Building Citizen Trust towards e-Government Services: Do High Quality Websites Matter?

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Abstract

E-governments are increasingly becoming a familiar fixture in virtual landscapes. Yet, the lack of citizen trust brought on by the novelty and uncertainty of online transactions has inhibited the widespread acceptance for public e-services. Ascribing to the perspective of technology as a social actor with whom the customer interacts and transacts, we put forward a research model that accentuates the pivotal role of e-government service quality as a salient driver of citizens' trustworthiness beliefs towards e-government websites, which in turn promotes the corresponding adoption of public e-services. E-government service quality, as conceptualized in this study, borrows from the popularized SERVQUAL constructs in deriving prescriptive design principles to guide the development of e-government websites. Data collected from a sample of 647 e-government service participants substantiates all 14 hypothesized relationships, thereby suggesting that high quality e-government websites do matter in building citizen trust towards public e-services.

1. Introduction

Building citizens' trust towards e-government services has been advocated by scholars as being deterministic of their adoption intentions towards public e-services [20, 53, 58]. With the IT-enabled web interface being poised as the focal contact point between customers and service providers [3], the absence of face-to-face assurance and clarification has exacerbated the risk of online transactions [24, 26, 34]. Further, e-governments' monopolistic nature [53] and their inevitable affiliation to political factions [44] have called into question the morality and neutrality of public e-services [52, 53]. Characteristically, trust—"the subjective assessment of one party [trustor] that another party [trustee] will perform a particular transaction according to his or her confident expectations, in an environment characterized by uncertainty" [2, p. 245]—is vital to e-service adoption by alleviating customers' fears of being compromised by the service provider [19, 24, 43, 39]. Empirical evidence has also ascertained trust as a salient driver of e-government adoption [20, 28, 29, 58].

Mayer *et* al [31] posited that the degree to which a trustor trusts a trustee is dictated by the trustworthiness of the latter. This trustworthiness in turn is rooted in the trustor's perceived attributes of *ability*, *benevolence* and *integrity* implicit to the trustee [31]. Under e-service conditions where the customer interacts primarily with the IT-enabled web interface, it is not hard to imagine that consumers treat the embedded technological artifacts as social actors [33, 42] and ascribe humanlike characteristics to them such as trustworthiness beliefs [51]. Indeed, the relevance of trustworthiness beliefs in the creation of trust for e-government services has been empirically validated [e.g., 27, 29]. The pressing issue however is how we can go about designing e-government websites that exhibit ability, benevolence and integrity such that it can induce trust among citizens.

Research has often cited e-government service quality—*the extent to which to which an e-government website facilitates the efficient delivery of effective public e-services to assist citizens in accomplishing their governmental transactions*—as being instrumental to the design of citizen-centric e-government services [e.g., 1, 7, 22, 54]. Since trust deals with the truster's beliefs that the trustee will behave in a socially responsible manner to fulfill promised obligations despite the former's defenseless position [16, 31, 46], high quality e-government websites, which deliver public e-services that conform to citizens' service expectations on a consistent basis, should arguably foster trust among citizens as affirmed by similar studies conducted in the domain of e-commerce [16, 43]. But despite the positive relationship between service quality and trust, further inquiry is needed to determine whether the three trustworthiness beliefs of *ability*, *benevolence* and *integrity* can be bolstered through efficaciously designed e-government websites. To this end, we tested an integrated model, which synthesizes constructs from trust, trustworthiness beliefs, service quality and the Technology Acceptance Model (TAM), on a sample of 647 e-government service participants.

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2. Theoretical Foundation

The seamless diffusion of IT into public administration has radically altered its bureaucratic structure by expanding the scope and capabilities of public services through new communication media [50]. Yet, citizen adoption rates continue to linger at disappointing levels [23]. Notably, the appeal of the e-service environment is eroded due to: (1) the impersonal nature of online transactions; (2) the extensive utilization of estranged communication technology as opposed to face-to-face interactions; (3) the inherent uncertainty of employing an open transactional architecture, and; (4) the novelty of the underlying service delivery medium [38].

The concept of trust has thus been advanced as a motivating factor for encouraging citizens' participation in e-government transactions [20, 29, 53, 58]. The establishment of trust hinges on a precondition of vulnerability, which dictates that the trustor must willingly assume a defenseless posture in anticipation that the trustee will behave in a socially responsible manner to fulfill promised obligations to the former [17, 31, 46]. Core to this idea are the principles of interdependence and risk because the basis of transactional relationships rests on the fundamental assumption that the interests of one party cannot be achieved without reliance on another [47] and "if one were omniscient, actions could be undertaken with complete certainty, leaving no need or even possibility, for trust to develop" [30, p. 970]. This has led academics to infer that some manner of trust is implicit to all forms of relationships [47]. Therefore, insofar as transactional uncertainty acts as the major deterrent inhibiting e-government service adoption, trust becomes crucial in driving citizens' acceptance of public e-services.

Hypothesis 1: A citizen's trust towards an e-government website will positively influence his/her continual usage intention towards the website.

Gefen *et* al [19] maintained that apart from trust-oriented constructs, customers' behavioral intentions towards e-service websites as technological artifacts should be explained in part by the TAM. According to the TAM, an individual's intention to voluntarily utilize an emerging technology is governed by system-salient beliefs corresponding to the perceived usefulness (PU) and the perceived ease of use (PEOU) in utilizing it. Whereas PU measures the individual's subjective assessment of the utility derived from deploying a particular technology in a specific task-related context, PEOU offers an indication of the cognitive effort required to learn and utilize the technology [12, 13]. Because the predictive capabilities of PU and PEOU have been repeatedly confirmed through prior empirical studies [56], it is logical to deduce that the same relationships, as hypothesized by Gefen *et* al [19] in their prediction of online shopping behaviors, should hold in explaining citizens' adoption intentions towards e-government.

Hypothesis 2: A citizen's perceived usefulness of an e-government website will positively influence his/her continual usage intention towards the website.

Hypothesis 3: A citizen's perceived ease of use for an e-government website will positively influence his/her continual usage intention towards the website.

Hypothesis 4: A citizen's perceived ease of use for an e-government website will positively influence his/her perceived usefulness of the website.

Trust is a prime determinant of what to anticipate under ambiguous circumstances and determines the utility extracted [15], especially for online transactions which involve "*current* costs invested in exchange for *future* unguaranteed rewards" [19, p. 61]. Consequently, trust is a valuable commodity by engendering the much-needed faith in the capacity of the system to deliver on its promised functional capabilities prior to actual usage. If potential users are reluctant to even try new technological solutions, it is conceivable that these innovations will never be useful regardless of their design [45].

Hypothesis 5: A citizen's trust towards an e-government website will have a positive influence on his/her perceived usefulness of the website.

A key to building trust in business interactions is to treat the vulnerable party fairly by not taking advantage of his/her resource dependency or knowledge inadequacy [21, 25]. Offering due process and sufficient explanations with respect to procedures and policies cultivate trust in business transactions [25] by reducing misunderstandings that undermine it [4]. Since the web interface is the primary intersection point between consumers and vendors, easy access to transactional content and procedural information should translate to perceptions of process transparency culminating in trust creation [19].

Hypothesis 6: A citizen's perceived ease of use towards an e-government website will have a positive influence on his/her trust of the website.

Reeves and Nass [42] supplied ample, compelling evidence demonstrating that people treat technological artifacts as social actors by applying sociological rules in interacting with them [see also 33]. Particularly, the three trustworthiness beliefs of ability, benevolence and integrity, as postulated by Mayer *et* al [31] to be salient antecedents leading to the inducement of organizational trust, have been empirically verified to be applicable across multiple e-service domains [e.g., 32, 57], including that of e-government [27, 29]. We hence adapt definitions of the trustworthiness constructs, as proposed in previous studies [e.g., 32, 57], to the context of e-government services (see Table 1) and hypothesize that:

Hypothesis 7: A citizen's perceived ability of an e-government website will positively influence his/her trust towards the website.

Hypothesis 8: A citizen's perceived benevolence of an e-government website will positively influence his/her trust towards the website.

Hypothesis 9: A citizen's perceived integrity of an e-government website will positively influence his/her trust of the website.

Table 1: Definitions for Trustworthiness Constructs

Trustworthiness Construct	Definition
Ability	Degree to which an individual customer believes that the website has the ability, skills, and expertise to perform effectively in specific domains
Benevolence	Degree to which an individual customer believes that the website cares about him/her and acts in his/her interests
Integrity	Degree to which an individual customer believes that the website adheres to a set of principles that he/she finds acceptable

Though prior studies have lent weight to the viability of the three trustworthiness factors as trust-inducing antecedents, there is a paucity of research dealing with how e-government websites can be designed to exhibit desirable attributes of ability, benevolence and integrity. Gefen [16] observed that the notion of service quality and specifically, SERVQUAL, acts to induce trust in e-service environments [see also 43]. SERVQUAL and its constituent dimensions (i.e., *tangibles*, *reliability*, *responsiveness*, *assurance*, and *empathy*) were conceived by Parasuraman *et* al [36, 37] as a noteworthy benchmark of service quality by measuring customers' subjective assessment that the service they are receiving is the service that they expect. In light of existing empirical evidence attesting to the positive relationship between trust and SERVQUAL [16], we construe e-government service quality as a composite construct comprising the five SERVQUAL dimensions as contextualized for e-government websites (see Table 2).

Table 2: Definitions for SERVQUAL Constructs

SERVQUAL Constructs	Definition
Tangibles	Functional appeal and web-interface appearance of the e-government website
Reliability	Degree to which services offered via the e-government website are provided in an accurate and dependable manner
Responsiveness	Degree to which services offered via the e-government website is helpful and prompt in responding to citizens
Assurance	Degree to which services offered via the e-government website project an image of competency and courtesy
Empathy	Degree to which services offered via the e-government website are personalizable for citizens

From Table 2, it is evident that service quality, as appraised via SERVQUAL, relates to the system-salient beliefs of PU and PEOU embodied in the TAM. As posited by Parasuraman *et* al [37], the strength of SERVQUAL as a yardstick of service quality resides in assessing consumer perceptions along pivotal areas of service content and delivery performance. Consequently, SERVQUAL, as applied to e-government service websites, evaluates the extent to which public e-services empower citizens to achieve desired transactional outcomes with minimal effort. In the same vein, e-government websites adhering to the service quality standards prescribed by SERVQUAL would not only be useful to citizens by assisting them in maximizing the results of their governmental transactions, but they would also ensure the entire transactional process to be as effortless as possible.

Hypothesis 10: A citizen's perceived service quality of an e-government website, as measured via SERVQUAL, will have a positive influence on his/her perceived usefulness towards the website.

Hypothesis 11: A citizen's perceived service quality of an e-government website, as measured via SERVQUAL, will have a positive influence on his/her perceived ease of use towards the website.

Service quality, as described earlier, is attained whenever offered services conform amicably to customer expectations. Customers' perceptions of service quality would thus imply that service offerings act accordingly to facilitate the achievement of optimal outcomes. Since SERVQUAL, as defined in Table 2, is a refined measure of e-government service quality, it should inspire identical perceptions of competency among citizens.

Hypothesis 12: A citizen's perceived service quality of an e-government website, as measured via SERVQUAL, will positively influence his/her perceived ability of the website.

E-government websites are deemed to be benevolent whenever public e-service offerings do not deviate from satisfying the transactional objectives of its targeted citizenry audience. Due to the synchronicity of SERVQUAL with customer service expectations, it is obvious that designing e-government websites along its prescriptions would not betray citizens' interests.

Hypothesis 13: A citizen's perceived service quality of an e-government website, as measured via SERVQUAL, will positively influence his/her perceived benevolence of the website.

Integrity, as a trustworthiness belief, deals with whether the trustee behaves in a manner consistent with principles intrinsic to the trustor. Translated to the domain of public e-services, integrity can be interpreted as the extent to which e-government websites do not violate widely acknowledged service principles by offering transactional mechanisms [31], which respect the rights

and privacy of citizens [52]. Because SERVQUAL highlights the core areas of service improvements sought after by citizens, designing e-government websites in accordance with its guiding principles should retain the integrity of its service offerings by not introducing unethical transactional procedures or processes.

Hypothesis 14: A citizen's perceived service quality of an e-government website, as measured via SERVQUAL, will positively influence his/her perceived integrity of the website.

3. Methodology

To validate our proposed research model, data was gathered via an online survey questionnaire on a panel of e-government service participants. Survey respondents were requested to recall an e-government website that they frequented and to provide evaluations based on their transactional experience with this recollected website. The collected data was then analyzed using Structural Equation Modeling (SEM) techniques [18].

Constructs from our proposed research model have been extensively investigated from past research and measures can be easily obtained from extant literature with minor modifications whenever necessary. Measurement items for SERVQUAL were derived from Cenfetelli *et* al [8], who evaluated service quality in an e-commerce environment. Customer trust was measured with semantic scales adapted from Gefen [16], who employed the exact same constructs in an inquiry of e-commerce service quality whereas the three trustworthiness constructs were measured using items derived from Wang and Benbasat [57]. Due to the pervasiveness of perceived usefulness and perceived ease of use in MIS adoption research, measurement items can be readily adapted from existing empirical studies [e.g., 13, 18, 19, 55, 56]. Table 3 tabulates the adapted measurement items for this empirical study.

Table 3: Summary of Adapted Measurement Items [Dropped items are italicized and shaded]

Construct	Description	Reflective Measures	Mean (Std Dev)
SERVQUAL Constructs [adapted from Cenfetelli et al, 2005]			
Tangibles [TAN]	*Tangibles*, in an e-government service context, are determined by the appearance of the web interface and the comprehensiveness of functionalities offered for completing governmental transactions	The appearance of the website is in keeping with services provided.	2.62 (1.17)
		The website's appearance is pleasing.	2.90 (1.20)
		The website is neat in appearance.	2.49 (1.17)
		The website presents a comprehensive list of functionalities to assist me in performing my e-government transactions.	3.20 (1.29)
		The website presents all the services I require clearly.	2.98 (1.29)
Reliability [REL]	*Reliability* governs the degree to which the functionalities offered consistently deliver on promised outcomes while ensuring that the execution sequence and performance of these service functionalities do not fluctuate from citizen to citizen	The website is reliable.	2.38 (1.09)
		What I get is what I have asked for from the website.	2.76 (1.21)
		The website completes the processing of my e-government transactions on time.	2.41 (1.15)
		The website processes my e-government transactions in the same manner as it would for any other citizen.	2.36 (1.20)
		The website performs its service accurately.	2.49 (1.11)
Responsiveness [RES]	*Responsiveness* involves the inclusion of services that fulfill a matching transactional expectation on the part of the citizens while ensuring that these electronic public services are made readily available to citizens as and when necessary	The website is responsive to my administrative needs.	2.86 (1.25)
		The website gives me prompt service, if something were to go wrong.	3.32 (1.28)
		Help is readily available on the website whenever I am faced with problems in performing my e-government transactions.	3.48 (1.33)
		Customer service at the website is quick in addressing any concerns that I have when performing my e-government transactions.	3.66 (1.26)
Empathy [EMP]	*Empathy* deals with customers' perceptions that the online portal is giving them individualized attention and has their best interests at heart through the integration of both service content and delivery mechanism.	The website is easily personalized for my specific administrative needs.	3.58 (1.43)
		The website makes allowances to address my special administrative needs.	3.75 (1.27)
		The website remembers/recognizes me as a repeat user (after the first time).	***3.67 (1.62)***
		The availability of different e-government service options (e.g., different modes of payment) on the website caters to my different needs.	3.19 (1.28)

Assurance [ASS]	*Assurance* encompasses service functionalities which proactively engage citizens in a cyclical learning process while assuring that this learning occurs in a conducive and user-friendly digital environment.	Using the website lets me feel confident about becoming proficient in performing e-government transactions.	2.81 (1.25)
		Using the website I can answer all my questions about performing government transactions online.	3.23 (1.39)
		Using the website lets me feel confident about understanding the outcomes of e-government transactions.	2.96 (1.25)
		Using the website lets me understand how to better use the services in the future after every e-government transaction I complete.	3.29 (1.31)
		Using the website, I can easily rectify the mistakes that I make when performing my e-government transactions.	***3.33 (1.29)***
		Making mistakes in performing e-government transactions on the website does not result in any penalties.	***3.84 (1.33)***
Trust Constructs [adapted from Gefen, 2002; Wang and Benbasat, 2005]			
Customer Trust [TRU]	*Customer Trust* is defined as the willingness to make oneself vulnerable to actions taken by the trusted party based on the feeling of confidence or assurance.	Even if not monitored, I trust the website to do the job right.	3.15 (1.34)
		I trust the website.	2.74 (1.19)
		The website is trustworthy.	2.70 (1.17)
		I am quite certain of what to expect from the website.	2.78 (1.22)
Ability [ABI]	*Competence* beliefs refer to the degree to which an individual customer believes that the website has the ability, skills, and expertise to perform effectively in specific domains.	The website has the ability to understand my needs and preferences about e-government transactions.	3.26 (1.37)
		The website can support all my e-government transactional needs.	3.53 (1.54)
		The website pays attention to my requirements for e-government transactions.	3.05 (1.33)
Benevolence [BEN]	*Benevolence* beliefs refer to the degree to which an individual customer believes that the website cares about him or her and acts in his or her interests.	The website puts my interests first.	3.55 (1.33)
		The website keeps my interests in mind.	3.50 (1.33)
		The website empathizes with my interests.	3.74 (1.40)
Integrity [ITE]	*Integrity* beliefs refer to the degree to which an individual customer believes that the website adheres to a set of principles that he or she finds acceptable.	I consider my e-government transactions with the website to be conducted in a fair manner.	2.42 (1.15)
		I consider the website to be unbiased when conducting my e-government transactions.	2.47 (1.29)
		I consider the website to possess integrity.	2.93 (1.29)
Technology Acceptance Model [TAM] [adapted from Gefen et al, 2000]			
Perceived Ease of Use [PEOU]	*Perceived Ease of Use*, in contrast, refers to the degree to which citizen believes that using the e-government website to perform transactions with the government would be free of effort	Using the website enables me to complete my transactions with the government more quickly.	2.24 (1.21)
		The website is easy to use.	2.56 (1.21)
		It is easy to become skilful at using the website.	2.63 (1.23)
		Learning to operate the website is easy.	2.57 (1.22)
Perceived Usefulness [PU]	*Perceived Usefulness* is defined as the degree to which citizen believes that using the e-government website would enhance the outcome of his/her governmental transaction.	Using the website increases the effectiveness in my transactions with the government.	2.60 (1.26)
		Using the website improves my performance in my transactions with the government.	2.83 (1.24)
		Overall, the website is useful for my transactions with the government.	2.40 (1.21)
Intention [INT]	*Intention* refers to the willingness of citizens to utilize the e-government website for the performing governmental transactions	I will use the website for future transactions with the government.	2.23 (1.23)
		I will continue using the website.	2.22 (1.23)
		I will continue carrying out my e-government transactions via the website.	2.28 (1.21)

Given the predominantly Internet-savvy target audience of e-government service participants, an electronic survey is the most appropriate forum for data collection [6, 48, 49]. Online questionnaires possess distinct advantages over physical surveys in that questions can be: (1) stipulated to be compulsory, and; (2) constrained to a single response for each. This eliminates common mistakes such as missing values or erroneous data entry. The online questionnaire was pre-tested on a sample of 25 e-government service participants selected with the help of a marketing research firm (52% females and on average, each respondent has accessed at least 4 different types of e-government services). We were keen to verify the clarity of the survey instructions as there will not be any face-to-face contact between investigators and the actual respondents [48, 49]. Other than minor formatting issues, no major concerns surfaced during the pre-test.

An email invitation was broadcasted to members belonging to a nationwide (United States) panel of e-business consumers from a marketing research firm. Panelists were awarded points, from the firm in exchange for their participation, which can be reimbursed for tangible incentives. The computer logs of the web server on which the electronic survey was hosted recorded a total of 2,203 unique visitors. Because the panel is primarily composed of e-business consumers, a single filtering question was inserted to identify respondents who match our targeted profile of citizens with previous e-government transactional experience. 689 out of 2203 visitors satisfy our sample criteria. Forty-two responses were deleted due to incompletion or data runs, thereby yielding a sample of 647 viable respondents for analysis. Paired *t*-test between our sample demographics and those reported in the Pew Internet and American Life Project's [41] survey of 815 American e-government service participants revealed no significant differences in distribution (i.e., $t_{(15)} = 1.069$, $p > 0.30$).

Table 4 depicts the spread of e-government websites upon which respondents' answers were based. As can be seen from Table 4, respondents targeted a wide variety of e-government websites in replying to the online questionnaire, thereby assuring full variance on the constructs of interest.

4. Data Analysis

Partial Least Squares (PLS) analysis is used to validate both the measurement and structural properties of our research model [9]. PLS analysis is preferred over other analytical techniques because: (1) it facilitates the modeling of formative (and therefore aggregate) constructs [9, 10], and; (2) it tests the psychometric properties of the measurement items (i.e., the measurement model) while simultaneously, analyzing the direction and strength of each hypothesized relationship (i.e., the structural model) [59]. Similar to Cenfetelli *et* al [8], we modeled SERVQUAL as a second-order *superordinate* construct whereby each of its five constituent dimensions was measured reflectively. These five dimensions were then reflectively loaded onto an overall SERVQUAL construct using repeated indicators from its constituent dimensions [11].

Table 4: Targeted e-Government Services

Type of e-Government Service[1]	Responses	%
Online application for government benefits	49	7.6%
Online filing of taxes	301	46.5%
Online application/renewal of licenses	194	30.0%
Online payment of fines	18	2.8%
Online application for government jobs	32	5.0%
Others	53	8.2%

The test of the measurement model involves the estimation of internal consistency as well as the convergent and discriminant validity of the measurement items included in our survey instrument. Because reflective items supposedly capture the effects of the construct under scrutiny [5], internal consistency can be assessed through standard estimates of Cronbach's alpha [35], composite reliability and the Average Variance Extracted (AVE) [14]. After dropping three measurement items from SERVQUAL due to low factor loadings[2] (i.e., < .75), all latent constructs exceed prescribed thresholds, thus supporting convergent validity (see Table 5).

To determine discriminant validity, the square root of the AVE for each construct was compared against its correlations with other constructs [14]. For the criterion of discriminant validity to hold, the square root of the AVE for each construct should be greater than its correlations with any other construct. Based on the inter-construct correlation matrix generated from PLS (see Table 5), all constructs display sufficient discriminant validity.

Results from PLS analysis of the structural model, including path coefficients and their statistical significance[3], are illustrated in Figure 1. From our data analysis using the Partial Least Squares (PLS) technique, all hypothesized relationships were substantiated by the empirical evidence. As postulated, *trust*, *perceived usefulness* and *perceived ease of use* have positive and significant effects on citizens' continual usage intentions

[1] The range of options for the types of e-government services is in accordance with surveys conducted by the Pew Internet and American Life Project [40, 41], which disclosed these public e-services as the ones most frequent by citizens.

[2] The factor loading matrix is available upon request.

[3] Standard errors were computed via a bootstrapping procedure with 500 re-samples.

towards e-government websites. Further, the effect of service quality on citizen trust is mediated through the three trustworthiness beliefs of ability, benevolence and integrity. Service quality was also observed to exert significant, positive effects on both perceived usefulness and perceived ease of use. This lends credibility to our contention that SERVQUAL captures the duality of e-government service quality as a combination of IT-mediated service content and delivery components. Adequate convergent and divergent validity exhibited by the five SERVQUAL dimensions suggest that it may be worthwhile to keep them as distinct constructs in prescribing design guidelines for e-government websites.

Table 5: Inter-Construct Correlation Matrix [Average Variance Extracted (AVE) on Diagonals]

	Cronbach's Alpha [> 0.70]	Fornell [> 0.70]	ASS	BEN	ABI	TRU	EMP	ITE	INT	PEOU	PU	REL	RES	TAN
ASS	**0.89**	**0.93**	**0.87**											
BEN	**0.88**	**0.92**	0.73	**0.90**										
ABI	**0.88**	**0.92**	0.79	0.85	**0.90**									
TRU	**0.91**	**0.94**	0.73	0.61	0.66	**0.89**								
EMP	**0.81**	**0.89**	0.79	0.76	0.81	0.61	**0.85**							
ITE	**0.85**	**0.91**	0.72	0.57	0.62	0.81	0.54	**0.88**						
INT	**0.96**	**0.98**	0.58	0.40	0.50	0.74	0.42	0.81	**0.96**					
PEOU	**0.93**	**0.95**	0.72	0.57	0.63	0.80	0.54	0.82	0.77	**0.91**				
PU	**0.90**	**0.94**	0.73	0.57	0.62	0.82	0.58	0.84	0.81	0.83	**0.91**			
REL	**0.93**	**0.94**	0.74	0.50	0.57	0.82	0.52	0.85	0.78	0.83	0.83	**0.88**		
RES	**0.88**	**0.92**	0.83	0.75	0.78	0.68	0.81	0.60	0.49	0.62	0.64	0.67	**0.86**	
TAN	**0.91**	**0.93**	0.84	0.67	0.74	0.78	0.71	0.76	0.64	0.83	0.76	0.83	0.77	**0.86**

5. Discussion and Implications

This study accomplishes several theoretical objectives. First, though TAM and its system-salient consequences have been popularized as a parsimonious model of MIS-related adoptions, we prove that the sociological concept of trust plays a complementary role in predicting citizens' continual usage of e-government websites. Second, we can infer that in transacting with e-government websites, citizens share a tendency to ascribe humanlike traits to the extent to which efficaciously designed public e-services act through citizens' perceptions of service competency, benevolence and integrity in building trust towards these e-government websites. Third, our redefinition of the five SERVQUAL dimensions as design guidelines coupled with the empirically proven positive relationship between SERVQUAL and the three trustworthiness beliefs serve to shed light on the creation of *high quality* and *trustworthy* e-government websites.

Practitioners can also benefit from this investigation in three ways. First, our findings suggest that developers should pay heed to the saliency of socio-technical attitudes and beliefs in encouraging citizens' adoption of public e-services. Further, the evidence from our inquiry reveals citizens' tendency to treat e-government websites as social entities during their performance of transactional activities. Therefore, e-government websites should not only be designed as pure technological artifacts with functional properties but they must also incorporate sociological elements that cater to customers' social needs. Last but not least, public institutions can consider SERVQUAL as a prescriptive framework from which to guide the design of e-government websites because apparently, it is able to foster both sociologically- and technologically-oriented beliefs. Specifically, our findings suggest that in order to induce trust among citizens towards e-government services, websites must not only be designed to be functionally comprehensive and aesthetically pleasing, they must also exhibit characteristics of reliability, responsiveness, assuring and empathy in its delivery of public e-service offerings.

In conclusion, while the relationship between service quality and trust has been established in prior studies [e.g., 16], it is still unclear as to how exactly service quality culminates in customers' trust towards e-service offerings. This study hence endeavours to bridge the gap in contemporary literature by demonstrating that citizens assign the same trustworthiness criteria to e-government websites as if they were dealing with another human entity and that e-government service quality induces trust by enabling public e-service offerings to project humanlike trustworthiness attributes. In another sense, designing high quality e-government websites not only translate to functional efficacies, they also serve the dual purpose of building citizen trust towards public e-services.

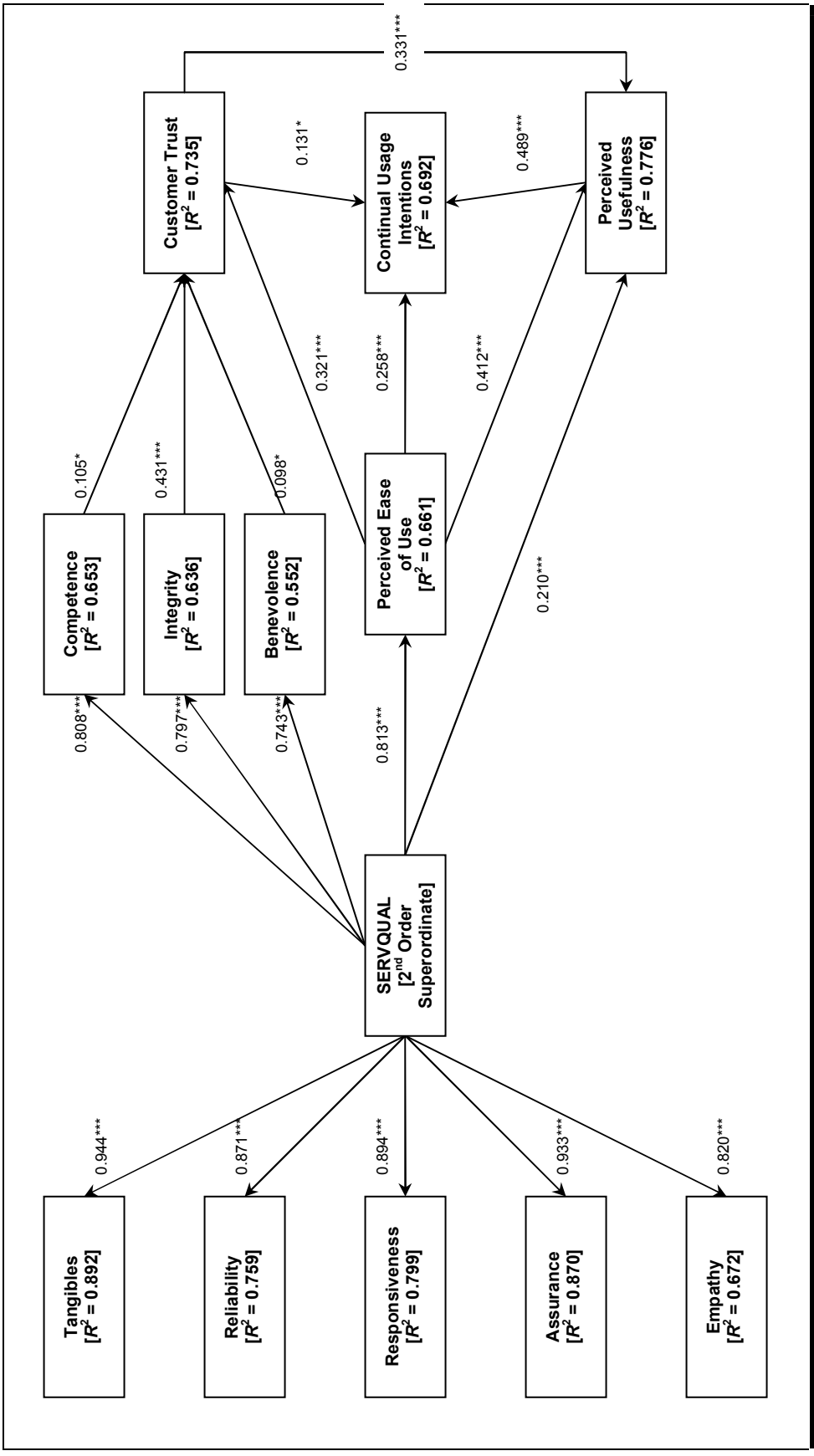

Figure 1: A SERVQUAL Model of e-Government Service Adoption

*** Correlation is significant at the 0.001 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

6. References

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