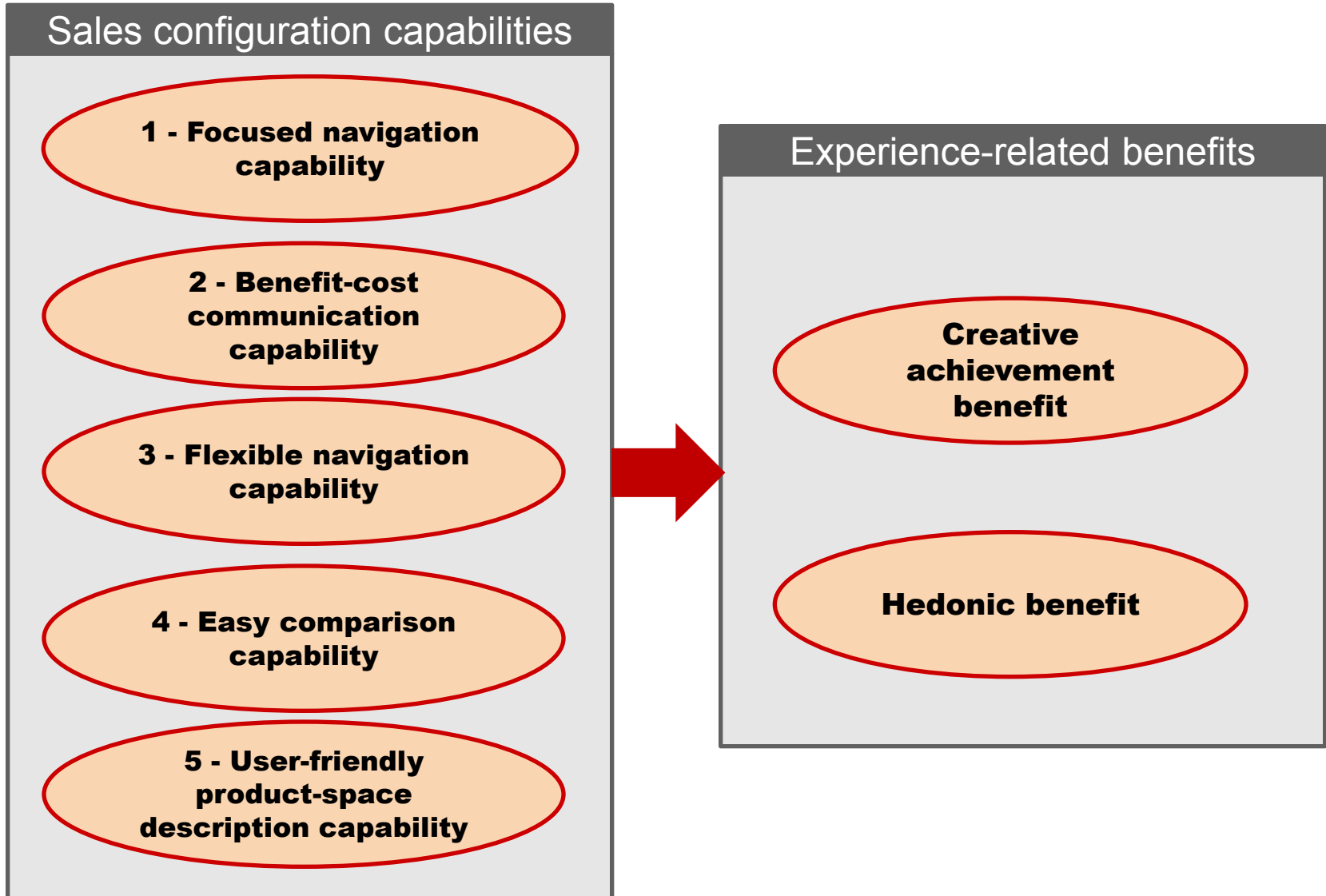
[Babin et al., 1994; Holbrook and Hirschman 1982]

The configuration experience can produce hedonic benefits

- The configuration process can be an exciting and enjoyable experience for the customer

[Franke and Schreier, 2010; Merle et al., 2010; Fiore et al 2004]

Linking sales configurator capabilities with the value of the customization experience



1. Focused navigation capabilities capability

FN is 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.

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Type

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List Price: \$684.00

Instant Savings: -\$285.00

Starting at: \$399.00

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- Intel® Core™ i3 Processor
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[customize it](#) **Average build time for customized orders is 1-2 weeks**

List Price: \$734.00

Instant Savings: -\$285.00

Starting at: \$449.00

2. Benefit-costs communication

BCC is 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).





Recommendations

[How to Read Processor Descriptions](#)

[Compare Side by Side](#)

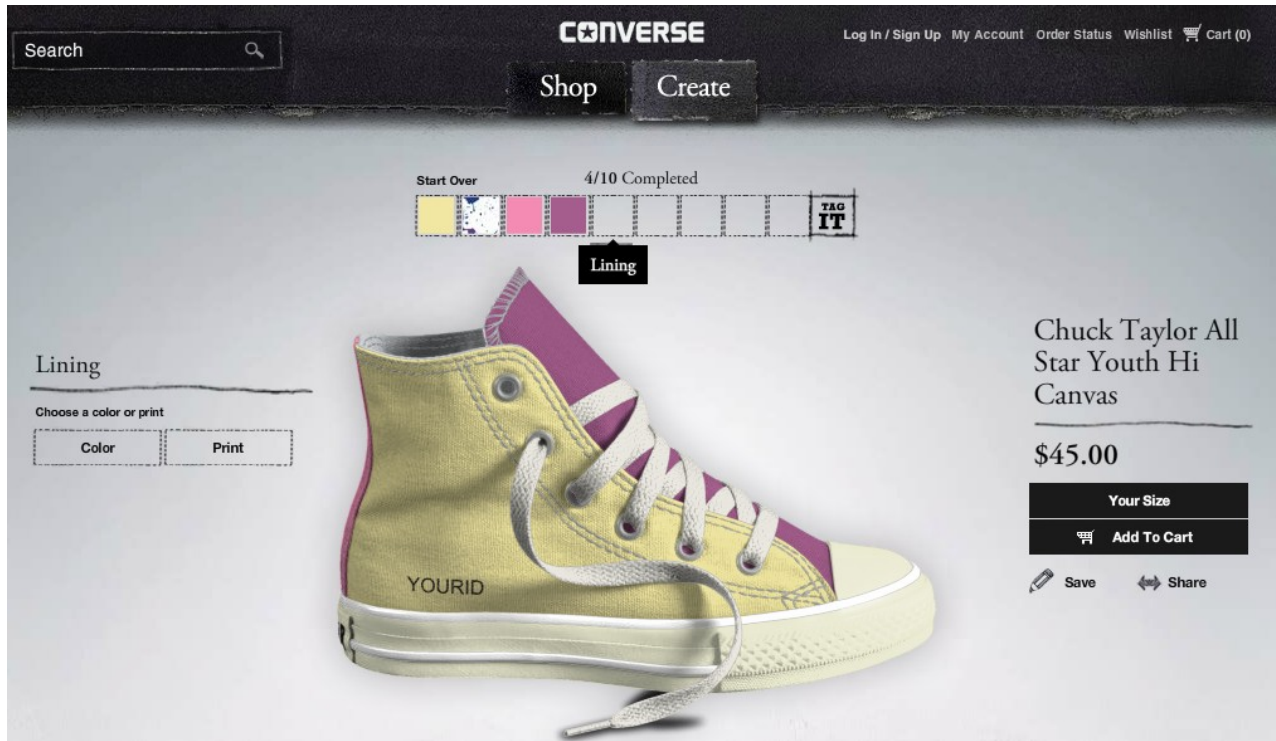
Which processor is best for me?

When it comes to choosing a processor, keep in mind that a higher number generally indicates better performance. Available in three performance levels, Intel Core i3, i5 and i7 processors are designed to deliver faster, smarter performance. Depending on the number of cores within each processor, you can get more multitasking capability, extra speed or advanced digital media consumption.

| | |
|--|---|
|  Intel Core i7 | Core i7 Extreme At the top rung is Intel® Core™ i7 Extreme Edition, which has all the capabilities of Intel Core i3, i5 and i7, plus greater performance, thanks to four cores, more onboard memory and 8-way multitask processing. Intel Core i7 Extreme processors also enable you to overclock ¹ the CPU for even greater performance, perfect for serious media enthusiasts and hard-core gamers. Core i7 Extreme is available on select Alienware™ systems. |
|  Intel Core i7 | Core i7 Thanks to new processor technology that adapts to meet your needs and enables you to multitask faster, Core i7 processors have all the capabilities of Core i3 and i5, plus they deliver serious PC performance, especially when it comes to creating digital video, music and photos. With four- and eight-way ² multitask processing, you can get things done more quickly, saving you time. Core i7 is available on select Dell systems. |
|  Intel Core i5 | Core i5 Apart from providing great visuals and multitasking, Core i5 processors automatically speed up when your PC needs a little extra boost, thanks to Intel® Turbo Boost Technology. With four-way multitask processing, you can get many things done at once. Plus, you can watch all your online content on the big screen with Intel® Wireless Display ³ . |
|  Intel Core i3 | Core i3 Core i3 processors are perfect for everyday applications and are a huge step up from Pentium® processors. Featuring two cores, four-way multitask processing and new visual capabilities, you can be sure that you will have the performance you need to get your everyday tasks done faster and enjoy a great visual experience. |

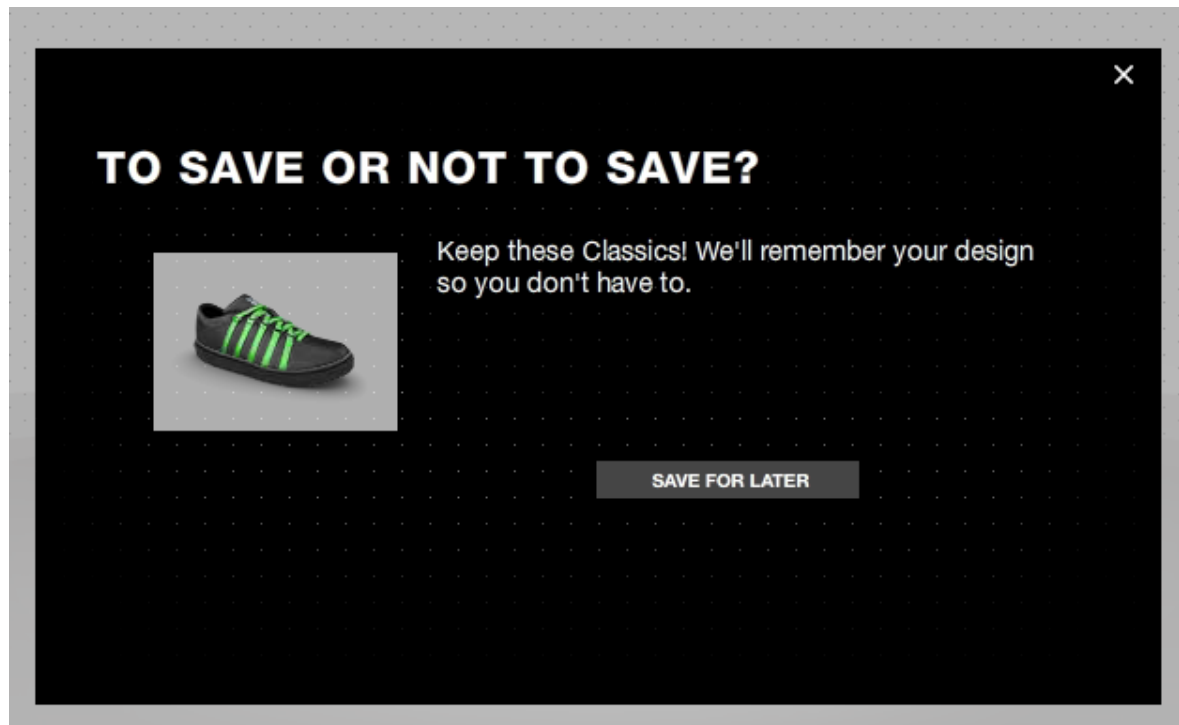
3. Flexible navigation capability

FLN is 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



4. Easy comparison capability

EC is the ability to minimize the effort required of a potential customer to compare previously created product configurations



5. User-friendly product-space description capability

UFD is 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

Configure your Polo SEL 1.2 TSI 105PS 6spd 3dr Man: Step 2
Total price: **£15,305.00**
Includes £0.00 of your choices

[Get a finance quote](#)

Change the engine on your car. When you are finished go to the next step.

Next Step

You customise
Configure

- 1 Build Your Model
- 2 Engine + Transmission
- 3 Wheels
- 4 Paint
- 5 Interior Upholstery
- 6 Optional Extras
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Save Open New Print

Book a test drive Test drive this very car

Order a brochure

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Polo SEL 1.4 85PS 5spd 3dr Man Petrol 5 Speed manual

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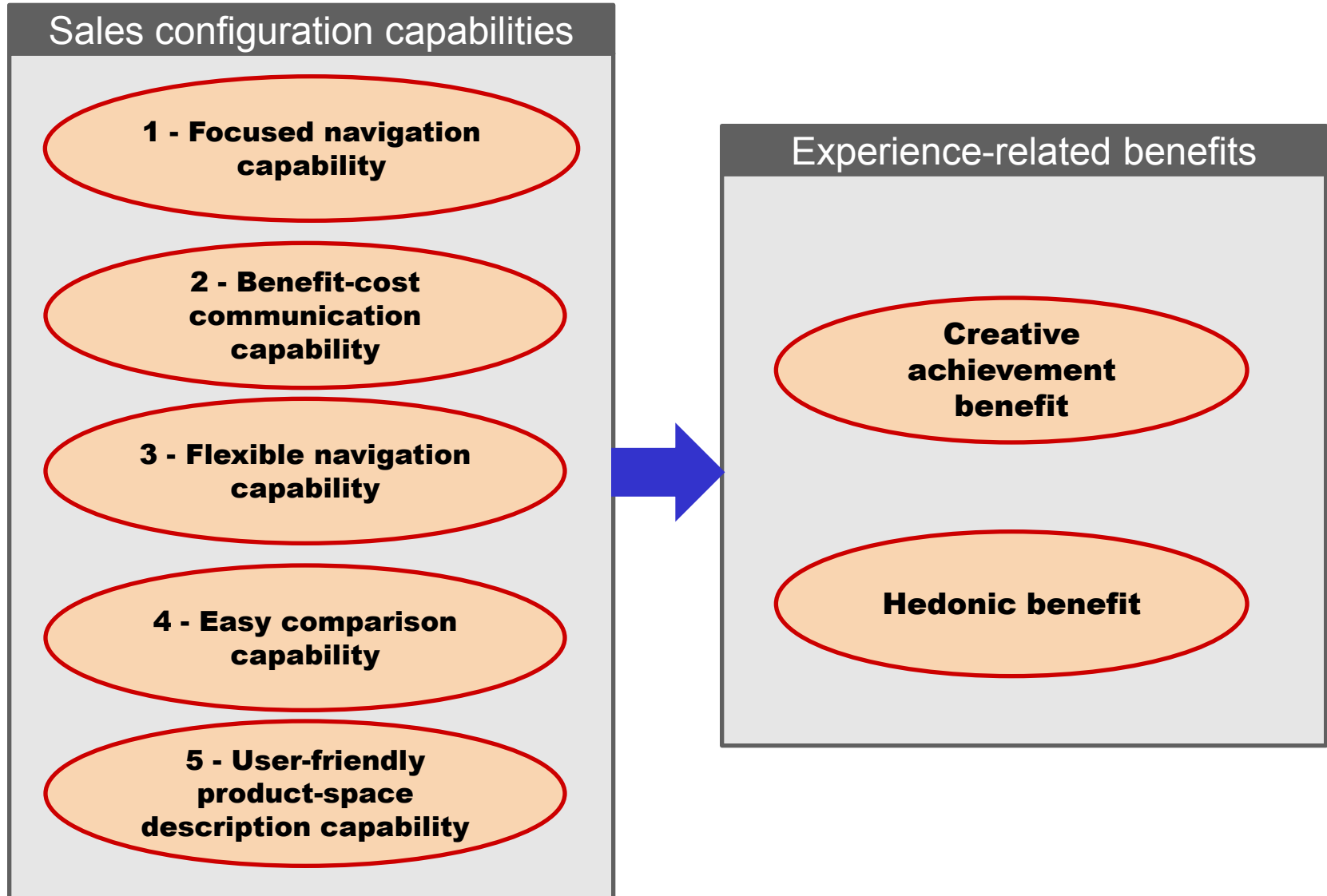
Polo SEL 1.4 85PS 5spd 3dr Man Petrol
£14,310

Polo SEL 1.2 TSI 105PS 6spd 3dr Man Petrol

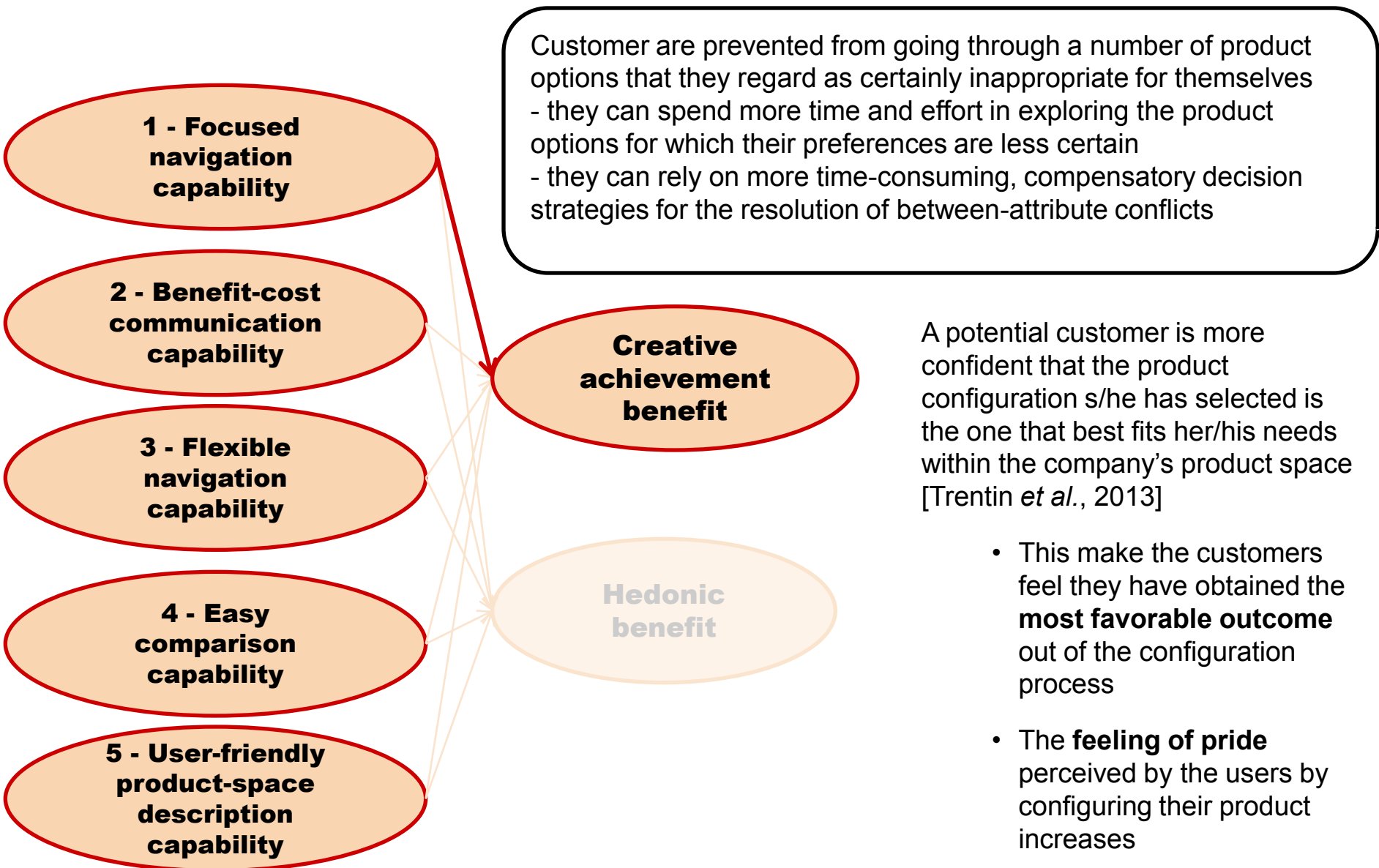
Polo SEL 1.4 85PS 7spd 3dr DSG Petrol

Polo SEL 1.6 TDI 90PS 5spd 3dr Man Diesel 5 Speed manual
£15,750

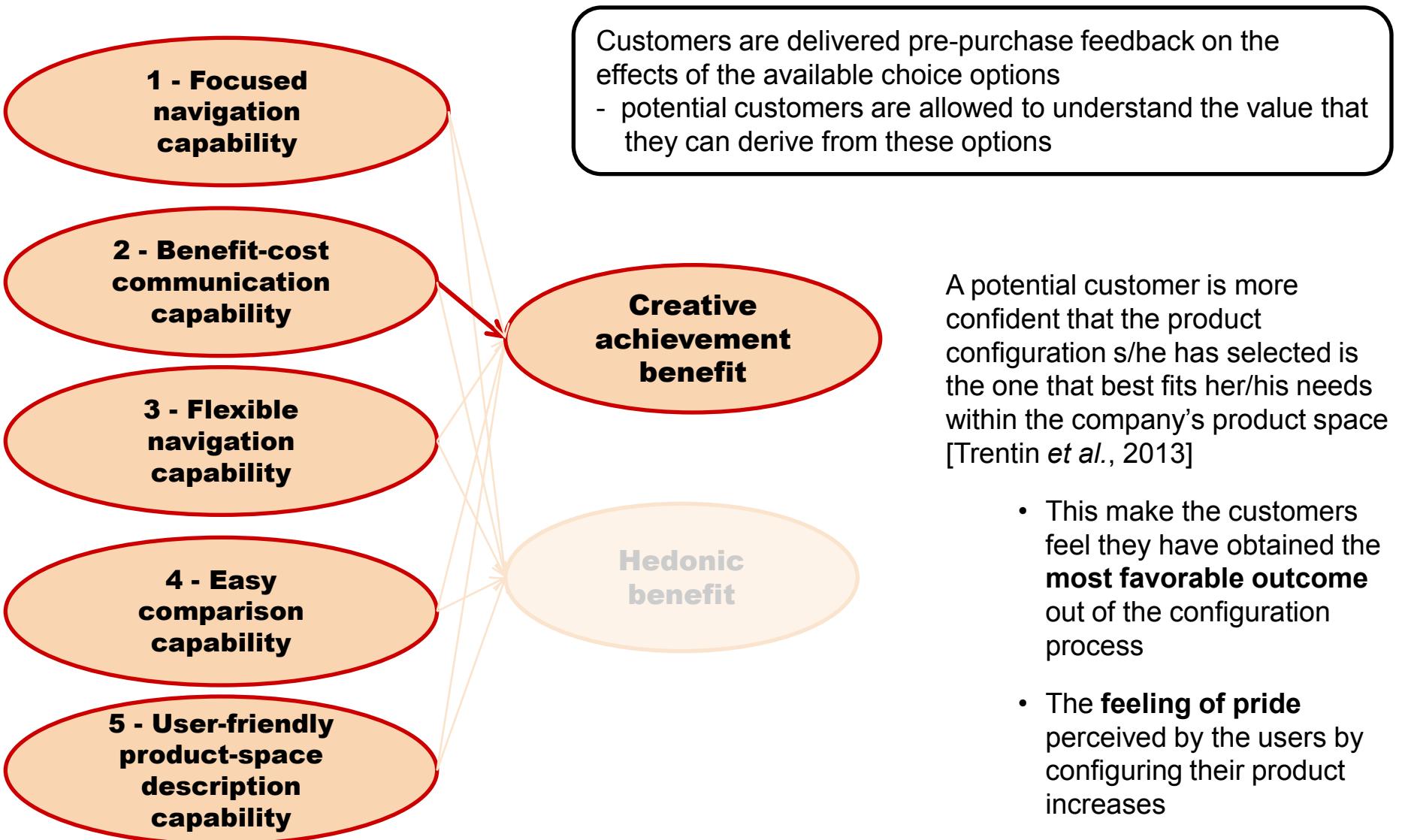
Linking sales configurator capabilities with the value of the customization experience



Linking sales configurator capabilities with creative achievement benefit



Linking sales configurator capabilities with creative achievement benefit



Linking sales configurator capabilities with creative achievement benefit

1 - Focused navigation capability

2 - Benefit-cost communication capability

3 - Flexible navigation capability

4 - Easy comparison capability

5 - User-friendly product-space description capability

Potential customers are allowed to quickly make and undo changes to previously created product configurations

- users can conduct more trial-and-error tests to evaluate the effects of available choices
- experimentation promotes potential customers' learning about the value they would derive from the product being configured

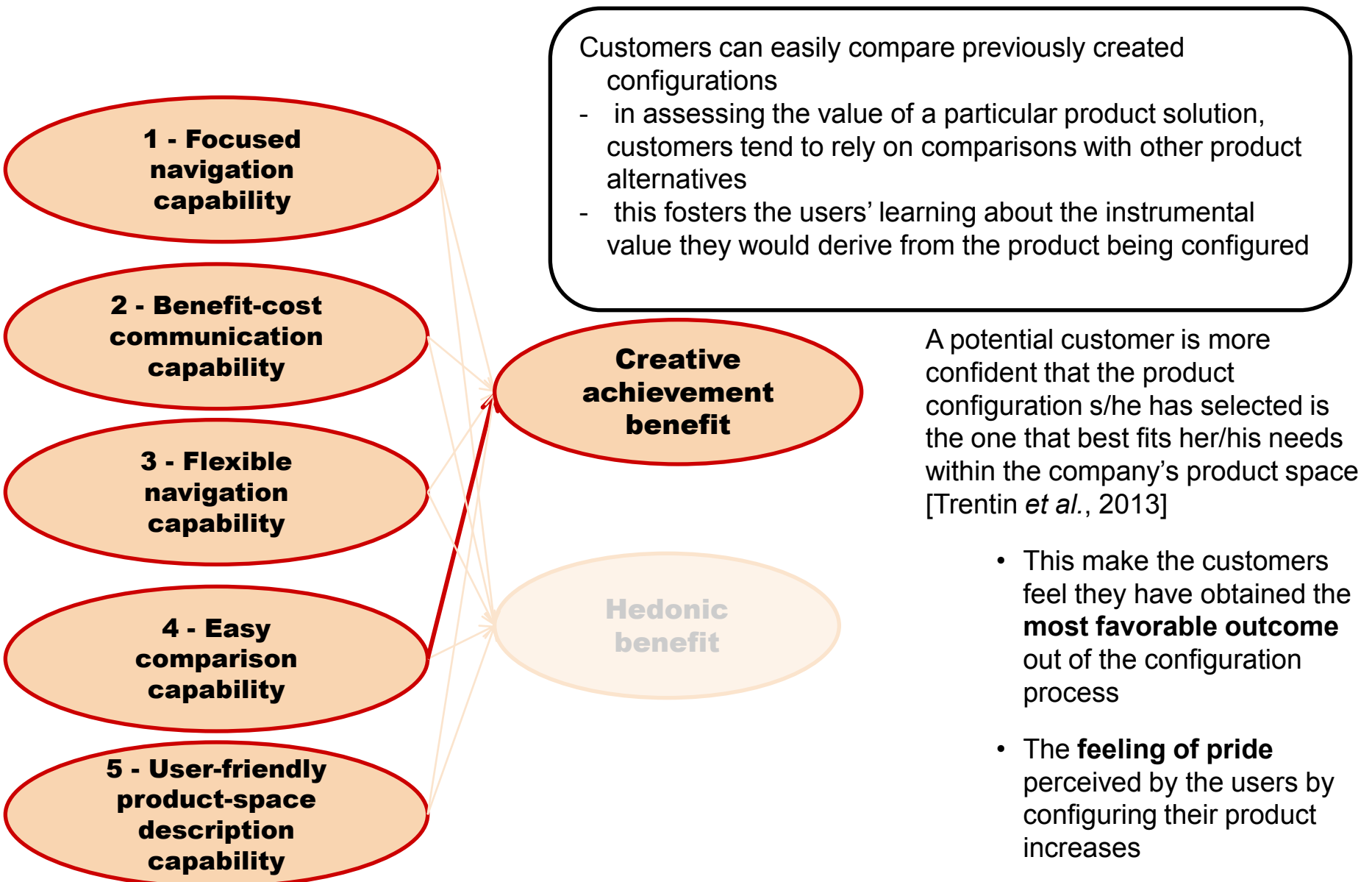
Creative achievement benefit

Hedonic benefit

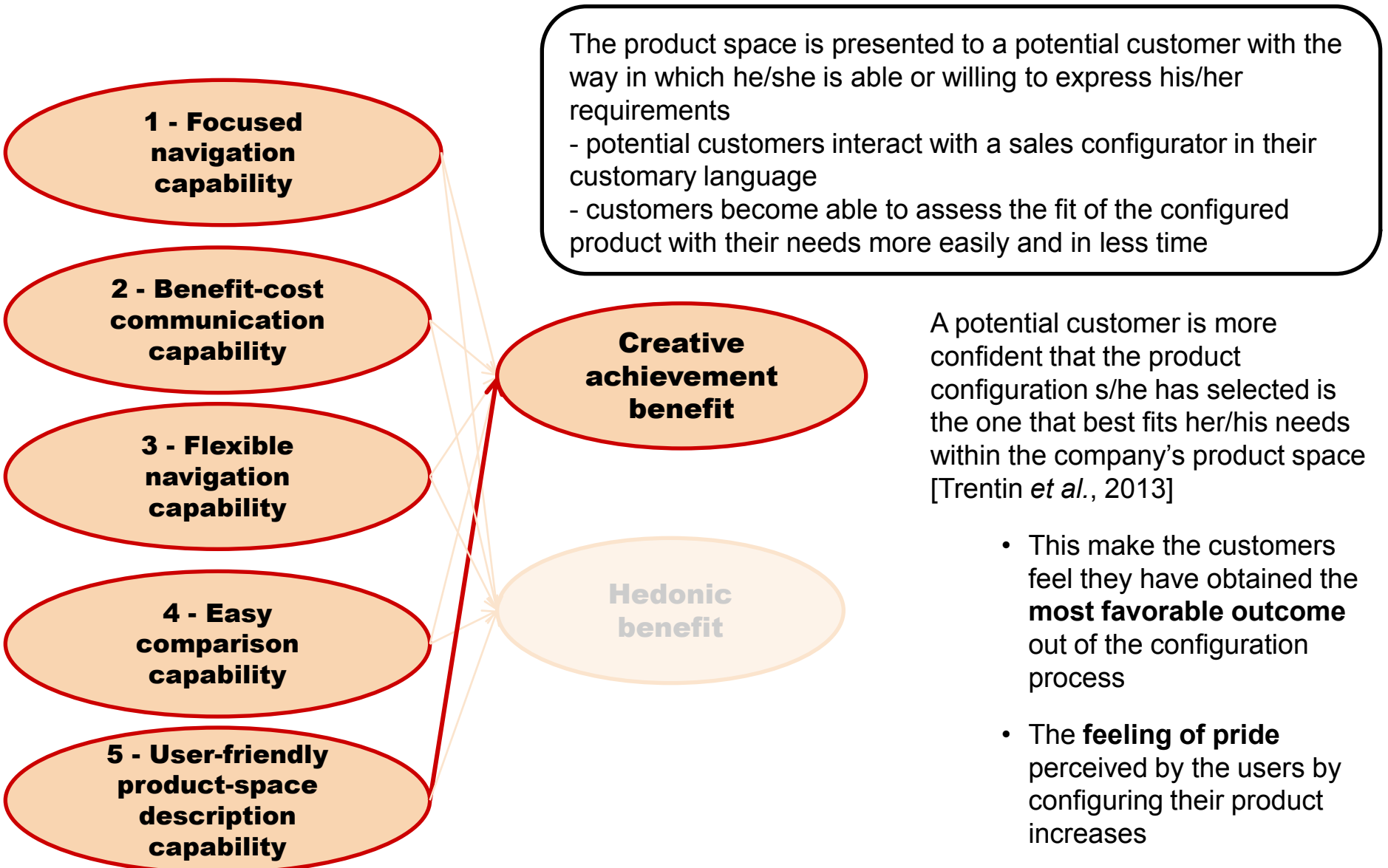
A potential customer is more confident that the product configuration s/he has selected is the one that best fits her/his needs within the company's product space [Trentin *et al.*, 2013]

- This make the customers feel they have obtained the **most favorable outcome** out of the configuration process
- The **feeling of pride** perceived by the users by configuring their product increases

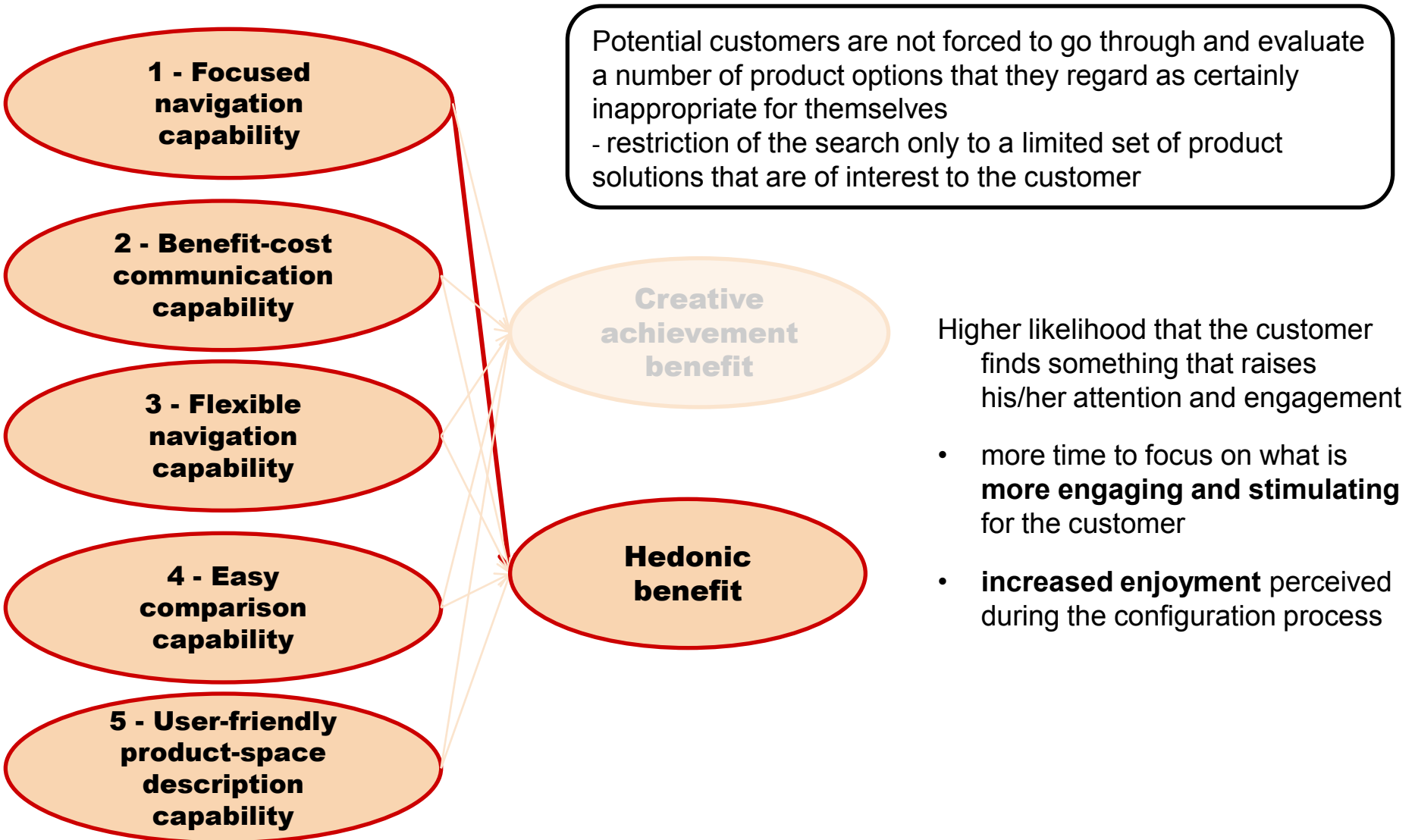
Linking sales configurator capabilities with creative achievement benefit



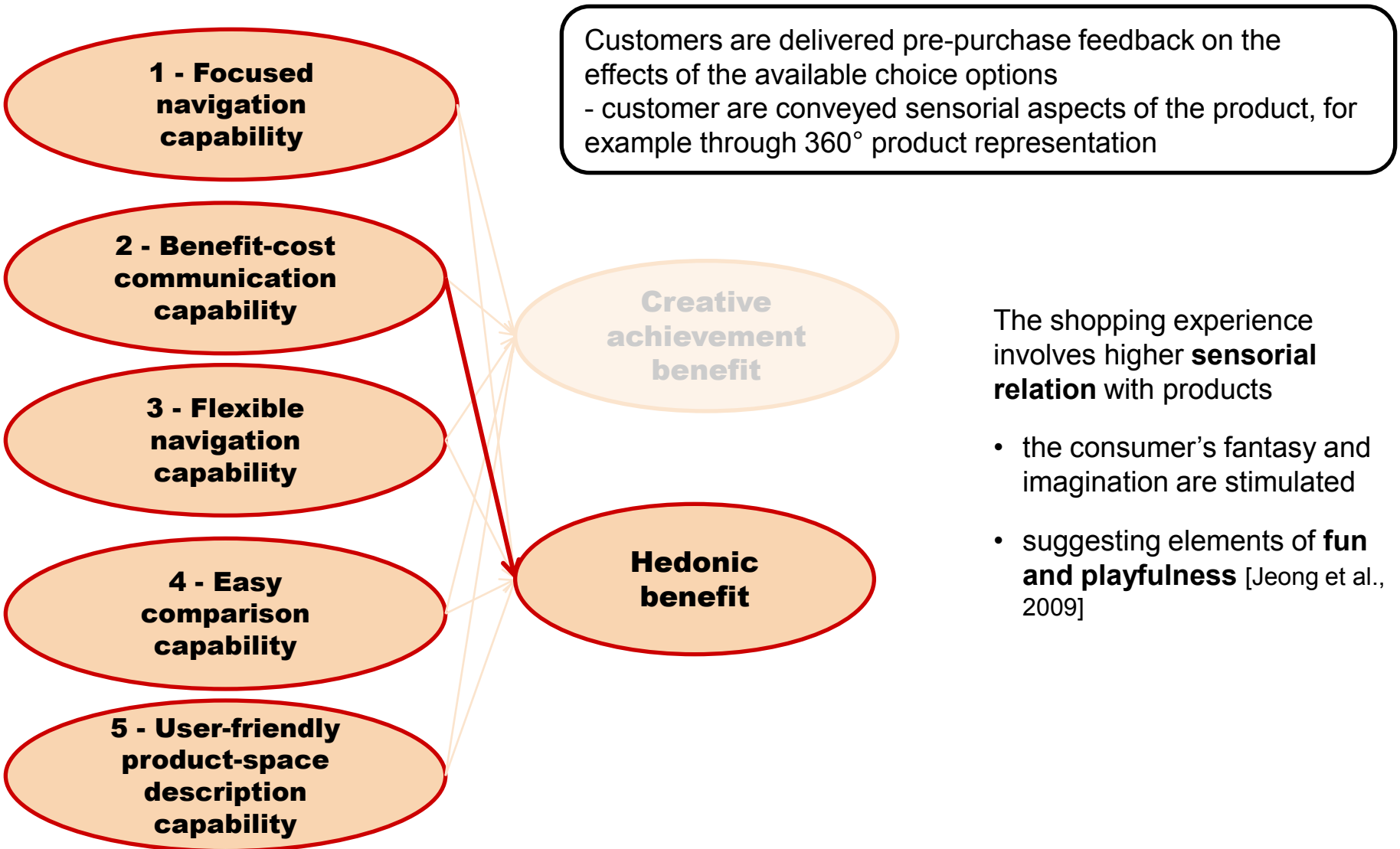
Linking sales configurator capabilities with creative achievement benefit



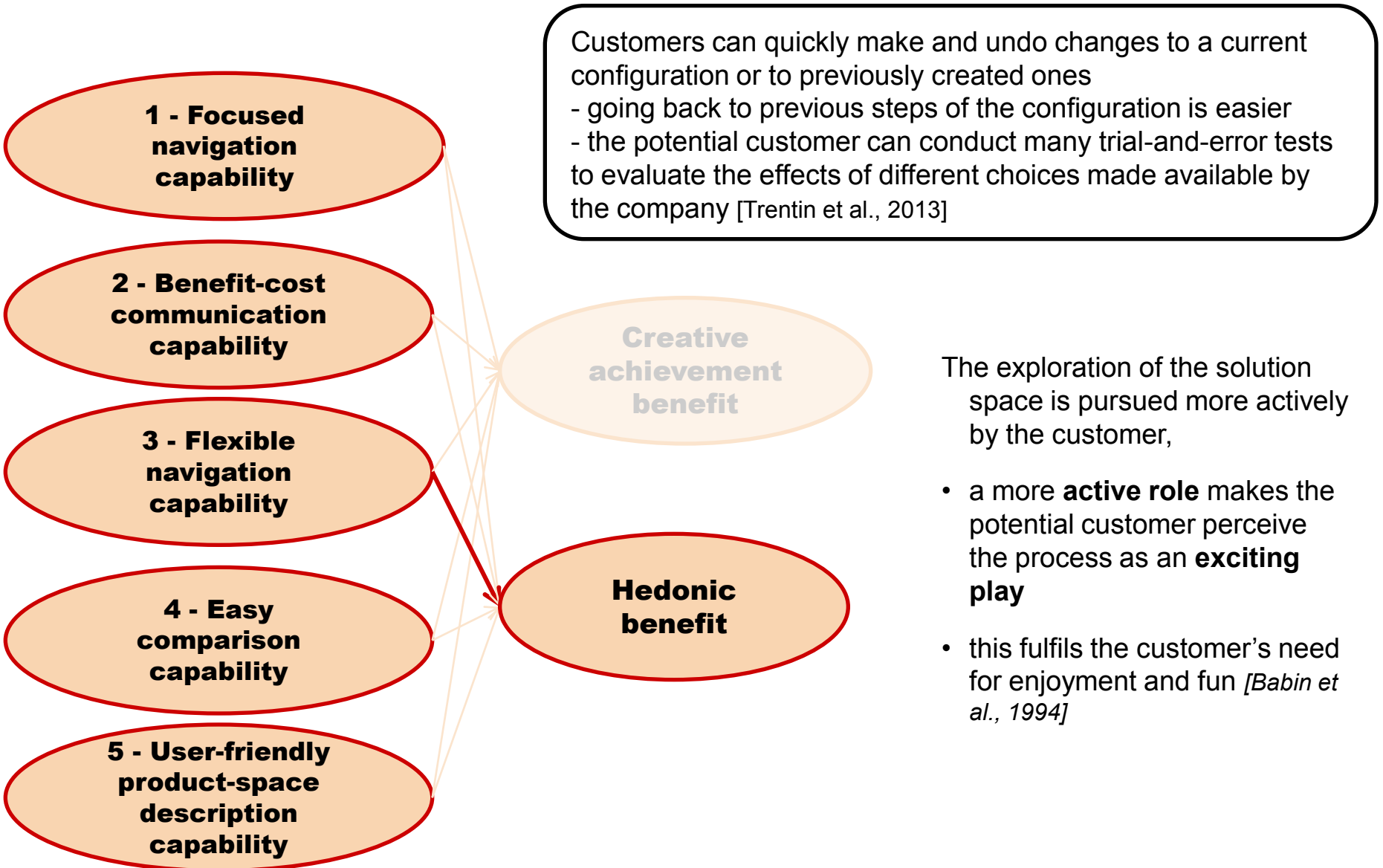
Linking sales configurator capabilities with hedonic benefit



Linking sales configurator capabilities with hedonic benefit



Linking sales configurator capabilities with hedonic benefit



Linking sales configurator capabilities with hedonic benefit

Customers do not have to rely on their limited working memory to recover and compare configurations they have previously created
- the number of product configurations that potential customers can explore and add to their consideration set increases [Alba and Lynch, 1997]

1 - Focused navigation capability

2 - Benefit-cost communication capability

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5 - User-friendly product-space description capability

Creative achievement benefit

Hedonic benefit

Decreased constraint to the exploration of the company's product space

- higher feeling of **freedom and spontaneity** perceived during the configuration process.
- these feelings drive the potential customer to obtain higher hedonic value out of the experience [Babin et al., 1994]

Linking sales configurator capabilities with hedonic benefit

1 - Focused navigation capability

2 - Benefit-cost communication capability

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The system adapts information contents according to customers' needs and abilities
- customers are able to understand the characteristics of the product offered by the company

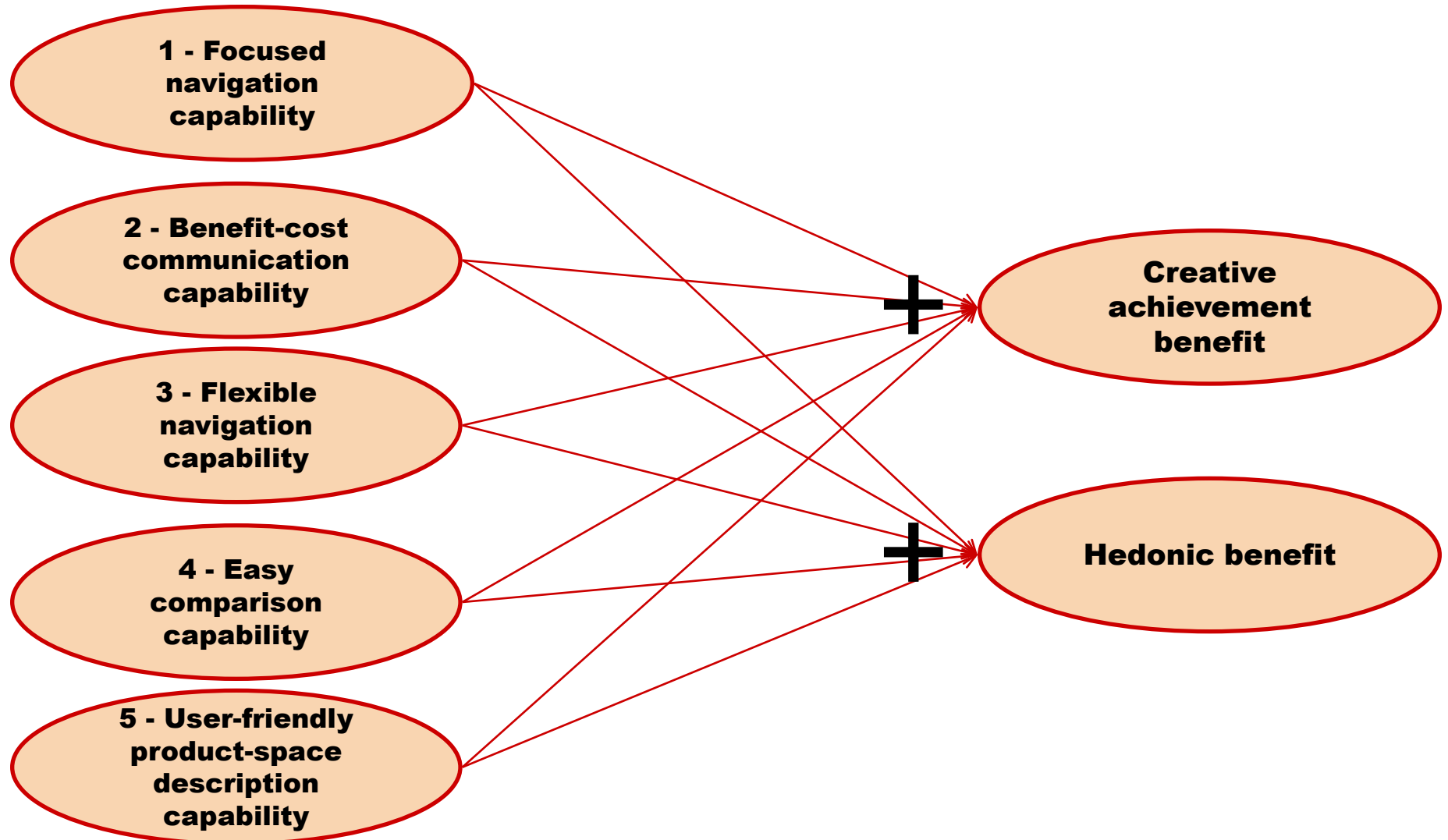
Creative achievement benefit

Hedonic benefit

While using the sales configurator customers learn about new products released in the market or new trends

- **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]

The model



Method

- 675 sales configuration experiences made by 75 engineering students
 - age range: 24-27; 30% females
 - mean expertise in using Internet to conduct transactions: 3.95, standard deviation: 1.90 on a seven-point Likert scale (7 = completely agree, 1 = completely disagree)
- Each participant was pre-assigned 9 Web-based sales configurators
- Participants had to:
 - configure a product on all these websites, according to their individual needs, and
 - fill out a questionnaire to rate the capabilities of each configurator and the level of hedonic and creative value they had derived from the configuration process
- The chosen data analysis method is the structural equation modeling, using LISREL 9

Results

We controlled for possible effects of participants' characteristics before assessing the quality of our measures

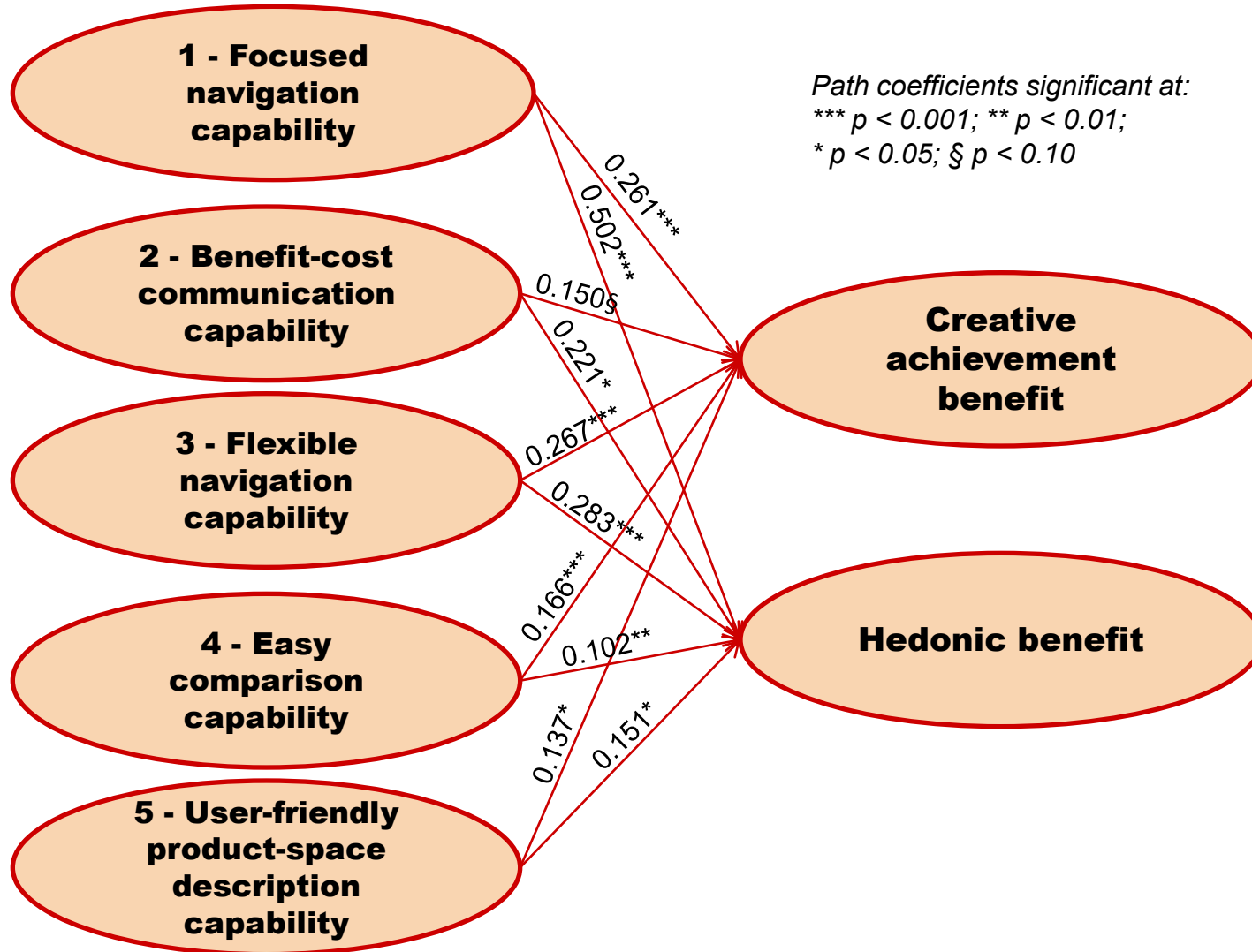
- we regressed our indicators on 75 dummies representing the participants in our study and used the standardized residuals in all the subsequent analyses

CONFIRMATORY FACTOR ANALYSIS (CFA)

We estimated an a priori measurement model where the empirical indicators were restricted to load on the latent factor they were intended to measure

- Unidimensionality and convergent validity.
 - The a priori model showed good fit indices
 - Each factor loading was in its anticipated direction, was greater than 0.50, and was statistically significant at $p < 0.001$
- Discriminant validity.
 - For each latent construct, the square root of the average variance extracted (AVE) exceeded the correlation with all the other latent variables
 - thereby suggesting that our measurement scales represent distinct latent variables
- Reliability.
 - All the WLJ composite reliability values were greater than 0.70 and all the AVE scores exceeded 0.50
 - indicating that a large amount of the variance is captured by each latent construct rather than due to measurement error

Results



RMSEA (90% CI) = 0.0576 (0.0531; 0.0623), $\chi^2/df(df) = 2.80 (231)$, CFI=0.990, NFI=0.984

CONCLUSIONS

- We have theorized and tested the positive impact of sales configuration capabilities on hedonic benefit and creative achievement benefit
- This work adds to the debate surrounding information technology support to mass customization [*e.g. Blecker and Friedrich, 2007; Forza and Salvador, 2008*]
 - MC involves not only improving compatibility between customization and operational performance but also **augmenting the perceived value of customization** [*Franke and Schreier, 2010; Franke et al., 2010; Merle et al., 2010*]
 - Higher understanding of **how product configurators should be designed to foster such a value**, thus increasing customers' willingness to pay [*Franke and Schreier, 2010; Franke et al., 2010*]

THANK YOU

Sales configurator capabilities

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 inexperienced 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

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, $p < 0.001$).