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SUCCESS FACTORS ON THE IMPLEMENTATION OF HUMAN-RIGHTS-AWARE CITIES SCORING APPLICATION

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ABSTRACT

As an effort to advance human rights in every city across Indonesia, the regional government of all cities should fulfill basic human rights need in their cities to advance Human Rights in Indonesia even further. The Human-Rights Cities Scoring program brought by Ministry of Law and Human Rights of Republic of Indonesia via its Directorate General of Human Rights helps them to achieve it. To make sure the scoring run smoothly and to accommodate a new Ministerial Decree with an increasing number of indicator criteria, a web-based application is used since 2017. However, since the number of cities getting the title went stagnated since the application. After asking 182 respondents and analyzing the data using the PLS-SEM method, this research found that information quality, system quality, and service quality are not significantly affecting both intentions to use and user satisfaction. In the other hand, the influence of social influence, intention to use, use, and user satisfaction are all significantly positive.

Keywords: Information Systems, e-Government, DeLone and McLean IS Success Model, PLS-SEM, Human Rights

1. INTRODUCTION

As an effort to advance human rights in every city across Indonesia, Ministry of Law and Human Rights of the Republic of Indonesia, via its Directorate General of Human Rights, scores all regional governments of all cities in Indonesia in its Human-Rights-Aware Cities Scoring every year. The scoring is done to fulfill basic Human Rights needs of every city for their citizens. The activity itself has been held since 2013 via Regulation of The Minister of Law and Human Rights Number 11 of 2013. To participate in the Human-Rights-Aware Cities Scoring, the regional government of all cities in Indonesia can send the documents necessary for this activity. The documents are sent manually to the Directorate General of Human Rights to be scored.

As time progressed, a new ministerial regulation is made in 2016. In the Regulation of The Minister of Law and Human Rights Number 34 of 2016, a new set of criteria are made, and the role of Regional Offices of the Ministry of Law and Human Rights is strengthened. Also, in this

regulation, two new titles are introduced alongside the existing Human-Rights-Aware, they are Barely Human-Rights-Aware and Human-Rights-Aware Enough. To help the process of scoring since the criteria are increased a lot, a computer application is used and mandated by the policy. To implement the computer application, a web-based survey form is used. The need of an application is also essential since the number of criteria are now far increased and the absence of the application means the activity can be halted.

The regional governments are still sending the required documents manually, but instead of sending to the Directorate General of Human Rights, it is sent to the Regional Offices of the Ministry of Law and Human Rights. The Regional Offices then verifying and submitting the form and its documents to the web-based survey form. The submitted data is then verified again within the Directorate General of Human Rights to be scored and escalated further to the high-level meeting to be finalized.

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In 2021, when the activity of scoring wasn't held because of pandemic-related issues, a new ministerial regulation was made and take effect in 2022. In that regulation, a new set of criteria were made, and citizen participation can affect the scoring process.

Currently, there are 514 regions of cities in Indonesia. However, since the beginning of the scoring process with an application, the number of cities that receive the title of Human-Rights Aware isn't increasing significantly. Compared to 2016, the last year of scoring without an application, the number of cities that received the title of Human-Rights Aware increased just almost 6%.

Cities Getting The Title

"Human-Rights-Aware"



Figure 1: Progress of cities participating and getting the title of Human-Rights-Aware

However, as the information system's benefits should be taking effect on individuals, organizations, or people, [1] 4 years of using the application didn't even trigger the increase of cities receiving the title of Human-Rights Aware. Because of that, research should be done to measure how successful the application is. A system information success factor is also varying even when the usage is mandatory. [2]

2. LITERATURE REVIEW

4.1 E-Government

The Human-Rights-Aware Cities Scoring Application is an example of e-government implementation in Indonesia. E-Government involves information and communication technology in a public administration and can also transform relationships between the government and its citizens. [3] Implementing e-government into a public service or administration services can also reduce corruption and increase accountability to the government body that holds the service. [4]

There are a lot of types of e-government relationships between the government and its constituents. [5] In the case of the Human-Rights-Aware Cities Scoring Application, it falls into G2G and two-way communications.

4.2 E-Form and Computer Assisted Web Interview (CAWI)

The Human-Rights-Aware Cities Scoring Application works by giving a set of questions to be answered by the regional government to be fulfilled with the supporting documents. The answers and supporting documents are then sent manually to the Regional Offices of the Ministry of Law and Human Rights in their respective province. Those documents are then submitted to the application by officers in the Regional Offices of the Ministry of Law and Human Rights.

The look and feel of the application resemble an electronic form, an electronic equivalent of a paper form. [6] Sending a questionnaire through an electronic form, especially web-based like this application can be classified as Computer-Assisted Web Interviewing. [7]

4.3 DeLone and McLean Information Systems Success Model

There are numerous ways to measure information system success so a proper measurement model would be necessary. [8] One of the models is the DeLone and McLean Information Systems Success Model. [2], [8] The original model sees the benefit of information systems as organizational and individual impacts and is affected by system quality, information quality, use, and user satisfaction. [8]

As time progressed, DeLone and McLean revised the model in 2003 to elaborate use, simplifying organizational and individual impacts into one variable called net benefits, and service quality. This is done to cover the use when the system usage is mandatory, cover all system information implementation in various situations, and see the information system as a whole product. [2]

The model sees the success of information systems affected by these variables: Information Quality, System Quality, Service Quality, Intention

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to Use and the Use itself, User Satisfaction, and Net Benefits. [2]



Figure 2: The DeLone and McLean Information System Success Model based on the 2003 version.

4.4 Unified Theory of Acceptance and Use of Technology (UTAUT)

This model is developed in 2003 by Venkatesh, Morris, Davis, and Davis to review and compare several acceptance models. This model sees how performance expectancy, effort expectancy, and social influence affect behavioral intention to use. Then, the user behavior is affected by behavioral intention to use and facilitating conditions. Those relationships are moderated by gender, age, experience, and voluntariness of use. [9]

4.5 Previous Studies

There are several studies measuring the success of information systems implementation in the egovernment realm. One of them is Khayun et al. in 2012 assessing how successful the E-Excise system in Thailand is. [10] The study finds that when Trust, perceptions of information quality, and perceptions of system quality will affect system usage and user satisfaction. These two things will eventually affect the perceived net benefits.

Still, in ASEAN, particularly the e-Filing system of the Inland Revenue Board of Malaysia also has been tested with this model by MD. Aminul Islam in 2012. [11] The study seeks the factors that influence the increase of taxpayer reports to the e-Filing system. The study finds that information quality and service quality can affect trust building, perception of service, flexibility, and information quality. On the other hand, system quality only partially affects user satisfaction in the context of information system success.

As stated before, UTAUT can be used to measure what contributes to actual system usage. One of the e-government studies in this model is the e-Punten system of Bandung's Communications and Information Bureau. [12] The study finds that effort expectancy affects behavioral intention, facilitating conditions affect use behavior, and behavioral intention affects user behavior, while the most affecting one is performance expectancy and effort expectancy.

While UTAUT isn't for measuring the information system success, there is an effort to combine UTAUT and DeLone and McLean Information System Success Model by Mardiana et. al. [13] The proposed combined model connects UTAUT to Intention to Use. To validate the combined model, Mardiana et. al. tests it on a governmental bureau that has representative offices across Indonesia. [14] The test finds 3 variables that can predict intention to use significantly. They are perceived usefulness, service quality, and system quality. The system quality is unique because the relationship has a negative coefficient value.



Figure 3: The DeLone and McLean Information System Success Model combined with UTAUT.

The combined model has also been studied for the e-Filing system in Pontianak by Andriani et. al. [15] The study finds that Information Quality, Service Quality, System Quality, Use Behavior, User Satisfaction, and Behavior Intention influence user acceptance.

Using a combination of models is also present on the research to see how public-facing egovernment websites in PRC, but it is not with UTAUT. [16] After the research conducted to 1650 citizens in several cities in PRC, it is found that perceived service value is the strongest mediator for the relationship between service quality and continuous use intention by the citizen. As for the intention to use, it is the result of service quality, service value, and satisfaction.

Those studies about e-government have one thing in common, they all studied an information system to be used by the citizens, not for internal purposes. The Human-Rights-Aware-Cities Scoring Application is an application for internal only, while the subject is the regional government of cities in Indonesia. But, despite the internal nature

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of the application, the citizen would get the benefits.

3. METHODOLOGY

Based on the studies explained above, this study will use the DeLone and McLean Information Systems Success Model as a base. All variables from the model will be used. They are Information Quality, System Quality, Service Quality, Intention to Use, Use, User Satisfaction, and eventually the Net Benefits. The study will also incorporate one of the UTAUT variables into the study, the Social Influence variable.



Figure 4: Model used in this research

The research used a questionnaire consisting of 33 questions divided into 8 phases that represent each variable. The questionnaire is then sent to all individuals involved in the Human-Rights-Aware-Cities Scoring process. They are employees within the Sub-Directorate of Domestic Human Rights Cooperation in the first and second region, and the employees of the Human Rights Sector within the Law Service Division in the Regional Offices of the Ministry of Law and Human Rights. Based on the Human Resources System of the Ministry of Law and Human Rights (SIMPEG KUMHAM), it is found that the number of employees involved in the activity is around 267 employees. After doing a sampling using Slovin's formula, 161 employees are.

The questionnaire was presented as an online questionnaire using Google Forms. The link was distributed through an official memo to every structure involved in the activity.

The results of the questionnaire were then be analyzed through Partial Least Square Structured Equation Modeling (PLS-SEM) using SmartPLS 3. Structured Equational Modeling is one of many types of statistical methods to model relationships within every variable. [17]

The first 2 stages of PLS-SEM are specifying the structural model and the measurement models. [18] The structural model consists of how the relationships of each variable. That relationships are also often called hypotheses. On the other hand, the measurement models describe the relationships between variables and their indicators.

To see what factors affect the success of the implementation of the Human-Rights-Aware-Cities Success Application, this research uses 8 variables (or constructs in the terminology of PLS-SEM [18]). They are:

- 1. System Quality (SQ) to see how desired functionality and performance characteristics from a system affect the whole model. [19]
- 2. Information Quality (IQ) to see how the quality of the information in the system affects the whole model. [8]
- 3. Service Quality (SQ) to see how the user's expectation matches the reality affects the whole model. [20], [21]
- Social Influence (SI) to see how influence from other people affects the whole model.
 [9], [13]
- 5. Intention to Use (IU) to see how the intention to use the system affects the whole model. [9], [13], [22]
- 6. Use (U) to see how the user's consumption information affects the whole model. [8] This includes the mandatory or voluntary nature of the system use. [2]
- 7. User satisfaction to see how interaction success between users and the system affects the whole model. [8]
- 8. Net Benefits to see how the impacts of system use affect the whole model. [2]

Those variables are measured by their own indicators. Those indicators are derived from several literatures and previous studies for various scenarios. Table 1 shows indicators to measure every variable/construct used in this research.

Table 1: Indicators of each variable/construct.

Var.	Indicators							
	Code	Description	References					
IQ	IQ1	Completeness	[2], [19],					
	IQ2	Ease of understanding	[23]–[25]					
	IQ3	Personalization]					
	IQ4	Relevance]					
	IQ5	Security						
SQ	SQ1	Adaptability and flexibility	[23]–[26]					
	SQ2	Availability						

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	SQ3	Reliability	
	SQ4	Response time	1
	SQ5	Usability]
	SQ6	Navigation	1
SVQ	SVQ1	Assurance	[2], [8],
	SVQ2	Empathy	[16], [20],
	SVQ3	Responsiveness	[21]
	SVQ4	Service capacity	1
SI	SIla	Subjective norm	[9], [13],
	SI1b	Subjective norm	[27], [28]
	SI2a	Sector for the sec	1
	SI2b	Social factors	
IU	IU1	Intention	[2], [9],
	IU2	Prediction	[13], [29]
	IU3	Planning]
U	U1	Time to use	[2], [8], [30]
	U2	Frequency of use]
	U3	Use repetition]
US	US1	Assessment on user	[2], [8], [30]
		satisfaction	
	US2	System use difficulty	
	US3	System use convince]
	US4	Requirements of system use]
		satisfaction	
	US5	Delight on system use	
		satisfaction	
NB	NB1	Satisfaction	[2], [8], [31]
	NB2	Individual performance	
	NB3	Organizational performance	

4. **RESULTS AND DISCUSSIONS**

4.1 Respondents

182 respondents are responding to the questionnaire. Most of the respondents are in the level of staff. There are also several employees from the higher-up level participating in answering the questionnaire. They can either be actively



Figure 5: The origin of respondents. The darker region indicates a higher respondent number in the Regional Office in that province. For the Directorate General of Human Rights, it is not on the map.

involved in the usage of the application or have previously been involved with the application. While the total population of 267 is based on the employees of the Human-Rights Sector of the Regional Office of The Ministry of Law and Human Rights and Coordinator of Human Rights Home Affairs and Region 1 and 2 of the Human Rights Action Plan within the Directorate General of Human Rights of the Ministry of Law and Human Rights, there are several employees outside that population group. This can happen because, sometimes, they need help to input and verify the incoming data to the application.

The most working unit that completed the questionnaire is the Directorate General of Human Rights with 21 employees. The Regional Office of the Ministry of Law and Human Rights comes second with 18 employees. There are no employees from the West Kalimantan and Southeast Sulawesi Regional Office of the Ministry of Law and Human Rights. As for North Kalimantan, South Papua, Central Papua, and Highland Papua, there is no regional office in those provinces, yet.

After models and indicators are specified and the required number of respondents have already answered the question, the model is then drawn to SmartPLS 3. This process is done so that the analysis can be done. The SEM model in this research can be seen in the Figure 6.



Figure 6: The model in SmartPLS 3



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	IQ	IU	NB	SI	SQ	SVQ	U	US
IQ1	0.909							
IQ2	0.867							
IQ3	0.908							
IQ4	0.922							
IU1		0.928						
IU2		0.852						
IU3		0.943						
NB1			0.941					
NB2			0.921					
NB3			0.896					
SI1a				0.832				
SI1b				0.868				
SI2a				0.855				
SI2b				0.830				
SQ2					0.922			
SQ3					0.926			
SQ4					0.945			
SQ5					0.919			
SQ6					0.906			
SVQ1						0.943		
SVQ2						0.937		
SVQ3						0.962		
U1							0.905	
U2							0.919	
U3							0.934	
US5								1.000

Table 2: The outer loading value. Below is the third test of outer loading.

4.2 Measurement Models

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After running the PLS algorithm in SmartPLS 3, we can see how valid and reliable the model and the indicators are. The validation process of PLS-SEM consists of two phases. They are:

- 1. Convergent validity how to see correlated measurement positively to alternative measurement in a construct. This process is done with outer loading and average variance extracted (AVE). The outer loading value of an indicator should be above 0.7, and the AVE value of a construct should be above 0.5. [18]
- 2. Discriminant validity to see how a construct is distinctly different from another construct in an empirical standard. Usually, two tests are done to complete this phase. They are cross-loading and Fornell-Larcker Criterion. The cross-loading value of an indicator relative to its home construct should not be below the value of that indicator in the other construct. As for Fornell-Larcker Criterion, the value of construct correlation to itself should not below the correlation of a construct to another construct. [18]

If the requirements are not met, usually, the indicator with the lowest outer loading value is

omitted and tests are done again from the outer loading phase. As for outer loading itself, the indicator is omitted if the value is below the requirement.

Table 2 is the value of the outer loading of all indicators relative to its construct. The first outer loading test finds that indicators US1 (0.665), US2 (0.302), and US3 (0.650) are below the requirement of 0.7. After the indicators are omitted, the process makes the US4 indicator below 0.7 (0.613). This indicator is also omitted.

After the indicators are omitted, the process makes the US4 indicator below 0.7 (0.613). This indicator is also omitted. After running the second outer loading test, there is no indicator with outer loading below 0.7.

After testing the first Fornell-Larcker Criterion, it finds that IQ5, SVQ4, and SQ1 are making the value of IQ correlation to IQ below the value of IQ correlation to SVQ and SQ. Table 2 shows the value of outer loading after those all processes are done.

As we can see in the Table 3, the AVE values for all constructs are above the required value of 0.5. These happen for both the tests before and after Fornell-Larcker Criterion.



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 Table 3: Average Variance Extracted (AVE) value.
 Below is the second test of AVE.

	Average Variance
	Extracted (AVE)
IQ	0.813
IU	0.825
NB	0.845
SI	0.716
SQ	0.853
SVQ	0.898
U	0.846
US	1.000

In the discriminant validity phase, the crossloading in the Table 5 indicates that no indicator correlation value to another construct is higher than the indicator correlation value to its home construct. This happens for both cross-loading tests before and after the Fornell-Larcker Criterion test. The value of cross-loading can be seen on Table 4.

Finally, the Fornell-Larcker Criterion test finds that the construct correlation between IQ (0.884) and itself is lower than SQ (0.902) and SVQ (0.906). As explained in the outer loading tests, indicators from those constructs that have the lowest value are IQ5 (0.850), SVQ4 (0.913), and

Table 5: Cross-loading value.	The cells in	black are	the correlation	n between	the indicator	r and its	home	construct.
	Below	is the seco	ond test of cros	s-loading	s.			

	IQ	IU	NB	SI	SQ	SVQ	U	US
IQ1	0.892	0.648	0.697	0.632	0.809	0.780	0.667	0.511
IQ2	0.862	0.698	0.726	0.689	0.838	0.810	0.710	0.563
IQ3	0.887	0.723	0.717	0.680	0.746	0.743	0.678	0.652
IQ4	0.926	0.691	0.768	0.747	0.794	0.828	0.788	0.642
IQ5	0.850	0.683	0.724	0.729	0.805	0.844	0.765	0.573
IU1	0.703	0.928	0.691	0.782	0.697	0.721	0.691	0.613
IU2	0.731	0.852	0.773	0.672	0.750	0.731	0.804	0.567
IU3	0.688	0.943	0.730	0.762	0.674	0.700	0.693	0.672
NB1	0.801	0.779	0.941	0.743	0.834	0.830	0.815	0.772
NB2	0.752	0.711	0.921	0.696	0.721	0.741	0.748	0.755
NB3	0.713	0.736	0.896	0.690	0.718	0.729	0.756	0.651
SI1a	0.533	0.636	0.484	0.832	0.511	0.501	0.514	0.522
SI1b	0.586	0.647	0.599	0.868	0.558	0.599	0.614	0.608
SI2a	0.732	0.727	0.685	0.855	0.719	0.710	0.647	0.596
SI2b	0.789	0.732	0.819	0.830	0.778	0.822	0.786	0.633
SQ1	0.791	0.676	0.706	0.740	0.874	0.782	0.716	0.584
SQ2	0.799	0.747	0.773	0.675	0.914	0.819	0.754	0.649
SQ3	0.858	0.729	0.803	0.735	0.928	0.826	0.758	0.620
SQ4	0.845	0.686	0.751	0.697	0.934	0.845	0.758	0.622
SQ5	0.841	0.714	0.749	0.720	0.917	0.860	0.772	0.596
SQ6	0.800	0.715	0.734	0.627	0.901	0.833	0.733	0.611
SVQ1	0.862	0.725	0.787	0.748	0.873	0.934	0.790	0.661
SVQ2	0.770	0.706	0.738	0.700	0.800	0.922	0.762	0.571
SVQ3	0.870	0.768	0.794	0.719	0.874	0.957	0.814	0.659
SVQ4	0.869	0.749	0.793	0.764	0.832	0.913	0.784	0.597
U1	0.757	0.753	0.788	0.673	0.807	0.796	0.905	0.636
U2	0.734	0.734	0.740	0.720	0.748	0.746	0.919	0.610
U3	0.762	0.737	0.793	0.713	0.710	0.790	0.934	0.668
US5	0.669	0.680	0.792	0.699	0.674	0.669	0.694	1.000

Table 4: Fornell-Larcker Criterion value. Below is the second test.

	IQ	IU	NB	SI	SQ	SVQ	U	US
IQ	0.902							
IU	0.767	0.908						
NB	0.807	0.807	0.919					
SI	0.764	0.814	0.773	0.846				
SQ	0.877	0.778	0.826	0.748	0.924			
SVQ	0.851	0.775	0.817	0.762	0.897	0.947		
U	0.789	0.806	0.842	0.763	0.818	0.833	0.920	
US	0.661	0.680	0.792	0.699	0.671	0.667	0.694	1.000

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SQ1 (0.874). Those indicators are omitted and the test is then restarted from testing the outer loading. The restarted tests are all returning above the required values. Table 4 shows the value of the Fornell-Larcker Criterion after IQ5, SVQ4, and SQ1 are omitted.

The reliability tests are done to see if something isn't biased and error-free. [32] Usually, Cronbach's Alpha is used to see reliability based on the intercorrelation to the variable indicator. To mitigate the sensitivity of Cronbach's Alpha, an alternative test is used and it is called composite reliability.

Table 6: Cronbach's Alpha and composite reliability.

	Cronbach's Alpha	Composite Reliability
IQ	0.923	0.946
IU	0.893	0.934
NB	0.908	0.942
SI	0.868	0.910
SQ	0.957	0.967
SVQ	0.943	0.963
U	0.909	0.943
US	1.000	1.000

Both Cronbach's Alpha and composite reliability values should be at least 0.7 and above. [18], [32] Table 6 sees all values of Cronbach's Alpha and Composite Reliability are above the required value.

From what we discussed above, we can safely declare that all constructs and their indicator are valid and reliable. This indicates that we can go on to the structural model tests.

4.3 Structural Models

The structural model models can be assessed once the construct measures are reliable and valid. [18] This research mainly uses path coefficients, R^2 , and the level of Q^2 values to assess the structural model in the PLS-SEM.

Table 7: Path coefficients									
	IQ	IU	NB	SI	SQ	SVQ	U	US	
IQ		0.109						0.241	
IU							0.806		
NB									
SI		0.471							
SQ		0.209						0.235	
SVQ		0.135						0.251	
U			0.564						
US			0.401						

Table 7 shows the value of Path Coefficients. These value are used to see the hypothesized relationships among the constructs. The values of path coefficients are usually between -1 and +1. The more it close to 1, the stronger it gets. As for the direction of relationships, if it is below 0, then it is affecting negatively, and vice versa. [18]

All hypothesized relationships in this research are positively related. The strongest one is how IU affects U on 80.6% percentage. Interestingly, all the constructs about the quality (IQ, SQ, and SVQ) are relatively weak to IU and US, but the construct US is moderate to NB (40.1%). The strong value of the relationship of IU to U might be contributed by how SI affects IU, despite the moderate value of the relationship (47.1%).

If we see the R^2 value in Table 8, we can see how combined effects of exogenous variables/constructs affecting are particular endogenous variables/constructs. [18], [32] In Table 7, we can see that NB is strongly predicted by its exogenous constructs (U and US, by 79.2%). The weakest endogenous construct to be predicted by its exogenous constructs is US (from IQ, SQ, and SVQ, by 48.4%). The remaining percentage of each construct might be influenced by other factors not included in this research model.

<i>Table 8:</i> R^2 <i>value</i>		
	R ²	R ² Adjusted
IU	0.734	0.728
NB	0.792	0.789
U	0.650	0.648
US	0.484	0.475

To measure the model's out-of-sample predictive power and predict unused data in the model estimation, the Q^2 value is used. If the Q^2 value is larger than 0, the model has predictive relevance in one or more certain endogenous constructs. [18] This procedure is done by running a blindfolding process. All endogenous constructs positively have predictive relevance for the endogenous construct under consideration. As we can see from Table 9, all endogenous constructs have predictive relevance they all have more than 0 value.

Table 9: f² effect value

	IU	NB	U	US
IQ	0.009			0.024
IU			1.854	
SI	0.308			
SQ	0.024			0.016
SVQ	0.011			0.022
U		0.791		
US		0.399		

To measure the change of R^2 when an exogenous variables/construct are omitted, we can see the f^2

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effect size of each variables/constructs. [18] shows that the relationship between IU and U has the greatest effect (1.854) of all relationships. And then, the relationship between U and NB has the second greatest effect at 0.791. US and NB relationship also has a high effect at 0.399. The medium effect is held by the relationship between SI and IU (0.308). Then, the relationship between SVQ to US and IQ to US are notably small at 0,022 and 0,024. The rests are virtually non existent below 0,02.

Table 10: Q^2 value

	Q ²
IU	0.590
NB	0.659
U	0.544
US	0.462

To see whether a hypothesis is significant or not, since it depends on standard error, bootstrapping process should be done. It enables the calculation of the *t-value* and *p-value*. The *t* value should be larger than the critical value of 1,96 at a significance level of 5%. The *p-value* should be less than the significance level. [18]

	t-stat	p-value
IQ -> IU	0.762	0.447
IQ -> US	0.923	0.357
IU -> U	17.204	0.000
SI -> IU	3.261	0.001
SQ -> IU	1.119	0.264
SQ -> US	0.856	0.392
SVQ -> IU	0.797	0.426
SVQ -> US	1.764	0.078
U -> NB	8.964	0.000
US -> NB	6.464	0.000

Table 11: t-stat and p-value

Based on the t-stat and p-values from Table 11, the results can be described as below:

4.3.1 Hypothesis 1

- H₀: Information quality (IQ) is not affecting intention to use (IU) positively.
- H₁: Information quality (IQ) is affecting the intention to use (IU) positively.

In the structural model evaluation, we can see the path coefficient direction of IQ to IU is positive (10.9%). Since the t-stat value is still below the required value of 1.96 (0.762) and the p-value is still above 0.05 (0.447). It means that there is not enough evidence from the sample that IQ is significantly affecting IU positively. Therefore, we reject H_1 and accept H_0 .

4.3.2 Hypothesis 2

- H₀: System quality (SQ) is not affecting intention to use (IU) positively.
- H₁: System quality (SQ) is affecting the intention to use (IU) positively.

In the structural model evaluation, we can see the path coefficient direction of SQ to IU is positive (20.9%). Since the t-stat value is still below the required value of 1.96 (1.119) and the p-value is still above 0.05 (0.264). It means that there is not enough evidence from the sample that SQ is significantly affecting IU positively. Therefore, we reject H_1 and accept H_0 .

4.3.3 Hypothesis 3

- H₀: Service quality (SVQ) is not affecting intention to use (IU) positively.
- H₁: Service quality (SVQ) is affecting the intention to use (IU) positively.

In the structural model evaluation, we can see the path coefficient direction of SVQ to IU is positive (13.5%). Since the t-stat value is still below the required value of 1.96 (0.135) and the pvalue is still above 0.05 (0.797). It means that there is not enough evidence from the sample that SVQ is significantly affecting IU positively. Therefore, we reject H_1 and accept H_0 .

4.3.4 Hypothesis 4

- $\begin{array}{ll} H_0: & \mbox{Social influence (SI) is not affecting intention} \\ & \mbox{to use (IU) positively.} \end{array}$
- H₁: Social influence (SI) is affecting the intention to use (IU) positively.

In the structural model evaluation, we can see the path coefficient direction of SI to IU is positive (47.1%). The t-stat value on this hypothesis is above the required value of 1.96 (3.261) and the pvalue is also below 0.05 (0.001). It means that there is enough evidence from the sample that SVQ is significantly affecting IU positively. Therefore, we reject H_0 and accept H_1 .

4.3.5 Hypothesis 5

- H₀: Information quality (IQ) is not affecting user satisfaction (US) positively.
- H₁: Information quality (IQ) is affecting user satisfaction (US) positively.

In the structural model evaluation, we can see the path coefficient direction of IQ to US is positive (24.1%). Since the t-stat value is still below the

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required value of 1.96 (0.923) and the p-value is still above 0.05 (0.357). It means that there is not enough evidence from the sample that IQ is significantly affecting US positively. Therefore, we reject H_1 and accept H_0 .

4.3.6 Hypothesis 6

- H₀: System quality (SQ) is not affecting user satisfaction (US) positively.
- H₁: System quality (SQ) is affecting user satisfaction (US) positively.

In the structural model evaluation, we can see the path coefficient direction of SQ to US is positive (23.5%). Since the t-stat value is still below the required value of 1.96 (0.856) and the pvalue is still above 0.05 (0.392). It means that there is not enough evidence from the sample that SQ is significantly affecting US positively. Therefore, we reject H_1 and accept H_0 .

4.3.7 Hypothesis 7

- H₀: Service quality (SVQ) is not affecting user satisfaction (US) positively.
- H₁: Service quality (SVQ) is affecting user satisfaction (US) positively.

In the structural model evaluation, we can see the path coefficient direction of SVQ to US is positive (25.1%). Since the t-stat value is still below the required value of 1.96 (1.764) and the pvalue is still above 0.05 (0.078). It means that there is not enough evidence from the sample that SVQ is significantly affecting US positively. Therefore, we reject H₁ and accept H₀.

4.3.8 Hypothesis 8

- H₀: Intention to use (IU) is not affecting use (U) positively.
- H₁: Intention to use (IU) is affecting use (U) positively.

In the structural model evaluation, we can see the path coefficient direction of IU to U is positive (80.6%). The t-stat value on this hypothesis is above the required value of 1.96 (17.204) and the pvalue is also below 0.05 (0.000). It means that there is enough (very enough, frankly speaking) evidence from the sample that IU is significantly affecting U positively. Therefore, we reject H_0 and accept H_1 .

4.3.9 Hypothesis 9

- H₀: Use (U) is not affecting net benefits (NB) positively.
- H₁: Use (U) is affecting use (U) positively.

In the structural model evaluation, we can see the path coefficient direction of U to NB is positive (56.4%). The t-stat value on this hypothesis is above the required value of 1.96 (8.964) and the pvalue is also below 0.05 (0.000). It means that there is enough evidence from the sample that U is significantly affecting NB positively. Therefore, we reject H_0 and accept H_1 .

4.3.10 Hypothesis 10

- H₀: User satisfaction (US) is not affecting net benefits (NB) positively.
- H_1 : User satisfaction (US) is affecting use (U) positively.

In the structural model evaluation, we can see the path coefficient direction of US to NB is positive (40.1%). The t-stat value on this hypothesis is above the required value of 1.96 (6.464) and the p-value is also below 0.05 (0.000). It means that there is enough evidence from the sample that US is significantly affecting NB positively. Therefore, we reject H_0 and accept H_1 .

5. CONCLUSION

Based on the discussion of the research on Human-Rights-Aware-Cities Scoring Application, three constructs are not influencing the success of the application. They are information quality, system quality, and service quality. Those three variables have the t-stat value below 1,96 and pvalue above 0,05. Despite those facts, user satisfaction remains influential to the net benefits of the application. Use also influential to the net benefits of the application, and this influenced by the intention to use. The only variable derived from UTAUT, social influence, influenced the intention of use of the users.

Most of the findings are in line with one or more studies stated in either previous works or in the variables. The only thing that hasn't seen on all those studies are how information quality (IQ) affects user satisfaction (US). Combined with how information quality, system quality, and service quality don't affect both intention to use and user satisfaction, make the application itself isn't the success factor of the application.

Based on those findings, to increase the success of Human-Rights-Aware-Cities Scoring Application, the Ministry of Law and Human Rights and Regional Governments of Cities across Indonesia should strengthen their cooperation and coordination. Thus, having a good relationship between Directorate General of Human Rights, the

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Regional Offices of Ministry of Law and Human Rights, and Regional Governments is a must to keep officers willing to use the application. That also trigger the higher-ups and stakeholders to push officers or even themselves in the Regional Offices of Ministry of Law and Human Rights. As the law mandated in the Article 8 of Law No. 39 of 1999 about Human Rights, "The government is responsible of protecting, advancing, and enforcing the human rights", then making all cities met the title of Human-Rights-Aware should be the priority of all regional government.

Inside the Ministry of Law and Human Rights, efforts should be made to make users are satisfied when using the application. The intention of use from the user should be increased so that the use can also be increased. This can be done through a humble command from the higher-ups to the staffs.

There are limitations to this research. This research can't cover the respondents from the regional governments since they are not directly involved in the usage of the application. They only supplied the data so that staffs from the Regional Office of Ministry of Law and Human Rights can input. Further research can ty to include more from the indirect users of the similar application so that the outcome of the research can be more comprehensive. Another suggestion is to use more UTAUT variables since it is suitable for mandatory applications.

REFERENCES:

- P. . Seddon, "A respecification and extension of the DeLone and McLean model of IS. Information Systems Research," *Inf. Syst. Res.*, vol. 8, no. 3, pp. 240–253, 1997, [Online]. Available: https://pubsonline.informs.org/doi/abs/10.1287 /isre.8.3.240
- [2] W. H. DeLone and E. R. McLean, "The DeLone and McLean model of information systems success: A ten-year update," *J. Manag. Inf. Syst.*, vol. 19, no. 4, pp. 9–30, 2003, doi: 10.1080/07421222.2003.11045748.
- [3] M. P. Rodríguez-Bolívar, Measuring Egovernment Efficiency: The Opinions of Public Administrators and Other Stakeholders. Granada: Springer, 2014.
- [4] D. Anderson, R. Wu, J.-S. Cho, and K. Schroeder, *E-Government Strategy, ICT and Innovation for Citizen Engagement*. New York, NY: Springer New York, 2015. doi: 10.1007/978-1-4939-3350-1.

- [5] J. S. Hiller and F. Bélanger, Privacy Strategies for Electronic Government, E-government series. Endowment for the business of Government. Arlington, VA: Pricewaterhouse Cooper, 2001.
- [6] K. Axelsson and S. Ventura, "Reaching Communication Quality in Public E-Forms – A Communicative Perspective on E-Form Design," in *Electronic Government*, Berlin, Heidelberg: Springer Berlin Heidelberg, 2007, pp. 342–353. doi: 10.1007/978-3-540-74444-3_29.
- [7] S. Biffignandi and J. Bethlehem, *Handbook of Web Surveys*, 2nd ed. John Wiley & Sons, Inc., 2021.
- [8] W. H. Delone and E. R. McLean, "The quest for the dependent variable. Information Systems Research," *Inf. Syst. Res.*, vol. 3, no. 1, pp. 60–95, 1992, [Online]. Available: https://doi.org/10.1287/isre.3.1.60
- [9] Venkatesh, Morris, Davis, and Davis, "User Acceptance of Information Technology: Toward a Unified View," *MIS Q.*, vol. 27, no. 3, p. 425, May 2003, doi: 10.2307/30036540.
- [10] V. Khayun, P. Ractham, and D. Firpo, "Assessing e-Excise sucess with Delone and Mclean's model," *J. Comput. Inf. Syst.*, vol. 52, no. 3, pp. 31–40, 2012, doi: 10.1080/08874417.2012.11645556.
- [11] MD. Aminul Islam, "Factors affecting user satisfaction in the Malaysian income tax efiling system," *African J. Bus. Manag.*, vol. 6, no. 21, pp. 6447–6455, 2012, doi: 10.5897/ajbm11.1689.
- [12] K. A. Mutaqin and E. Sutoyo, "Analysis of Citizens Acceptance for e-Government Services in Bandung, Indonesia: The Use of the Unified Theory of Acceptance and Use of Technology (UTAUT) Model," *Bull. Comput. Sci. Electr. Eng.*, vol. 1, no. 1, pp. 19–25, 2020, doi: 10.25008/bcsee.v1i1.3.
- [13] S. Mardiana, J. H. Tjakraatmadja, and A. Aprianingsih, "DeLone-Mclean information system success model revisited: The separation of intention to Use Use and the integration of technology acceptance models," *Int. J. Econ. Financ. Issues*, vol. 5, no. July, pp. 172–182, 2015.
- [14] S. Mardiana, J. H. Tjakraatmadja, and A. Aprianingsih, "Validating the Conceptual Model for Predicting Intention to Use as Part of Information System Success Model: The Case of an Indonesian Government Agency," *Procedia Comput. Sci.*, vol. 72, pp. 353–360,



ISSN: 1992-8645

www.jatit.org

2015, doi: 10.1016/j.procs.2015.12.150.

- [15] F. D. Andriani, T. A. Napitupulu, and S. Haryaningsih, "The user acceptance factors of e-filing system in Pontianak," *J. Theor. Appl. Inf. Technol.*, vol. 95, no. 17, pp. 4265–4272, 2017.
- [16] Y. Li and H. Shang, "Service quality, perceived value, and citizens' continuous-use intention regarding e-government: Empirical evidence from China," *Inf. Manag.*, vol. 57, no. 3, p. 103197, 2020, doi: 10.1016/j.im.2019.103197.
- [17] R. H. Hoyle, *Handbook fo Structural Equation Modelling*. 2012.
- [18] J. F. Hair, G. T. Hult, C. Ringle, and M. Sarstedt, *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, 2nd ed. SAGE Publications, 2017.
- [19] A. Ameen, K. Alfalasi, N. A. Gazem, and O. Isaac, "Impact of System Quality, Information Quality, and Service Quality on Actual Usage of Smart Government," 2019 1st Int. Conf. Intell. Comput. Eng. Towar. Intell. Solut. Dev. Empower. our Soc. ICOICE 2019, pp. 0–5, 2019, doi:

10.1109/ICOICE48418.2019.9035144.

- [20] A. Parasuraman, V. A. Zeithaml, and L. L. Berry, "A Conceptual Model of Service Quality and Its Implications for Future Research," *J. Mark.*, vol. 49, no. 4, p. 41, 1985, doi: 10.2307/1251430.
- [21] L. F. Pitt, R. T. Watson, and C. B. Kavan, "Service Quality: A Measure of Information Systems Effectiveness," vol. 19, no. 2, pp. 173–187, 1995, doi: https://doi.org/10.2307/249687.
- [22] I. Ajzen, M. Fishbein, and N. A. Flanders, Belief, attitude, intention and behaviour: An introduction to theory and research. Boston: Addison-Wesley Publishing Company, 1975.
 [Online]. Available: https://www.google.co.id/books/edition/Belief _Attitude_Intention_and_Behavior/800QAQA AIAAJ?hl=en&gbpv=0&bsq=Fishbein and Ajzen%27s (1975)
- [23] R. R. Nelson, P. A. Todd, and B. H. Wixom, "Antecedents of information and system quality: An empirical examination within the context of data warehousing," *J. Manag. Inf. Syst.*, vol. 21, no. 4, pp. 199–235, 2005, doi: 10.1080/07421222.2005.11045823.

- [24] P. Saha, A. K. Nath, and E. Salehi-Sangari, "Evaluation of government e-tax websites: An information quality and system quality approach," *Transform. Gov. People, Process Policy*, vol. 6, no. 3, pp. 300–321, 2012, doi: 10.1108/17506161211251281.
- [25] T. Zhou, "An empirical examination of initial trust in mobile banking," *Internet Res.*, vol. 21, no. 5, pp. 527–540, 2011, doi: 10.1108/10662241111176353.
- [26] N. P. Rana, Y. K. Dwivedi, and M. D. Williams, "Evaluating the validity of IS success models for the electronic government research: An empirical test and integrated model," *Int. J. Electron. Gov. Res.*, vol. 9, no. 3, pp. 1–22, 2013, doi: 10.4018/jegr.2013070101.
- [27] S. Al-Shafi, V. Weerakkody, and M. Janssen, "Investigating the adoption of e-government services in Qatar using the UTAUT model," *15th Am. Conf. Inf. Syst. 2009, AMCIS 2009*, vol. 3, pp. 1915–1924, 2009.
- [28] G. Tokdemir, Y. Paçin, M. Kurfal, and A. Arifo, "Computers in Human Behavior Adoption of e-government services in Turkey," vol. 66, pp. 168–178, 2017, doi: 10.1016/j.chb.2016.09.041.
- [29] E. Karahanna and D. W. Straub, "The psychological origins of perceived usefulness and ease-of-use," *Inf. Manag.*, vol. 35, no. 4, pp. 237–250, 1999, doi: 10.1016/S0378-7206(98)00096-2.
- [30] R. A. Zuama, J. M. Hudin, D. Puspitasari, E. H. Hermaliani, and D. Riana, "Quality dimensions of Delone-McLean model to measure students' accounting computer satisfaction: An empirical test on accounting system information," in 2017 5th International Conference on Cyber and IT Service Management (CITSM), Aug. 2017, pp. 1–6. doi: 10.1109/CITSM.2017.8089318.
- [31] V. R. Prybutok, X. Zhang, and S. D. Ryan, "Evaluating leadership, IT quality, and net benefits in an e-government environment," *Inf. Manag.*, vol. 45, no. 3, pp. 143–152, 2008, doi: 10.1016/j.im.2007.12.004.
- [32] U. Sekaran, A Skill-Building Approach Fourth Edition RESEARCH METHODS FOR BUSINESS. 2016. [Online]. Available: http://www.wiley.com/college