What Drives Online Repurchase Intention? A Replication of the Moderating Role of Perceived Effectiveness of E-Commerce Institutional Mechanisms

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Abstract:

Online retailing is growing rapidly and customer retention has become increasingly important, especially trust and e-commerce institutional mechanisms such as online credit card guarantees, escrow services, and privacy protection, which have become more significant and the subject of recent research (Fang et al., 2014). We conducted a methodological replication of first insights and a model of the relation between satisfaction, trust, repurchase intention and the perceived effectiveness of such e-commerce institutional mechanisms (PEEIM). As we were unable to support the original findings, we provide an alternative reasoning relevant to today's role of PEEIM for online repurchases and discuss implications for research and practice.

Keywords: Online Shopping, Repurchase Intention, E-Commerce, Institutional Mechanisms, Vendor Satisfaction, Trust, Partial Least Squares Structural Equation Modeling, Moderation Analysis, Panel, Replication

Introduction

Online retailing has grown rapidly within the past decade. As online retailers face the challenge of retaining customers, identifying factors influencing customer decisions for repeated purchases (i.e., repurchases) has become increasingly important in recent years (Johnson, Hult, & McGowan, 2008). *Trust* has been found to be a key predictor of customer retention in online retailing (e.g., Flavián, Guinalíu, & Gurrea, 2006; Gefen, 2002; Qureshi et al., 2009), and researchers have called for an examination of the moderating effect of the e-commerce institutional context (i.e., the safeguarding, regulatory structures for the transaction environment, Zucker, 1986) on the relationship between trust and online repurchase (Gefen, Benbasat, & Pavlou, 2008).

Fang et al. (2014) set out to investigate this effect empirically to help specifying how and under which conditions trust influences online repurchase, and to provide a rationale for previously unexpected results in the literature regarding customer loyalty in e-commerce settings. The authors extended the moderating role of customer loyalty by accounting for customer satisfaction because past experience in a purchase situation can serve as an important factor for evaluating trust (McKnight, Cummings, & Chervany, 1998). The first test of their model provided confirmatory results.

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To provide additional empirical evidence and to extend the theory to a new context, we replicated the study by Fang et al. (2014). Our replication answers the general call for more replication in the field of information systems (e.g., Dennis & Valacich, 2014; Morrison, Matuszek, & Self, 2010; Niederman & March, 2015). We decided to replicate the study of Fang et al. (2014) because of the importance of their findings for e-commerce related research and practice. Furthermore, replication research has become a field of interest among scholars due to a high number of non-replicable findings (Lindsay, 2015; Morrison et al., 2010; Niederman & March, 2015), which "are of no significance to science" (Popper, 2005, p. 66). To the best of our knowledge, as no other replications of this study exist, we suggest that a replication of the study by Fang et al. (2014) could provide helpful benefits to both research and practice. Thus, our replication aims at providing either further evidence for the original study's findings or additional boundaries for the scope of applicability.

The remainder of this paper is structured as follows. First, we describe the original study as well as our replication approach. Second, we describe the research model and related hypotheses. Third, we describe the research methodology applied and the results gained from data analysis. We then discuss our paper's findings, limitations, and avenues for future research. Our study ends with a short conclusion.

1.1 Overview of Original Research

The original study by Fang et al. (2014) explored the moderating effect of the e-commerce institutional context. It investigated the *perceived effectiveness of e-commerce institutional mechanisms* (PEEIM) as a manifestation of the institutional context. According to the authors, PEEIM refers to "online customer perceptions that third-party safeguarding mechanisms, such as online credit card guarantees, escrow services and privacy protection exist to protect them against potential risks in the e-commerce environment" (Fang et al., 2014, p. 409) and is distinguished from other, similar concepts by measuring perceptions regarding the institutional environment independent of the vendor and its ability to mitigate risks (Fang et al., 2014).

Fang et al. (2014) propose a model that tests an effect of *satisfaction with vendor* (SV) on *repurchase intention* (RPI), mediated by *trust in vendor* (TV). Furthermore, they suggest a direct effect of SV on RPI. Aside from this basic model, the authors propose the moderating effects of PEEIM on the effects of SV on TV (H_2) and on the relation of TV with RPI (H_1). They suggest a positive moderation for H_2 and a negative one for H_1. Additionally, they account for different control variables with an influence on both TV and RPI.

The authors tested their research model by using partial least squares (PLS) as a structural equation modeling approach with data from a sample generated among students and faculty members (Fang et al., 2014). Their sample consisted of 362 usable responses (see Appendix A for more information). The most commonly bought items were air tickets (n = 92), followed by books (n = 42). Figure 1 shows the research model results obtained in the study by Fang et al. (2014). The authors were able to support both H_1 and H_2 and only three control variables had significant effects: vendor reputation and perceived website quality significantly influenced TV, while only perceived website quality had a significant effect on RPI.

Fang et al. (2014) conclude that, while trust is still important, it is less so if consumers perceive that effective e-commerce institutional mechanisms (EIMs) are in place (Fang et al., 2014). Therefore, increasing trust and perceived trustworthiness is insufficient and does not assemble a competitive advantage if EIMs are perceived to be effective. Fang et al. (2014) suggest investing more heavily in promoting trust, when EIMs are perceived as ineffective, compared to environments in which EIMs are perceived as effective.
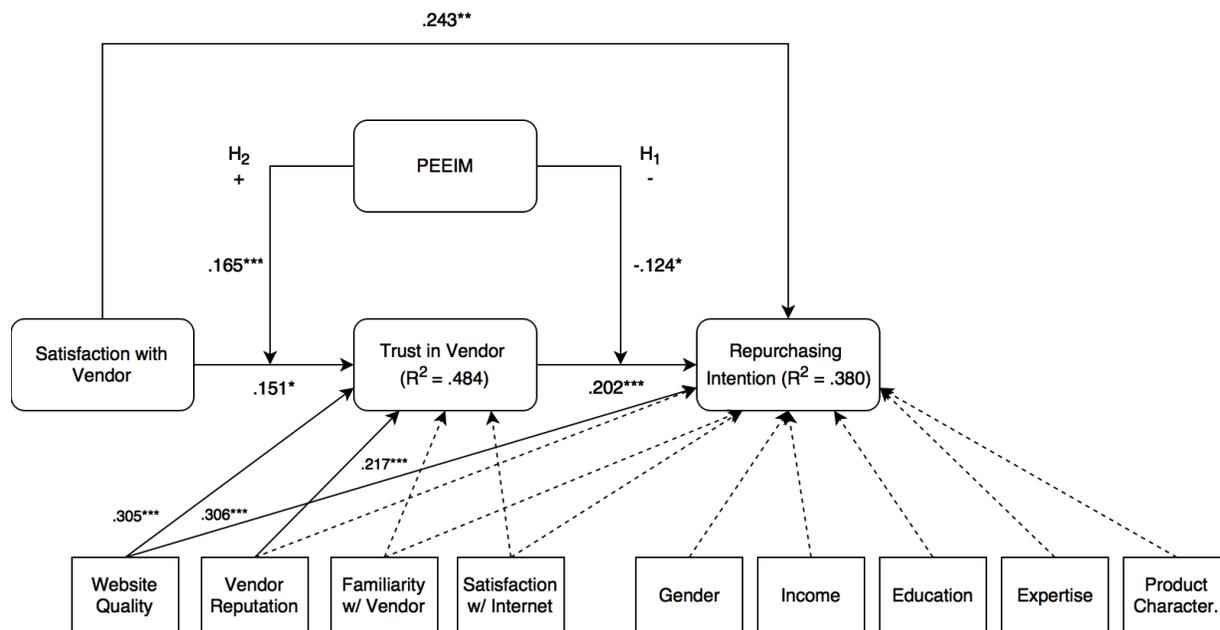
Figure 1. Research Model Results of the Original Study (Fang et al., 2014)

1.2 Overview of the Replication Study

Of the three main types of replication studies (Dennis & Valacich, 2014), we conducted a *methodological replication*. Therefore, our study used exactly the same methods (i.e., survey design, statistical analyses, etc.) as the original study, which is why the main part of our survey is similar to the original paper (cf. Fang et al., 2014). As the term methodological replication implies, we maintained the methodology but conducted our study in a different context (i.e., Germany vs. Northern Ireland; panel participants vs. students and faculty members). We decided to replicate the original study in Germany because Germany is a market comparable to the Northern Ireland market investigated in the study by Fang et al. (2014). We did not conduct it exclusively among students and university faculty members but broadened our sample by explicitly inviting other (online) consumers as well.

In regard to the model and hypotheses used in this replication study, we retain the model and the hypotheses proposed by Fang et al. (2014). Table 1 gives an overview of the implementation characteristics of both the original study and the replication. In the following section, we describe the research methodology applied to test this model.

Table 1. Comparison of the Implementation of the Original Study and the Replication.		
	Fang et al. (2014)	**Replication**
Sample	University Personnel and Students, Northern Ireland	Panel Data (SoSci Survey), Germany
Data Collection	2004 (and 2013)	2016
Sample Size	362	726
Data Analysis Technique	Partial Least Squares (SmartPLS)	Partial Least Squares (SmartPLS)
Language	English	German
Most Popular	Air Tickets	Clothes and Electronics

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2 Research Methodology

2.1 Survey Design

Our survey is divided into two parts. The first part was used to measure the general experience of online shopping. The concepts PEEIM, satisfaction with shopping online and general expertise using the Internet were measured using seven-point Likert scales.

As a break between the first and the second part of the study, a recall method was added. This method was replicated from the original study to subconsciously guide the participants to concentrate on a specific vendor to trigger the recollection of a specific, rather than a general, experience.

The second part of our study included the concepts SV, RPI, TV, vendor reputation, and perceived website quality, which focused on what the vendor remembered during the recall task. All items in the second part were measured through seven-point Likert scales with the exception of two constructs (i.e., vendor reputation and perceived website quality), which were each assessed on seven-point semantic differential scales. In line with the original research, we asked for the price of the product or service bought and its type. Furthermore, demographic variables (i.e., age, gender, education, employment, income, and location) were collected.

We complemented the survey with a control mechanism comparable to previous research (e.g., Gimpel, Nißen, & Görlitz, 2013) to control for common method variance (Lindell & Whitney, 2001). For instance, we asked the participants between other items to select a specific value, collected all data anonymously, and did not offer or imply any rewards for specific answers (for further details on our approach to prevent and analyze common method variance, see *Limitations*).

To validate the translation process, we used the back translation method (Brislin, 1970). This method was necessary, as the language of the original survey was English and our study was conducted in Germany. The translation from English to German was made by a hired professional English native speaker and reviewed by a second, independent one. Afterwards, two German native speakers individually translated the German version back into English. Finally, a third person proof-read the original and the back-translated versions to assure translation quality (Brislin, 1970). Appendix B gives the original, English items in Table B1, while Table B2 gives the translated, German items.

2.2 Data Collection

The data was collected through the online survey tool SoSci Survey (http://www.soscisurvey.de) mainly for three reasons. First, the tool allows one to conduct complex surveys easily. Second, our survey was reviewed one additional time to ensure design quality, including formal (questions and expressions) and informal (design and layout) aspects. Therefore, we had to modify the wording of some questions. The third crucial reason for using the tool is that we had the opportunity to obtain access to a panel and therefore access to more participants.

Basically, conducting the survey comprised two phases:

(I)   First, we executed a pretest for testing the model in the new context. In contrast to the original study, we did not impose any explicit (e.g., specific age, gender, or occupation) or implicit (e.g., distributing our study during lectures) restrictions in respect to the respondents. To expand the context of the original study, we did not exclude any educational levels or employment statuses. We acquired the respondents for the pretest from our personal networks through broadcasting messages, as well as personal invitations via social media (e.g., Facebook). Additionally, we sent invitations to a Facebook group, which acts as an open panel for scientific survey. Furthermore, we appealed for further distribution by social networks.

(II)   After conducting the pretest, we used the panel to gain deeper insights and to increase the sample size. The panel used is provided by SoSci Survey as non-representative, with approximately 93,000 registered subjects.

The survey was tested independently by all authors, as well by three peers. The timeframe of the data collection was set to four weeks each for both the pretest and panel survey.

Two control questions were added to the questionnaire to inspect the attentiveness of the interviewees while completing the questionnaire. The completed questionnaires with wrong answers to these two questions were excluded from the analysis.

3 Data Analysis & Results

During the pretest, 234 usable responses were gathered. The mean age of our participants is 24.7 years, varying between 19 and 52 years (SD = 5). The most common items bought were electronics (n = 51), clothes (n = 46), books and DVDs (n = 27), and sports equipment (n = 24). The price of the product or service bought averaged 143 Euros, ranging from 5 to 6,000 Euros (SD = 424 Euros). As the data analysis from the pre-test did not lead to different conclusions, we only report our findings from the panel survey.

In total, 874 questionnaires were filled out completely by members of the SoSci Panel. SoSci offers quality criteria to clean the data set from dishonest (e.g., click-through participants) or automated (e.g., bots) answers. Penalties are given for below-average complete times (i.e., participants who were faster than the average time of completion) and for missing answers (for more information, see SoSci Survey Help). A total of 939 participants participated in our study. Out of the 874 completed questionnaires, 726 remained because 148 respondents did not answer correctly one or both of our control questions. The mean age of our participants is 39.3 years, varying between 16 and 87 years (SD = 14.5). The participants reported an average yearly income of 42,172.82 Euros, ranging between 20.00 and 550,000.00 Euros (SD = 54,010.57 Euros). Approximately 62.26% of the participants identified as female (n = 452), while 36.36% (n = 264) identified as male and 0.14% (n=1) identified as other; 1.24% (n = 9) did not answer. Most of the participants (n = 352; 48.485%) reported being employed, but not at a university, followed by students (n = 169; 23.278%), self-employed (n = 58; 7.989%), university personnel (n = 53; 7.300%), retiree (n = 45; 6.198%), and job-seeking (n = 17; 2.342%). Thirty-two (4.408%) did not answer. While the majority of participants reported residing in Germany (n = 599; 82.507%), some reported residing in other parts of Europe (n = 118; 16.253%) and some elsewhere (n=7; 0.964%). Two did not answer (0.275%). Most of the participants (n = 431; 59.367%) reported having a university degree, followed by a high-school diploma or equivalent (n = 226; 31.130%), secondary school leaving certificate or equivalent (n = 56; 7.713%), and no degree (n = 1; 0.138%). Twelve did not answer (1.653%). The most common items bought were clothes (n = 121), electronics (n = 114), books (n = 103), household items (n = 42), sports equipment (n = 34), movies (n = 30), flight tickets (n = 26), and other items (n = 256, e.g., hotel room bookings, kitchen items, concert tickets, etc.).

In line with the original study, the research model was tested using partial least squares (PLS). For the analysis, we relied on SmartPLS (Ringle, Wende, & Becker, 2015). The analyses concerning the moderating effects were performed using the product-indicator approach. The significance tests were retrieved using SmartPLS' bootstrapping with 5,000 samples.

3.1 Measurement Model

Since our measurement model contains reflective indicators only, we consider the following four criteria for reliability and validity: internal consistency, indicator reliability, convergent validity, and discriminant validity.

First, two criteria can be used to evaluate internal consistency. Cronbach's alpha and composite reliability must exceed 0.700 for each construct (Nunnally, 1978; Werts, Linn, & Jöreskog, 1974). The model fulfills both criteria since the respective values are above the recommended threshold (see Table 2).

Second, indicators are considered reliable if the associated latent construct explains more than half of the indicator's variance (Henseler, Ringle, & Sinkovics, 2009). Indicators are reliable if they have a t-value equal to 1.66 or higher (level of significance .05) and a loading of 0.700 or higher. Concerning items with loadings below 0.700, we proceeded as follows (Hair, Hult, Ringle, & Sarstedt, 2013). Since none of the items had a loading below 0.400, we assessed whether removing items led to an improvement of composite reliability or average variance extracted (AVE) of the respective latent construct. Beginning with the item with the lowest loading (i.e., WQ10 with a loading of 0.474), we removed the respective item and recalculated the model. As a result, we removed the following items: WQ10, WQ11, WQ13, WQ09, WQ06, TV04, SV03, and SI03. Notwithstanding the removal, we retained sufficient items for each construct. We explain the removal of the set of items for website quality in our discussion.

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Table 2. Mean, Standard Deviation (SD), Cronbach's Alpha (CA), Composite Reliability (CR), Average Variance Extracted (AVE), Construct Correlations, and the Square Root of AVE

	Mean	SD	CA	CR	AVE	SI	VR	RPI	PEEIM	TV	SV	WQ	EXP	FV	G
SI	5.605	1.164	.855	.932	.873	**.934**									
VR	5.190	1.296	.873	.940	.887	.159	**.942**								
RPI	*	*	.895	.935	.827	.364	.138	**.909**							
PEEIM	3.350	1.673	.782	.858	.604	.383	.152	.143	**.777**						
TV	5.424	1.342	.903	.924	.635	.427	.473	.417	.341	**.797**					
SV	6.007	1.207	.913	.945	.852	.505	.433	.603	.239	.740	**.923**				
WQ	5.704	1.227	.896	.917	.579	.287	.279	.425	.145	.419	.466	**.761**			
EXP	5.665	1267	.886	.921	.746	.367	.054	.258	.233	.283	.279	.219	**.864**		
FV	5.530	1.320	1.00	1.00	1.00	.269	.186	.529	.180	.415	.454	.371	.358	**1.00**	
G	**	**	1.00	1.00	1.00	-.010	-.055	-.030	-.015	.000	-.048	-.092	.101	.024	**1.00**

diagonal elements represent the square-root of AVE

* due to different scales of each item, no mean and standard deviation are available

** as gender is measured on a nominal scale, mean and standard deviation are not reported

Third, the following criteria can be applied to assess convergent validity (Fornell & Larcker, 1981): composite construct reliabilities should exceed 0.800 and AVE should exceed 0.500 for each construct. Table 2 demonstrates that the composite reliabilities of all constructs exceed the required minimum of 0.800 and that the AVE values of all constructs exceed the threshold of 0.500. Thus, convergent validity conditions are met.

Fourth, to confirm discriminant validity, latent variables must explain their indicators' variances to a higher degree than the variances of other latent variables (Fornell & Larcker, 1981). Accordingly, the square root of each construct's AVE must exceed the correlations with the other constructs. With the highest correlation between two constructs of 0.740 and the lowest square root of an AVE of .761, all latent variables fulfill this criterion (see Table 2). Moreover, we evaluated discriminant validity by examining the factor loadings of each indicator. According to Chin (1998), each indicator must load higher on the associated construct compared to all other factors. In our case, corroborate discriminant validity is confirmed by factor loadings and cross-loadings (see Table 3). In addition to the Fornell-Larcker criterion, Henseler, Ringle, and Sarstedt (2015) propose Heterotrait-monotrait (HTMT) ratio of correlations as a new criterion to assess discriminant validity. Table 4 shows the calculated HTMT values for our model. The highest HTMT value of 0.809 is below a conservative threshold of 0.850 (Henseler et al., 2015). Combining the results from the HTMT criterion and the Fornell-Larcker criterion is seen as a promising approach to assess discriminant validity (Voorhees, Brady, Calantone, & Ramirez, 2015).

Table 3. Factor Loadings (bold) and Cross-loadings

Construct	Item	SI	VR	RPI	PEEIM	TV	SV	WQ	EXP	FV	G
Satisfaction w/ Internet (SI)	SI01	**.933**	.161	.338	.335	.395	.474	.296	.319	.243	-.025
	SI02	**.936**	.136	.343	.381	.403	.470	.242	.367	.259	.005
Vendor Reputation (VR)	VR01	.128	**.934**	.110	.139	.418	.370	.251	.042	.160	-.053
	VR02	.169	**.950**	.147	.147	.470	.441	.273	.058	.188	-.050
Repurchase Intention (RPI)	RP01	.317	.074	**.876**	.132	.307	.474	.389	.247	.488	.024
	RP02	.356	.171	**.911**	.141	.414	.582	.375	.224	.460	-.051

Table 3. Factor Loadings (bold) and Cross-loadings

Construct	Item	SI	VR	RPI	PEEIM	TV	SV	WQ	EXP	FV	G
	RP03	.321	.127	**.940**	.119	.411	.586	.396	.235	.496	-.051
PEEIM	PE01	.326	.096	.087	**.824**	.260	.167	.081	.159	.120	-.027
	PE02	.370	.186	.164	**.824**	.320	.246	.153	.268	.183	-.047
	PE03	.256	.068	.090	**.753**	.252	.154	.102	.151	.128	.002
	PE04	.208	.099	.085	**.700**	.207	.158	.104	.111	.114	.047
Trust in Vendor (TV)	TV01	.322	.319	.257	.226	**.714**	.510	.285	.203	.279	.026
	TV02	.345	.298	.428	.265	**.774**	.631	.414	.234	.384	-.005
	TV03	.311	.438	.268	.305	**.830**	.562	.295	.223	.295	.048
	TV05	.317	.357	.263	.353	**.735**	.493	.332	.201	.304	-.062
	TV06	.373	.414	.357	.295	**.864**	.644	.327	.259	.341	-.032
	TV07	.288	.484	.303	.254	**.823**	.590	.315	.205	.327	.022
	TV08	.414	.338	.411	.218	**.828**	.667	.355	.246	.368	.006
Satisfaction w/ Vendor (SV)	SV01	.497	.353	.564	.204	.709	**.940**	.448	.257	.409	-.043
	SV02	.494	.416	.551	.233	.713	**.943**	.459	.254	.435	-.028
	SV04	.404	.434	.557	.227	.625	**.885**	.380	.264	.413	-.065
Website Quality (WQ)	WQ01	.251	.212	.364	.087	.324	.389	**.826**	.157	.305	-.121
	WQ02	.228	.254	.342	.112	.406	.410	**.793**	.163	.310	-.069
	WQ03	.199	.224	.276	.113	.292	.333	**.796**	.174	.247	-.092
	WQ04	.206	.244	.288	.125	.326	.349	**.768**	.157	.276	-.081
	WQ05	.265	.147	.357	.116	.236	.318	**.721**	.202	.291	-.024
	WQ07	.251	.152	.371	.082	.279	.342	**.708**	.242	.312	-.007
	WQ08	.199	.229	.294	.140	.335	.341	**.716**	.137	.249	-.091
	WQ12	.142	.226	.280	.115	.331	.335	**.750**	.101	.256	-.073
Expertise (EXP)	EX01	.343	.076	.266	.259	.263	.249	.222	**.920**	.347	.100
	EX02	.338	.026	.236	.141	.239	.273	.188	**.838**	.309	.014
	EX03	.278	.011	.191	.182	.214	.203	.151	**.818**	.273	.124
	EX04	.297	.067	.177	.218	.258	.232	.185	**.875**	.295	.128
Familiarity w/ Vendor (FV)	FV01	.269	.186	.529	.180	.415	.454	.371	.358	**1.00**	.024
Gender (G)	G01	-.010	-.055	-.030	-.015	.000	-.048	-.092	.101	.024	**1.00**

Table 4. HTMT Values

Construct	SI	VR	RPI	PEEIM	TV	SV	WQ	EXP	FV	G
SI	--									
VR	.182	--								
RPI	.417	.153	--							
PEEIM	.456	.175	.164	--						
TV	.484	.533	.401	.401	--					
SV	.571	.484	.276	.276	.809	--				
WQ	.327	.313	.170	.170	.460	.511	--			
EXP	.417	.059	.284	.264	.314	.308	.243	--		
FV	.291	.198	.560	.198	.434	.475	.390	.376	--	
G	.017	.059	.049	.044	.038	.051	.097	.113	.024	--

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3.2 Structural Model

Figure 2 displays the structural model with standardized weights and indicates significant p-values, while Table 5 provides the respective values for effect size (f^2) and predictive relevance (q^2). The two main hypotheses of Fang et al. (2014) were a negative moderation of PEEIM on the relation between TV and RPI (H_1) and that PEEIM positively moderates the relationship between SV and TV (H_2). Figure 2 shows that PEEIM has no moderating effect on the relation between TV and RPI (p = n.s.) for our sample and that PEEIM also has no moderating effect on the relation between SV and TV (p = n.s.). Furthermore, TV has no significant direct effect on RPI (p = n.s.). In contrast, the connection between SV and RPI (p < .001) is highly significant. The remaining paths, that is, SV to TV (p < .001) and PEEIM to TV (p < .001), were found to be highly significant. These results are contrary to the original study by Fang et al. (2014), as our results do not support H_1 and H_2. Instead, our results indicate that there is a significant influence of PEEIM on TV (p < .001).

Figure 2 also includes the control variables, whereby dotted lines represent non-significant paths (i.e., with a p-value >= .05) and solid lines represent significant paths. While the paths from website quality to RPI and TV as well as the path from vendor reputation to TV, were significant in both the original study and our replication, our replication showed vendor reputation to have a significant effect on TV, which was not present in the original study. Further, familiarity with vendor was a significant predictor for RPI and TV in our study, which contradicts the findings of Fang et al. (2014).
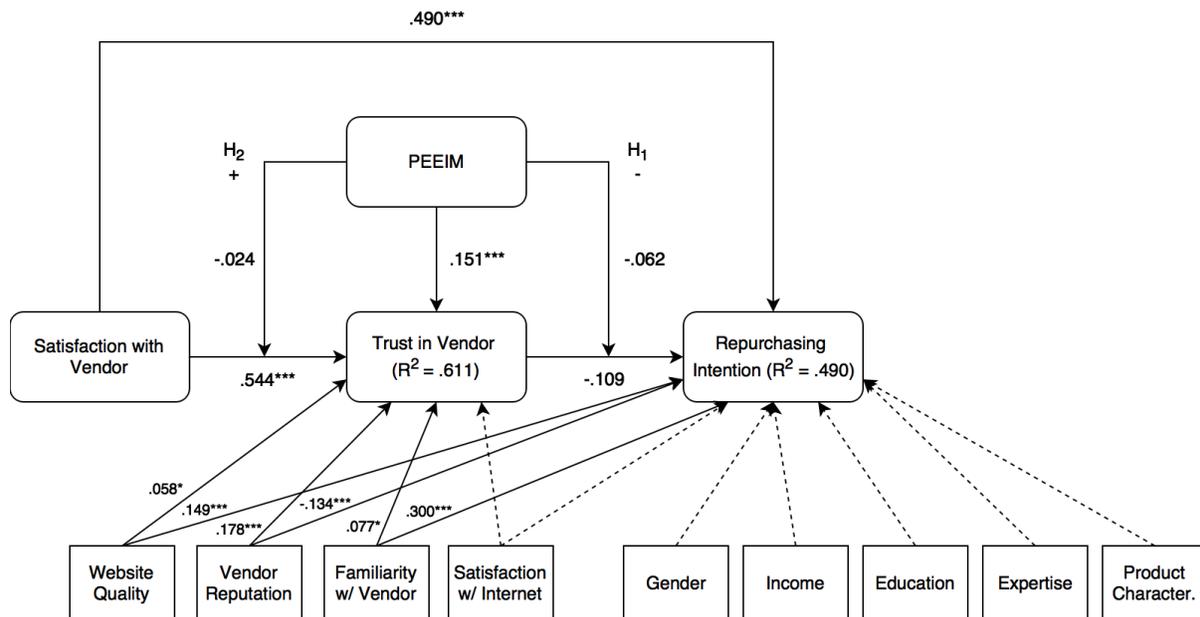

Figure 2. Estimated Research Model
*: p < .05; **: p < .01; ***: p < .001

Table 5. Effect Size and Predictive Relevance				
	f^2		**Effect Size** according to Cohen (1988)	q^2
	Original		Replication	
SV → TV	.010	.349	medium to high	.142
SV → RPI	--	.165	medium	.107
TV → RPI	0.12	.009	small	.003
PEEIM → TV	--	.049	small	.017
SV * PEEIM → TV	.050	.001	small	.000
TV * PEEIM → RPI	.003	.007	small	.002

4   Discussion

4.1   Implications

Table 6 juxtaposes the findings of the original study (Fang et al., 2014) and our replication for the measurement model, the structural model, and the control variables. While relying on a methodological replication (i.e., using the same methods but in a different context), our main finding is the lack of support for the model of Fang et al. (2014). In particular, our study neither supports H_1 (i.e., PEEIM's moderating role for TV → RPI) nor H_2 (i.e., PEEIM's moderating role for SV → TV). Instead, we identified a positive influence of PEEIM on TV, which was not revealed in the study by Fang et al. (2014). Additionally, our replication does not confirm the positive influence of TV on RPI. In the following, we discuss reasons for these contradicting findings and suggest avenues for future research. The larger sample size of 726 usable responses in our study, compared to the original study, which had 362 usable responses (Fang et al., 2014), is generally favorable to increase the representativeness of the research. However, it also likely to contribute to the significance of the control variables and path weights.

Table 6. Comparison of the Results of the Original Study and the Replication		
	Fang et al. (2014)	**Replication**
Measurement Model		
Model Fit & Evaluation	Satisfactory	Satisfactory (after item removal)
Structural Model		
TV → RPI	Significant	Non-Significant
SAT → TV	Significant	Significant
SAT → RPI	Significant	Significant
PEEIM → TV	Non-Significant	Significant (consistent with Pavlou & Gefen, 2004)
PEEIM → RPI	Non-Significant	Non-Significant
H_1: PEEIM * SAT → TV	Significant	Non-Significant
H_2: PEEIM * TV → RPI	Significant	Non-Significant
Control Variables		
Perceived Website Quality → TV	Significant	Non-Significant
Perceived Website Quality → RPI	Significant	Significant
Vendor Reputation → TV	Significant	Significant
Vendor Reputation → RPI	Non-Significant	Significant
Familiarity w/ Vendor → TV	Non-Significant	Significant
Familiarity w/ Vendor → RPI	Non-Significant	Significant
Gender → RPI	Non-Significant	Significant
Satisfaction w/ Internet → TV	Non-Significant	Non-Significant
Satisfaction w/ Internet → RPI	Non-Significant	Non-Significant
Income → RPI	Non-Significant	Non-Significant
Education → RPI	Non-Significant	Non-Significant
Expertise → RPI	Non-Significant	Non-Significant
Product Characteristics → RPI	Non-Significant	Non-Significant

In general, we see a major reason for the observed differences in the point in time at which the data was collected for the original study and our replication. While we collected data in 2016, the data in the original study was predominantly collected in approximately 2004. Given the time that has elapsed between both studies, several contextual factors have changed.

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First, dynamics of online shopping (e.g., increasing number of online shoppers, advances in mobile technologies and its adoption, new service delivery features) have considerably changed online shoppers' expectations (e.g., design, ease of use, accessibility) concerning websites (Bilgihan, Kandampully, & Zhang, 2016; Fang, Wen, George, & Prybutok, 2016). This also becomes apparent in our data. For example, considering the construct website quality, we had to remove several items due to their low loadings that concern aspects such as layout, excitement, and website transmission. The need to adapt the measurement is reflected by more recent approaches to assess website quality (e.g., Wells, Valacich, & Hess, 2011). The remaining items reflect a focus on websites that are easy to use, well-organized, and provide operational efficiency. While in the early years of e-commerce, aspects such as arousal and excitement might have been important in attracting online shoppers, currently e-commerce websites are well-known and a quasi-standard for shoppers; therefore, an effective and efficient order process seems to be the number one priority.

Second, currently, trust in vendor seems to play a minor role in repurchase intentions. In contrast to Fang et al. (2014), our replication does not provide evidence for a positive relation between TV and RPI. While earlier studies are in favor of the role of trust for purchase intensions (e.g., van der Heijden, Verhagen, & Creemers, 2003), we suggest that trust is important for initially using a website for (online) shopping. However, our results suggest that SV has a medium effect on RPI and is thus more important than trust. In other words, TV is important for the initial contact, while SV is decisive for RPI. Considering the low share of booking a holiday via online channels in the UK at the time of the original study (Statista, 2017b) – which almost doubled from 23% in 2005 to 44% in 2013 – and the emphasis on flight tickets in the original sample, a high share of first-time bookers appears likely, for which TV could be important. Furthermore, in today's e-commerce environment, many vendors have been active for more than a decade and have thus acquired a reputation, which they might not have had at the time of the original study. This might have led to a higher importance of institutional mechanisms in the past compared to today's e-commerce, where SV has become a more important factor.

Third, despite the reduced importance of PEEIM in general, it also plays a role here. PEEIM has a positive impact on TV, which did not find support in the original study. Considering that the original study is based on data from an earlier "age" of e-commerce, long-term satisfaction might not have been established yet, thus explaining the larger role of TV at that time. Additionally, our measurement shows that SV and TV are highly correlated. If online shoppers do not explicitly differentiate between the two constructs, it is likely that one of those constructs is mediated by the other. However, the finding that trust and satisfaction concerning a shopping website are highly correlated is not a new one (Yoon, 2002).

Fourth, as online shopping continues to gain importance in Germany – with numbers increasing from 15% of all shoppers in 2002 to 45% of all shoppers in 2013 (Statista, 2017c) – online shopping regulations also increase, which leads to better consumer protection and customer rights (Kariyawasam & Wigley, 2017). Additionally, a majority of respondents in our sample referred to online shopping at Amazon (http://www.amazon.de). In Germany, this vendor has a well-established standing and provides high customer service, which is reflected in Amazon's huge share in Germany's online trading turnover (Statista, 2017a). Trust is, therefore, of less importance if the customers are continuously satisfied with their purchases, which is reflected in our data (i.e., the mean value of SV amounts to 6.007).

Fifth, another difference between the original study and our replication is the kind of purchase made (services vs. goods). Participants of our sample did not mostly buy flight tickets (3.59% of all items bought in our sample vs. 25.41% in the original study) but rather electronics (15.75%, no exact figure available for the original study) and clothing (16.71% vs. 10.22% in the original study). Research (e.g., Murray & Schlacter, 1990) found that services increase the perception of risks compared to goods. Considering the role of TV, one might thus presume that a consumer's process of repurchase differs in regard to goods and services. To analyze this difference, we performed a multi-group analysis (see Appendix C). While Figure C1 shows the differences between goods and services, Figure C2 and Figure C3 show the estimated path models for goods and services, respectively. Additionally, Table C1 provides the path weights and p-values for each path. Although Figure C1 shows no significant differences between goods and services, the estimated path model for services (see Figure C3) reveals a significantly negative moderating effect of PEEIM for the influence of TV on RPI, as suggested in H_1. However, the moderated path – that is, the effect of TV on RPI – remains non-significant.

Based on these implications, we suggest the following avenues for future research. First, the analysis should include further contextual control variables. Predominantly, the differentiation between first purchases and repeated purchases can contribute to better understanding the role of trust for repurchase intentions.

Second, replicating the study in different cultural settings might reveal further insights. In prior research, cultural differences between people from different countries and regions have been identified based on cultural norms (Hofstede & Hofstede, 2005), taking into account dimensions such as power distance, individualism, or uncertainty avoidance. For example, as regards uncertainty avoidance Asian cultures such as the Chinese one is much more comfortable with ambiguity und uncertainty than European cultures such the German one (https://www.hofstede-insights.com/country-comparison/china,germany/). Both the original study and our replication were conducted in Western European countries (i.e., in similar contexts). Shifting the analysis, for instance, to Asian cultures is a promising research endeavor in order to test for boundaries as regards the role of PEEIM, which might be different considering the different nature of Western online platforms versus Asian platforms such as TaoBao (e.g., Huang, Chen, Ou, Davison, & Hua, 2017). Third, in addition to considering different cultural patterns, analyzing repurchase intentions in relation to platforms such as TaoBao can help to explore PEEIM boundaries since it operates in a customer-to-customer context. Here, the interplay of satisfaction, trust, and repurchase intention might be different because the e-commerce institutional mechanisms are not offered by the same party that sells a good or service. Fourth, our multi-group analysis points toward another promising avenue for future research. A more detailed differentiation between different types of purchases can help to determine the boundaries of the research model. Finally, we suggest that further replications should consider a longitudinal design. An analysis of multiple events could reveal differences in buyers' perceptions over repeated purchases, if, for instance, reciprocal causations are the underlying phenomena (Mitchell & James, 2001). Taking the effects of time and "when the variables involved in the relationship occur" (Mitchell & James, 2001, p. 530) into consideration is crucial for building better theories.

4.2   Limitations

First, our study suffers from limited representativeness since we obtained data from a panel. Due to limited insights into the members of the panel and the panel's acquisition of participants for our study, our data collection is subject to a selection bias. As seen from the descriptive data analysis, our sample is not representative. However, it provides a broad cross-section of different educational backgrounds, age groups, employment statuses, and income levels (see "Data Analysis & Results" for more details). Recent research investigated how student samples, consumer panels, and online crowdsourcing markets (e.g., Amazon Mechanical Turk) differ in statistical conclusions and found no significant variation when comparing samples originating from the same country (Steelman, Hammer, & Limayem, 2014). The questionnaire that we used in the panel has a slightly different wording compared to the initial wording resulting from the back-translation method, as modifications were mandatory for panel access.[1] Therefore, they are not identical and must be analyzed separately. Strictly speaking, the changes made for panel access affects the comparability of our study to the original study. Bringing these changes into context, we believe that all changes improved the questionnaire's readability and reduced ambiguity.

Second, common method variance might be an issue in our research. While method biases are presumed to be less serious in information systems research compared to other disciplines (Malhotra, Kim, & Patil, 2006), we designed our study in a way that reduces the risk of increased correlations (Lindell & Whitney, 2001; Malhotra et al., 2006) that results from collecting information for both the dependent and independent variables from the same key informants. In particular, we included the variables WQ14 and TV9, which requested the respondents to select the option to the far left and right, respectively, and excluded all respondents from our sample who did not comply with one or both of these requests. Additionally, we analyzed our data based on Harmon's single-factor test (Malhotra et al., 2006) by means of an exploratory factor analysis of all items (Podsakoff, Mackenzie, Lee, & Podsakoff, 2003). With none of the factors accounting for a majority of the variance, common method variance is unlikely to exist in our study. Furthermore, we applied the marker-variable technique in a post hoc fashion to check for the correlation between theoretically uncorrelated dimensions (Malhotra et al., 2006). Using the second-smallest positive correlation (i.e., 0.01) between manifest variables (except for WQ14 and TV9) as proxy (Lindell & Whitney, 2001) supports the claim that common method variance is not prevalent in our study.

Finally, among all participants, we raffled a 100-Euro voucher for online shopping. To avoid hypothesis guessing as a potential threat to construct validity (Cook & Campbell, 1979), we did not mention the online

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[1] As an example, we had to first introduce the question, followed by the scale. For instance, "Please select the option that best describes how satisfied you are with previous experiences with the vendor" became "In the following you will see multiple items regarding your satisfaction of previous experiences with the vendor. Please select the option that fits best".

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shop or website and did our best to formulate the lottery as neutrally as possible. Nevertheless, interviewees could have guessed that it was a voucher for Amazon Germany, as these vouchers are common in online surveys. This could have biased the interviewees to mistake Amazon for their last e-commerce vendor, which would result in a non-representative sample in terms of all available e-commerce vendors. The underlying assumptions of how transactions are evaluated and a repurchase intention is formed should nevertheless be comparable, irrespective of the specific vendor.

5   Conclusion

With this research, we answer the call for more replication in the field of information systems in general (Dennis & Valacich, 2014; Morrison et al., 2010; Niederman & March, 2015) and for the original study of our replication (Fang et al., 2014) in particular. With our methodological replication, we reveal that PEEIM currently does not play a moderating role in the relations between SV, TV, and RPI. By discussing this contradiction based on changes in online shopping behavior between 2004 and 2016, we contribute to an improved understanding of the mechanisms in online shopping contexts.

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Appendix A: Sample Characteristics

Table A1. Sample Characteristics as reported by Fang et al. (2014)		
865 distributed questionnaires	362 usable responses	
Of which were	695 business students	170 faculty members
	70% female	30% male
	Mean age of 29 years.	

Appendix B: Questionnaire Items

To improve the comparability, we used the same items as Fang et al. (2014) for the English version, the German items were translated according to the back translation method (Brislin, 1970).

Table B1. Original English Questionnaire Items and Back-Translated Items. Differences are highlighted.		
ID	**Original Item**	**Back-Translated Item**
General Perceptions about Online Purchase		
Perceived Effectiveness of E-commerce Institutional Mechanisms (scale 1-7)		
Below you will see a series of statements. If you agree with a statement completely, please circle the number on the far right. If you absolutely do not agree with a statement, please circle the number on the far left. You can balance your agreement or disagreement with the other numbers.		Below you will see a set of statements. If you agree with a statement completely, please select the option on the far right. If you do not agree with a statement at all, please choose the option on the far left. You can balance your agreement or disagreement with the other options.
PEEIM1	When buying online, I am confident that there are mechanisms in place to protect me against any potential risks (e.g., leaking of personal information, credit card fraud, goods not received, etc.) of online shopping if something goes wrong with my online purchase.	When buying online, I am confident that there are mechanisms in place to protect me against any potential risks (e.g., leaking of personal information, credit card fraud, lost goods, etc.) of online shopping if something goes wrong with my online purchase.
PEEIM2	I have confidence in third parties (e.g., Trusted Shops, PayPal) to protect me against any potential risks (e.g., leaking of personal information, credit card fraud, goods not received, etc.) of online shopping if something goes wrong with my online purchase.	I have confidence in third parties (e.g., SafeTrader, TRUSTe) to protect me against any potential risks (e.g., leaking of personal information, credit card fraud, lost goods, etc.) of online shopping if something goes wrong with my online purchase
PEEIM3	I am sure that I cannot be taken advantage of (e.g., leaking of personal information, credit card fraud, goods not received, etc.) as a result of conducting purchases online.	I am sure that I cannot be taken advantage of (e.g., leaking of personal information, credit card fraud, lost goods, etc.) as a result of conducting purchases online.
PEEIM4	I believe that there are other parties (e.g., my credit card company) who have an obligation to protect me against any potential risks (leaking of personal information, credit card fraud, goods not received, etc.) of online shopping if something goes wrong with my online purchase.	I believe that there are other parties (e.g., your credit card company) who have an obligation to protect me against any potential risks (leaking of personal information, credit card fraud, lost goods, etc.) of online shopping if something goes wrong with my online purchase.
Previous Satisfaction with Purchasing via the Internet (scale 1-7)		
Please select the option that best describes how satisfied you are with previous transactions via the Internet.		Please circle the number that best describes how satisfied you are with previous transactions on the Internet.
SI1	Overall, extremely satisfied.	Overall, extremely satisfied.
SI2	Overall, extremely pleased.	Overall, extremely pleased.
SI3	My expectations were exceeded.	My expectations were exceeded.
Expertise in Using the Internet to Conduct Transaction (scale 1-7)		

Please circle the number that best describes how experienced you are with previous transactions via the Internet.		Please select the option that best describes how experienced you are with <u>past</u> transactions <u>on</u> the Internet.
EXP1	I know a lot about conducting purchases via the Internet.	I know a lot about conducting purchases <u>on</u> the Internet.
EXP2	I am experienced in conducting purchases via the Internet.	I am experienced in conducting purchases <u>on</u> the Internet.
EXP3	I am an expert buyer of products/services via the Internet.	I am an expert buyer of products/services <u>on</u> the Internet.
EXP4	I am informed about conducting purchases via the Internet.	I am informed about conducting purchases <u>on</u> the Internet.
Perceptions about a Specific Vendor		
As you fill out this part, please think of a vendor you have purchased from recently via the internet. A vendor could either be an organisation or company that produces or provides the product or service (e.g., www.easyjet.com; www.blackstar.co.uk), or it could be an intermediary that sells various products or services (e.g., www.tesco.com). It doesn't matter which one you choose, as long as you keep it in mind as you fill out Part C. So that you are clear, please answer the following preliminary questions before you proceed:		As you fill out this part, please think of a vendor you have <u>recently purchased from on</u> the internet. A vendor could either be an <u>organization</u> or company that produces or provides the product or service (e.g., <u>www.ryanair.com; www.apple.com</u>), or it could be an intermediary that sells various products or services (e.g., <u>www.amazon.com</u>). It <u>does not</u> matter which one you choose, as long as you keep it in mind <u>while</u> you fill out the following parts. So that you are clear <u>on this</u>, please answer the following preliminary questions before you proceed.
VEN	The vendor I am thinking of is: a company or brand that produces or provides the actual service an intermediary or wholesaler that sells a host of products and/or services on their Web site	The vendor I am thinking of is: a company or brand that produces or provides the actual service an intermediary or wholesaler that sells a <u>variety</u> of products and/or services on their Web site
Repurchase Intention		
Please indicate the degree to which you agree with the following statements concerning your likelihood/probability of buying online again from the vendor you had in mind as you filled out this questionnaire.		Please indicate the degree to which you agree with the following statements concerning your likelihood/probability of buying online again from the vendor you had in mind as you filled out this questionnaire.
RPI1	In the medium term	In the medium term
RPI2	In the long term	In the long term
RPI3	All things considered, and on a scale from 0-100%, what is the probability that you will purchase online from the same vendor again?	All things considered, and on a scale from 0-100%, what is the probability that you will purchase online from the same vendor again?
Trust in Vendor (scale 1-7)		
Please indicate the degree to which you agree with the following statements concerning your trust to the vendor you had in mind as you filled out this questionnaire.		Please indicate the degree to which you agree with the following statements concerning your trust to the vendor you had in mind as you filled out this questionnaire.
TV1	I believe that this vendor is consistent in quality and service.	I believe that this vendor is consistent in quality and service.
TV2	I believe that this vendor is keen on fulfilling my needs and wants.	I believe that this vendor is <u>eager to fulfil</u> my needs and wants.
TV3	I believe that this vendor is honest.	I believe that this vendor is honest.
TV4	I believe that this vendor wants to be known as one that keeps promises and commitments.	I believe that this vendor wants to be known as one that keeps promises and commitments.
TV5	I believe that this vendor has my best interests in mind.	I believe that this vendor has my best interests in mind.
TV6	I believe that this vendor is trustworthy.	I believe that this vendor is trustworthy.
TV7	I believe that this vendor has high integrity.	I believe that this vendor has high integrity.
TV8	I believe that this vendor is dependable.	I believe that this vendor is dependable.
TV9	--	Please select the option to the far right.
Previous Satisfaction with Vendor (scale 1-7)		

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	Please circle the number that best describes how satisfied you are with previous experiences with the vendor.	Please select the option that best describes how satisfied you are with previous experiences with the vendor.
SV1	Overall, extremely satisfied.	Overall, extremely satisfied.
SV2	Overall, extremely pleased.	Overall, extremely pleased.
SV3	My expectations were exceeded.	My expectations were exceeded.
SV4	I would recommend this vendor to a friend.	I would recommend this vendor to a friend.
Vendor Image/Reputation (1-7 semantic differential)		
	Please circle the number that best describes your perception of the vendor you now have in mind on each of the attributes below.	Please select the option that best describes your perception of the vendor you now have in mind on each of the attributes below.
VR1	Poor public image / Excellent public image	Bad public image / Excellent public image
VR2	Has a poor reputation / Has an excellent reputation	Has a bad reputation / Has an excellent reputation
Perceived Website Quality (1-7 semantic differential)		
	Please circle the number that best describes your perception of the vendor's website on each of the attributes below.	Please select the option that best describes your perception of the vendor's website on each of the attributes below.
WQ1	Extremely difficult to use / Extremely easy to use	Extremely difficult to use / Extremely easy to use
WQ2	Extremely poor organized / Extremely well organized	Extremely bad organized Extremely well organized
WQ3	Extremely difficult to navigate / Extremely easy to navigate	Extremely difficult to navigate / Extremely easy to navigate
WQ4	Extremely difficult to find information that I want / Extremely easy to find information that I want	Extremely difficult to find the information that I want / Extremely easy to find information that I want
WQ5	Extremely difficult to conduct online shopping / Extremely easy to conduct online shopping	Extremely difficult to shop online / Extremely easy to conduct online shopping
WQ6	Extremely slow in transmitting words and images / Extremely fast in transmitting words and images	Extremely slow in transmitting words and images / Extremely fast in transmitting words and images
WQ7	Poor in terms of operational efficiency (e.g., non-working links, etc.) / Excellent in terms of operational efficiency (e.g., working links, etc.)	Poor in terms of operational efficiency (e.g., broken links, etc.) / Excellent in terms of operational efficiency (e.g., working links, etc.)
WQ8	Extremely useless search/help functions / Extremely useful search/help functions	Extremely useless search/help functions / Extremely useful search/help functions
WQ9	Extremely uninteresting / Extremely interesting	Extremely uninteresting / Extremely interesting
WQ10	Extremely unexciting / Extremely exciting	Extremely unexciting / Extremely exciting
WQ11	Extremely boring / Extremely entertaining	Extremely boring / Extremely entertaining
WQ12	Extremely unclear layout / Extremely clear layout	Extremely unclear layout / Extremely clear layout
WQ13	Low attention-grabbing ability / High attention-grabbing ability	Low attention-grabbing ability High attention-grabbing ability
WQ14	--	Please select the option to the far left.
Familiarity with Vendor (scale 1-7)		
FAM	Overall, how familiar are you with the vendor you now have in mind?	Overall, how familiar are you with the vendor you currently have in mind?
Product Characteristics		
PC1	Approximately how much did the product or service you bought cost (in Euros)?	Approximately how much did the product or service you bought cost (in Euros)?
PC2	What was the item you bought?	What was the item you bought?

Table B2. Translated German Questionnaire Items.	
ID	**Item**
General Perceptions about Online Purchase	
Perceived Effectiveness of E-commerce Institutional Mechanisms (scale 1-7)	
Nachfolgend lesen Sie eine Reihe von Aussagen. Wenn Sie einer Aussage voll und ganz zustimmen, wählen Sie in der entsprechenden Zeile bitte die Auswahloption ganz rechts. Wenn Sie der Aussage gar nicht zustimmen, wählen Sie bitte die Auswahloption ganz links. Mit den Auswahloptionen dazwischen können Sie Ihre Beurteilung abstufen.	
PEEIM1	Beim Online-Kauf bin ich überzeugt, dass Mechanismen vorhanden sind, die mich gegen jegliche potenziellen Risiken (z. B. Verbreitung persönlicher Daten, Kreditkartenbetrug, nicht erhaltene Waren usw.) des Online-Einkaufs schützen, wenn mit meinem Online-Kauf etwas schiefgeht.
PEEIM2	Ich vertraue darauf, dass Dritte (z. B. Trusted Shops, PayPal) mich gegen jegliche potenziellen Risiken (z. B. Verbreitung persönlicher Daten, Kreditkartenbetrug, nicht erhaltene Waren usw.) des Online-Einkaufs schützen, wenn mit meinem Online-Kauf etwas schiefgeht.
PEEIM3	Ich bin mir sicher, dass ich infolge der Durchführung eines Online-Kaufs nicht ausgenutzt werden kann (z. B. durch Verbreitung persönlicher Daten, Kreditkartenbetrug, nicht erhaltene Waren usw.).
PEEIM4	Ich glaube, dass es andere Unternehmen und Organisationen gibt (z. B. mein Kreditkartenunternehmen), die verpflichtet sind, mich gegen jegliche potenziellen Risiken (Verbreitung persönlicher Daten, Kreditkartenbetrug, nicht erhaltene Waren, etc.) des Online-Einkaufs zu schützen, wenn mit meinem Online-Kauf etwas schiefgeht.
Previous Satisfaction with Purchasing via the Internet (scale 1-7)	
Bitte wählen Sie die Option an, die am besten beschreibt, wie zufrieden Sie mit früheren, über das Internet getätigten Transaktionen sind.	
SI1	Insgesamt sehr zufrieden.
SI2	Insgesamt sehr überzeugt.
SI3	Meine Erwartungen wurden übertroffen.
Expertise in Using the Internet to Conduct Transaction (scale 1-7)	
Bitte wählen Sie die Option an, die am besten beschreibt, welche Erfahrungen Sie mit früheren, über das Internet getätigten Transaktionen gemacht haben.	
EXP1	Ich kenne mich mit der Durchführung von Einkäufen über das Internet gut aus.
EXP2	Ich habe Erfahrung mit der Durchführung von Käufen über das Internet.
EXP3	Ich bin ein fachkundiger Käufer von Produkten/Diensten, die über das Internet angeboten werden.
EXP4	Ich weiß über die Durchführung von Einkäufen über das Internet Bescheid.
Perceptions about a Specific Vendor	
Denken Sie beim Ausfüllen dieses Abschnitts bitte an einen Verkäufer, von dem Sie kürzlich über das Internet Ware erworben haben. Ein Verkäufer kann entweder eine Organisation oder ein Unternehmen sein, die/das das jeweilige Produkt / den jeweiligen Dienst anbietet oder erstellt (z. B. www.ryanair.com; www.apple.com), oder aber ein Zwischenhändler, der verschiedene Produkte oder Dienste zum Kauf anbietet (z. B. www.amazon.de). Es spielt keine Rolle, für welchen Verkäufer Sie sich entscheiden, solange Sie sich beim weiteren Ausfüllen auf diesen beziehen. Bitte beantworten Sie - nur, damit Sie sich darüber im Klaren sind - die folgenden einleitenden Fragen, ehe Sie fortfahren.	
VEN	Der Verkäufer, für den ich mich entschieden habe ist: ein Unternehmen oder eine Marke, welche(s) den jeweiligen Dienst erstellt oder anbietet ein Zwischenhändler oder Großhändler, der über seine Internetseite sehr viele Produkte und/oder Dienste verkauft
Repurchase Intention	
Wie groß ist die Wahrscheinlichkeit, dass Sie bei dem Verkäufer, der Ihnen beim Ausfüllen dieses Fragebogens vorschwebt, erneut online kaufen?	
RPI1	Mittelfristig
RPI2	Auf lange Sicht
RPI3	Alles in allem, auf einer Skala von 0 – 100 %, wie hoch ist die Wahrscheinlichkeit, dass Sie über das Internet erneut vom gleichen Verkäufer kaufen werden?
Trust in Vendor (scale 1-7)	
Im Folgenden sehen Sie Aussagen bezüglich Ihres Vertrauens gegenüber des Verkäufer, der Ihnen beim Ausfüllen dieses Fragebogens vorschwebt. Bitte geben Sie an, wie sehr Sie den jeweiligen Aussagen zustimmen.	
TV1	Ich glaube, dass bei diesem Verkäufer Qualität und Service gleichbleibend sind.
TV2	Ich glaube, dass dieser Verkäufer sehr daran interessiert ist, meinen Anforderungen und Bedürfnissen gerecht zu werden.
TV3	Ich glaube, dass dieser Verkäufer ehrlich ist.
TV4	Ich glaube, dass dieser Verkäufer dafür bekannt sein möchte, Versprechungen und Verpflichtungen einzuhalten.

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TV5	Ich glaube, dass dieser Verkäufer mein Interesse im Sinn hat.
TV6	Ich glaube, dass dieser Verkäufer vertrauenswürdig ist.
TV7	Ich glaube, dass dieser Verkäufer hohe Integrität besitzt.
TV8	Ich glaube, dass dieser Verkäufer zuverlässig ist.
TV9	Wählen Sie bitte die Option ganz rechts

Previous Satisfaction with Vendor (scale 1-7)

Bitte wählen Sie die Option an, die am besten beschreibt, wie zufrieden Sie mit früheren Erfahrungen sind, die Sie mit dem Verkäufer gemacht haben.

SV1	Insgesamt sehr zufrieden.
SV2	Insgesamt sehr überzeugt.
SV3	Meine Erwartungen wurden übertroffen.
SV4	Ich würde einem Freund / einer Freundin diesen Verkäufer weiterempfehlen.

Vendor Image/Reputation (1-7 semantic differential)

Bitte wählen Sie bei jeder der folgenden Merkmale die Option an, die Ihre Einschätzung des von Ihnen gewählten Verkäufers am besten beschreibt.

VR1	Sehr schlechtes öffentliches Ansehen / Hervorragendes öffentliches Ansehen
VR2	Verfügt über einen sehr schlechten Ruf / Verfügt über einen ausgezeichneten Ruf

Perceived Website Quality (1-7 semantic differential)

Bitte wählen Sie bei jeder der folgenden Merkmale die Option an, die Ihre Einschätzung der Internetseite des Verkäufers am besten beschreibt.

WQ1	Besonders schwer zu nutzen / Besonders einfach zu nutzen
WQ2	Besonders schlecht organisiert / Besonders gut organisiert
WQ3	Besonders schwer zu navigieren / Besonders einfach zu navigieren
WQ4	Es ist besonders schwer, die von mir benötigten Informationen zu finden / Es ist besonders einfach, die von mir benötigten Informationen zu finden
WQ5	Es ist besonders schwer, Online-Einkäufe durchzuführen / Es ist besonders einfach, Online-Einkäufe durchzuführen
WQ6	Die Übertragung von Text und Bildern ist besonders langsam / Die Übertragung von Text und Bildern ist besonders schnell
WQ7	Extrem schlecht in Bezug auf operative Effizienz (z. B. durch nicht funktionierende Links usw.) / Hervorragend in Bezug auf operative Effizienz (z. B. durch funktionierende Links usw.)
WQ8	Besonders unnützliche Such-/Hilfefunktionen / Besonders nützliche Such-/Hilfefunktionen
WQ9	Besonders uninteressant / Besonders interessant
WQ10	Besonders wenig aufregend / Besonders aufregend
WQ11	Besonders wenig unterhaltsam / Besonders unterhaltsam
WQ12	Besonders unübersichtliche Aufmachung / Besonders übersichtliche Aufmachung
WQ13	Geringe Fähigkeit, Aufmerksamkeit zu erregen / Große Fähigkeit, Aufmerksamkeit zu erregen
WQ14	Wählen Sie bitte die Option ganz links

Familiarity with Vendor (scale 1-7)

FAM	Alles in allem, wie vertraut ist Ihnen der Verkäufer, der Ihnen vorschwebt?

Product Characteristics

PC1	Wie viel hat das Produkt oder der Dienst, das/den Sie in Anspruch genommen haben, ungefähr gekostet (in Euro)?
PC2	Worum handelte es sich bei Ihrem Kauf?

Appendix C: Multi-Group Analysis

Table C1 shows the results of the multi-group analysis (MGA) for the two groups *goods* and *services*. The MGA was calculated with SmartPLS (Ringle et al., 2015). Electronics, clothes, sports equipment, household items, and kitchen items are categorized in goods. Services contain flight tickets, hotel bookings, concerts, books, and movies. Books and movies are in the category of services because purchasers buy and consume them and generally they cannot be refunded once books have been read or movies watched. Figure C1 shows the differences between the two groups, while Figure C2 and Figure C3 show the estimated path models for goods and services, respectively.

| Table C1. Model Estimates (Goods vs. Services)						
	Goods			Services		
Path	Weight	t value	p value	Weight	t value	p value
Main Model						
SV → TV	.600	9.913	.000	.595	8.397	.000
PEEIM → TV	.180	4.972	.000	.231	5.005	.000
PEEIM * SV → TV	-.025	.620	.535	-.076	1.549	.121
TV → RPI	-.047	.646	.518	-.074	.856	.392
PEEIM * TV → RPI	-.081	.610	.542	-.216	2.539	.011
SV → RPI	.422	4.476	.000	.543	5.226	.000
PEEIM → RPI	-.006	.130	.897	-.105	1.555	.120
Control Variables						
WQ → TV	.017	.408	.683	.016	.345	.730
WQ → RPI	.196	3.586	.000	.147	2.621	.009
VR → TV	.215	5.352	.000	.127	2.459	.014
VR → RPI	-.102	2.213	.027	-.081	1.476	.140
FV → TV	.041	.873	.383	.066	1.551	.121
FV → RPI	.297	4.337	.000	.142	1.923	.055
SI → TV	-.036	.800	.424	.013	.203	.839
SI → RPI	.082	1.421	.155	.092	1.239	.215
Gender → RPI	-.028	.669	.503	-.032	.721	.471
Income → RPI	.069	1.679	.093	.084	1.536	.125
Education → RPI	-.012	.302	.763	-.050	1.204	.229
Expertise → RPI	-.013	.266	.790	.180	2.879	.004
Product Characteristics → RPI	-.053	.654	.513	.016	.356	.722
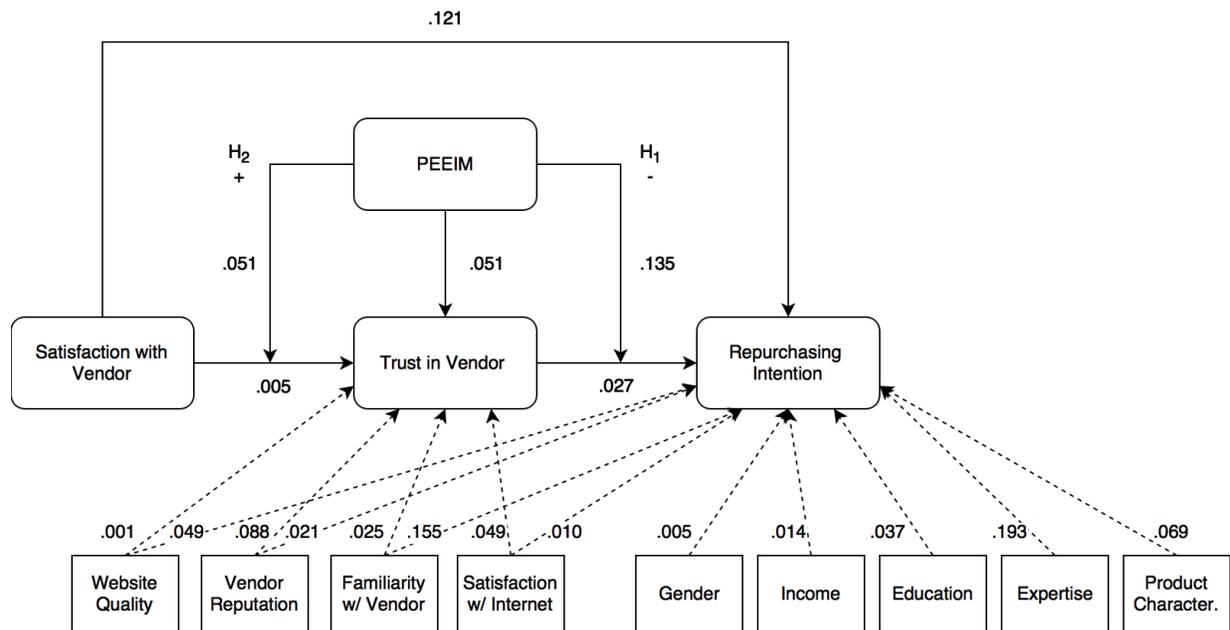
Figure C1. Research Model with absolute path weight differences between goods and services.
*: p < .05; **: p < .01; ***: p < .001; dotted lines represent non-significant differences in effects of control-variables
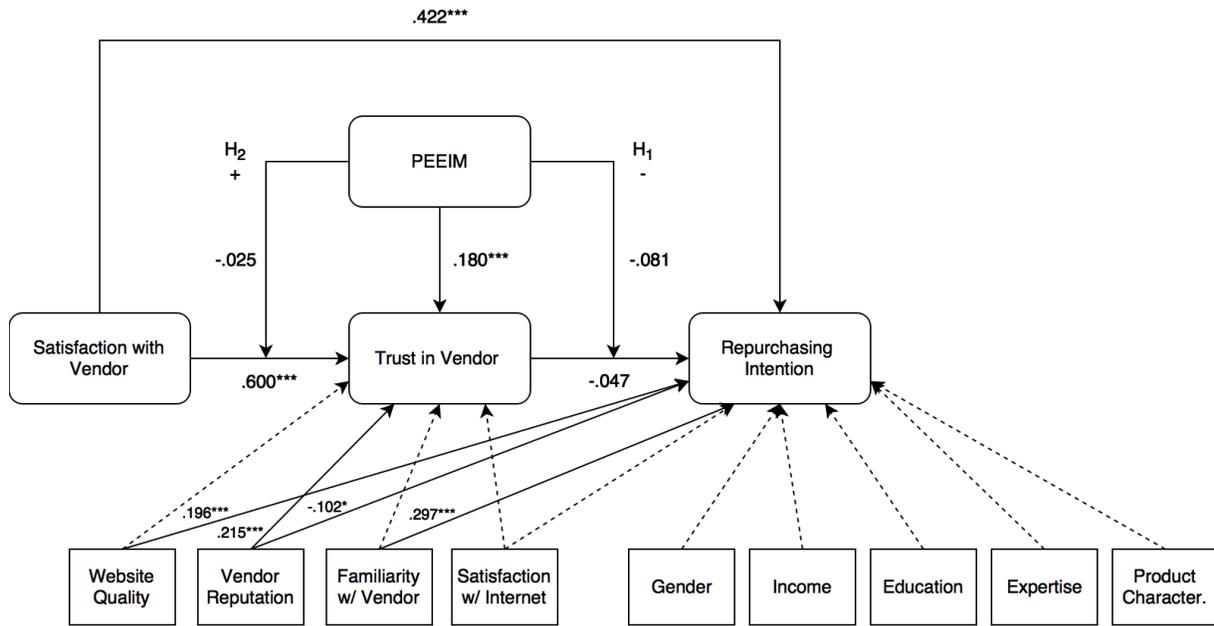
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Figure C2. Estimated Research Model (Goods)
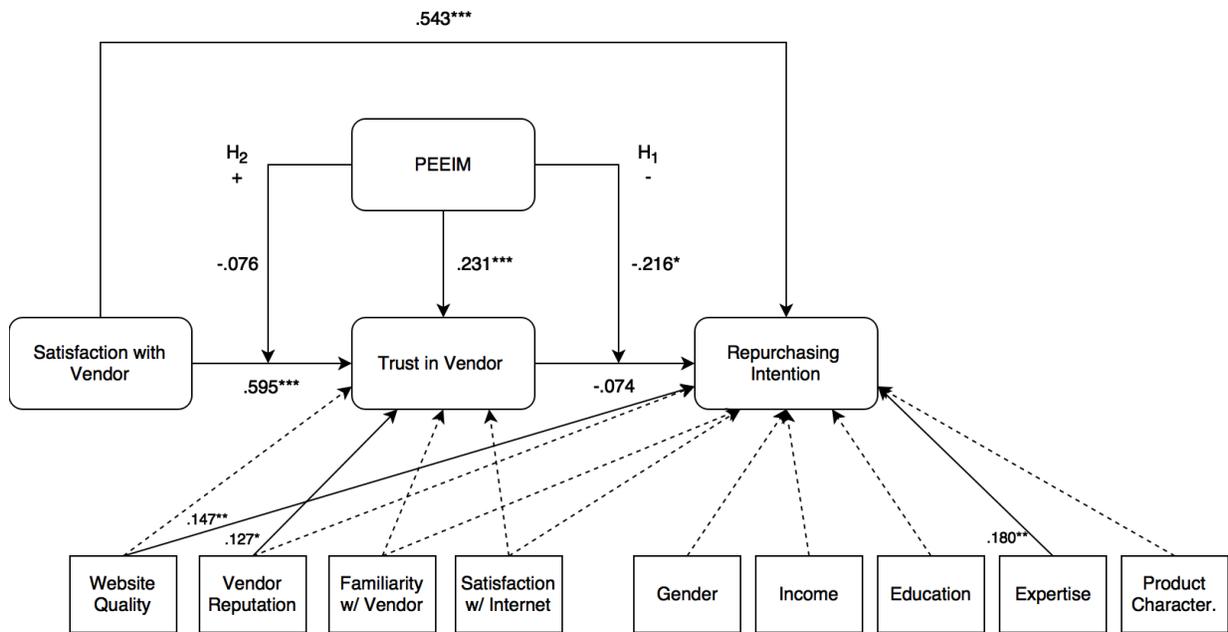*: p < .05; **: p < .01; ***: p < .001; dotted lines represent non-significant control-variables

Figure C3. Estimated Research Model (Services)
*: p < .05; **: p < .01; ***: p < .001; dotted lines represent non-significant control-variables

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