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Understanding Pre-Usage Acceptance of Self-Executing Electronic Services: The Impact of Privacy Concerns, Trust and Expected Convenience

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Abstract:

Common innovation acceptance models such as the Technology Acceptance Model assume that users are willing to test an innovation. The causes of willingness to test remain unlit. This paper aims to gain an understanding of what qualifies a self-executing electronic service with a high degree of novelty to be tested by potential users. A cross-sectional study was carried out using structured questionnaires. Structural equation modeling was applied to evaluate the measurement model and to test the hypotheses. Results indicate that privacy concerns, trust and expected convenience are of considerable relevance for the explanation of the phenomenon discussed.

Keywords:

Electronic service, Innovation adoption, Technology acceptance, Ubiquitous Computing, Pervasive Computing, Smart Objects, Internet of Things, Privacy concerns, Trust, Service convenience

1 Introduction

Rapidly changing customer requirements, growing competitive pressure, improved reengineering capabilities and shortening technology life cycles are forcing providers to launch disruptive technologies and adapt business models. Companies that refuse to engage in creative destruction (Schumpeter, 1942) risk losing the ability to meet investors' return expectations and will be driven out of the market someday. One technology class may be of utmost importance to retain or to expand the competitive position because it is said to be capable of opening up information procurement, communication, transaction, persuasion and customer experience management opportunities that extend deep into the daily life of consumers (Rust & Huang, 2014). Historically known as Ubiquitous Computing (Weiser, 1991), later labeled as Pervasive Computing, Ambient Intelligence, Internet of Thing, Web of Things or Smart Objects (Atzori et al., 2010; Sicari et al., 2015), it is capable of enriching operand resources with operant resources (Vargo & Lusch, 2004, 2016) and thus transforming objects into smart assistants that perform tasks silently and autonomously for or on behalf of the user (Ehret & Wirtz, 2017). Examples of services in line with this understanding are self-driving cars and self-ordering refrigerators.

From the user's perspective, smart assistants are radically innovative, because they require learning new competencies and go hand in hand with the change of familiar everyday processes (Garcia and Calantone 2002). The latter was already highlighted by Weiser (1991, p. 94) who claimed that largely self-executing services will silently perform all kinds of inconvenient everyday processes for or on behalf of the user who, in turn, gains time to focus on more important tasks: "The most profound technologies are those that disappear. They weave themselves into the fabric of everyday life until they are indistinguishable from it [...] only when things disappear in this way are we freed to use them without thinking and so to focus beyond them on new goals".

From the point of view of established providers, the enrichment of objects with information technology represents a cost-intensive and radically innovative product modification. New competences are needed (McDermott et al., 2002), existing business models are transformed (Green et al., 1995; Ehret & Wirtz, 2017), and customer relationships may change (Rust & Huang, 2014). There is also empirical evidence pointing to a high flop risk. For example, the location-based push advertising service "Gettings", which was at times heavily advertised in Germany, was discontinued at the end of 2015 (Költzsch, 2015). The usage intensity of semi-autonomous Amazon Dash buttons never reached provider's expectations (Cassar & Warshaw, 2016). The service was also discontinued in March 2019. The ubiquitously discussed self-ordering refrigerator is still rarely found in consumer households (Ricker, 2017). In fact, none of these services has achieved substantial market penetration

and many potential users have not even made the effort to test them (Arnold, 2018). Against this background, this paper addresses the following research questions:

RQ1 What are the main domain-specific reasons for and against the intention to test self-executing electronic services?

RQ2 Do these reasons provide an acceptable explanation for the acceptance for pre-usage acceptance of self-executing electronic services?

2 Field of study

2.1 Conceptual framework

This study utilizes the Behavioral Reasoning Theory (BRT) as conceptual framework, which is a descendant of the Theory of Reasoned Action (TRA). BRT and TRA share central assumptions and both theories consider the attitude (AT) towards a certain behavior as a central predictor of behavioral intention (IN). In contrast to the TRA, BRT postulates that potential users of a particular offer evaluate domain-specific reasons for and against its use (Claudy et al., 2015).

According to Westaby (2005), AT is a domain-independent factor that influences IN across different areas of behavior and serves as justification of actions, promoting and protecting self-esteem. In contrast to Madden et al. (1992), there are considerations and empirical indications suggesting that domain-specific factors can also have a direct impact on IN and do not have to be mediated by AT because people tend to simplify decision-making through cognitive shortcuts or heuristics (Claudy et al., 2015). Therefore, domain-specific factors do not necessarily have to fully activate domain-independent factors (Westaby, 2005). This view is also found in the numerous technology-orientated studies, most prominent in most variants of TAM (Davis et al., 1989; Venkatesh & Davis, 2000), which also postulate direct effects between domain-specific factors and IN.

2.2 Pre-usage acceptance

According to Rogers (1982), the trialability (or testability) of an innovation is positively related to its adoption rate, whereby early adopters consider trialability to be more important than later adopters. However, this presupposes that there is a willingness to test the innovation. This assumption is also found in literally all current technology orientated innovation acceptance models, most prominent in the Technology Acceptance Model (TAM), which assumes that users test an innovation simply because it is available for this purpose (Davis et al., 1989). Hence, TAM incorporates no indication of what qualifies an innovation to be tested from the potential adopter's perspective.

Venkatesh and Davis (2000) do recognize that the evaluation of a technology innovation is important before market launch and during prototyping in order to reduce the flop risk. They do not take into account, that user-sided beliefs about perceived usefulness or perceived ease of use are largely formed during (not before) testing. In fact, before testing, potential users must rely on expectations or assumptions that emerge from the provider's value proposition and personal experiences to shape their intention to test (IN) the service. This is also emphasized by Venkatesh et al. (2011), who recognize the relevance of pre-usage perceptions for acceptance and thus underline their importance for the diffusion of an innovation.

Since the present paper addresses smart assistants with autonomous behavior patterns, it is meaningful to utilize the term self-executing electronic service, because (1) digital operant resources are applied for the benefit of the user, (2) the service provider interacts with or acts upon at least one other entity (market partner, object) and (3) the user is largely excluded during service provision, which is nevertheless executed for him or on his behalf. Such offers can only provide an adequate service, if a relevant amount of information from the privacy of users is employed (Arnold, 2018), who in turn must trust (TR) the application, that the data collected is not used opportunistically. Although there are findings indicating that consumers tend to have privacy concerns (PC) but still use applications that can penetrate the private sphere in a largely uncontrolled manner (Norberg et al., 2007; Kokolakis, 2015), it is reasonable to assume that PC and a low level of TR can slow down or stop the acceptance of self-executing electronic services, as they are typically at an early stage of diffusion and some additional aspects such as peer pressure or learned helplessness are largely irrelevant for early innovators (Rogers, 1982). Weiser (1991, p. 104) also advocates this argumentation, considering the relevance of convenience (CO), PC and TR as follows: "Even today, although active badges and self-writing appointment diaries offer all kinds of convenience, in the wrong hands their information could be stifling. Not only corporate superiors or underlings, but over-zealous government officials and even marketing firms could make unpleasant use of the same information that makes invisible computers so convenient".

Assuming that users are aware of the privacy issue and have some degree of distrust against the service, there is little reason to believe that these factors can be fully masked by the provider's value proposition. Rather, before testing a radically innovative self-executing electronic service that has not reached a considerable market penetration, users will weigh their PC and the level of TR they need to provide against the amount of expected CO, thus weighing the reasons for and against testing the offer.

2.3 The relationship of privacy concerns, trust and convenience

If one assumes that users value privacy, understood as the claim of an individual to determine for himself when, how and to what extent information about him is passed on to others (Westin

1967), it must be concluded that PC represent a significant barrier to the adoption of technology classes that can only provide an adequate service if they silently collect and analyze contextual information that originates from the user's privacy sphere (Xu et al., 2012). Günther and Spiekermann (2005) argue that this barrier arises primarily because users can be hiddenly monitored and information collected can be easily disseminated and misused.

Trust can be understood as a subjective conviction of honesty towards another entity (Ha & Stoel, 2009) and thus as a belief that a delegated task is carried out in one's own interest. Trust between market partners is essential (Moorman et al., 1993), especially if the service provider is to act largely independently for or on behalf of the user and emerges when the user expects that no hidden or opportunistic activities during or after service provision are performed (Sicari et al. 2015). Therefore, in accordance with Naresh et al. (2004), Eastlick et al. (2006) and Van Dyke et al. (2007), it is postulated:

H1 *PC arise when a potential user assumes that personal information is used opportunistically and therefore have a negative impact on TR.*

Berry et al. (2002) understand service convenience as time and effort required to buy or use a service. These aspects may be relevant before, during or after service provision (Seiders et al., 2007; Lloyd et al., 2014): (1) Decision convenience is a consequence of selecting the service provider. (2) Access convenience arises during the initiation of service delivery. (3) Transaction convenience unfolds in the course of transaction completion. (4) Benefit convenience is a consequence of the provider's core service. (5) Post-benefit convenience is the result of the intensity of efforts to establish contact with the provider after service provision. In this research, the focus of interest is on convenience expectations, which may arise because self-executing electronic services take on all kinds of inconvenient everyday tasks and give potential users the freedom to devote themselves to other tasks (Weiser, 1991). CO in the area studied is therefore to be understood as saved time and effort released by the autonomous provision of the service and the time and effort required to assure adequate results (Collier & Sherrell, 2010; Jiang et al., 2013). If the user wants to ensure that his privacy remains protected, he must spend time and effort monitoring the service provision. Hence, it is postulated:

H2 *PC force potential users to spend time and effort to protect their privacy and therefore have a negative impact on CO.*

TR has a risk reducing function for potential adopters. A lack of TR requires user activities during service provision to ensure that the outcome is in his interest. Those who trust the electronic service need to spend less or no time and effort to ensure that only intended results are produced. It is therefore hypothesized:

H3 *TR reduces the need to monitor the service provision and has therefore a positive effect on CO.*

2.4 Attitude and intention

BRT postulates in line with TRA that attitude (AT) is determined by readily accessible or salient beliefs about the probability of consequences of a concrete behavior (Ajzen & Albarracín, 2007; Ajzen, 2012) and thus represents a subjective assessment of the likelihood that a particular action has a certain attribute (Fishbein & Ajzen, 1975). TRA also assumes that domain-specific (or external) variables do not directly influence IN but are mediated by TRA-specific factors (Madden et al., 1992). AT is considered to be a domain-independent factor, which is relevant to build a parsimonious acceptance model with high explanatory power (Davis et al. 1989). Hence, it is postulated:

H4 *PC are domain-specific beliefs that the user cannot determine when, how and to what extent information about him is passed on and therefore have a negative effect on AT.*

H5 *TR is a domain-specific belief with a risk reducing function and therefore has a positive effect on AT.*

H6 *CO is a domain-specific belief that unpleasant tasks are largely handled independently by the electronic service and therefore has a positive effect on AT.*

IN is typically seen as mediator between AT and actual behavior because it is assumed that AT directly influences IN and that people carry out IN as soon as the opportunity arises (Fishbein & Ajzen, 1975, 1980). In line with these considerations, it is claimed:

H7 *AT has a positive effect on IN.*

BRT assumes that domain-specific factors may also have a direct impact on IN and do not have to be mediated by AT because people tend to simplify decision-making through cognitive shortcuts or heuristics (Claudy et al., 2015). Thus, it is claimed largely in accordance with Stewart and Segars (2002), Yoon and Kim (2007), as well as Xu and Gupta (2009):

H8 *PC are a cognitive shortcut and affect IN negatively.*

H9 *TR is a cognitive shortcut and has a positive impact on IN.*

H10 *CO is a cognitive shortcut and therefore has a positive effect on IN.*

3 Study

3.1 Data collection and method

To test the hypotheses (summarized in Figure 1), students at four universities in southern Germany and Berlin, Germany were asked to evaluate an innovative electronic assistance with autonomous behavioral patterns. The participants were told that a group of known experts is about to launch a smart electronic service that can autonomously take over inconvenient tasks that arise during their studies (e.g. compiling lecture plans, obtaining mock exams and lecture materials, registering for examinations). In addition, it was claimed that the application uses university data sources, as well as private data sources to tailor the service provision to personal learning preferences and general life conditions. A total of 295 subjects were interviewed, whereby 5.5% of the questionnaires were not completed in full. The respondents were 55.2% female and 44.8% male. The average age was 22.9 years.

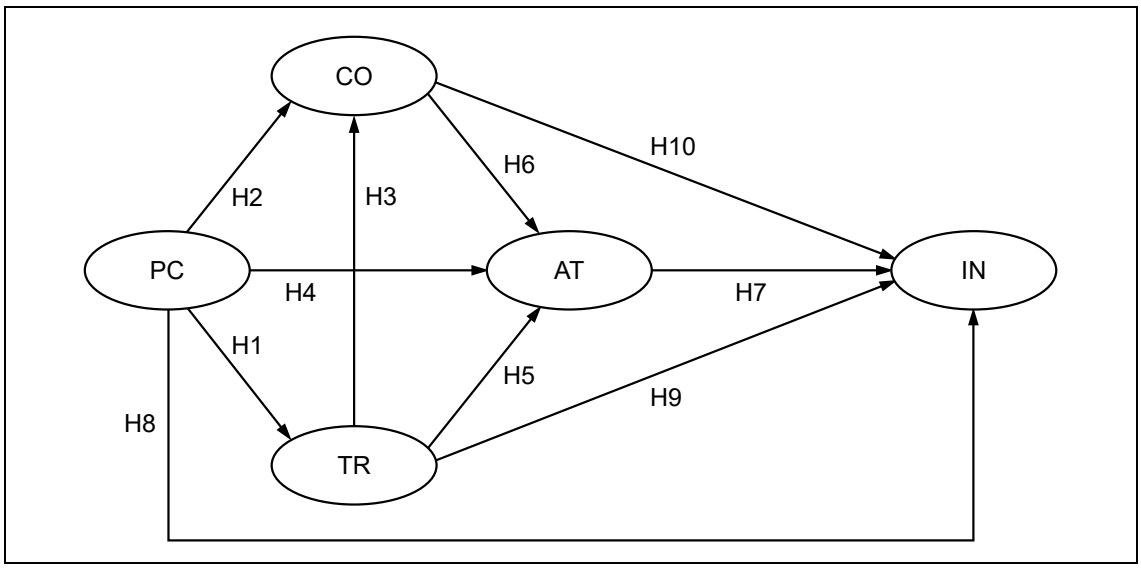

Figure 1: Hypotheses

Reflective indicators from existing research were extracted to measure PC (Dinev & Hart, 2004; Hong & Thong, 2013), TR (Collier & Sherrell, 2010; Collier & Kimes, 2012), as well as CO (Seiders et al., 2007; Lloyd et al., 2014) and carefully fitted to meet the requirements of the study. To measure AT and IN, typical indicators from Ajzen and Fishbein (1975, 1980) were adapted. The measurement model and basic descriptive statistics can be found in Appendix 1. All indicators were measured with 5-point Likert scales and treated as continuous, which is in line with recommendations given by Rhemtulla et al. (2012). Full information maximum likelihood estimation was used to treat missing values (Enders & Bandalos, 2001). Since a moderate non-normal multivariate distribution was found (Mardia skewness = 1,951.05,

Mardia kurtosis = 15.14), robust standard errors and scaled test statistics (Yuan & Bentler, 1998) were applied.

All statistical tests were performed with R 3.6.1 and the packages lavaan for structural equation modeling (SEM), mvn for testing multivariate normality and boot for bootstrapping 6,000 bootstrap samples, as well as computing 95% bias corrected and accelerated (BCa) confidence intervals.

In accordance with Anderson and Gerbing (1988), first the measurement model was evaluated and then the hypothetical relationships were tested. Since the number of regression coefficients in the structural model equals the number of covariances between latent variables in a confirmatory factor analysis the latter does not provide any findings that cannot be drawn from a fully specified SEM. Therefore, the measurement model and the hypotheses were tested with the SEM. It should be noted that the scaled χ^2 test is significant at the 0.1% level, indicating that the observed and model implied variance-covariance matrices differ considerably. However, this is the case in almost all studies that do not meet extremely restrictive conditions, since the χ^2 test and its scaled variants are known to be overly rigorous and sample size sensitive (Hu & Bentler, 1998; Schermelleh-Engel et al., 2003; Mueller & Hancock, 2008). Therefore, close fit statistics were applied (Steiger, 2016), supplemented by incremental and descriptive fit indices. On this basis, the model fits properly (RMSEA = 0.04[0.033, 0.056], pclose = 0.77, CFI = 0.97, NNFI = 0.97, IFI = 0.97, RNI = 0.97, χ^2/df = 198.87/125 = 1.59, SRMR = 0.04).

3.2 Assessing reliability, convergent and discriminant validity

Initially, the reliability of the measurement model was evaluated, followed by an assessment of convergent and discriminant validity (see Table 1). Standardized loadings range from 0.69 to 0.89 (see Appendix 1), which means that no squared standardized loading is lower than 0.48 or higher than 0.78. Factor reliabilities are between 0.77 and 0.92. Average variances extracted span from 0.53 to 0.75 and are all larger than their respective maximum shared variances, understood as squared correlation of the considered factor with the factor with which it correlates most strongly (Fornell & Larcker, 1981). In addition, the heterotrait-monotrait ratio of correlations (HTMT) proposed by Henseler et al. (2015) was applied as supplementary assessment of discriminant validity. HTMT ranges from 0.29 to 0.76.

Table 1: Factor reliability, convergent and discriminant validity

Factor	FR	AVE	MSV	PC	TR	CO	AT	IN
PC	0.79	0.56	0.17		0.37	0.29	0.40	0.36
TR	0.77	0.53	0.17	-0.40		0.44	0.50	0.42
CO	0.88	0.65	0.42	-0.31	0.44		0.66	0.62
AT	0.92	0.73	0.57	-0.41	0.48	0.65		0.76
IN	0.92	0.75	0.57	-0.39	0.41	0.63	0.76	

(Notes: FR = factor reliabilities, AVE = average variances extracted, MSV = maximum shared variances, lower triangular matrix = correlations, upper triangular matrix = HTMT)

Based on commonly applied criteria (Fornell & Larcker, 1981; Bagozzi & Yi, 1988; Bagozzi & Baumgartner, 1994; Henseler et al., 2015) it can be concluded that all factors are reliably measured and that both convergent and discriminat validity are present.

3.3 Hypothesis test

To test the hypothesized relationships, direct effects were assessed, followed by an analysis of the indirect and total effects. Results for direct effects are shown in Table 2, indicating that H2, H8 and H9 are not significant and have to be rejected. H4 and H5 are significant at the 5% level, H10 at the 1% level and H1, H3, H6 and H7 at the 0.1% level.

Table 2: Direct effects

Hypothesis		B	Lower	Upper	SE	Z	β
H1	PC → TR	-0.32	-0.47	-0.17	0.08	-4.19***	-0.40
H2	PC → CO	-0.19	-0.40	0.02	0.10	-1.84	-0.16
H3	TR → CO	0.56	0.27	0.85	0.14	3.86***	0.37
H4	PC → AT	-0.24	-0.45	-0.06	0.09	-2.56*	-0.18
H5	TR → AT	0.29	0.05	0.54	0.12	2.40*	0.18
H6	CO → AT	0.57	0.41	0.73	0.08	7.15***	0.52
H7	AT → IN	0.58	0.41	0.75	0.09	6.65***	0.57
H8	PC → IN	-0.10	-0.26	0.09	0.08	-1.19	-0.07
H9	TR → IN	0.02	-0.21	0.29	0.13	0.15	0.01
H10	CO → IN	0.27	0.07	0.46	0.10	2.76**	0.24

(Notes: B = unstandardized regressions, Lower and Upper = limits of 95% BCa confidence intervals, significance: *** 0.1%, ** 1%, * 5%, β = standardized regressions)

For in-depth analysis, indirect and total effects were assessed (see Table 3). The results signal that all total effects are significant at the 0.1% level. It is therefore concluded that the effects from PC on CO, from PC on IN and from TR on IN are fully mediated and thus only have an impact on their target variables via the corresponding paths. The effects of PC on

CO, TR on AT and CO on IN are partially mediated, which means that they have a direct and indirect impact on the target variables.

Table 3: Indirect and total effects

Indirect and total effects	B	Lower	Upper	SE	Z	β
PC → CO (total effect)	-0.37	-0.55	-0.18	0.09	-4.07***	-0.31
TR → CO	-0.18	-0.32	-0.09	0.05	-3.25**	-0.15
PC → AT (total effect)	-0.55	-0.75	-0.35	0.10	-5.57***	-0.41
TR → AT	-0.09	-0.20	-0.02	0.04	-2.19*	-0.07
TR → CO → AT	-0.10	-0.19	-0.05	0.03	-3.15**	-0.08
CO → AT	-0.11	-0.25	0.01	0.06	-1.72	-0.08
TR → AT (total effect)	0.61	0.33	0.89	0.14	4.38***	0.37
CO → AT	0.32	0.16	0.53	0.09	3.56***	0.19
PC → IN (total effect)	-0.52	-0.69	-0.33	0.09	-5.75***	-0.39
TR → IN	-0.01	-0.10	0.07	0.04	-0.15	0.00
TR → AT → IN	-0.05	-0.13	-0.01	0.03	-2.12*	-0.04
TR → CO → AT → IN	-0.06	-0.12	-0.03	0.02	-2.62**	-0.04
TR → CO → IN	-0.05	-0.12	-0.01	0.02	-2.09*	-0.04
CO → AT → IN	-0.06	-0.16	0.00	0.04	-1.71	-0.05
CO → IN	-0.05	-0.15	0.00	0.03	-1.52	-0.04
AT → IN	-0.14	-0.27	-0.04	0.06	-2.43*	-0.10
TR → IN (total effect)	0.52	0.25	0.78	0.13	3.93***	0.31
AT → IN	0.17	0.03	0.34	0.07	2.36*	0.10
CO → AT → IN	0.18	0.08	0.35	0.06	2.92**	0.11
CO → IN	0.15	0.04	0.33	0.07	2.24*	0.09
CO → IN (total effect)	0.60	0.42	0.75	0.08	7.41***	0.53
AT → IN	0.33	0.20	0.50	0.07	4.43***	0.29

(Notes: B = unstandardized regressions, Lower and Upper = limits of 95% BCa confidence intervals, significance: *** 0.1%, ** 1%, * 5%, β = standardized regressions)

3.4 Comparing competing models

From a theoretical point of view, it must be noted that some results are ambiguous. On one hand, the effects of PC and TR on IN are fully mediated. On the other hand, the direct effect of CO on IN is significant and only partially mediated by AT. The hypothetical model was therefore compared with a more parsimonious model, which is based on common assumptions of the TRA and does not postulate direct effects on IN apart from AT, using a scaled χ^2 difference test for nested models (Satorra & Bentler, 2001).

The test yields p(9.94, 3) = 0.02. This is interpreted as a weak sign that the more parsimonious model is not to be preferred, at least in the context of the study. Nevertheless, the result may serve as a cue that innovation models closely linked to the TRA are at risk of being too parsimonious and that potential users do partially rely on shortcuts that are not mediated by AT to shape their intentions (Westaby, 2005; Claudy et al., 2015). Since all significant indirect effects that are not mediated by AT are mediated by CO, the hypothetical model was compared with a slightly less stringent model with an unconstrained path from CO on IN. The result, p(1.44, 2) = 0.49, strongly indicates that this model is preferable, which underlines the importance of CO to explain the phenomena investigated.

4 Discussion

Without user-sided willingness to test an innovation, diffusion is unlikely, especially if the innovation incorporates a high degree of novelty and/or has not yet been launched on the market. This is particularly true for self-executing electronic assistants. They promise far-reaching information procurement, communication, transaction, persuasion and customer experience management opportunities and can transform static objects into service providers, which in turn enables completely new business models. However, there is empirical evidence that many assistants fail to penetrate the market. If one assumes that potential adopters have fundamental concerns that are already present before using the service, then the chances of success of the innovation are detectable even before market launch and even before prototyping.

This research is based on several crucial assumptions. In particular: User-sided evaluation of radical electronic innovations with autonomous behavioral patterns is useful before or during prototyping, in order to minimize the flop risk. Potential users who have no intention to test an innovation from the domain studied likely have no intention to adopt the service. Common innovation acceptance models such as TAM assume that potential users test the innovation because it is available for this purpose. They provide no indication of what qualifies an innovation to be tested from the perspective of future users. The study provides some evidence that the domain-specific factors studied are important in explaining the phenomenon under investigation.

Since the results signal that not all variables have a direct impact on pre-usage acceptance, competing models were evaluated. It turns out that acceptance models based exclusively on the TRA are associated with the risk of being too parsimonious and less explanatory than models based on the BRT.

5 Conclusions

Since the study focuses on a specific technology class and on phases prior to market launch, domain-specific variables were derived from the theory that may determine pre-usage acceptance. The research suggests that PC has a significant direct impact on TR. This also applies to the effect of TR on CO. The influence of PC on CO is fully mediated by TR. It is also concluded that PC, TR and CO are of considerable relevance for the explanation of the phenomenon: $R^2 = 0.50$ for AT and $R^2 = 0.61$ for IN. It is not claimed that this set of factors is relevant in other areas. Further research inside and outside the research area is therefore recommended. Nevertheless, it should be noted that the study has several shortcomings that need to be addressed. (1) The model is not capable of reproducing the data perfectly, therefore the results should be interpreted with caution. (2) Only a fictitious innovation was presented to the respondents for assessment, for which no information is available from other sources. This may not necessarily be the case with true innovation projects, even during prototyping or pre prototyping. (3) It was ensured that the respondents were part of the target group by presenting features that are only relevant for students. In addition, students at several universities were surveyed. Nevertheless, the study cannot claim to be representative. (4) A correlative research design was applied. Causal relationships were not tested in an experimental sense, but carefully derived from theory. (5) Since a cross-sectional study was carried out, it is not possible to predict whether PR, TR or CO will increase or decrease over time.

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Appendix 1

F	Indicator	Skew	Kurt	SD	β
PC – Privacy concerns					
	%service% will pass on my data to third parties	-0.07	-0.88	1.21	0.69
	%service% does not protect my personal data	-0.14	-0.36	0.99	0.83
	My privacy is being violated because %service% will certainly share data	-0.06	-0.75	1.13	0.71
TR – Trust					
	I have confidence in %service%	0.16	-0.08	0.88	0.74
	%service% seems trustworthy	0.18	-0.70	0.92	0.72
	%service% will perform the assigned tasks in my personal interest	0.23	-0.22	0.93	0.73
CO – Convenience					
	Thanks to %service%, I will be able to organize my studies with less effort	-0.12	-0.83	1.14	0.79
	%service% relieves me of tedious tasks	-0.09	-0.90	1.15	0.79
	%service% could help me to achieve many advantages with little effort	-0.31	-0.84	1.17	0.85
	It’s pleasant that %service% takes on many tasks for me	-0.32	-0.74	1.19	0.81
AT – Attitude					
	%service% is suitable for me	-0.45	-0.79	1.26	0.87
	I hope that %service% will be launched on the market soon	-0.38	-0.82	1.25	0.88
	%service% is a meaningful innovation	-0.61	-0.58	1.21	0.84
	%service% is a promising innovation	-0.67	-0.66	1.28	0.83
IN – Intention to test					
	I will install %service% promptly	0.19	-1.14	1.31	0.86
	I will try out whether %service% can improve my academic performance	0.25	-1.08	1.26	0.89
	I will try %service% as soon as possible	-0.04	-1.34	1.41	0.87
	I can well imagine testing %service% soon	0.12	-1.28	1.36	0.86

(Notes: F = Factor, Skew = skewness, Kurt = kurtosis, SD = standard deviations, β = standardized loadings)

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