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A New Method for Open Government Using of Information Technology

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A B S T R A C T

The purpose of this paper is to explore dimensions of open government in tax affairs organization of Iran country as a governmental organization. Three main factors of policy, culture, and technology were identified after investigating open government's plan in the United States of America, Austria, Mexico countries and the conducted interviews with experts in three fields of information technology, Executive, and legal. Four subfactors of internal directive, legal, strategic planning, and performance for policy and five subfactors of security, tools, open government program, data, and infrastructure for technology and six sub-factors of employees readiness, communicational channels, knowledge management, changes management, agency stakeholders, and participatory activities were considered for culture. A structured interview was conducted with three experts in legal, information technology and administrative fields for initial evaluation and finding new factors. The statistical population in this research was considered among Tax Affairs Organization of Iran country's employees. The mentioned pattern was evaluated based on partial least squares approach and confirmed at strong level after extracting information from the distributed questionnaires. Three factors of policy, technology and culture have effect on open government and between them culture has the main priority.

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1. INTRODUCTION

Open government is a pervasive movement to expand citizens' access to government affairs. Open government is of the relatively new achievements that have close relationship with information technology. Its principles have been based on democratic values. Citizens' right of access to government documents and measures for public supervision is of the open government goals. They can also extract their required information from this context. This means that citizens are able to receive more data and information about their need by using web electronic contexts [1]. The doctrine governing open government states that citizens should have the right to access government documents and inquiry for public supervision [2]. Alalwan et al. [3-5] consider the emergence of social media as a factor that has provided opportunity for people's engagement and interaction in open government work.

It has changed people's expectations about how government works. They also consider achievement of transparency, participation, and partnership as one of the goals of open government . Emergence of web is one of the significant developments in the Internet. Davis [6], Alharbi and Drew [7] consider it as the factor of opening data and sharing non-sensitive information about operations and services by governmental organizations and business. Benbasat and Barki [8] consider open data as an important source due to its potential to empower citizens, business, and conversion of government to public services delivery. Al-Shihi et al. [2] believe that the government should use the capacity availability of open government data with high quality as a main input source for industry despite harness of the economic value of open data assets and advantage related to business opportunities. Users despite data overlapping may confuse also overlapping data set and contradictory data set. Brasel and Gips [9] consider increase of transparency, stimulation of economic growth, improvement of government services and accountability, encouraging the reuse of information, improvement of public relations and attitude towards the government, and improvement of government data and processes as six incentives to open the data in the countries. Obstacles of participation including lack of incentive, abilities,

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business models and technical knowledge among users. Budiono et al. [10], Carlsson et al. [11], Chong [12], Chong etal. [13], Daraei and Hamidi [14] concern for privacy, confidentiality and responsibility, complexity of the activities required for identification, understanding and using the data can be mentioned as the obstacles of the expansion of open data

Chong et al. [15] totally consider employees and budget constraint, the likelihood of loss of income, and the uncertainty of its compliance with the Data Protection Act as the most problematic obstacle among 20 unique specified obstacles. The concern for coordination between security and openness has been stated as an important factor in other researches. However, competition between the principles of information management and balancing due to the required internal information has been sometimes reported as the important factor . Chong et al. [16] states open government project of organization as a public plan that its details show how the principles of transparency and open government statement are of the main mission of organization. This project in senior policy, legal and technology management fields in organization with the public experts and experts' view reflects open government in which specific measures' details should be carried out according to the schedule table. Alvanchi et al. [17], Lee and Kwak [18] consider "Open Government Implementation Model" as a model of public method to implement open government projects that includes some suggestions for step by step implementation of open government and includes some indices to measure the success of individual steps. Provision of a specific framework can be helpful for the next measures including implementation and operation of open government due to the development of e-government in Iran country and more provision of services electronically and online by governmental organizations and institutions in Iran, and due to the movement of developed countries toward creation and operation of open government in line with e-government, and since an specific study has not been conducted till now on implementing, designing and creating open government in governmental organizations which provide e-services, and there is not still an appropriate understanding in this regard .

The aim of conducting this research is to identify factors that have an effect on implementation of open government in the Tax affairs Organization of Iran country as governmental organization. Open government projects in different countries are firstly studies for this purpose. Then the research methodology is stated and afterwards the results of findings are analyzed. Finally the results of findings are analyzed, concluded, and summarized .

۲. Research Literature

Open government model in three countries, the United States of America, Austria and Mexico is addressed in this part .

۲,۱. Open Government Framework Of America Department of Interior (DOI)

DOI has accepted integrated lifecycle management to access for planning and implementing business processes, which is of the primary goals of open government. Expansion of DOI government framework includes a process of comprehensive management within the life cycle total time of evaluation and planning program of primary stages in order to measure performance and processes of improvement. In addition, the framework includes the methods to identify, understand and address to the technology, policy, and cultural issues of DOI related to certain projects of open government (Open Government project of America):

Key technologies' areas: Security, infrastructure, tools, enterprise architecture, and current open government pilots and programs ;

Key policies' areas: Strategic planning, performance, legal, internal directives, acquisition and privacy;

Key culture areas: Employee readiness, communication channels, stakeholders, and existing and emerging public collaboration vehicles.

The framwork for Open Government project of America is illustrated in Figure 1.

Figure 1: Open government framework of Department of Interior of America country

۲,۲ Open Government of Austria country

Open government is the comprehensive redesign of administrative policies and activities according to the principles of modern management and public governance. In terms of the above cases, open government focuses on transparency, participation and partnership. KDZ Implementation model is significantly based on "Lee & Kwak Implementation Model" [18]. Implementation Model, open government data is four steps :

Stage 1 – Increasing Data Transparency: Opens access to administrative data .

Stage 2 – Improving Open Participation: Opens government and administration for the ideas and knowledge of the public .

Stage 3 – Enhancing Open Collaboration: Improves Open Collaboration between administrative agencies, the government, citizens, the public, and the economy. Open participation allows the use of social media to connect people and their ideas. Open Collaboration allows the achievement of specific outputs.

Stage 4 – Realizing Ubiquitous Engagement: Allows the engagement of the public through transparency, participation, and collaboration .

The Open Government Implementation Model of Austria is shown in Figure 2.

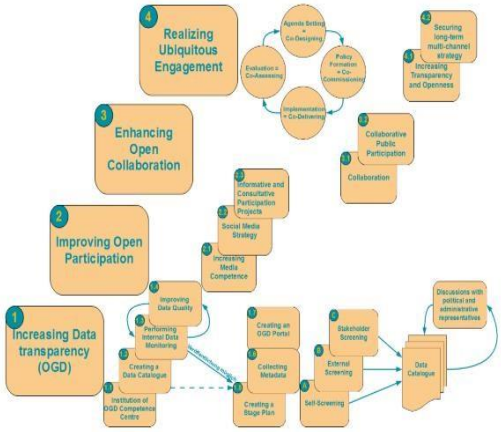

Figure 2: Open Government Implementation Model of Austria [18]

۲,۳Open Government of Mexico country

Mexican government has applied several projects under the OGP by applying new technologies and innovation in order to increase transparency, empower citizens, fight against corruption, and harness new technologies to strengthen the government. One of these open government projects that called PbR-SED is seeking to strengthen transparency in budget. PbR-SED project is known as one of the measures that the Mexican government has committed to do it for "open government program for Mexico" since twentieth of September 2011. In addition to a series of operations in this method, the information on government funding, governmental investments (governmental bonds), transfers in and federal government, performance indices and assessments is published and updated .

The effect of a number of factors has been examined in this project, which include :

- Contextual factors
- Budget factors
- Information systems factors .
- Collaboration factors
- Knowledge factors
- Trust factors

۲,٤ . Identified Factors In Open Government

Open government of the government of America seems more comprehensive than other countries after evaluating open government model in the three mentioned countries. The proposed model includes three basic dimensions of policy, culture and technology. Each of these dimensions was then compared correspondingly with the factors and models of other countries and studies. The following table was obtained finally. Table 1 summarized the identifying factors in open government project.

*TABLE **1. summarizing the factors identified in open government***

Main dimension	Factor	Index
Policy	Strategic planning [19]	Strategic planning, performance, legal, internal guidelines, business, and privacy
	Performance [20]	Political factors, including political support by senior officials, lawmakers and policymakers
	Rules [21]	▪ Rules and regulations of governmental investment ▪ Rules and regulations of civil services
	Implementation Strategy [22]	▪ The designers intent of the reform and the suggested path of this change from top to
	Power [23]	Centralization level of decision-makers in organization
	Leadership [24]	▪ Supporting a leader or team mechanisms, as well as guidance-oriented measures through policies and other delimitations
	Supervision [25,26]	Steps and mechanisms for decision-making and monitoring decisions with regard to technology application, such as selection of teams or networks and other mechanisms of interaction between participants
Tech nolo gy	Technology [27-36]	Security, infrastructures, tool, organizational architecture, and current leaders of open government and programs
	Information Technology [37-44]	dynamic information and user needs, information quality, usability, security issues, incompatibility of technology, complexity of technology, skills and technical experience, and newness of technology are of the concepts of information technology and data.
Technology	Information and Data [45-50]	▪ Protection of focused policies, procedures and recording data quality ▪ Administeration of list of data sources to assess data quality
Culture	Employees' readiness [51, 52]	▪ Employees' readiness, communicational channels, beneficiaries, and the existing public relations and public partnerships
Culture	Factors related to knowledge [42, 43]	▪ Experience in the field of previous reform [professional experience] ▪ Sharing knowledge with members of other domains [group work] ▪ Formal education [education]
	Transparent responsibilities [48-50]	Explaining the tasks and responsibilities to build trust between participants who use the intended project.
	Incentives [42]	Applying various incentives and become known among the public
	Professional experience [52]	Knowledge and expertise related to specific job to work, including professional history, occupational and operational experience, and aducation are considered among the most important issues
	Team work experience [52]	Acquired skills of team to work such as sharing previous knowledge and experience of the individuals who working in the team
	Social media [33]	▪ Development of social media strategy ▪ Increase of media ability
	Changes' management	Efficient projects and change management issues such as transparent

Main dimension	Factor	Index
	[21]	responsibilities, good comprehensive project and considering the risks, appropriate control and supervision, organizing resources properly and well-managed partnership between governmental and governmental-private organizations.

3. Research Methodology

The statistical population in this research was considered among Tax Affairs Organization of Iran country's employees given that open government has been composed of different dimensions and required comprehensive information and pervasive vision to the subject. Among the employees those who have comprehensive viewpoint in both policy and Information Technology fields were selected by purposive and judgmental sampling. 90 questionnaires were distributed in the population of 120 employees. 87 questionnaires were collected finally. Data collection tool was questionnaire and five-point Likert scale has been used. Finally, variance-based method with partial squares approach was used given that the sample size is limited, as well as data was not normal. SmartPLS and SPSS tools were used for this purpose . Three countries of United States of America, Austria and Mexico were selected for further review after reviewing open government project in different countries in order to determine an appropriate pattern for providing in tax affairs organization of Iran country. With regard to research literature, each of these three countries was following a different approach in the field of open government. Open Government Project of United States of America among them had more precise expression of the subject. It was selected as the base model for this purpose. A structured interview was conducted with three experts in legal, information technology and administrative fields in the initial step for initial evaluation and the possibility of providing this project pattern. Accordingly, there was the possibility to provide the pattern. The following model was finally proposed based on United States of America Model due to the literature review and the conducted interviews . Figure 3 shows the Model stating the relationships between variables.

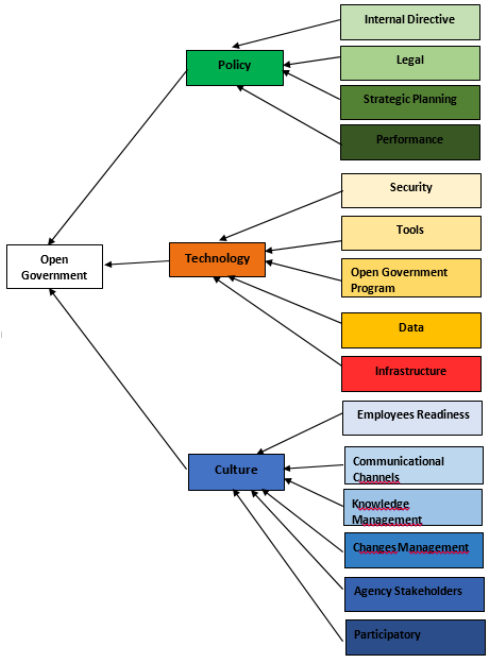

Figure 3: Model stating the relationships between variables

As it has been demonstrated in the above figure, three main factors of culture, policy and technology have an effect on open government based on this framework. Policy dimension itself is influenced by internal directive, strategic planning, legal and performance. Technology factor is also influenced by factors such as security, tools, open government program, data, and infrastructure. Cases such as employees' readiness, communicational channels, knowledge management, changes management, agency stakeholders, and participatory have an effect on cultural factors.

A primary questionnaire was prepared to evaluate the provided model. The questionnaire was evaluated by content validity ratio (CVR) index after evaluating it by the experts on the necessity. As a result, two questions were eliminated. Then the simplicity, clarity, and relevance of the questionnaire's questions were evaluated by content validity index (CVI) test. Eventually the modified questionnaire was distributed. The collected data was placed in KMO and Bartlett's

H1: Policy has an effect on open government. Policy itself has been composed of four parts of internal directive, strategic planning, and legal and performance.

H2: Technology has an effect on open government. Technology itself has been composed of five factors of security, infrastructure, open government program, data, and tools.

H3: Culture has an effect on open government. Culture itself includes six factors of employees' readiness, communicational channels, knowledge management, changes management, agency

stakeholders, and participatory. Figure 4 shows the hypotheses.

4. DATA ANALYSIS

Variance-based methods were used given that the sample size is 87 and small, as well as data was not normal. Partial squares approach was used for this purpose. Findings analysis is conducted at two levels of measurement model and structural model. The relationship between the items and the variables is examined in the measurement model, while the relationship between variables is examined in the structural model. Since the legal variable has been intended of composite type, therefore, it has not been examined in tests such as reliability, validity, and divergent and convergent validity .

٤,١ Evaluation of Questionnaire Reliability

Three factors of Cronbach's Alpha, collective reliability, and composite reliability are examined to evaluate the questionnaire reliability. Acceptability criterion in Cronbach's Alpha test for this index, which will show the reliability of reflective measurement model is at least 0.7. Composite reliability index has greater priority compared to Cronbach's Alpha. This is because Cronbach's alpha assumes that observable variables of each measurement model have similar weights. But there is not composite reliability index of this assumption. Acceptable value for this index is between 0.7 and 0.95. In addition, collective reliability represents the generalizability level of the questionnaire's questions, and the acceptable value for it is higher than 0.5 . Table 2 summarized the evaluation and reliability of questionaire applied in this work.

Table 2: Evaluation of questionnaire reliability

Variable	Cronbach's alpha	Composite reliability	Collective reliability
Changes' management	0.9075	0.9312	0.7305
Communicational channels	0.8051	0.8735	0.6347
Data	0.9314	0.9480	0.8749
Employees' readiness	0.8918	0.9204	0.6982
Performance	0.8319	0.8824	0.6033
Infrastructure	0.8932	0.9336	0.8234
Internal directive	0.9058	0.9409	0.8416
Knowledge management	0.8858	0.9292	0.8139
Open government program	0.9087	0.9360	0.7854
Participatory activity	0.8228	0.8942	0.7388
Security	0.8692	0.9014	0.6050
Stakeholders	0.8816	0.9274	0.8105
Strategic planning	0.7366	0.8480	0.6574
Tools	0.9322	0.9458	0.7142

4. 2. Coefficient of Determination Index Test (R^2)

This test is the main criterion of evaluating endogenous latent variables in the confirmatory path model. It indicates how much the independent variables have been able to predict the behavior of dependent variable. Faqih, and Jaradat [24] described values of 0.67, 0.33, and 0.19 for endogenous latent variables, significant, moderate, and weak, respectively. But if endogenous latent variable is under the effect of a small number (one or two) of exogenous variables, average values of the coefficient of determination are also acceptable. Dwivedi et al. [23] have described values of 0.25, 0.5, and 0.75 for the endogenous variables in the structural path model, weak, moderate, and significant. Table 3 list out R^2 for the coefficient of determination index.

Table 3: Coefficient of determination index (R^2)

Latent variable	R^2
Culture	0.999972
Open government	0.999973
Policy	0.999970
Technology	0.999990

As can be observed in the above table the value of coefficients of determination is higher than 0.67. So they are placed in significant (strong) group.

4.3. Overall Fitting of Model's Test

This index is the square of the multiplication of two values of communality values' average and average of coefficients of path determination (R square) and is calculated by the following formula. Values of 0.01, 0.25 and 0.36 have been described weak, moderate and strong respectively.

Equation 1: Overall fitting of model

$$\text{GOF} = \sqrt{\overline{\text{communality}} * \overline{\text{R square}}} \quad (1)$$

GOF value in this research is 0.855 and since its value is higher than 0.36, it is described strong.

$$\text{GOF} = \sqrt{0.7316 * 0.99976} = 0.855$$

4.3. Effect Size Index

The index is introduced to determine the severity of the relationship between latent variables of the model of this criterion. The values of 0.35, 0.15and 0.02 have been described significant, moderate, and weak, respectively. In other words, this criterion can help to measure the amount of effect of an exogenous variable for an endogenous variable in structural equations modeling. It is calculated based on the following formula in which F2 reflects the effect of a variable on B.

Equation 2: Effect size index

$$F^2 = \frac{R^2_{included} - R^2_{excluded}}{1 - R^2_{excluded}} \quad (2)$$

Coefficient of determination of endogenous variable=$R^2_{included}$

Coefficient of determination of endogenous dimension variable from exogenous variable=$R^2_{excluded}$

The effect of culture, policy, and technology variables on open government was evaluated separately according to the above formula and the following results were obtained. The effect of size index is given in Table 4.

Table 4: Effect size index

Exogenous variable	*f*
Culture	0.999372881
Technology	0.999257446
Policy	0.99785527

5. CONCLUSION

Accordingly, we evaluate each of these factors in Tax affairs organization in this section.

Policy: The main dimension of policy itself divided into four parts of internal directive, strategic planning, performance, legal. In this regard, it seems that an appropriate context is provided for implementation of open government in terms of policy making in tax affairs organization of Iran country according to the taxpayers' exchange of information guideline, the subject of Article (120) of Fifth Development Plan Act, as well as Articles 169 and 169 frequent direct tax Act, which pave the way for exchange of information between governmental organizations and institutions, as well as people.

Technology: Main dimension of technology itself is divided into five parts of security, infrastructure, tool, open government program, and data. Internal sectors' of Tax affairs organization in the domain of infrastructure are currently communicating with each other via Internet, as well as with foreign organizations through Internet or offline. Improvement of the quality of current infrastructure must be seriously considered, especially in the counties.

Culture: The main dimension of culture itself is divided into six parts that include participatory activities, Agency's Stakeholders, communicational channels, employees' readiness, changes' management, and knowledge management. In this part, participatory activities are done in various sectors, if necessary, such as formation of working group meetings or think tank. They would be canceled in the case of meeting the requirements or changing the works' priority and they are not permanently.

REFERENCES

1. Al-Louzi, B., & Iss, B. (2012). Factors influencing customer acceptance of m-commerce services in Jordan. Journal of Communication and Computer, 9(2011), 1424–1436.
2. Al-Shihi, H., Sharma, S. K., & Sarrab, M. (2018). Neural network approach to predict mobile learning acceptance. Education and Information Technologies, 23(5), 1805–1824. https://doi.org/10.1007/s10639-018-9691-9
3. Alalwan, A. A., Baabdullah, A. M., Rana, N. P., Tamilmani, K., & Dwivedi, Y. K. (2018). Examining adoption of mobile internet in Saudi Arabia: Extending TAM with perceived enjoyment, innovativeness and trust. Technology in Society, 55(May), 100–110. https://doi.org/10.1016/j.techsoc.2018.06.007
4. Alalwan, A. A., Dwivedi, Y. K., & Rana, N. P. (2017). Factors influencing adoption of mobile banking by Jordanian bank customers: Extending UTAUT2 with trust. International Journal of Information Management, 37(3), 99–110. https://doi.org/10.1016/j.ijinfomgt.2017.01.002
5. Alalwan, A. A., Rana, N. P., Dwivedi, Y. K., & Algharabat, R. (2017). Social media in marketing: A review and analysis of the existing literature. Telematics and Informatics, Vol. 34, pp. 1177–1190. https://doi.org/10.1016/j.tele.2017.05.008
6. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly: Management Information Systems, 13(3), 319–339. https://doi.org/10.2307/249008
7. Alharbi, S., & Drew, S. (2019). The role of self-efficacy in technology acceptance. Advances in Intelligent Systems and Computing, 880, 1142–1150. https://doi.org/10.1007/978-3-030-02686-8_85
8. Benbasat, I., & Barki, H. (2007). Quo vadis, TAM? Journal of the Association for Information Systems, 8(4), 211–218. https://doi.org/10.17705/1jais.00126
9. Brasel, S. A., & Gips, J. (2014). Tablets, touchscreens, and touchpads: How varying touch interfaces trigger psychological ownership and endowment. Journal of Consumer Psychology, 24(2), 226–233. https://doi.org/10.1016/j.jcps.2013.10.003
10. Budiono, F. L., Lau, S. K., & Tibben, W. J. (2018). Cloud Computing Adoption for E-Commerce in Developing Countries: Contributing Factors and Its Implication for Indonesia. Twenty-Second Pacific Asia Conference on Information Systems (PACIS), 1–14.

11. Carlsson, C., Carlsson, J., Hyvönen, K., Puhakainen, J., & Walden, P. (2006). Adoption of mobile devices/services - Searching for answers with the UTAUT. Proceedings of the Annual Hawaii International Conference on System Sciences, 6(C), 1–10. https://doi.org/10.1109/HICSS.2006.38
12. Chong, A. Y. L. (2013). Predicting m-commerce adoption determinants: A neural network approach. Expert Systems with Applications, 40(2), 523–530. https://doi.org/10.1016/j.eswa.2012.07.068
13. Chong, A. Y. L., Chan, F. T. S., & Ooi, K. B. (2012). Predicting consumer decisions to adopt mobile commerce: Cross country empirical examination between China and Malaysia. Decision Support Systems, 53(1), 34–43. https://doi.org/10.1016/j.dss.2011.12.001
14. Daraei, A. & Hamidi, H. (2018). An Efficient Predictive Model for Myocardial Infarction Using Cost-sensitive J48 Model. Iranian Journal of Public Health, Vol. 46, No.5, pp.682-692. http://ijph.tums.ac.ir/index.php/ijph/article/view/9918
15. Chong, A. Y. L., Darmawan, N., Ooi, K. B., & Lin, B. (2010). Adoption of 3G services among Malaysian consumers: An empirical analysis. International Journal of Mobile Communications, 8(2), 129–149. https://doi.org/10.1504/IJMC.2010.031444
16. Chong, J. L., Chong, A. Y. L., Ooi, K. B., & Lin, B. (2011). An empirical analysis of the adoption of m-learning in Malaysia. International Journal of Mobile Communications, 9(1), 1–18. https://doi.org/10.1504/IJMC.2011.037952
17. Alvanchi, A., Didehvar, N., Jalilehvand, M., Adami, P., Shahmi, S. (2021). Semi-Augmented Reality, a Novel Approach to Improve Customer Safety in the Pre-sale Process of Under Construction Buildings. ***International Journal of Engineering, Transactions A: Basics***, 34(10), 2198-2205. doi: 10.5829/ije.2021.34.10a.01
18. Lee, Gwanhoo, and Young Hoon Kwak. "Open government implementation model: a stage model for achieving increased public engagement." In *Proceedings of the 12th Annual International Digital Government Research Conference: Digital Government Innovation in Challenging Times*, pp. 254-261. 2011. https://doi.org/10.1145/2037556.2037598
19. Dai, H., & Palvia, P. C. (2009). Mobile Commerce Adoption in China and the United States: A Cross-Cultural Study. Data Base for Advances in Information Systems, 40(4), 43–61. https://doi.org/10.1145/1644953.1644958
20. Mohammadi, K. , Hamidi, H., (2006). Modeling Fault Tolerant and Secure Mobile Agent Execution in Distributed Systems. International Journal of Intelligent Information Technologies (IJIIT), 2(1), 21-36. doi:10.4018/jiit.2006010102
21. Donga, G., & Zindiye, S. (2018). Assessing the Acceptance of Mobile Marketing among South African Students Gift Donga and Stanislous Zindiye Department of Business Management, University of Venda, South Africa Abstract Mobile phone usage by consumers is increasing exponentially, and p. Business & Social Sciences Journal, 3(1), 46–57.
22. Duarte, P., & Pinho, J. C. (2019). A mixed methods UTAUT2-based approach to assess mobile health adoption. Journal of Business Research, 102(February), 140–150. https://doi.org/10.1016/j.jbusres.2019.05.022
23. Dwivedi, Y. K., Shareef, M. A., Simintiras, A. C., Lal, B., & Weerakkody, V. (2016). A generalised adoption model for services: A cross-country comparison of mobile health (m-health). Government Information Quarterly, 33(1), 174–187. https://doi.org/10.1016/j.giq.2015.06.003
24. Faqih, K. M. S., & Jaradat, M. I. R. M. (2015). Assessing the moderating effect of gender differences and individualism-collectivism at individual-level on the adoption of mobile commerce technology: TAM3 perspective. Journal of Retailing and Consumer Services, 22, 37–52. https://doi.org/10.1016/j.jretconser.2014.09.006
25. Gao, T. (Tony), Rohm, A. J., Sultan, F., & Pagani, M. (2013). Consumers un-tethered: A three-market empirical study of consumers' mobile marketing acceptance. Journal of Business Research, 66(12), 2536–2544. https://doi.org/10.1016/j.jbusres.2013.05.046
26. Guo, X., Jin, Y., Zhao, Y., & Zhang, N. (2010). Two-sided adoption of mobile marketing platforms: Towards an integrated conceptual model. ICMB and GMR 2010 - 2010 9th International Conference on Mobile Business/2010 9th Global Mobility Roundtable, 474–480. https://doi.org/10.1109/ICMB-GMR.2010.53
27. Kamankesh A, Hamidi H, (2017). An Approach to Intelligent Traffic Management System Using a Multi-agent System, International Journal of Intelligent Transportation Systems Research, ***International Journal of Intelligent Transportation Systems Research***, Vol. 16, no. 2 (2018): 112-124. DOI: 10.1007/s13177-017-0142-6
28. Herrero, Á., San Martín, H., & Garcia-De los Salmones, M. del M. (2017). Explaining the adoption of social networks sites for sharing user-generated content: A revision of the UTAUT2. Computers in Human Behavior, 71, 209–217. https://doi.org/10.1016/j.chb.2017.02.007
29. Hew, J. J., Badaruddin, M. N. B. A., & Moorthy, M. K. (2017). Crafting a smartphone repurchase decision making process: Do brand attachment and gender matter? Telematics and Informatics, 34(4), 34–56. https://doi.org/10.1016/j.tele.2016.12.009
30. Hew, T. S., Leong, L. Y., Ooi, K. B., & Chong, A. Y. L. (2016). Predicting drivers of mobile entertainment adoption: A two-stage sem-artificial-neural-network analysis. Journal of Computer Information Systems, 56(4), 352–370. https://doi.org/10.1080/08874417.2016.1164497
31. Hirschman, E. C. (1980). Innovativeness, Novelty Seeking, and Consumer Creativity. Journal of Consumer Research, 7(3), 283. https://doi.org/10.1086/208816
32. Hsu, C. I., Shih, M. L., Huang, B. W., Lin, B. Y., & Lin, C. N. (2009). Predicting tourism loyalty using an integrated Bayesian network mechanism. Expert Systems with Applications, 36(9), 11760–11763. https://doi.org/10.1016/j.eswa.2009.04.010
33. Huang, L., Mou, J., See-To, E. W. K., & Kim, J. (2019). Consumer perceived value preferences for mobile marketing in China: A mixed method approach. Journal of Retailing and Consumer Services, 48(September 2018), 70–86. https://doi.org/10.1016/j.jretconser.2019.02.007
34. Naghsh Nilchi, A.R., Vafaei, A. & Hamidi, H. (2008). Evaluation of Security and Fault-Tolerance in Mobile Agents,The 5th IEEE Conference on Wireless & Optical Communications Networks, May 5, 6 and 7. https://doi.org/10.1109/WOCN.2008.4542509, 2008.
35. Im, S., Bayus, B. L., & Mason, C. H. (2003). An empirical study of innate consumer innovativeness, personal characteristics, and new-product adoption behavior. Journal of the Academy of Marketing Science, 31(1), 61–73. https://doi.org/10.1177/0092070302238602
36. Imtiaz, S. (2018). The Studies of Unified Theory of Acceptance and Use of Technology (UTAUT) in M-

Commerce Context. : : Testing and Computing Periodicity of Continuous Time Signal International Journal of Information Communication Technology and Digital Convergence Vol., 3(1), 42–56.

37. Torabi, A., Hamidi, H., Safaie, N. (2021). Effect of Sensory Experience on Customer Word-of-mouth Intention, Considering the Roles of Customer Emotions, Satisfaction, and Loyalty. ***International Journal of Engineering, Transactions C: Aspects,*** Vol. 34(3), 682-699. doi: 10.5829/ije.2021.34.03c.13
38. Jaradat, M.-I. R. M., & Faqih, K. M. S. (2014). Investigating the Moderating Effects of Gender and Self-Efficacy in the Context of Mobile Payment Adoption: A Developing Country Perspective. International Journal of Business and Management, 9(11). https://doi.org/10.5539/ijbm.v9n11p147
39. Kalinic, Z., & Marinkovic, V. (2016). Determinants of users' intention to adopt m-commerce: an empirical analysis. Information Systems and E-Business Management, 14(2), 367–387. https://doi.org/10.1007/s10257-015-0287-2
40. Bahrami, L., Safaie, N., Hamidi, H. (2021). Effect of motivation, opportunity and ability on human resources information security management considering the roles of Attitudinal, behavioral and organizational factors. *International Journal of Engineering*, ***Transactions C: Aspects,*** Vol. 34(12), 2624-2635. doi: 10.5829/ije.2021.34.12c.07
41. Khalifa, M., & Ning Shen, K. (2008). Explaining the adoption of transactional B2C mobile commerce. Journal of Enterprise Information Management, 21(2), 110–124. https://doi.org/10.1108/17410390810851372
42. Kim, C., Mirusmonov, M., & Lee, I. (2010). An empirical examination of factors influencing the intention to use mobile payment. Computers in Human Behavior, 26(3), 310–322. https://doi.org/10.1016/j.chb.2009.10.013
43. Kim, H. W., Chan, H. C., & Gupta, S. (2007). Value-based Adoption of Mobile Internet: An empirical investigation. Decision Support Systems, 43(1), 111–126. https://doi.org/10.1016/j.dss.2005.05.009
44. KIR, B., & Altinbaăžak Farä°NA, Ä. (2016). How to Increase the Participation of Customers to Location-Based Mobile Marketing: The Case of an Emerging Country Turkey. ***International Journal Of Management & Information Technology***, 11(5), 3001–3021. https://doi.org/10.24297/ijmit.v11i5.4687
45. Ktoridou, D., Epaminonda, E., & Vrontis, D. (2007). Technological and cultural aspects of the use of mobile marketing evidence from cyprus. NGMAST 2007 - The 2007 International Conference on Next Generation Mobile Applications, Services and Technologies, Proceedings, (Ngmast), 19–25. https://doi.org/10.1109/NGMAST.2007.4343396
46. Kwofie, M., & Adjei, J. K. (2019). Understanding the Factors Influencing Mobile Commerce Adoption by Traders in Developing Countries: Evidence from Ghana. IFIP Advances in Information and Communication Technology, 558, 104–127. https://doi.org/10.1007/978-3-030-20671-0_8
47. Lallmahomed, M. Z. I., Lallmahomed, N., & Lallmahomed, G. M. (2017). Factors influencing the adoption of e-Government services in Mauritius. Telematics and Informatics, 34(4), 57–72. https://doi.org/10.1016/j.tele.2017.01.003
48. Lamarre, A., Galarneau, S., & Boeck, H. (2012). Mobile Marketing and Consumer Behaviour Current Research Trend. Latest Trends Computing, 3(1), 1–9.
49. Leong, L. Y., Ooi, K. B., Chong, A. Y. L., & Lin, B. (2011). Influence of individual characteristics, perceived usefulness and ease of use on mobile entertainment adoption. International Journal of Mobile Communications, 9(4), 359–382. https://doi.org/10.1504/IJMC.2011.041141
50. Liébana-Cabanillas, F., Marinković, V., & Kalinić, Z. (2017). A SEM-neural network approach for predicting antecedents of m-commerce acceptance. International Journal of Information Management, 37(2), 14–24. https://doi.org/10.1016/j.ijinfomgt.2016.10.008
51. Liébana-Cabanillas, F., Marinkovic, V., Ramos de Luna, I., & Kalinic, Z. (2018). Predicting the determinants of mobile payment acceptance: A hybrid SEM-neural network approach. Technological Forecasting and Social Change, 129(February 2017), 117–130. https://doi.org/10.1016/j.techfore.2017.12.015
52. Liébana-cabanillas, F., Marinkovic, V., Ramos, I., Luna, D., & Kalinic, Z. (2018). Technological Forecasting & Social Change Predicting the determinants of mobile payment acceptance: A hybrid SEM-neural network approach. Technological Forecasting & Social Change, 129(February 2017), 117–130. https://doi.org/10.1016/j.techfore.2017.12.015

Persian Abstract

چکیده

امنیت امروزه با توجه به تلاش دولت جمهوری اسلامی ایران در راستای توسعه دولت الکترونیک همچنین سیاست‌گذاری‌های صورت گرفته به‌منظور اشتراک‌گذاری، استفاده مجدد و نشر آزاد اطلاعات، به نظر می‌رسد بستر مناسبی برای بررسی دولت‌باز در کشور ایران فراهم‌شده است. در این پژوهش ابعاد دولت‌باز در سازمان امورمالیاتی کشور ایران به‌عنوان یک سازمان دولتی بررسی می‌شود. بدین منظور پس از بررسی طرح دولت‌باز در کشورهای ایالات‌متحده آمریکا، اتریش، مکزیک و مصاحبه‌های صورت گرفته با خبرگان در سه حوزه فناوری اطلاعات، اجرایی و حقوقی سه عامل اصلی سیاست، فرهنگ و تکنولوژی شناسایی شد که چهار عامل فرعی دستورالعمل داخلی، حقوقی، برنامه‌ریزی استراتژیک، اجرایی برای سیاست و پنج عامل فرعی اجرایی، امنیت، ابزار، برنامه دولت‌باز، داده، زیرساخت برای تکنولوژی و شش عامل فرعی آمادگی کارکنان، کانال‌های ارتباطی، مدیریت دانش، مدیریت تغییرات، ذینفعان سازمان و فعالیت‌های مشارکتی برای فرهنگ در نظر گرفته شد. درنهایت الگوی مذکور پس از استخراج اطلاعات پرسشنامه‌های توزیع‌شده، بر اساس رویکرد حداقل مربعات جزئی مورد ارزیابی قرار گرفت و در سطح قوی مورد تائید قرار گرفت.

کلیدواژه ها: دولت‌باز، سازمان امورمالیاتی،الگوی دولت‌باز، سیاست، تکنولوژی، فرهنگ