WEB APPENDIX

Reciprocal Effects of Cognitive, Affective and Social Customer Experience on Customer Loyalty and Word of Mouth in Omnichannel Fashion Retailing

By Nils Fränzel and Bernhard Swoboda

	
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Web Appendix A. Literature Review

Table A.1. Literature Review (CX effect studies)

Author(s)	Research question	Theory/framework	Sample and method	Core findings
Studies on overall CX effects on one behavioral outcome variable				
Anshu et al., (2022)	Which are crucial antecedents of online CX towards grocery shopping? Do they affect attitudes which impact grocery RPI? Moderating influence of Value co-creation?	– MAUT-Multi Attribute Utility – ABC-Attitude-behaviour-context theory	– N=526 online grocery shoppers/India – Structual path analysis	– The antecedent convenience, delivery experience and recovery of *OCX* positively correlate with customers attitude towards online grocery shopping, while recovery has the strongest influenc. – The customers attitude towards online grocery shopping positively correlates with online grocery *RPI*. – The effect between convenience, product experience, privacy/security, delivery experience, network effects, recovery of OCX, and attitude towards online grocery shopping is moderated significantly by value co-creation.
Brakus et al., (2009)	Brand Experience: What is it? How is it Measured? Does the brand experience influence consumer satisfaction and loyalty?	– None	– N=267 students surveyd on 5 brands/International – SEM	– *Brand experience* measured by four Dimensions (sensory, affective, behavioral, intellectual) affects *satisfaction and loyalty*. – The direct effect of brand experience (vs. personality) on loyalty is higher than the direct effect of brand (vs. personality) experience on satisfaction. Brand experience seems to be a stronger predictor of actual buying behavior than brand personality, which in turn is a better predictor of satisfaction.
Cambra-Fierro et al., (2021)	Analyze the concept of CX, the variability of CX and how both metrics influence customer retention with consideration of market turbulence.	– Social exchange theory	– N=13,761 multichannel telecom customers/ Europe – Multilevel modeling	– *CX* in its absolute value has a positive impact on *customer retention*. – A high level of accumulated variability in CX significantly decreases the likelihood of customer retention. A new competitor in the market negatively affects customer retention. Customers who have established long-term exchange relationships usually have greater tolerance to such changes, so it is more likely that they will remain in the established relationships.
Gao et al., (2019)	Linkages between what the firm does (value, brand and relationship equity), social environment, CX quality, and its ultimate impact on profitability.	– Social influence theory	– N=1,990 N/A customers of a bank/Europe – Regression analysis	– *Value equity, brand equity, and relationship equity* have a positive impact on the *CX quality*. – *CX quality* has a positive impact on *customer profitability* – Social influence has a positive impact on the quality of the CX. The impact of value equity on CX quality was significantly and negatively moderated by social influence. Social influence strengthened the impact of brand equity on the CX quality.
Gao et al., (2021a)	Effect of mismatch between online and offline CX on customers retention (loyalty) in an omnichannel context.	– Goal setting theory	– N=440 omnichannel respondents/China – Polynomial regression	– *Incongruence of CX* has a negative effect on *customer rentention*, while channel transparency, convenience, and seamlessness reduce the effect. Customer retention is higher when online CX is aligned with offline CX, and any deviation between online CX and offline CX decreases customer retention.
Jara et al., (2018)	How customer develop perceptions of click & collect and what are key factors in explaining the long-term value creation for click & collect systems depending on consumers' profiles?	– None	– N=479 multichannel grocery respondents/France – PLS	– *Experiential benefits* (CX) create long-term value to customers – variables related to orders, service, pick-up point and website positively and strongly influence *customers' repurchase*. – Relational benefits related to human relations between staff and customers create long-term value to them – they influence positively and strongly customers' re-purchase. Functional benefits create less value to customers in comparison to the experiential and relational benefits - their influence is reduced on customers' repurchases (1.6 per cent of created value).
Khan et al., (2020)	How does CX affect customers' affective and calculative commitment? How does customer age accentuate CX's impacts?	– None	– N=423 offline retail store shoppers/India – SEM	– *CX* has a positive effect on affective and calculative commitment as well as on *brand loyalty*, but the effect on affective commitment is stronger. – Customer age represents a key moderating role in affecting the association between CX and affective and calculative commitment and brand loyalty.
Kuehnl et al., (2019)	Effective CJD, incl. brand experience and moderators, highlighting a dual mechanism of an effective CJD and brand experience to customer loyalty.	– Construal-level theory	– N_1=2300, N_2=2312 multi-channel consumers/USA and Europe – SEM	– An *effective CJD* has a positive effect on *customer loyalty*. Effective CJD has a positive effect on utilitarian and hedonistic attitudes, but the effect on utilitarian brand attitudes is stronger. – Brand experience has a positive effect on utilitarian and hedonistic brand attitudes, but the effect of brand experience on hedonistic brand attitudes is stronger.
Kumar et al., (2014)	Does the state of economy moderate the influence of CX factors on customer's service purchase behavior over the effects of behavioral factors?	– Price sensitivity and relative attribute importance	– N=725 offline customer of international airlines/USA – Generalized method of moments estimation	– CX matters more when the state of the economy is more positive. – *CX factors* (satisfaction, unrecovered and recovered service failure) positively affect *service purchase frequency* and *revenue*, moderated by the state of economy. – Satisfaction has a greater positive impact on service purchase frequency and service revenue when the state of economy is better.
Massi et al., (2023)	Does a seamless multichannel CX affect consumer behavior, specifically in terms of purchase intention and brand authenticity perceptions?	– Signaling theory	– N_1=20 all multichannel consumers or students/ Italy, $N_{2/3}$=105, N_4=107 consumers – Open-coding approach	– Retailers see seamlessness and brand authenticity as influencing factors for an omnichannel CX and need to manage multiple touchpoints simultaneously to improve the overall CX. – *Seamless multichannel CX* has a significant effect on *purchase intention* and brand authenticity. Brand authenticity fully mediates the positive effect of a seamless CX on purchase intention. – Seamless CX effect on purchase intention is moderated by brand untrustworthiness.
Nguyen et al., (2022a)	How to improve CX and retain customers during channel switching?	– Theory of reasoned actions – Social cognitive theory	– N=23 omnichannel customers/electronic retail/Vietnam – Content analysis	– Confirms the research shopper model by Verhoef et al. (2007) in the omnichannel context and suggested reasons for channel switching: the influence of social groups and perceived self-efficacy of the switching behaviour. – *Key factors affecting channel choices* during switching are product attributes, trust/perceived uncertainty, social influence, customer characteristics, review culture, and time constraints. Customer emotions can influence the CX during the switching journey.

Table A.1. to be continued.

Table A.1. continued.

Author(s)	Research question	Theory/framework	Sample and method	Core findings
Nguyen et al., (2022b)	This study examines customer intention behind channel switching behaviour and the CX during the channel switching journey in the omnichannel context.	– Social cognitive theory	– N=46 omnichannel customers of retailers/ Vietnam – Content analysis	– The lack of trust/satisfaction from the search channels (low channel lock-in), enhancing benefits from using various channels during search and purchase. – In terms of *CX*, customer emotions during the journey, it is shown that both positive emotions and negative emotions during the journey, influence their next *channel choices during the switch*. – The difference in the customer's needs and their positive and negative emotions lead to different in activities and the touchpoint choices/channel choices of customers.
Prentice et al., (2019)	How customers' brand connection (brand experience and love) and a firm's service offerings affect customer engagement with the brand and its associated organization?	– None	– N=225 N/A passengers Airline/Portugal – SEM	– *Brand experience* has a positive impact on brand love and affect *customer engagement* through the mediation of brand love. Brand experience has a direct effect on customer engagement, but this effect decreases after including brand love. – Brand experience and brand love are significantly related to all four dimensions of customer engagement (purchase engagement, referrals engagement, influence value engagement, knowledge engagement). – Flight attendant service significantly moderates the relationship between brand experience and brand love.
Quach et al., (2020)	Examine the effects of two components of service integration in omnichannel retailing: service consistency and service transparency, on CX.	– Flow theory – Hyperbolic discounting theory	– N=786 omnichannel grocery consumers/USA – SEM	– *CX* as a mediator is represented by *flow* and *risk* – *Service consistency* has a direct and significant impact on flow and perceived risk while service transparency only has an significant effect on flow is significant. Both flow and perceived risk are related to *customer loyalty* to a retailer. – Showrooming behaviour and location-based service usage moderate the relationship between service consistency and risk.
Studies on overall CX effects on more behavioral outcome variables				
Bustamante and Rubio, (2017)	Understanding CX and generating a scale to measure ISCX?	– Social identity theor (Tajfel 1981)	– N=800 offline consumers of retailers/Spain – SEM	– *ISCX* is influenced by cognitive, affective, social and physical elements. – ISCX increases *customer satisfaction* and *customer loyalty* towards the retail store, while satisfaction partly mediated the effect.
Butt et al., (2023)	Will the employee, and AR-based services impact the consumer? And can such services be integrated into CX satisfaction, equity and loyalty?	– None	– N= 620 offline consumers/ China – PLS	– *CX* and service experience with AR-based services have a significant impact on customer satisfaction, perceived customer equity, and customer loyalty. – Positive *CX* and service experience withAR technology contributes to higher *customer satisfaction and loyalty*. Service experience directly affect satisfaction and loyalty, while satisfaction is a mediator. – Overall CX can lead to improved equity and loyalty.
Das et al., (2019)	Does brand experience translate into brand commitment? Is this influence of perceived brand ethicality sustainable or does it get masked in the presence of brand passion given its strong emotional connection with the brand?	– Identity theory – Attachment-aversion theory – Ethical theory	– N=273 N/A apparel shoppers/India – SEM	– *Brand experience* includes four dimensions, sensory, affective, behavioural and intelectual and has a positive effect on *brand commitment* (loyalty) as well as *brand passion*. – Perceived brand ethicality moderates the effects of brand experience. – The influence of perceived brand ethicality remains sustainable, with varying effects based on the type of brand passion. It is sustained for harmonious brand passion, leading to moral restraint. In the case of obsessive brand passion, it doesn't get masked, and brand commitment remains strong even in the presence of perceived brand ethicality.
Mclean et al., (2018)	How do different variables affect the CX while using mobile apps in retail?	– Flow-Theory – TAM	– N=1024 mobile app customers/N/A – SEM	– Utilitarian factors have a positive influence on CX and thus on the frequency of mobile app use. – Gender and size of the smartphone screen has a positive effect on CX. – *CX* positively affects the *frequency of use* and *satisfaction*.
Rahman et al., (2022)	How can a theoretical basis for a new measure of perceived omnichannel CX be established?	– Schema theory – Categorization theory – Means-end chain theory	– Study 1: N=79 omnichannel customers, 2: N=359 MTurk, 3: N=447 Qualtrics/all USA, 4: N=371 see study 3, 5: N=209 see 2, 6: N=214 see 2 – Content analysis, PLS	– *Omnichannel CX scale* as a precise, actionable measure for retailers to gain insights into customers' perceptions of their CX with nine important dimensions: value, personalization, customer service, consistency, delivery, product return, social communication, information safety, loyalty programs. – Empirical validation of positive relationships of CX with *satisfaction, customers' loyalty intentions, WoM, share of wallet, and trust*. – Recent technologies and increased customer-retailer and customer-customer interactions across channels and touchpoints allow retailers to capture vast data which can help to identify which investments are likely to result in improved CX across channels.
Roy, (2018)	Which effect does CX quality of service with a higher (vs. lower) hedonic value on consumers' attitudes have? Impact of CX quality on customer's outcomes for regular vs. new customers and temporal change on customers converting?	– Transcendent consumer experiences, information processing theory, schema theory	– Study 1: N=234/272, 2: N=226 online customers of banks/restaurants/N/A, 3: N=209 consumers without discount coupon – SEM	– Stronger effect of *service EXQ* on consumer attitudes for hedonic services compared to utilitarian services. CX has a positiv impact on *satisfaction, loyalty and WoM*, the strongest impact on satisfaction. – For first-time customers CX leads to satisfaction but has no positive impact on loyalty and WoM. Experiences matter more for hedonic servces than for utilitarian services. CX developing over time could lead to patronage behavior thorugh positive WoM and behavioral loyalty. – Favorable CX could lead to a long-term direct effect on satisfaction behavioral loyalty and positive WoM.
Stein and Ramaseshan, (2019)	Investigate the effects of various TPs on CX and the effect on loyalty intentions moderated by motivation orientation.	– None	– N=241 online customers/ Australia – Hierarchical Regression	– The real-time touch point evaluations significantly effect overall CX and that these effects significantly differ for utilitarian and hedonic motivation orientations. – Favorable *overall CX* evaluations exert significant positive influence on *loyalty intentions*, and *actual spend*, and these influences are significantly stronger for consumers with hedonic than utilitarian motivation orientations.

Table A.1. to be continued.

Table A.1. continued.

Author(s)	Research question	Theory/framework	Sample and method	Core findings
Studies on efects of CX dimensions on one behavioral outcome variable				
Bleier et al., (2019)	Influence of website elements on purchase intention mediated by the cognitive, affective, social and sensory dimension of online CX.	– None	– N=10.470 online worker MTurk in 16 experiments/ N/A – SEM	– *Design elements of the website* influence purchase intention via online CX. The dimensions ***cognitive information, affective entertainment, social experiences, sensory experiences*** create an effective CX and influence the *purchase intention*. – Entertainment (affective CX) has the strongest effect on purchase intention. The effects of information (cognitive CX) and social presence (social CX) are equally strong. Sensory appeal hast the weakes effect on purchase intention.
Ciuchita et al., (2019)	How does existing customers deal with the change brought about by incremental innovations? How does that effort influences customers' perceptions of the new e-service version in the short run (i.e., encounter CX) and their e-service relationship in the long run?	– None	– N=299 students E-service/ Europe, N=223 students E-service/USA – Seemingly unrelated regressions	– Existing customers of e-services tend to employ coping strategies when faced with incremental innovations. These coping strategies can be either emotion-focused or problem-focused. – The effort made by customers in coping with the change brought about by incremental innovations influence their encounter experiences (affective=Intimacy and cognitive=usefulness) and their long-term cumulative experiences with the e-service. – The ***cognitive and affective CX dimensions*** of the encounter experience can have positive consequences for the cumulative experience with the e-service therefore positively affect *satisfaction.*
Gao et al., (2021b)	How CI influences the development of CX and omnichannel usage intention? Comparison of cognitive and affective CX.	– SOR framework	– N=434 omnichannel shoppers/China – SEM	– Different dimensions *of CI* exert distinct effects on the ***cognitive*** **and** ***affective*** **CX**. Integrated promotion, product and price, and transaction information are more influential in enhancing the cognitive CX than the affective CX. – Cognitive and affective CX positively affects *omnichanel usage intention*.
Riaz et al., (2022)	Exploring customer RPI, driven through cognitive and affective experience, toward food delivery satisfaction.	– None	– N=350 users of food delivery apps/Pakistan – PLS	– Food delivery applications are not only an other touchpoint in retailers'selling strategy, but rather it nurtures a complete holistic experience that drives *customer purchase intention*; as the number of food delivery applications is growing, along with the number of users utilizing this service, ***cognitive and affective CX*** can yield a huge difference in a throng of competitors. – Cognitive CX as a stronger predictor of *application satisfaction* than affective CX; customers with better cognitive experience are likely to hold more positive perceptions to food delivery applications and are motivated for repurchase. – Order tracking, mapping and location, information access positively influence customer cognitive experience.
Studies on efects of CX dimensions on more behavioral outcome variables				
Barari et al., (2020)	Develop a negative CX model in online retailing.	– Regulatory focus theory	– N=201 online retail consumers/MTurk/N/A – SEM	– Analysis shows *service failure* causes negative ***affective and cognitive CX*** and has an impact on *dissatisfaction and negative WoM* in the online retailing context. – Furthermore, this research considers experience destruction only during the purchase stage, whereas it is possible to consider experience destruction before, during and after purchase.
Gahler et al., (2023)	What is an omnichannel-capable measurement of CX that applies to different customer intetactions in the omnichannel environment?	– Theory of the conscious mind (Chalmer 1996, 2010)	– Omnichannel Study 1: N= 29 students, N=756, N=21 consumers, S2: N=18 experts, S3: N=162, S4: N= 1,348 both consumers, S5: N=224 experiment consumers, S6: N=601 customer hotels, S7: N=364 experiment customers restaurants	– Developed CX scale reduces measurement ambiguity and identifies all relevant CX dimensions in the omnichannel domain. – The study propose a scale with **six** ***dimensions of CX: affective, cognitive, physical, relational, sensorial, symbolic***. The scale helps managers to identify, prioritize, and improve crucial customer interactions along customer journeys in omnichannel domains. – Significant effects of affective and physical CX are shown on outcomes such as *attitudes, satisfaction, WoM and consumer loyalty*.
Rose et al., (2012)	Exploring the formation of the CX that results from online shopper interactions with e-retailer (testing antecedents and outcomes within websites).	– S-O-R-Framework	– N=220 online shoppers/ USA and Europe – PLS	– Study identifies and provides operational measures of the antecedent's variables and the ***cognitive and affective dimensions*** of online CX and its outcomes (*trust, satisfaction and repurchase intension*). – The cognitive and affective CX dimensions do not directly influence RPI or trust as satisfaction was found to be an important mediator between CX dimensions and outcomes. The effect of affective (vs. cognitive) CX dimension on satisfaction is stronger.
Roy et al., (2022)	How can we meaningfully differentiate CX from customer commitment? What are the effects of CX and commitment on customer engagement behaviors?	– None	– N=187 offline grocery shoppers/Australia – PLS	– CX and commitment as well as their sub-components have different performance effects. – Positive significant effect of ***emotional, physical and social CX*** on *higher order commitment* (i.e., affective, normative, economic, forced and habitual) and on *higher order customer engagement behaviors* (i.e., compliance, cooperation, feedback, helping, WoM).
Tyrväinen et al., (2020)	We examine the effects of personalization and hedonic motivation on emotional and cognitive CX and its outcomes in omnichannel retail context.	– None	– N=2084 omnichannel shoppers/Finland and N=2334 Sweden – SEM	– *Hedonic motivation and personalization* positively affercts ***emotional and cognitive CX***. – Positive effects of cognitive CX on WoM and RPI as well as of affective CX on WoM and RPI, while the effects of affective CX is stronger for both *WoM and RPI*.

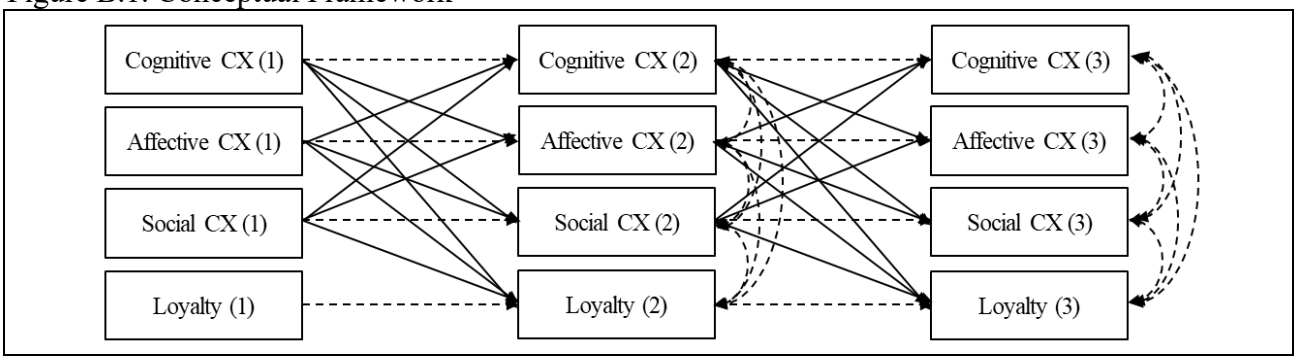
Note: AR=Augmented Reality; CI=Channel Integration; CX=Customer Experience; CJ=Customer Journey; CJD=Customer Journey Design; EXQ=Experience Quality; ISCX=In-Store Customer Experience; OCX=Online Customer Experience; N/A=Not Available; MTurk=Mechanical Tool by Amazon; PLS=Partial Least Squares Modelling; RPI=Repurchase Intention; SEM=Structural Equation Modelling; WoM=Word of Mouth.

Web Appendix B. Description of the Cross-lagged Model

We have ensured the usability of the cross-lagged panel model (CLPM) in several steps (e.g., Lucas, 2023; Hamaker, 2023). *First*, our three waves of the survey avoid criticism of studies using two time points. *Second*, to reduce possible cross-lagged effects based on correlations between individuals, the sample is based on quota sampling. *Third*, to ensure that the surveyed construct may change over time, only respondents who purchased at a retailer between the survey waves were included in the study. *Fourth*, to ensure stability of the within-person variance, a self-assessment construct (three-items measure of self-efficacy, "I have confidence in my ability to solve problems"; "I feel that I am good generating novel ideas" and "Compared to other people, I can do most tasks very creatively" Newman et al., 2018) and for each respondent mean values of respective answers per survey wave were used to identify possible deviations within the person over time. The average deviation of the mean values of survey waves 1 and 2 was 0.650 and we have removed seven respondents whose average changed by 1 or more between both waves. Between the waves 2 and 3 the average was 0.481 and we have removed four respondents with a deviation of 1 or more between both waves (following Hamaker, 2023). Based on this test, CLPM seems to be appropriate for studying causality in longitudinal data as it allows the conceptualization of reciprocal relationships between variables over time (e.g., Allison et al., 2017). There are no lasting differences between individuals in the long run, or differences are never perfectly stable, even in the short run (Asendorpf, 2021; Orth et al., 2021).

As mentioned, the constructs are measured at three time points (Figure B.1.). We follow the advice of Burkholder and Harlow (2003) and include disturbance correlations in the cross-lagged design. These correlations were modeled between the same indicators across the three time points. Disturbance correlations are also included between all constructs at time point two and are then integrated at time point three. They are constrained and thus estimated equally (Allison et al., 2017). Autoregressive relationships between a variable and its prior state must be modeled (Zyphur et al., 2019).

Figure B.1. Conceptual Framework



Web Appendix C. Common Method Variance

A data collection at different time points reduces the potential threat of common method variance in our data set ex ante (Fuller et al., 2016). Additionally, we used an appropriate questionnaire design. First, the respondents were told that the study was anonymous and confidential and that there were no right or wrong answers. Moreover, the study started with the measures of the dependent variables (Chang et al., 2010). We calculated a single-factor test using confirmatory factor analysis. The results show that the models with all items loading on a single factor had a significantly worse fit than our proposed models did (see Table C.1. for Loyalty and C.2. for Word of Mouth (WoM)).

Table C.1. Loyalty Results of the Single-factor Tests

	CFI	TLI	RMSEA	SRMR	χ^2 (df)	$\Delta\ \chi^2$(df)	*p*-value of difference
Time point one							
Proposed model	.890	.866	.098	.065	519.566 (86)	990.799 (4)	.000
Single factor model	.641	.581	.173	.108	1510.365 (90)		
Time point two							
Proposed model	.913	.894	.101	.055	546.591 (86)	1229.655 (4)	.000
Single factor model	.682	.630	.188	.095	1776.246 (90)		
Time point three							
Proposed model	.924	.907	.098	.063	525.320 (86)	1252.946 (4)	.000
Single factor model	.708	.659	.188	.095	1778.266 (90)		

Notes: Difference tests were conducted using χ^2 tests of difference.

Table C.2. WoM Results of the Single-factor Tests

	CFI	TLI	RMSEA	SRMR	χ^2 (df)	$\Delta\ \chi^2$(df)	*p*-value of difference
Time point one							
Proposed model	.887	.855	.111	.065	461.151 (61)	884.698 (4)	.000
Single factor model	.638	.566	.193	.104	1345.849 (65)		
Time point two							
Proposed model	.922	.901	.109	.051	444.423 (61)	1271.775 (4)	.000
Single factor model	.666	.599	.219	.090	1716.198 (65)		
Time point three							
Proposed model	.927	.906	.110	.063	450.576 (61)	1199.744 (4)	.000
Single factor model	.702	.642	.215	.087	1650.320 (65)		

Notes: Difference tests were conducted using χ^2 tests of difference.

Tables C.3. to C.8. show the results for the marker variable technique following the latent variable approach of Williams et al. (2010).

We used creative self-efficacy as a marker variable. The marker variable is measured as a construct based on three items ("I have confidence in my ability to solve problems"; "I feel that I am good generating novel ideas" and "Compared to other people, I can do most tasks very creatively" Newman et al. 2018). First, it is an ideal marker because it is theoretically unrelated to our constructs. Second, it is similar to our constructs in content and format, thus it might be equivalently vulnerable to the same causes of CMV (Simmering et al., 2015).

The marker variable technique consists of three consecutive phases. The correlations between the latent constructs are not biased through the marker variable (phase I, Method-C vs. -R). The results of the following reliability decomposition (phase II) indicate that the amount of method variance, associated with the measurement of the substantive latent constructs in Model 1 (loyalty), is less than 18.70 percent (between 12.71 and 18.59 percent). In Model 2 (WoM) it is less 17.8 percent (between 8.31 and 17.74 percent). Since previous literature (e.g., Williams et al., 2010) found impacts up to 19.7 percent, the possibility of CMV seems to be reduced. This is also supported by the third phase, which shows only a minor impact of the marker-based method variance on construct correlations.

Table C.3. Loyalty Results of the Model Comparisons (Phase I)

	Time point one						Time point two						Time point three					
Model	χ^2	df	CFI	TLI	RMSEA	SRMR	χ^2	df	CFI	TLI	RMSEA	SRMR	χ^2	df	CFI	TLI	RMSEA	SRMR
CFA	649.543	125	.902	.877	.087	.058	612.443	125	.922	.909	.084	.048	608.113	125	.934	.921	.085	.051
Baseline	715.261	132	.891	.875	.091	.071	679.572	134	.917	.905	.086	.065	669.736	134	.929	.918	.087	.057
Method-C	702.863	133	.893	.877	.090	.071	658.496	133	.920	.907	.087	.058	666.227	133	.929	.918	.087	.056
Method-U	682.415	119	.895	.863	.095	.066	644.327	119	.920	.897	.090	.052	637.217	119	.931	.911	.089	.055
Method-R	761.758	139	.883	.870	.091	.083	797.266	139	.900	.889	.093	.067	811.348	139	.908	.901	.096	.063
Chi-square differences of model comparison tests																		
ΔModels	$\Delta\chi^2$	Δdf	*p*				$\Delta\chi^2$	Δdf	*p*				$\Delta\chi^2$	Δdf	*p*			
Baseline with Method-C	12.398	1	**				21.076	1	**				3.509	1	*			
Method-C with Method-U	20.448	14	ns				14.169	14	ns				29.010	14	*			
Method-C with Method-R	58.895	6	ns				138.770	6	ns				145.121	6	ns			

Notes: ns=not significant; † *p*<.10; * *p*<.05; ** *p*<.01; *** *p*<.001.

Table C.4. WoM Results of the Model Comparisons (Phase I)

	Time point one						Time point two						Time point three					
Model	χ^2	df	CFI	TLI	RMSEA	SRMR	χ^2	df	CFI	TLI	RMSEA	SRMR	χ^2	df	CFI	TLI	RMSEA	SRMR
CFA	571.843	94	.904	.877	.098	.056	496.866	94	.936	.917	.091	.046	524.223	94	.940	.923	.093	.050
Baseline	639.223	103	.892	.873	.097	.072	563.441	103	.927	.913	.092	.064	586.772	103	.933	.920	.094	.058
Method-C	628.112	102	.892	.873	.097	.065	548.165	102	.928	.913	.091	.055	581.664	102	.933	.921	.094	.058
Method-U	611.478	90	.893	.860	.103	.063	536.556	90	.928	.904	.096	.051	555.468	90	.933	.913	.097	.056
Method-R	773.462	108	.864	.851	.108	.074	692.424	108	.903	.893	.099	.062	726.243	108	.913	.904	.104	.065
Chi-square differences of model comparison tests																		
ΔModels	$\Delta\chi^2$	Δdf	*p*				$\Delta\chi^2$	Δdf	*p*				$\Delta\chi^2$	Δdf	*p*			
Baseline with Method-C	11.111	1	**				15.276	1	**				5.108	1	**			
Method-C with Method-U	16.634	12	ns				11.609	12	ns				26.196	12	*			
Method-C with Method-R	145.350	6	ns				144.259	6	ns				144.579	6	ns			

Notes: ns=not significant; † *p*<.10; * *p*<.05; ** *p*<.01; *** *p*<.001.

Table C.5. Loyalty Results of the Reliability Decomposition (Phase II)

Time point one				
	Reliability baseline model	Decomposed reliability from method-C model		
Latent variable	Total reliability	Substantive reliability	Method reliability	% reliability marker variable
Cognitive CX	.994	.835	.162	16.21
Affective CX	.983	.822	.166	16.67
Social CX	.983	.806	.182	18.21
Loyalty	.993	.811	.181	18.34
Time point two				
	Reliability baseline model	Decomposed reliability from method-C model		
Latent variable	Total reliability	Substantive reliability	Method reliability	% reliability marker variable
Cognitive CX	.993	.869	.128	12.79
Affective CX	.994	.869	.127	12.71
Social CX	.990	.828	.165	16.54
Loyalty	.994	.864	.131	13.12
Time point three				
	Reliability baseline model	Decomposed reliability from method-C model		
Latent variable	Total reliability	Substantive reliability	Method reliability	% reliability marker variable
Cognitive CX	.995	.853	.144	14.46
Affective CX	.995	.847	.149	14.94
Social CX	.993	.810	.185	18.59
Loyalty	.994	.842	.154	15.47

Table C.6. WoM Results of the Reliability Decomposition (Phase II)

Time point one				
	Reliability baseline model	Decomposed reliability from method-C model		
Latent variable	Total reliability	Substantive reliability	Method reliability	% reliability marker variable
Cognitive CX	.994	.854	.142	14.22
Affective CX	.988	.831	.157	15.83
Social CX	.984	.811	.178	17.74
WoM	.991	.820	.173	17.34
Time point two				
	Reliability baseline model	Decomposed reliability from method-C model		
Latent variable	Total reliability	Substantive reliability	Method reliability	% reliability marker variable
Cognitive CX	.994	.860	.136	13.64
Affective CX	.993	.859	.134	13.57
Social CX	.989	.838	.155	15.55
WoM	.993	.827	.167	16.74
Time point three				
	Reliability baseline model	Decomposed reliability from method-C model		
Latent variable	Total reliability	Substantive reliability	Method reliability	% reliability marker variable
Cognitive CX	.994	.914	.083	8.31
Affective CX	.994	.911	.086	8.75
Social CX	.996	.854	.142	14.34
WoM	.993	.826	.170	17.12

Table C.7. Loyalty Results of the Sensitivity Analyses (Phase III)

Time point one					
Construct correlations	CFA	Baseline	Method-C	Method-S (.05)	Method-S (.01)
CCX with LOY	.545	.541	.534	.772	.778
ACX with LOY	.447	.434	.412	.710	.719
SCX with LOY	.520	.516	.510	.765	.774
CCX with ACX	.631	.614	.586	.792	.800
CCX with SCX	.517	.512	.511	.764	.774
SCX with ACX	.735	.730	.725	.870	.872
SELF with CCX	.095	.000	.000	.000	.000
SELF with ACX	.120	.000	.000	.000	.000
SELF with SCX	.056	.000	.000	.000	.000
SELF with LOY	.104	.000	.000	.000	.000
Time point two					
Construct correlations	CFA	Baseline	Method-C	Method-S (.05)	Method-S (.01)
CCX with LOY	.581	.581	.577	.793	.796
ACX with LOY	.577	.575	.573	.795	.799
SCX with LOY	.526	.527	.525	.774	.781
CCX with ACX	.691	.691	.686	.841	.845
CCX with SCX	.591	.591	.587	.795	.801
SCX with ACX	.720	.720	.718	.864	.867
SELF with CCX	.135	.000	.000	.000	.000
SELF with ACX	.084	.000	.000	.000	.000
SELF with SCX	.071	.000	.000	.000	.000
SELF with LOY	.065	.000	.000	.000	.000
Time point three					
Construct correlations	CFA	Baseline	Method-C	Method-S (.05)	Method-S (.01)
CCX with LOY	.567	.567	.567	.797	.803
ACX with LOY	.620	.620	.620	.822	.827
SCX with LOY	.510	.510	.509	.775	.781
CCX with ACX	.751	.751	.753	.880	.884
CCX with SCX	.644	.644	.643	.833	.837
SCX with ACX	.825	.826	.825	.916	.920
SELF with CCX	.074	.000	.000	.000	.000
SELF with ACX	.057	.000	.000	.000	.000
SELF with SCX	.016	.000	.000	.000	.000
SELF with LOY	.037	.000	.000	.000	.000

Notes: LOY=Loyalty, CCX=Cognitive customer experience, ACX=Affective customer experience, SCX=Social customer experience, SELF=Self efficacy.

Table C.8. WoM Results of the Sensitivity Analyses (Phase III)

Time point one					
Construct correlations	CFA	Baseline	Method-C	Method-S (.05)	Method-S (.01)
CCX with WoM	.533	.533	.526	.766	.772
ACX with WoM	.539	.536	.514	.749	.756
SCX with WoM	.444	.442	.438	.730	.740
CCX with ACX	.656	.650	.631	.807	.815
CCX with SCX	.514	.511	.509	.767	.774
SCX with ACX	.725	.725	.727	.871	.877
SELF with CCX	.095	.000	.000	.000	.000
SELF with ACX	.131	.000	.000	.000	.000
SELF with SCX	.057	.000	.000	.000	.000
SELF with WoM	.121	.000	.000	.000	.000
Time point two					
Construct correlations	CFA	Baseline	Method-C	Method-S (.05)	Method-S (.01)
CCX with WoM	.564	.563	.557	.778	.789
ACX with WoM	.572	.573	.564	.785	.795
SCX with WoM	.486	.485	.483	.750	.754
CCX with ACX	.693	.699	.685	.842	.849
CCX with SCX	.592	.591	.589	.794	.802
SCX with ACX	.721	.720	.722	.864	.867
SELF with CCX	.135	.000	.000	.000	.000
SELF with ACX	.085	.000	.000	.000	.000
SELF with SCX	.071	.000	.000	.000	.000
SELF with WoM	.097	.000	.000	.000	.000
Time point three					
Construct correlations	CFA	Baseline	Method-C	Method-S (.05)	Method-S (.01)
CCX with WoM	.563	.562	.561	.790	.796
ACX with WoM	.611	.610	.610	.814	.820
SCX with WoM	.516	.514	.515	.776	.780
CCX with ACX	.754	.754	.754	.882	.884
CCX with SCX	.644	.642	.642	.832	.835
SCX with ACX	.822	.824	.824	.915	.920
SELF with CCX	.074	.000	.000	.000	.000
SELF with ACX	.055	.000	.000	.000	.000
SELF with SCX	.017	.000	.000	.000	.000
SELF with WoM	.043	.000	.000	.000	.000

Notes: WoM=Word of Mouth, CCX=Cognitive customer experience, ACX=Affective customer experience, SCX=Social customer experience, SELF=Self efficacy.

Web Appendix D. Endogeneity Test

In order to reduce possible biases from endogeneity we used the instrumental variable (IV) approach. We checked whether the results of the studies change, if the exogenous variables are endogenized by including IVs for each CX dimension. IV1, the perceived store usefulness is measured with three items. Hedonic shopping motivation, as IV2, is measured with two items, and IV3, the social influence is again measured with three items. These are theoretically strong predictors for the respective CX dimension (e.g., Gao et al., 2019; Han et al., 2020; Stein and Ramaseshan, 2019). First, F-tests proved that the IVs are strong predictors of the analyzed variables (see Table D.1.). The IVs are included in the models to calculate consistent models in addition to the efficient (proposed) models for the different decision situations (Antonakis et al., 2010, Loyalty see Table D.2.; WoM see Table D.3.). Second, regarding the path estimates we verified whether changes emerged (Hausman, 1978). Respective t-values were below the critical value of 1.96 and we conclude that the probability of endogeneity seems to be reduced.

Table D.1. F-test of Strong Instrumental Variables

	Model 1
	F-value
IV1 → Cognitive CX	58.244
IV2 → Affective CX	117.282
IV3 → Social CX	32.641

Notes: IV=Instrumental variable, F-value>10 indicates strong predictor.

Table D.2. Loyalty Results of the Efficient and Consistent Model

			Proposed/efficient model		Consistent model	
			β	*p*	*β*	*p*
Direct effects						
IV1	→ Cognitive CX (1)				.249	***
IV2	→ Affective CX (1)				.321	***
IV3	→ Social CX (1)				.236	***
Cognitive CX (1)	→ Affective CX (2)		.124	***	.119	***
Affective CX (1)	→ Cognitive CX (2)		.068	***	.066	***
Cognitive CX (1)	→ Social CX (2)		.116	***	.112	***
Social CX (1)	→ Cognitive CX (2)		.071	***	.065	***
Affective CX (1)	→ Social CX (2)		.120	**	.101	**
Social CX (1)	→ Affective CX (2)		.186	***	.164	***
Cognitive CX (1)	→ Loyalty (2)		.096	**	.090	**
Affective CX (1)	→ Loyalty (2)		.059	† .079	.057	†(.056)
Social CX (1)	→ Loyalty (2)		.046	ns	.044	ns
Cognitive CX (1)	→ Cognitive CX (2)		.551	***	.537	***
Affective CX (1)	→ Affective CX (2)		.421	***	.430	***
Social CX (1)	→ Social CX (2)		.412	***	.404	***
Loyalty (1)	→ Loyalty (2)		.633	***	.629	***
Cognitive CX (2)	→ Affective CX (3)		.135	***	.132	***
Affective CX (2)	→ Cognitive CX (3)		.076	***	.075	***
Cognitive CX (2)	→ Social CX (3)		.119	***	.118	***
Social CX (2)	→ Cognitive CX (3)		.081	***	.077	***
Affective CX (2)	→ Social CX (3)		.165	***	.155	***
Social CX (2)	→ Affective CX (3)		.134	***	.119	***
Cognitive CX (2)	→ Loyalty (3)		.109	**	.107	**
Affective CX (2)	→ Loyalty (3)		.067	† .078	.065	†(.057)
Social CX (2)	→ Loyalty (3)		-.004	ns	.002	ns
Cognitive CX (2)	→ Cognitive CX (3)		.603	***	.600	***
Affective CX (2)	→ Affective CX (3)		.466	***	.473	***
Social CX (2)	→ Social CX (3)		.436	***	.445	***
Loyalty (2)	→ Loyalty (3)		.674	***	.674	***
R^2 Loyalty (3)			.601	***	.594	***
Indirect Effects						
Cognitive CX (1)	→ Cognitive CX (2)	.060	**	.055	**	**
Cognitive CX (1)	→ Affective CX (2)	.008	† .091	.006	†(.065)	†(.064)
Cognitive CX (1)	→ Social CX (2)	.000	ns	.000	ns	ns
Cognitive CX (1)	→ Loyalty (2)	.065	**	.062	***	***
Affective CX (1)	→ Affective CX (2)	.028	† .085	.031	†(.057)	†(.060)
Affective CX (1)	→ Cognitive CX (2)	.007	**	.008	**	**
Affective CX (1)	→ Social CX (2)	.000	ns	.000	ns	ns
Affective CX (1)	→ Loyalty (2)	.040	† .076	.041	†(.054)	†(.053)
Social CX (1)	→ Social CX (2)	-.002	ns	.002	ns	ns
Social CX (1)	→ Cognitive CX (2)	.008	**	.008	**	**
Social CX (1)	→ Affective CX (2)	.013	ns	.012	†(.083)	†(.084)
Social CX (1)	→ Loyalty (2)	.031	ns	.028	ns	ns
Total Effects						
Cognitive CX (1)	→ Loyalty (3)		.133	***	.126	***
Affective CX (1)	→ Loyalty (3)		.075	*	.078	*
Social CX (1)	→ Loyalty (3)		.050	ns	.047	ns
Diff. in total effects						
Cognitive CX	Affective CX		t=4.77	**	t=6.45	**
Cognitive CX	Social CX		t=9.58	**	t=9.64	**
Affective CX	Social CX		t=2.05	*	t=3.31	**
Covariates						
Gender (1)	→ Loyalty (1)		-.003	ns	-.001	ns
Gender (2)	→ Loyalty (2)		-.003	ns	-.001	ns
Gender (3)	→ Loyalty (3)		-.011	ns	-.003	ns
Age (1)	→ Loyalty (1)		.018	ns	.017	ns
Age (2)	→ Loyalty (2)		.018	ns	.017	ns
Age (3)	→ Loyalty (3)		.019	ns	.018	ns
Internet expertise (1)	→ Loyalty (1)		.016	ns	.017	ns
Internet expertise (2)	→ Loyalty (2)		.015	ns	.016	ns
Internet expertise (3)	→ Loyalty (3)		.015	ns	.016	ns

Structural model fits:
Proposed/efficient model: CFI .858, TLI .850; RMSEA .067, SRMR .084, $\chi^2(1325)=4488.808$, SCF=.88.. Consistent model: CFI .854, TLI .847, RMSEA .063, SRMR .113, $\chi^2(1771)=5437.713$, SCF=.89.
Notes: (1, 2, 3)=Time points, SCF=Scaling correction factor for MLM, N=528; ns=not significant; †p<.10; *p<.05; **p<.01; ***p<.001. [1]Difference tests.

Table D.3. WoM Results of the Efficient and Consistent Model

			Proposed/efficient model		Consistent model	
			β	*p*	*β*	*p*
Direct effects						
IV1	→ Cognitive CX (1)				.233	***
IV2	→ Affective CX (1)				.299	***
IV3	→ Social CX (1)				.343	***
Cognitive CX (1)	→ Affective CX (2)		.135	***	.126	***
Affective CX (1)	→ Cognitive CX (2)		.070	***	.066	***
Cognitive CX (1)	→ Social CX (2)		.127	***	.117	***
Social CX (1)	→ Cognitive CX (2)		.074	***	.065	***
Affective CX (1)	→ Social CX (2)		.136	**	.102	**
Social CX (1)	→ Affective CX (2)		.198	***	.164	***
Cognitive CX (1)	→ WoM (2)		.052	† .079	.052	*
Affective CX (1)	→ WoM (2)		.128	***	.116	***
Social CX (1)	→ WoM (2)		.054	ns	.056	ns
Cognitive CX (1)	→ Cognitive CX (2)		.546	***	.534	***
Affective CX (1)	→ Affective CX (2)		.389	***	.421	***
Social CX (1)	→ Social CX (2)		.389	***	.395	***
WoM (1)	→ WoM (2)		.562	***	.571	***
Cognitive CX (2)	→ Affective CX (3)		.147	***	.136	***
Affective CX (2)	→ Cognitive CX (3)		.080	***	.076	***
Cognitive CX (2)	→ Social CX (3)		.130	***	.122	***
Social CX (2)	→ Cognitive CX (3)		.084	***	.078	***
Affective CX (2)	→ Social CX (3)		.182	***	.155	***
Social CX (2)	→ Affective CX (3)		.145	***	.117	***
Cognitive CX (2)	→ WoM (3)		.058	† .078	.059	*
Affective CX (2)	→ WoM (3)		.147	***	.127	***
Social CX (2)	→ WoM (3)		-.049	ns	.036	ns
Cognitive CX (2)	→ Cognitive CX (3)		.596	***	.596	***
Affective CX (2)	→ Affective CX (3)		.441	***	.460	***
Social CX (2)	→ Social CX (3)		.414	***	.438	***
WoM (2)	→ WoM (3)		.604	***	.594	***
R^2 Loyalty (3)			.494	***	.477	***
Indirect Effects						
Cognitive CX (1)	→ Cognitive CX (2)	.032	† .085	.031	*	*
Cognitive CX (1)	→ Affective CX (2)	.020	**	.016	**	**
Cognitive CX (1)	→ Social CX (2)	-.006	ns	-.002	ns	ns
Cognitive CX (1)	→ WoM (2)	.031	† .072	.031	*	*
Affective CX (1)	→ Affective CX (2)	.057	**	.052	***	***
Affective CX (1)	→ Cognitive CX (2)	.004	† .098	.002	†(.061)	†(.063)
Affective CX (1)	→ Social CX (2)	-.007	ns	-.002	ns	ns
Affective CX (1)	→ WoM (2)	.077	***	.067	***	***
Social CX (1)	→ Social CX (2)	-.019	ns	-.013	ns	ns
Social CX (1)	→ Cognitive CX (2)	.004	† .099	.004	†(.064)	†(.068)
Social CX (1)	→ Affective CX (2)	.029	**	.018	**	**
Social CX (1)	→ WoM (2)	.033	ns	.033	ns	ns
Total Effects						
Cognitive CX (1)	→ WoM (3)		.077	*	.075	*
Affective CX (1)	→ WoM (3)		.132	***	.121	***
Social CX (1)	→ WoM (3)		.047	ns	.044	ns
Diff. in total effects						
Cognitive CX	Affective CX		t=6.62	**	t=5.64	**
Cognitive CX	Social CX		t=2.57	**	t=2.44	*
Affective CX	Social CX		t=10.38	**	t=5.96	**
Covariates						
Gender (1)	→ WoM (1)		-.004	ns	-.001	ns
Gender (2)	→ WoM (2)		-.004	ns	-.001	ns
Gender (3)	→ WoM (3)		-.015	ns	-.006	ns
Age (1)	→ WoM (1)		.025	ns	.027	ns
Age (2)	→ WoM (2)		.024	ns	.027	ns
Age (3)	→ WoM (3)		.025	ns	.028	ns
Internet expertise (1)	→ WoM (1)		.008	ns	.014	ns
Internet expertise (2)	→ WoM (2)		.008	ns	.013	ns
Internet expertise (3)	→ WoM (3)		.007	ns	.013	ns

Structural model fits:
Proposed/efficient model: CFI .860, TLI .851; RMSEA .073, SRMR .079, $\chi^2(1026)=3903.926$, SCF=.87. Consistent model: CFI .855, TLI .847, RMSEA .067, SRMR .113, $\chi^2(1424)=4813.887$, SCF=.89.
Notes: WoM=Word of Mouth. (1, 2, 3)=Time points, SCF=Scaling correction factor for MLM, N=528; ns=not significant; †p<.10; *p<.05; **p<.01; ***p<.001.
[1]Difference tests.

Web Appendix E. Reliability and Validity

Table E.1. Reliability and Validity (Explorative)

Con-struct	Item	Time point one					Time point two					Time point three				
		MV/Std.	FL	KMO	ItTC	α	MV/Std.	FL	KMO	ItTC	α	MV/Std.	FL	KMO	ItTC	α
CCX	CCX1	5.10/1.01	.802	.817	.746	.887	4.94/1.12	.825	.822	.774	.902	5.07/1.02	.879	.834	.833	.921
	CCX2	4.94/1.13	.768		.713		4.82/1.16	.779		.735		4.88/1.12	.811		.773	
	CCX3	5.22/1.07	.895		.818		5.03/1.12	.918		.847		5.11/1.07	.907		.855	
	CCX4	5.18/1.19	.794		.733		5.02/1.18	.818		.763		5.09/1.08	.854		.807	
ACX	ACX1	4.96/1.09	.776	.689	.691	.844	4.88/1.18	.823	.755	.767	.900	4.94/1.14	.873	.773	.820	.908
	ACX2	5.36/1.10	.766		.588		5.17/1.20	.790		.735		5.15/1.15	.854		.711	
	ACX3	4.18/1.39	.761		.698		4.13/1.38	.842		.793		4.45/1.31	.865		.814	
	ACX4	4.28/1.46	.833		.752		4.16/1.47	.873		.816		4.47/1.34	.885		.830	
SCX	SCX1	4.91/1.17	.719	.676	.540	.770	4.81/1.18	.787	.705	.629	.835	4.82/1.20	.793	.699	.659	.873
	SCX2	3.73/1.44	.721		.613		3.91/1.39	.832		.729		4.08/1.39	.906		.813	
	SCX3	3.96/1.42	.848		.672		3.97/1.41	.865		.747		4.13/1.39	.914		.818	
LOY	LOY1	4.46/1.58	.847	.804	.768	.868	4.52/1.56	.883	.806	.815	.885	4.55/1.53	.909	.817	.835	.891
	LOY2	4.24/1.72	.916		.820		4.33/1.59	.932		.845		4.35/1.56	.926		.851	
	LOY3	5.27/1.28	.719		.659		5.19/1.21	.809		.659		5.09/1.25	.797		.655	
	LOY4	3.54/1.77	.782		.641		3.75/1.76	.831		.693		3.81/1.74	.752		.712	
WoM	WoM1	5.29/1.33	.937	.500	.879	.936	5.12/1.35	.961	.500	.924	.960	5.13/1.34	.962	.500	.926	.962
	WoM2	5.14/1.39	.937		.879		5.03/1.41	.961		.924		5.02/1.36	.962		.926	

Notes: RPI=Repurchase intention, MV/Std.=Mean values and standard deviations, FL=Factor loadings (exploratory), KMO=Kaiser-Meyer-Olkin Criterion (≥.5), ItTC=Item-to-Total Correlation (≥.3), α=Cronbach's alpha (≥.7). All items measured on 7-point Likert-type scales: 1=strongly disagree, 7=strongly agree.

Web Appendix F. Test for Measurement Invariance

We tested for measurement equivalence to ensure comparability across the three time points (Van de Schoot et al., 2012). *First*, we assessed the model fit of the baseline model—which estimates factor loadings and intercepts freely—to assure configural invariance. *Second*, we tested for metric invariance by fixing the factor loadings of each item. A comparison of configural and the metric model shows that all deviations are within limits (see Table F.1.). We additionally relied on differences in the comparative fit indices to ensure measurement invariance (Chen, 2007). Partial metric invariance was ascertained by freely estimating some of the factor loadings (see Table F.1.). For model 1 the results indicate partial metric invariance and a good fit ($\Delta\chi2$ (146)=3.822, p>.05). In Model two, WoM, full metric invariance can be assumed ($\Delta\chi2$ (247)=21.487, p>.05).

Table F.1. Loyalty Measurement Invariance Across Time Points

Model	χ^2/df (*p*-value)	χ^2-Difference (*p*-value)	CFI (ΔCFI)	TLI (ΔTLI)	RMSEA (ΔRMSEA)	SCF
Model 1:	2993.358/879		.880	.865	.067	1.088
Configural invariance	(.000)		(-)	(-)	(-)	(-)
Model 2:	3023.621/901	30.263	.880	.868	.067	1.085
Full metric invariance	(.000)	(.016)	(.000)	(.003)	(.000)	(.003)
Model 3:	3019.799/899	3.822	.880	.867	.067	1.085
Partial metric invariance[a]	(.000)	(.144)	(.000)	(.001)	(.000)	(.000)

Notes: SCF=Scaling correction factor for MLM. aFactor loading freed for the following item: LOY1 time point one, LOY1 time point two.

Table F.2. WoM Measurement Invariance Across Time Points

Model	χ^2/df (*p*-value)	χ^2-Difference (*p*-value)	CFI (ΔCFI)	TLI (ΔTLI)	RMSEA (ΔRMSEA)	SCF
Model 1:	2252.910/636		.899	.882	.069	1.104
Configural invariance	(.000)		(-)	(-)	(-)	(-)
Model 2:	2274.397/654	21.487	.898	.885	.068	.1101
Full metric invariance	(.000)	(.247)	(.001)	(.003)	(.001)	(.003)

Notes: SCF=Scaling correction factor for MLM.

Web Appendix G. Split Half Test

We have used a random split half sample to test the robustness of our results (e.g., Heller et al., 2009). The sample was split in two equally sized groups, assuring reliability and further requirements (Warrens, 2015). Table G.1. shows the results of one split half for loyalty and WoM with a sample size of N=270, representative of the full test. The Results remain almost stable, notably, for small samples.

Table G.1. Results – Split Sample 2

	Model 1: Loyalty		Model 2: WoM	
	β	*p*	*β*	*p*
Direct effects				
Cognitive CX (1) → Affective CX (2)	.161	***	.164	***
Affective CX (1) → Cognitive CX (2)	.048	**	.047	**
Cognitive CX (1) → Social CX (2)	.148	***	.151	***
Social CX (1) → Cognitive CX (2)	.048	**	.047	*
Affective CX (1) → Social CX (2)	.126	**	.129	**
Social CX (1) → Affective CX (2)	.186	***	.188	***
Cognititve CX (1) → Dependend Var. (2)	.133	**	.078	*
Affective CX (1) → Dependend Var. (2)	.027	*	.089	*
Social CX (1) → Dependend Var. (2)	.014	ns	.038	ns
Cognitive CX (1) → Cognititve CX (2)	.577	***	.578	***
Affective CX (1) → Affective CX (2)	.388	***	.387	***
Social CX (1) → Social CX (2)	.354	***	.355	***
Dependend Var (1) → Dependend Var (2)	.604	***	.565	***
Cognitive CX (2) → Affective CX (3)	.169	***	.172	***
Affective CX (2) → Cognitive CX (3)	.055	**	.053	**
Cognitive CX (2) → Social CX (3)	.155	***	.158	***
Social CX (2) → Cognitive CX (3)	.059	**	.058	**
Affective CX (2) → Social CX (3)	.127	**	.125	**
Social CX (2) → Affective CX (3)	.125	**	.119	**
Cognititve CX (2) → Dependend Var. (3)	.153	***	.087	*
Affective CX (2) → Dependend Var. (3)	.032	ns	.103	*
Social CX (2) → Dependend Var. (3)	.048	ns	.064	ns
Cognitive CX (2) → Cognititve CX (3)	.630	***	.631	***
Affective CX (2) → Affective CX (3)	.422	***	.421	***
Social CX (2) → Social CX (3)	.419	***	.420	***
Dependend Var (2) → Dependend Var (3)	.648	***	.615	***
R^2 Dependend Var (3)	.627	***	.486	***
Indirect Effects				
Cognititve CX (1) → Cognitive CX (2) → Dependend Var (3)	.088	***	.050	*
Cognitive CX (1) → Affective CX (2) → Dependend Var (3)	.005	ns	.017	*
Cognitive CX (1) → Social CX (2) → Dependend Var (3)	.007	ns	-.010	ns
Cognitive CX (1) → Dependend Var (2) → Dependend Var (3)	.086	***	.048	*
Affective CX (1) → Affective CX (2) → Dependend Var (3)	.017	ns	.040	*
Affective CX (1) → Cognititve CX (2) → Dependend Var (3)	.007	*	.004	ns
Affective CX (1) → Social CX (2) → Dependend Var (3)	.006	ns	-.008	ns
Affective CX (1) → Dependend Var (2) → Dependend Var (3)	.074	*	.055	*
Social CX (1) → Social CX (2) → Dependend Var (3)	.012	ns	.023	ns
Social CX (1) → Cognititve CX (2) → Dependend Var (3)	.007	**	.004	ns
Social CX (1) → Affective CX (2) → Dependend Var (3)	.006	ns	.019	†(.064)
Social CX (1) → Dependend Var (2) → Dependend Var (3)	.017	ns	.023	ns
Total effects				
Cognitive CX (1) → Dependend Var (3)	.187	***	.091	*
Affective CX (1) → Dependend Var (3)	.104	*	.106	*
Social CX (1) → Dependend Var (3)	.043	ns	.024	ns
Covariates				
Gender (1) → Dependend Var (1)	-.001	ns	.001	ns
Gender (2) → Dependend Var (2)	-.001	ns	.001	ns
Gender (3) → Dependend Var (3)	-.006	ns	.006	ns
Age (1) → Dependend Var (1)	-.049	*	.069	*
Age (2) → Dependend Var (2)	-.050	*	.067	*
Age (3) → Dependend Var (3)	-.054	*	.072	*
Internet expertise (1) → Dependend Var (1)	.014	ns	.074	ns
Internet expertise (2) → Dependend Var (2)	.014	ns	.071	ns
Internet expertise (3) → Dependend Var (3)	.014	ns	.067	ns

Structural model fits: Model 1: CFI .828, TLI .819; RMSEA .084, SRMR .100, $\chi^2(1325)=3868.591$, SCF=.72.
Model 2: CFI .827, TLI .816; RMSEA .091, SRMR .100, $\chi^2(1026)=3315.911$, SCF=.72.
Notes: (1, 2, 3)=Time points, SCF=Scaling correction factor for MLM, N=270; ns=not significant; †$p<.10$; *$p<.05$; **$p<.01$; ***$p<.001$.

Web Appendix H. Alternative Models

To check the stability of our results, we also test alternative models. We test the reciprocal effect in models that omitted CX dimensions (Table H.1.-H.3.) to determine whether the results, for example, of cognitive and affective CX, which are the most often studied in the literature, are stable.

The models with cognitive and affective CX show some differences (weaker differences for loyalty β=.143, p<.001 vs. β=.097, p<.01, t=3.147, p<.01; insignificant effects of cognitive CX on WoM β=.068, ns vs. β=.184, p<.001, t=7.141, p<.01). The models with cognitive and social CX show significant results for the latter and a dominance of cognitive CX for WoM (loyalty β=.151, p<.001 vs. β=.074, p<.05, t=5.874, p<.01; WoM β=.124, p<.001 vs. β=.085, p<.05, t=2.497, p<.01). Finally, the models with affective and social CX show significant results for affective and insignificant results for social CX in both decisions.

We were furthermore asked to calculate the effects of the overall CX formed based on a second order base. Table H.4. show respective results but without further insights because no significant effect differences emerge between the three time points as well as the two dependent variables. The effects of single dimensions are omitted.

Thus, the results are charged if single or alle dimensions are omitted.

Table H.1. Results of General Model – Cognitive – Affective CX

	Model 1: Loyalty		Model 2: WoM	
	β	*p*	*β*	*p*
Direct effects				
Cognitive CX (1) → Affective CX (2)	.147	***	.137	***
Affective CX (1) → Cognitive CX (2)	.097	**	.104	**
Cognitive CX (1) → Dependend Var. (2)	.102	**	.035	ns
Affective CX (1) → Dependend Var. (2)	.069	*	.154	***
Cognitive CX (1) → Cognitive CX (2)	.568	***	.556	***
Affective CX (1) → Affective CX (2)	.505	***	.511	***
Dependend Var (1) → Dependend Var (2)	.636	***	.557	***
Cognitive CX (2) → Affective CX (3)	.157	***	.148	***
Affective CX (2) → Cognitive CX (3)	.111	**	.120	**
Cognitive CX (2) → Dependend Var (3)	.113	**	.035	ns
Affective CX (2) → Dependend Var (3)	.080	*	.176	***
Cognitive CX (2) → Cognitive CX (3)	.622	***	.611	***
Affective CX (2) → Affective CX (3)	.561	***	.571	***
Dependend Var (2) → Dependend Var (3)	.657	***	.570	***
R^2 Dependend Var (3)	.593	***	.492	***
Total effects				
Cognitive CX (1) → Dependend Var (3)	.143	***	.068	ns
Affective CX (1) → Dependend Var (3)	.097	**	.184	***
Diff. in total effects	t=3.147 **		t=7.141 **	
Covariates				
Gender (1) → Dependend Var (1)	-.002	ns	-.002	ns
Gender (2) → Dependend Var (2)	-.002	ns	-.002	ns
Gender (3) → Dependend Var (3)	-.007	ns	-.009	ns
Age (1) → Dependend Var (1)	.015	ns	.020	ns
Age (2) → Dependend Var (2)	.017	ns	.020	ns
Age (3) → Dependend Var (3)	.017	ns	.020	ns
Internet expertise (1) → Dependend Var (1)	.014	ns	.001	ns
Internet expertise (2) → Dependend Var (2)	.012	ns	.001	ns
Internet expertise (3) → Dependend Var (3)	.012	ns	.001	ns

Structural model fits: Model 1: CFI .903, TLI .897; RMSEA .062, SRMR .070, $\chi^2(902)=2718.329$, SCF=.85. Model 2: CFI .911, TLI .904; RMSEA .066, SRMR .062, $\chi^2(657)=2170.901$, SCF=.84.

Notes: CX=Customer Experience, (1, 2, 3)=Time points, SCF=Scaling correction factor for MLM, N=528. Standardized coefficients are shown. Differences between total effects have been tested using *t*-tests.

ns=not significant; †*p*<.10; **p*<.05; ***p*<.01; ****p*<.001.

Table H.2. Results of General Model – Cognitive – Social CX

	Model 1: Loyalty		Model 2: WoM	
	β	*p*	*β*	*p*
Direct effects				
Cognitive CX (1) → Social CX (2)	.194	***	.200	***
Social CX (1) → Cognitive CX (2)	.137	***	.145	***
Cognitive CX (1) → Dependend Var. (2)	.104	***	.092	**
Social CX (1) → Dependend Var. (2)	.047	ns	.057	†(.052)
Cognitive CX (1) → Cognitive CX (2)	.552	***	.553	***
Social CX (1) → Social CX (2)	.441	***	.439	***
Dependend Var (1) → Dependend Var (2)	.656	***	.594	***
Cognitive CX (2) → Social CX (3)	.204	***	.205	***
Social CX (2) → Cognitive CX (3)	.157	***	.159	***
Cognitive CX (2) → Dependend Var (3)	.117	***	.100	**
Social CX (2) → Dependend Var (3)	.049	ns	.065	*
Cognitive CX (2) → Cognitive CX (3)	.613	***	.615	***
Social CX (2) → Social CX (3)	.457	***	.459	***
Dependend Var (2) → Dependend Var (3)	.685	***	.612	***
R^2 Dependend Var (3)	.614	***	.493	***
Total effects				
Cognitive CX (1) → Dependend Var (3)	.151	***	.124	***
Social CX (1) → Dependend Var (3)	.074	*	.085	*
Diff. in total effects	t=5.874	**	t=2.497	**
Covariates				
Gender (1) → Dependend Var (1)	.001	ns	.000	ns
Gender (2) → Dependend Var (2)	.001	ns	.000	ns
Gender (3) → Dependend Var (3)	.002	ns	-.001	ns
Age (1) → Dependend Var (1)	.013	ns	.017	ns
Age (2) → Dependend Var (2)	.012	ns	.017	ns
Age (3) → Dependend Var (3)	.013	ns	.017	ns
Internet expertise (1) → Dependend Var (1)	.015	ns	.010	ns
Internet expertise (2) → Dependend Var (2)	.014	ns	.009	ns
Internet expertise (3) → Dependend Var (3)	.013	ns	.009	ns

Structural model fits: Model 1: CFI .939, TLI .935; RMSEA .048, SRMR .062, $\chi^2(775)=1725.883$, SCF=.84. Model 2: CFI .954, TLI .950; RMSEA .047, SRMR .059, $\chi^2(548)=1194.211$, SCF=.83.
Notes: CX=Customer Experience, (1, 2, 3)=Time points, SCF=Scaling correction factor for MLM, N=528. Standardized coefficients are shown. Differences between total effects have been tested using *t*-tests.
ns=not significant; †$p<.10$; *$p<.05$; **$p<.01$; ***$p<.001$.

Table H.3. Results of General Model – Affective – Social CX

	Model 1: Loyalty		Model 2: WoM	
	β	*p*	*β*	*p*
Direct effects				
Affective CX (1) → Social CX (2)	.221	***	.237	***
Social CX (1) → Affective CX (2)	.154	***	.135	***
Affective CX (1) → Dependend Var. (2)	.032	**	.137	***
Social CX (1) → Dependend Var. (2)	.035	ns	.004	ns
Affective CX (1) → Affective CX (2)	.507	***	.522	***
Social CX (1) → Social CX (2)	.394	***	.364	***
Dependend Var (1) → Dependend Var (2)	.661	***	.588	***
Affective CX (2) → Social CX (3)	.232	***	.255	***
Social CX (2) → Affective CX (3)	.172	***	.151	***
Affective CX (2) → Dependend Var (3)	.105	**	.156	***
Social CX (2) → Dependend Var (3)	.044	ns	.012	ns
Affective CX (2) → Affective CX (3)	.541	***	.554	***
Social CX (2) → Social CX (3)	.432	***	.417	***
Dependend Var (2) → Dependend Var (3)	.692	***	.601	***
R^2 Dependend Var (3)	.594	***	.491	***
Total effects				
Affective CX (1) → Dependend Var (3)	.124	**	.164	***
Social CX (1) → Dependend Var (3)	.065	ns	.042	ns
Diff. in total effects	t=5.232	**	t=6.825	**
Covariates				
Gender (1) → Dependend Var (1)	-.002	ns	.000	ns
Gender (2) → Dependend Var (2)	-.002	ns	.000	ns
Gender (3) → Dependend Var (3)	-.008	ns	-.001	ns
Age (1) → Dependend Var (1)	.029	ns	.037	ns
Age (2) → Dependend Var (2)	.029	ns	.037	ns
Age (3) → Dependend Var (3)	.031	ns	.037	ns
Internet expertise (1) → Dependend Var (1)	.034	ns	.029	ns
Internet expertise (2) → Dependend Var (2)	.033	ns	.027	ns
Internet expertise (3) → Dependend Var (3)	.032	ns	.025	ns

Structural model fits: Model 1: CFI .831, TLI .822; RMSEA .080, SRMR .104, $\chi^2(781)=3457.666$, SCF=.86; Model 2: CFI .826, TLI .813; RMSEA .092, SRMR .108, $\chi^2(554)=3038.095$, SCF=.84.
Notes: CX=Customer Experience, (1, 2, 3)=Time points, SCF=Scaling correction factor for MLM, N=528. Standardized coefficients are shown. Differences between total effects have been tested using *t*-tests.
ns=not significant; †$p<.10$; *$p<.05$; **$p<.01$; ***$p<.001$.

Table H.4. Results of Overall CX

	Model 1: Loyalty		Model 2: WoM	
	β	*p*	*β*	*p*
Direct effects				
CX (1) → Dependend Var. (1)	.564	***	.602	***
CX (2) → Dependend Var. (2)	.662	***	.652	***
CX (3) → Dependend Var. (3)	.636	***	.646	***
Covariates				
Gender (1) → Dependend Var (1)	-.002	ns	-.002	ns
Gender (2) → Dependend Var (2)	-.002	ns	-.002	ns
Gender (3) → Dependend Var (3)	-.008	ns	-.009	ns
Age (1) → Dependend Var (1)	.077	ns	.070	ns
Age (2) → Dependend Var (2)	.074	ns	.068	ns
Age (3) → Dependend Var (3)	.073	ns	.068	ns
Internet expertise (1) → Dependend Var (1)	.043	ns	.039	ns
Internet expertise (2) → Dependend Var (2)	.040	ns	.036	ns
Internet expertise (3) → Dependend Var (3)	.036	ns	.033	ns

Structural model fits: Model 1: CFI .847, TLI .840; RMSEA .070, SRMR .068, $\chi^2(1329)=4732.435$, SCF=.89. Model 2: CFI .869, TLI .861; RMSEA .070, SRMR .061, $\chi^2(1032)=3717.970$, SCF=.88.

Notes: CX=Customer Experience, (1, 2, 3)=Time points, SCF=Scaling correction factor for MLM, N=528. Standardized coefficients are shown. Differences between total effects have been tested using *t*-tests. ns=not significant; †$p<.10$; *$p<.05$; **$p<.01$; ***$p<.001$.

We conducted a cross-sectional study by referring to the same fashion omnichannel firms using the same pretest and quota sampling procedure for different, but still experienced, respondents (N=386, while compared to our plan, the 44–55 (18-30) age group is slightly underrepresented (overrepresented), see Table H.5.). We also used the same estimator and covariates and conducted the appropriate reliability or validity tests (Table H.6. and Table H.7.).

The results were different from those of the proposed model. For loyalty, cognitive, affective and social CX are significant; moreover, cognitive and affective CX show equal strength in their total effects, while social CX is significantly weaker in the effects but with minor significance. In WoM, affective CX continues to be the strongest dimension, but minor significant effects of social CX are also evident here compared to the proposed model (see Table H.8.).

Table H.5. Sample Characteristics

	Realized quota sample (in %)			**Planned quota sample (in %)**		
	Male	Female	Total	Male	Female	Total
		(N=386)				
Age 18-30	65	68	34.5	16.6	16.6	33.3
Age 31-43	63	63	32.6	16.6	16.6	33.3
Age 44-55	64	63	32.9	16.6	16.6	33.3
Total	49.7	50.3	386	50.0	50.0	576

Table H.6. Reliability and Validity

Construct	**MV/Std**	**FL**	**KMO**	**ItTC**	**α**	**CR**	**λ**
Cognitive CX							
How helpful was this experience (with [retailer])?	5.06/1.04	.909	.832	.834	.919	.918	.875
How informative was this experience (with [retailer])?	4.85/1.16	.869		.769			.815
How useful was this experience (with [retailer])?	5.08/1.07	.923		.856			.896
How worthwhile was this experience (with [retailer])?	5.09/1.08	.888		.796			.858
Affective CX							
How enjoyable was this experience (with [retailer])?	4.97/1.17	.908	.766	.825	.907	.913	.804
How happy was this experience (with [retailer])?	5.19/1.15	.828		.702			.767
How entertaining was this experience (with [retailer])?	4.47/1.30	.894		.810			.899
How fun was this experience (with [retailer])?	4.50/1.35	.908		.831			.914
Social CX							
How friendly was this experience (with [retailer])?	4.87/1.18	.811	.681	.623	.861	.871	.780
How communal was this experience (with [retailer])?	4.09/1.38	.914		.794			.827
How personal was this experience (with [retailer])?	4.13/1.38	.928		.823			.877
Loyalty							
I consider myself loyal to [retailer].	4.61/1.51	.908	.818	.819	.890	.895	.891
[Retailer] would be my first choice.	4.38/1.52	.922		.847			.901
I will not buy elsewhere if [retailer] is available to me.	5.11/1.26	.805		.664			.734
I intend to continue to shop with [retailer].	3.84/1.74	.831		.709			.765
WoM							
I recommend [retailer] to my family/friends.	5.18/1.31	.981	.500	.923	.960	.960	.941
If my family/friends ask my advice, I tell them to go to this [retailer].	5.06/1.31	.981		.923			.981

Confirmatory model fits: Model 1 (Loyalty): CFI .914, TLI .894, RMSEA .103, SRMR .065, $\chi^2(86)=441.600$, SCF=1.18.
Model 2 (WoM): CFI .915, TLI .891, RMSEA .118, SRMR .066, $\chi^2(61)=388.708$, SCF=1.19.

Notes: α=Cronbach's.Alpha.≥ .7; FL=Exploratory Factor Loadings; ItTC=Item to Total Correlation; KMO=Kaiser/Meyer/Olkin-criterio; MV=Mean value; Std.=Standard Deviation.

Table H.7. Discriminant Validity

Constructs	1	2	3	4	1	2	3	4
Model 1								
1 Cognitive CX	**.773**							
2 Affective CX	*.582*	**.767**						
3 Social CX	*.486*	*.664*	**.707**					
4 Loyalty	*.399*	*.386*	*.281*	**.545**				
Model 2								
1 Cognitive CX					**.768**			
2 Affective CX					*.598*	**.764**		
3 Social CX					*.491*	*.608*	**.702**	
4 Word of Mouth					*.320*	*.364*	*.245*	**.888**

Notes: AVE=Average Variance Extracted (≥.5), Values in italics represent squared correlations between constructs, values in bold represent the AVE of the construct.

Table H.8. Results of Cross-sectional Study

	Model 1: Loyalty		Model 2: WoM	
	β	*p*	*β*	*p*
Direct effects				
Cognititve CX (3) → Dependend Var. (3)	.452	***	.256	**
Affective CX (3) → Dependend Var. (3)	.489	**	.571	***
Social CX (3) → Dependend Var. (3)	.128	*	.188	†(.065)
Covariates				
Gender (3) → Dependend Var (3)	-.022	ns	-.008	ns
Age (3) → Dependend Var (3)	-.023	ns	.023	ns
Internet expertise (3) → Dependend Var (3)	-.025	ns	.007	ns

Structural model fits: Model 1: CFI .906, TLI .885; RMSEA .099, SRMR .058, $\chi^2(123)=589.378$, SCF=.98; Model 2: CFI .901, TLI .881; RMSEA .112, SRMR .063, $\chi^2(97)=563.075$, SCF=.97.

Notes: CX=Customer Experience, (1)=Time points, SCF=Scaling correction factor for MLM, N=386. Standardized coefficients are shown.

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