## <u>Supplementary material for the paper "Towards Identifying Factors Influencing Mobile Government Adoption: An Exploratory Literature Review"</u>

**Table 1. Key Factor Quality and Identified Components** 

Key Factor	Components	References
Quality	Service Quality	[5]; [13]; [9]; [11]; [2]; [7]; [10]; [17]; [32]; [39]
	Outcome Quality	[5]; [10]
	Information Quality	[33]; [6]; [11]; [5]; [2]; [17]
	Service Recovery	[7]
	Reliability	[4]
	Service Ubiquity	[4]; [12]
	Information Accuracy	[14]

**Table 2. Key Factor Provision and Identified Components** 

Key Factor	Components	References
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Provision	Lack of legal framework and structure	[27]; [32]
	Policy Framework	[29]
	Distributive and Interactional Justice	[7]
	Government Support	[23]

Table 3. Key Factor Perceived Value and Identified Components

Key Factor	Components	References
Perceived Value	Citizens expectations	[10]
	Perceived Value	[7]; [38]
	Increased channels for interaction	[7]; [10]
	Enhancing civic engagement among citizens	[2]
	Cost	[20]; [2]; [7]; [17]; [19]; [26]; [32]; [38]; [8]

Voice opportunity	[14]
Belief they will benefit by using mGov	[4]; [17]
Demand for government applications	[28]
Citizen participation	[10]

Table 4. Key Factor Demographics and Identified Components

Key Factor	Components	References
Demographics	Gender	[1]; [32]
	Age	[1]; [32]
	Household Income	[1]
	Poverty	[25]
	Limited human skills development	[27]; [7]
	Education	[25]; [32]

Minorities	[25]
Digital divide	[7]; [12]; [15]; [17]

Table 5. Key Factor Trust and Identified Components

Key Factor	Components	References
Trust	Trust in technology	[8]; [31]; [16]; [24]; [27]; [33]; [9]; [7]
	Trust	[1]; [6]; [9]; [11]; [2]; [7]; [21]; [22]; [32]
	Trust in government	[9]; [7]; [19]
	Transparency	[24]; [33]; [14]; [4]; [38]
	Perceived risk	[7]; [32]
	Perceived reliability	[34]; [14]
	Procedural fairness	[14]

Table 6. Key Factor User Experience and Identified Components

Key Factor	Components	References
User	Personalization	[38]
experience	User centricity	[38]
	Information overload	[32]
	Simplicity	[26]
	Responsiveness	[4]
	Citizen Satisfaction	[9]; [11]; [28]; [2]; [37]
	Perceived effectiveness	[11]; [38]
	Performance expectancy	[6]; [19]; [36]
	Effort expectancy	[2]; [6]; [19]; [36]
	Self-efficacy	[6]; [7]; [32]
	Convenience	[33]; [28]; [17]; [37]

Perceived Ease of Use (PEOU)	[16]; [18]; [24]; [9]; [14]; [20]; [23]; [34]; [2]; [4]; [17]; [29]
Perceived Usefulness	[2]; [8]; [9]; [31]; [16]; [24]; [34]
Trialability	[23]
Perceived Compatibility	[24]; [6]; [9]; [23]; [2]
User Acceptance	[8]

Table 7. Key Factor Mobile Strengths and Identified Components

Key Factor	Components	References
Mobile Strengths	Mobility	[24]; [30]; [2]; [10]; [36]; [38]
	Flexibility	[24]
	Immediacy	[30]; [33]; [4]; [10]; [17]
	Real time information	[24]; [30]; [10]; [17]; [19]; [29]; [32]

Portability	[14]; [10]; [32]
Location (any)	[21]; [32]; [14]
Speed	[29]; [32]; [40]
Convenience	[33]; [28]; [17]; [37]
Access	[20]; [28]; [4]; [10]; [17]; [32]; [38]; [35]
Active control	[14]
Multimedia services	[14]
Reachability	[22]; [32]; [38]
Limited computational capacity of mobile devices	[21]; [32]
Emergency management	[17]; [32]
Tangible services	[10]

Service ubiquity	[4]; [12]
Timeliness	[14]; [10]; [40]; [22]; [2]; [7]; [17]

## Table 8. Key Factor Infrastructure and Identified Components

Key Factor	Components	References
Infrastructure	Interoperability	[32]
	Smartphone penetration	[29]; [32]
	Infrastructure	[20]; [2]; [12]; [19]; [21]; [29]; [32]; [31]; [27]
	Facilitating conditions	[6]
	Availability of resources	[6]

## Table 9. Key Factor Image and Identified Components

Key Factor	Components	References

Image	Relative advantage	[23]
	Image	[23]
	Visibility	[23]; [4]
	Result demonstrability	[23]
	Social Influence	[8]; [1]; [7]; [19]

Table 10. Key Factor Attitude and Identified Components

Key Factor	Components	References
Attitude	Attitude	[32]
	Behavioral Intention	[32]; [2]
	Personal Initiative/ Characteristic	[20]; [28]

Table 11. Key Factor Security and Identified Components

Key Factor	Components	References
Security	Security	[31]; [16]; [24]; [27]; [30]; [6]; [20]; [34]; [2]; [12]; [15]; [29]; [32]; [40]
	Privacy	[31]; [27]; [30]; [12]; [21]; [32]
	Confidentiality	[21]

**Table 12. Key Factor Awareness and Identified Components** 

Key Factor	Components	References
Awareness	Weak understanding of mobile government	[31]
	Awareness or lack of awareness	[33]; [3]; [6]; [23]; [2]; [32]

## **References**

[1] Syed Zamberi Ahmad and Khalizani Khalid. 2017. The adoption of M-government services from the user's perspectives: Empirical evidence from the United Arab Emirates. *International Journal of Information Management* 37, 5 (October 2017), 367–379. DOI:https://doi.org/10.1016/j.ijinfomgt.2017.03.008

- [2] Adnan Mustafa AlBar and Mashael A. 2018. Exploring Saudi Citizens' Acceptance of Mobile Government Service. *ijacsa* 9, 11 (2018). DOI:https://doi.org/10.14569/IJACSA.2018.091156
- [3] Mahmoud Al-dalahmeh, Ons Al-Shamaileh, Anas Aloudat, and Bader Yousef Obeidat. 2018. The Viability of Mobile Services (SMS and Cell Broadcast) in Emergency Management Solutions: An Exploratory Study. *Int. J. Interact. Mob. Technol.* 12, 1 (January 2018), 95. DOI:https://doi.org/10.3991/ijim.v12i1.7677
- [4] Awad Saleh Alharbi, George Halikias, Mohammad Yamin, and Abdullah Basahel. 2020. An overview of M-government services in Saudi Arabia. *Int. j. inf. tecnol.* 12, 4 (December 2020), 1237–1241. DOI:https://doi.org/10.1007/s41870-020-00433-9
- [5] Hajar Saeed Al-Hubaishi, Syed Zamberi Ahmad, and Matloub Hussain. 2018. Assessing M-Government Application Service Quality and Customer Satisfaction. *Journal of Relationship Marketing* 17, 3 (July 2018), 229–255. DOI:https://doi.org/10.1080/15332667.2018.1492323
- [6] Mohammed Almaiah, Ahmad Al-Khasawneh, Ahmad Althunibat, and Saleh Khawatreh. 2020. Mobile government adoption model based on combining GAM and UTAUT to explain factors according to adoption of mobile government services. (2020).
- [7] Ibrahim Almarashdeh. 2020. The effect of recovery satisfaction on citizens loyalty perception: a case study of mobile government services. *IJECE* 10, 4 (August 2020), 4279. DOI:https://doi.org/10.11591/ijece.v10i4.pp4279-4295
- [8] Ibrahim Almarashdeh and Mutasem K. Alsmadi. 2017. How to make them use it? Citizens acceptance of M-government. *Applied Computing and Informatics* 13, 2 (July 2017), 194–199. DOI:https://doi.org/10.1016/j.aci.2017.04.001
- [9] Bassam Alqaralleh, Ahmad Al-Omari, and Malek Alksasbeh. 2020. An Integrated Conceptual Model for m-Government Acceptance in Developing Countries: The Case Study of Jordan. (2020).
- [10] Meiaad Rashid Alsaadi, Syed Zamberi Ahmad, and Matloub Hussain. 2019. Improving the quality of mobile government services in the Gulf Cooperation Council: A quality-function-deployment approach. *JSIT* 21, 1 (March 2019), 146–164. DOI:https://doi.org/10.1108/JSIT-11-2017-0116
- [11] Noor Dheyaa Azeez and Muhammad Modi Lakulu. 2005. EVALUATION FRAMEWORK OF M-GOVERNMENT SERVICES SUCCESS IN MALAYSIA. . *Vol.* 24 (2005), 33.
- [12] Mark Anthony Camilleri. 2019. The online users' perceptions toward electronic government services. *JICES* 18, 2 (November 2019), 221–235. DOI:https://doi.org/10.1108/JICES-09-2019-0102

- [13] Lovneesh Chanana, Rajat Agrawal, and Devendra Kumar Punia. 2016. Service Quality Parameters for Mobile Government Services in India. *Global Business Review* 17, 1 (February 2016), 136–146. DOI:https://doi.org/10.1177/0972150915610702
- [14] Zhen-Jiao Chen, Douglas Vogel, and Zhao-Hua Wang. 2016. How to satisfy citizens? Using mobile government to reengineer fair government processes. *Decision Support Systems* 82, (February 2016), 47–57. DOI:https://doi.org/10.1016/j.dss.2015.11.005
- [15] Shin-Yan Chiou, Tsung-Ju Wang, and Jiun-Ming Chen. 2017. Design and Implementation of a Mobile Voting System Using a Novel Oblivious and Proxy Signature. *Security and Communication Networks* 2017, (December 2017), 1–16. DOI:https://doi.org/10.1155/2017/3075210
- [16] Riyad Eid, Hassan Selim, and Yasser El-Kassrawy. 2020. Understanding citizen intention to use m-government services: an empirical study in the UAE. *TG* ahead-of-print, ahead-of-print (June 2020). DOI:https://doi.org/10.1108/TG-10-2019-0100
- [17] Salih Hajem Glood, Wan Rozaini Shiek Osman, and Maslinda Mohd Nadzir. 2005. THE EFFECT OF CIVIL CONFLICTS AND NET BENEFITS ON M-GOVERNMENT SUCCESS OF DEVELOPING COUNTRIES: A CASE STUDY OF IRAQ. . *Vol.* (2005), 12.
- [18] Dennis Hilgers and Lisa Schmidthuber. 2018. Open Government: Exploring Patterns of Mobile Interaction Between Citizens and Local Government. In *European Cities in Dynamic Competition*, Horst Albach, Heribert Meffert, Andreas Pinkwart, Ralf Reichwald and Łukasz Świątczak (eds.). Springer Berlin Heidelberg, Berlin, Heidelberg, 57–72. DOI:https://doi.org/10.1007/978-3-662-56419-6\_4
- [19] Jinghui (Jove) Hou, Laura Arpan, Yijie Wu, Richard Feiock, Eren Ozguven, and Reza Arghandeh. 2020. The Road toward Smart Cities: A Study of Citizens' Acceptance of Mobile Applications for City Services. *Energies* 13, 10 (May 2020), 2496. DOI:https://doi.org/10.3390/en13102496
- [20] Fredrick Ishengoma, Leonard Mselle, and Hector Mongi. 2019. Critical success factors for m-Government adoption in Tanzania: A conceptual framework. *E J Info Sys Dev Countries* 85, 1 (January 2019), e12064. DOI:https://doi.org/10.1002/isd2.12064
- [21] Tiko Iyamu. 2020. Creating a technical architecture framework for m-voting application. *African Journal of Science, Technology, Innovation and Development* (November 2020), 1–8. DOI:https://doi.org/10.1080/20421338.2020.1812977
- [22] Abhishek Kumar and Ashok Kumar Srivastava. 2011. Designing and developing secure protocol for mobile voting. *International journal of applied Engineering reesearch* (2011).
- [23] Herman Eliewaha Mandari, Yee-Lee Chong, and Chung-Khain Wye. 2017. The influence of government support and awareness on rural farmers' intention to adopt mobile government

- services in Tanzania. *JSIT* 19, 1/2 (March 2017), 42–64. DOI:https://doi.org/10.1108/JSIT-01-2017-0005
- [24] Shailendra Mishra and Mayank Singh. 2019. A conceptual framework for effective m-governance. *Journal of Engineering Science and Technology* 14, 6 (2019), 3514–3535.
- [25] Sean Mossey, Daniel Bromberg, and Aroon P. Manoharan. 2019. Harnessing the power of mobile technology to bridge the digital divide: a look at U.S. cities' mobile government capability. *Journal of Information Technology & Politics* 16, 1 (January 2019), 52–65. DOI:https://doi.org/10.1080/19331681.2018.1552224
- [26] Mallikarjun Mudda and Shruti Bhargava Choubey. 2018. Application of System Engineering in Election Voting System. *IJET* 7, 2.16 (April 2018), 102. DOI:https://doi.org/10.14419/ijet.v7i2.16.11503
- [27] Adebukola Onashoga, Adebayo Ogunjobi, Thomas Ibharalu, and Oluwafunmilayo Lawal. 2016. A secure framework for SMS-based service delivery in m-government using a multicast encryption scheme. *African Journal of Science, Technology, Innovation and Development* 8, 3 (June 2016), 247–255. DOI:https://doi.org/10.1080/20421338.2016.1156837
- [28] Christopher G. Reddick and Yueping Zheng. 2017. Determinants of citizens' mobile apps future use in Chinese local governments: An analysis of survey data. *TG* 11, 2 (May 2017), 213–235. DOI:https://doi.org/10.1108/TG-11-2016-0078
- [29] S Ryu, P Hong, and T Lim. Changes and Directions of ICT Services in Korea Government. *ICIC Express LEtters, Part B: Applications* 11, 7, 683–689. DOI:http://dx.doi.org/10.24507/icicelb.11.07.683
- [30] Meiaad Rashed Saadi, Syed Zamberi Ahmad, and Matloub Hussain. 2017. Prioritization of citizens' preferences for using mobile government services: The analytic hierarchy process (AHP) approach. *TG* 11, 3 (August 2017), 476–503. DOI:https://doi.org/10.1108/TG-04-2017-0020
- [31] Ala'a Saeb Al-Sherideh, Roesnita Ismail, Fauziah Abdul Wahid, Norasikin Fabil, and Waidah Ismail. 2018. Mobile Government Applications Based on Security and Privacy: A Literature Review. *IJET* 7, 4.1 (September 2018), 51. DOI:https://doi.org/10.14419/ijet.v7i4.1.19492
- [32] Stuti Saxena. 2018. Role of "perceived risks" in adopting mobile government (m-government) services in India. FS 20, 2 (April 2018), 190–205. DOI:https://doi.org/10.1108/FS-08-2017-0040
- [33] Fakhar Shahzad, Guoyi Xiu, Muhammad Aamir Shafique Khan, and Muhammad Shahbaz. 2020. Predicting the adoption of a mobile government security response system from the user's perspective: An application of the artificial neural network approach. *Technology in Society* 62, (August 2020), 101278. DOI:https://doi.org/10.1016/j.techsoc.2020.101278

- [34] Mahmud Akhter Shareef, Yogesh K. Dwivedi, Sven Laumer, and Norm Archer. 2016. Citizens' Adoption Behavior of Mobile Government (mGov): A Cross-Cultural Study. *Information Systems Management* 33, 3 (July 2016), 268–283. DOI:https://doi.org/10.1080/10580530.2016.1188573
- [35] Evgeny Styrin and Artem Kostyrko. 2016. Implementing Smart Services in Moscow: The Integrated Mobile Platform. In *Smarter as the New Urban Agenda*, J. Ramon Gil-Garcia, Theresa A. Pardo and Taewoo Nam (eds.). Springer International Publishing, Cham, 225–241. DOI:https://doi.org/10.1007/978-3-319-17620-8\_12
- [36] Shamim Talukder, Raymond Chiong, Sandeep Dhakal, Golam Sorwar, and Yukun Bao. 2019. A two-stage structural equation modeling-neural network approach for understanding and predicting the determinants of m-government service adoption. *JSIT* 21, 4 (November 2019), 419–438. DOI:https://doi.org/10.1108/JSIT-10-2017-0096
- [37] Hung Trong Van, Myung Bae Kim, Jae-Hun Sa, Jong-Bae Kim, and GwangYong Gim. 2016. The Factors Affecting User Behavior on Mobile Voting in Vietnam. *IJMUE* 11, 6 (June 2016), 311–318. DOI:https://doi.org/10.14257/ijmue.2016.11.6.27
- [38] Changlin Wang, Thompson S.H. Teo, and Luning Liu. 2020. Perceived value and continuance intention in mobile government service in China. *Telematics and Informatics* 48, (May 2020), 101348. DOI:https://doi.org/10.1016/j.tele.2020.101348
- [39] Bernd W. Wirtz, Steven Birkmeyer, and Paul F. Langer. 2019. Citizens and mobile government: an empirical analysis of the antecedents and consequences of mobile government usage. *International Review of Administrative Sciences* (2019), 0020852319862349.
- [40] P. Yaagesh Prasad and S. Malathi. 2020. M-Voting with Government Authentication System. In *Emerging Trends in Computing and Expert Technology*, D. Jude Hemanth, V. D. Ambeth Kumar, S. Malathi, Oscar Castillo and Bogdan Patrut (eds.). Springer International Publishing, Cham, 1244–1259. DOI:https://doi.org/10.1007/978-3-030-32150-5\_126