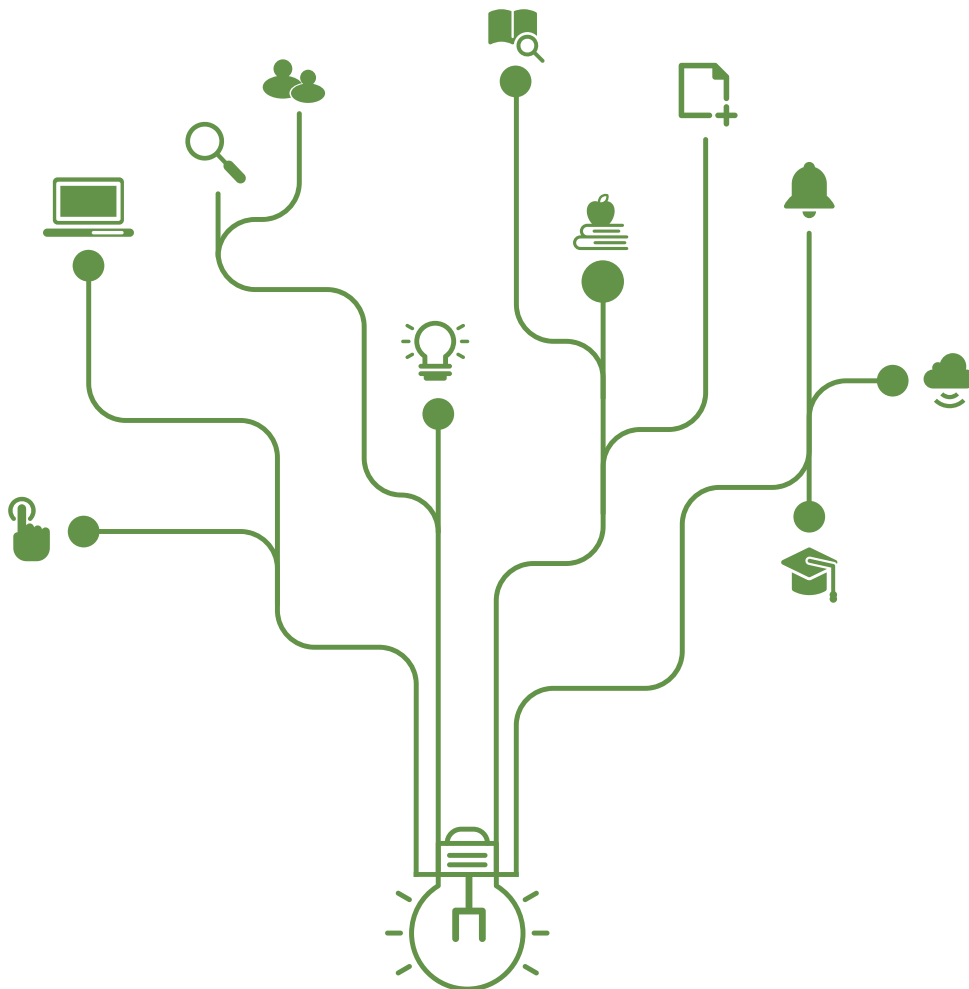


# The Social Perception of Government and its Effect on the Use of E-Government

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**The Social Perception of Government and its Effect on the Use of E-Government**

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**Abstract**

The current research examines the relationship between e-government website evaluation and the variables associated with the usage of e-government services (user satisfaction and intention to use) with basic social perceptions, warmth and competence, toward the government as the mediators (Fiske, 1993; Fiske et al., 2002). The results show that transparency, information suitability, and security of the website are associated with perception of warmth, while service quality was associated with perception of competence. Citizen engagement of the website was directly linked to individuals' intention to use the government website. Lastly, social perceptions were found to predict user satisfaction with the e-government website and future intention to use the website, confirming the mediational effect of social perceptions. Our findings suggest that the government agency is not simply viewed as a service provider but also as a social entity that encompasses both warmth and competence from the perspective of citizens, and these social perceptions impact their use of e-government services.

**Keywords:** E-government; Government website; Stereotype Content Model; Social Perception

## **Introduction**

User perception or attitude is critical from the service providers' point of view because, first, attitudes tend to last for a long period of time and, second, they elicit a corresponding behavioral orientation which, in the case for e-government, is the interaction between citizens and the government agency. Therefore, to develop effective strategic management of e-governance with a long-term perspective, it is crucial to examine the mechanisms underlying social perceptions of the government and how this might relate to different features of government websites. The current research attempts to unravel this topic by investigating the relationship between the assessment of e-government websites and intended outcomes (user satisfaction and intention to use) with social perceptions (warmth and competence) as the mediators (stereotype content model; Fiske, 1993; Fiske et al., 2002). The current research furthers our understanding of how the practicality aspect of the use of e-government websites contributes to the formation of citizens' attitudes toward the government, which is an essential factor that regulates the relationship between citizens and government.

## **Literature Review**

The main evaluation of government websites depends on the citizens' levels of usage and satisfaction with services (Hwang et al., 2004). Based on the democratic e-government website evaluation model (DEWEM; Lee-Geiller & Lee, 2019), a multiple-item scale was developed (Lee et al., 2021). The scale consists of five dimensions: transparency, information suitability, service quality, security, and citizen engagement, which are expected to predict citizens' intention to use and satisfaction with e-government websites. In more detail, transparency measures the perceived transparency of the government websites in terms of publishing multiple types of information (e.g. live broadcasts of meetings, performance reports, and ethical commissions). Information

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suitability measures the quality of information, regarding the usefulness, timeliness, and level of detail. Service quality measures the interoperability of services on government websites, such as page loading time, in-site search, and appearance on different browsers, which reflects the structural and functional aspects of the government website. The security factor measures how safe citizens feel when using the government website, based on the use of personal information for obtaining what they need. Citizen engagement measures the two-directional interactions between citizens and government through the government website, indicated by the availability of participation in decision-making processes, such as sharing opinions, policy forums, and e-voting. We employ the DEWEM measure (Lee et al., 2021) to assess citizen satisfaction and intention to use government websites and further test the practicality of the DEWEM scale in the context of democratic e-governance.

According to the stereotype content model (Fiske et al., 2002), people form impressions of others based on two primary dimensions: warmth and competence. Following these two trait perceptions, people develop further evaluations or stereotypes of the target person. Warmth is associated with characteristics concerning personality and morality, whereas competence is associated with characteristics such as effectiveness, intelligence, power, and skillfulness (Hoegg & Lewis, 2011). This social process is known to be evolutionarily adaptive, as it helps the perceiver to make a quick judgment about the target's intent and capability, corresponding to perceptions of warmth and competence, respectively.

The mechanism of impression formation described by the stereotype content model has not only been evident in personal, group, and cultural evaluation (Judd et al., 2005) but also when evaluating non-human entities such as brands (Kervyn et al., 2012) and organizations (Aaker et al., 2010). From the perspective of government, governments intend to elicit positive responses from

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citizens, such as satisfaction with government services, and encourage active interaction between citizens and government agencies to promote the optimal operation of the country. Based on the previous work, we believe that the stereotype content model is not limited to explaining brand, company, and organization perception but also impression formation of governments. Thus, investigating citizens' perception of a government's competence and warmth through e-government websites should be the starting point for enhancing the effectiveness and strategic management of e-government websites.

### **Hypothesis Development**

Information suitability is a variable associated with the transparency of the operation of government and indicates whether information is useful, up-to-date, appropriately detailed, and disclosed in a timely manner (Heald, 2003). This suggests that information suitability is an indicator of the level of information publisher's (in this case, the government) interest in the end users' demands and requests (Sung & Kim, 2010). Thus, information suitability extends the concept of information transparency and can be considered as a factor that is closely associated with the perceived warmth of governments. Therefore, we propose the following hypothesis (See Figure 1 for research model and hypothesis)

- Hypothesis 1. Individuals' perceived information suitability of e-government websites is positively related to the perceived warmth of the government.

Transparency is one of the most fundamental conditions that need to be met for governments as they oversee public services. While transparency is a basic indicator concerned with monitoring power, it can also indicate fairness, the impartiality of governments, and whether the power conferred by citizens is being used appropriately (Grimmelikhuijsen & Welch, 2012).

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Much of the research in public policy has the perception of transparency as an indicator of the appropriate use of governmental power. This suggests that transparency could have an impact on the perception of warmth (Grimmelikhuijsen et al., 2013). We, therefore, propose the following hypothesis:

- Hypothesis 2. Individuals' perceived transparency of e-government websites is positively associated with the perceived warmth of the government.

From the perspective of e-government services, perception of security can act as an indicator for believability (Manoharan et al., 2017). Perceived security reflects the user's perceived privacy and believability regarding e-government websites (Papadomichelaki & Mentzas, 2012). Personal information leakage and data loss are the main risks that are associated with the use of online platforms; therefore, reducing perceived risk is directly related to increasing trust in government. We suggest that warmth, which is an indicator of trustworthiness, is related to the security of websites. Therefore, we propose the following hypothesis:

- Hypothesis 3. Individuals' perceived security of e-government websites is positively related to the perceived warmth of the government.

Service quality is one of the main evaluation indexes of government websites (Lindgren & Jansson, 2013). Users' loyalty toward the service provider increases as service quality increases, and service quality can function as a causal factor for perceived capability, effectiveness, skillfulness, and professionalism (Grimmelikhuijsen & Knies, 2017; Nunkoo et al., 2017). Thus, a higher perceived service quality indicates higher perceived competence of the service provider. Therefore, we suggest the following hypothesis:

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- Hypothesis 4. Individuals' perceived service quality of e-government websites is positively related to the perceived competence of the government.

When we make judgments of people, we tend to pay attention to the warmth component before the competence component (Fiske, 2018). This is because intent, which is implied by warmth, predicts the behavioral orientation of the person, and being able to distinguish whether the target person intends to benefit or harm us is a crucial factor for survival. This suggests the warmth perception operates as the main factor that influences competence perception. Thus, we propose the following hypothesis.

- Hypothesis 5. Individuals' perceived warmth of the government is positively related to the perceived competence of the government.

The satisfaction of information users is positively related to qualitative dimensions such as the quality of the service provided (Ahmad et al., 2017; Toufaily & Pons, 2017). The capacity of the service provider to satisfy users' needs determines the continuous intention to use (Kim et al., 2011) and the evaluation of intention to use is determined by satisfaction with the quality of service (Khoo et al., 2017). Based on the literature, we test the following hypothesis regarding the impact of competence perception on user satisfaction:

- Hypothesis 6. Individuals' perceived competence of the government is positively related to user satisfaction with e-government websites.

Prior research has shown that high user satisfaction results in loyalty to the service, continuous intention to use, and prevents conversion to other services (Anderson & Sullivan, 1993; Delone & McLean, 2003; Kasiri et al., 2017). This causal relationship has further been verified



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through an experimental study by Liu et al (2018). We predict that the relationship between user satisfaction and continuous intention to use will be observed with e-government websites:

- Hypothesis 7: Individuals' user satisfaction of e-government websites is positively related to the intention to use e-government websites.

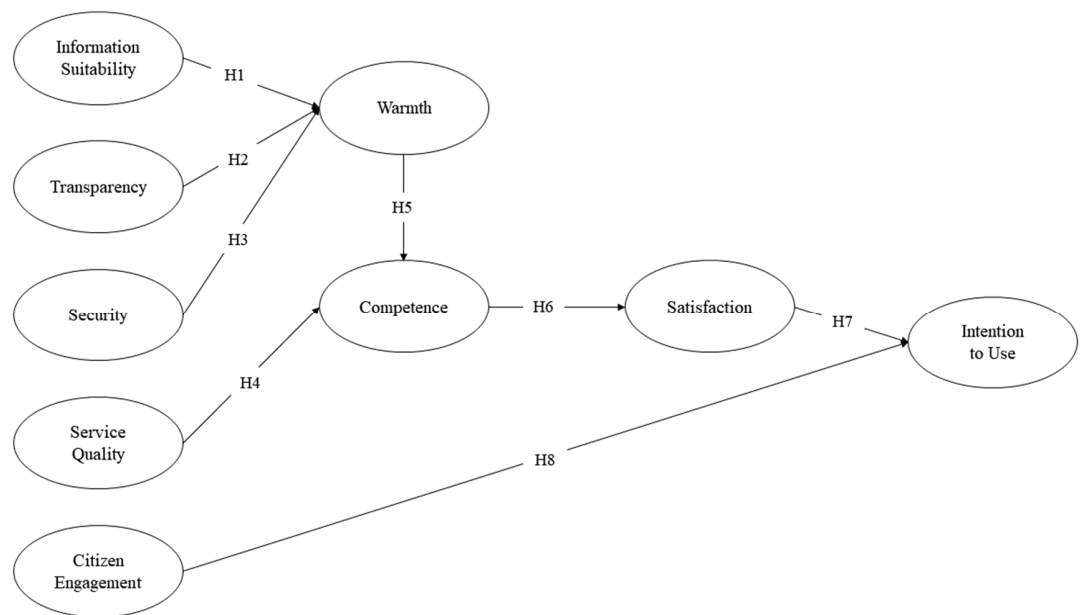
Within a democratic society, not only transparency and satisfaction of user expectations but also actual participation by the beneficiaries of policy is a crucial evaluation factor for the operation of governments (Lee-Geiller & Lee, 2019). Following this, it can be predicted that perception of citizen engagement (i.e. tools that enable participation in the decision-making process) has a direct influence on intention to use. Therefore, we hypothesize that citizen engagement in terms of the use of democratic e-government functions as a valid evaluation factor for predicting intention to use:

- Hypothesis 8. Individuals' perceived citizen engagement of e-government websites is positively related to the intention to use e-government websites.

### **Figure 1.**

*Research Model and Hypothesis*

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### Research Methodology

#### Sample & Survey

Participants were recruited and surveyed by an online survey company. Participants were presented with a link to the Korean e-government site (<https://www.gov.kr/portal/main>) and asked to browse the web pages for three minutes. They then responded to the survey items including evaluation of the e-government website, perception of the e-government website, satisfaction, and intention to use. Finally, they answered the demographics questions.

#### Measurements

**Evaluation of the e-governance website: DEWEM scale.** The DEWEM scale (Lee et al., 2021) was used to measure the evaluation of the e-governance website (see Appendix A). The scale is composed of five factors: Information Suitability (IS; e.g., The intentions of the citizens

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like me to use the website), Transparency (TP; e.g., Disclosure of periodical performance reports), Service Quality (SQ; e.g., Search functions work effectively), Security (SC; e.g., Personal data provided for authentication is used only for its purposes), and Citizen Engagement (CE; e.g., The website contains tools to sort ideas and solutions through online voting and ranking tools). It consists of a total of 25 items and is measured on a five-point scale (1 = not at all, 5 = very much).

*Perception of the e-governance website: Warmth and competence.* Two factors used by Grimmelikhuijsen et al., (2013) were adopted to measure the two aspects of the perception of government: competence and warmth. Competence (CP) consisted of five items (capable, effective, skillful, professional, carries out its duty very well), while Warmth (HN) consisted of three items (sincere, honest, honors its commitments) measured on a five-point scale.

*Satisfaction and intention to use.* To measure satisfaction and intention to use, items were taken from Rezende et al., (2017) and measured on a five-point scale. Satisfaction (SF; e.g., Government websites are useful) consisted of four items, and Intention to Use (IU; e.g., Government websites will be used to search for information and use services) consisted of three items.

## **Results**

### **Sample Profile**

A total of 899 participants took part in this study. The age ranged from 20s to 50s (Female = 50.2%, mAge = 39.7).

### **Measurement Model**

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The reliability test of the variables used in the study shows that Cronbach's alpha values were between .86 and .95. The model analysis was performed with the R program (R Development Core Team, 2012) and the 'lavaan' analysis package (Rosseel, 2012). To verify the reliability and validity of the measurements, a component factor analysis was performed on the measurement model. The model fit of the measurement model was statistically unsuitable according to the chi-square value of 1946.42 ( $df=704$ ),  $p < .001$ . However, the chi-square value is sensitive to the number of cases, and so the ratio of chi-square values and degrees of freedom was calculated. The ratio was 2.76 ( $\chi^2/df$ ), which does not exceed the threshold of 3 proposed in Bagozzi & Yi (1988), and is thus deemed acceptable.

The model goodness-of-fit analysis confirmed that CFI and TLI exceeded the figure proposed by Bentler, (1990). Also, the value of RMSEA [90% CI] is .044 [.042–.047] was found to be below the criterion proposed by Hu & Bentler, (1999). These results (see Table 1) indicate that the measurement model is suitable for use in the analysis (Kline, 2015).

**Table 1.**

*Measurement model estimates – CFA model*

Fit Index	CFA model	Recommendation
Chi-square	1946.424	N/A
Degree of Freedom ( <i>df</i> )	704	N/A
<i>p</i> -value	<.001	>.05
Chi-square/ <i>df</i>	2.76	<3.0
CFI	0.958	>.90
TLI	0.953	>.90
RMSEA [90% CI]	0.044 [.042, .047]	<.08

## Structural Equation Modeling

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Analysis of the structural equation modeling shows that the hypotheses proposed in this study are all supported. It was found that information suitability, transparency, and security were positively related to warmth, while service quality was positively related to competence, supporting H1, H2, H3, and H4. It was also found that warmth of the government was positively related to the competence of the government, which confirms H5. The findings indicate that competence significantly influences satisfaction, which in turn is positively related to intention to use. Therefore, H6 and H7 are supported. Finally, citizens' engagement with e-government websites was positively related to intention to use the e-government website, confirming H8. The significance of the regression coefficients are shown in Table 2 and Figure 2.

**Table 2.**

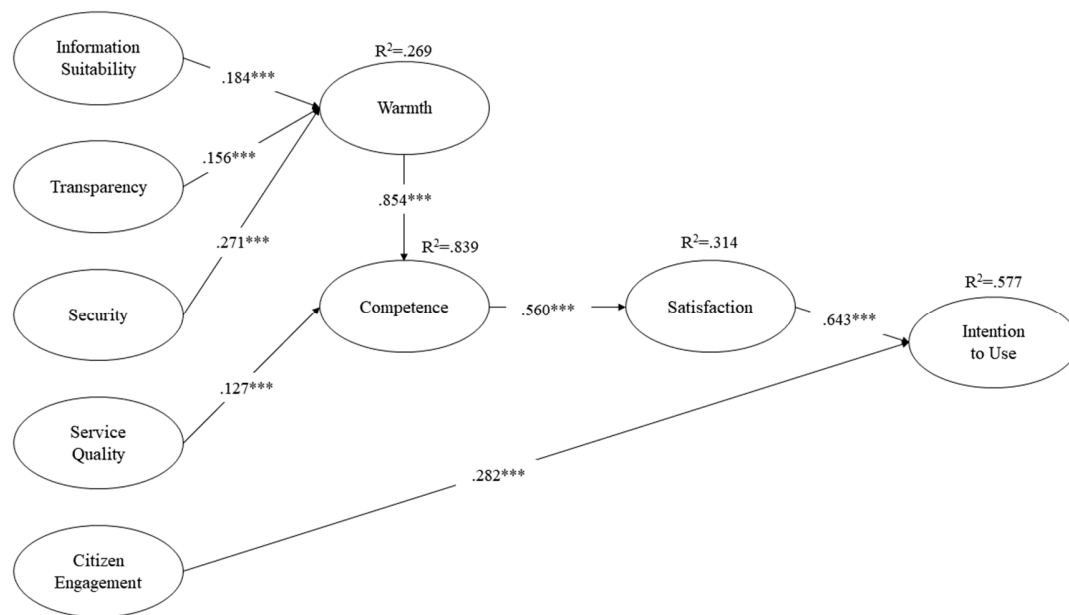
*Path coefficients of the relationship*

<i>H#</i>	<i>Hypothesis</i>	<i>Coeff (<math>\beta</math>)</i>	<i>z-value</i>	<i>Sig</i>	<i>Sup</i>
H1	IS $\rightarrow$ WM	0.184	3.775	<.001	Y
H2	TP $\rightarrow$ WM	0.156	4.157	<.001	Y
H3	SC $\rightarrow$ WM	0.271	5.616	<.001	Y
H4	SQ $\rightarrow$ CP	0.127	6.219	<.001	Y
H5	WM $\rightarrow$ CP	0.854	32.607	<.001	Y
H6	CP $\rightarrow$ SF	0.560	15.690	<.001	Y
H7	SF $\rightarrow$ IU	0.643	16.330	<.001	Y
H8	CE $\rightarrow$ IU	0.282	9.325	<.001	Y

**Figure 2.**

*Results of the research model*

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### General Discussion

Our research provides essential insights into the relational aspect of citizens' perceptions of e-government. Our data suggests the government agency is not simply viewed as a service provider that delivers essential government services but as a social entity that encompasses both warmth and competence. Therefore, people's tendencies to pay attention to the intentions of others play a much greater role in the use of e-government websites than previously understood. Furthermore, it provides important theoretical implications in that this research offers a causal structural model of the entire process, in which the DEWEM scale's five evaluation factors influence satisfaction and intention to use government websites through the two mediators of warmth and competence.

Based on the current results, we can propose the following practical strategic implications to increase the effectiveness of e-government websites. From the perspective of social perceptions,

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the government can be viewed as a non-profit, suggesting that perceptions of its warmth might be relatively high while perceptions of its competence are relatively low compared to for-profit organizations. Therefore, it is critical to enhance perceived competence to increase satisfaction and intention to use e-government websites. In addition, specific strategies for improving the perception of non-profit public organizations' competence can be deduced from the structural model of the current study. According to our model, service quality was shown to directly influence competence judgment and, therefore, focusing on the improvement of service quality is critical. Lastly, as warmth was shown to positively impact competence, DEWEM scale factors such as information suitability, transparency, and security, which were positively related to warmth perception, can be enhanced to indirectly increase perceptions of competence.

### **Conclusion**

It is important to note that depending on the levels of basic social perceptions triggered by the government, citizens could form different attitudes that are expected to last for a long period. Therefore, policymakers should pay close attention to the aspects of government websites that are associated with specific social dimensions that need to be enhanced to improve the public's attitudes and behavioral orientations toward the government for the optimal operation of a country.

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