

M-Government Adoption in Indonesia: Self-Determination Theory

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Abstract—Delivering public service to its stakeholders as easy and effective as possible has been a challenge for the government. The advancements and ubiquities of smartphones facilitating efficient access to government services by the government do not necessarily mean that it can be effectively undertaken. In the end, that is the stakeholders who decide whether or not they will adopt it. Thus, understanding the determinants leading to the decision is crucial, particularly its motive. This research aims to investigate mobile self-efficacy and personal innovativeness as intrinsic motivations leading to the intention to adopt the mobile government. Self-Determination Theory (SDT), comprising perceived competence, relatedness, and autonomy, is the most representative theoretical lens to portray this issue. A total of 303 valid respondents were collected to analyse further using Partial Least Square-Structural Equation Modelling (PLS-SEM). The findings reveal that both antecedents significantly affect the intention to adopt m-gov. Although mobile self-efficacy has no significant influence on perceived relatedness, altogether, the model accounted for 49% of the variance in adoption intention, with perceived ease of use contributing more to intention than the other constructs. These findings provide several important implications for mobile government adoption in Indonesia, in terms of both research and practice. Limitations and future research directions are also discussed.

Keywords—Mobile government, mobile self-efficacy, personal innovativeness, self-determination theory, adoption intention

I. INTRODUCTION

Providing citizens with access to government services via mobile phone, rather than requiring them to physically visit government agencies and offices to fill out forms, request information, or apply for a service, is a significant benefit of m-gov. It's the inevitable next step for any and all services we rely on. In addition to improving citizens' access to internet services, m-gov also streamlines the method in which government agencies complete their day-to-day operations. Additionally, governments may employ mobile services to, for instance, disseminate emergency-related information (such as flood, earthquake, and other natural and man-made disasters) to the public [1, 2].

In Indonesia, there has been a dramatic increase in the prevalence of mobile devices in recent years. This may be shown in the fact that almost 65% out of more than 270 million Indonesia population now use their smartphones at work [3]. With the use of mobile technology, practically

everyone, at any time, might have access to government services. The government has recently issued the regulation regarding the utilisation of IT in public sector [4]. Although all the necessary efforts have been put in place by the government to successfully implement the m-gov, at the end of the day, that is the citizens who decide to accept it. In other words, understanding factors contributing to m-gov users' adoption is the most important thing given the ultimate goal of all public service activities is to serve the public's interest.

One of the most well-known methods for determining whether or not a system or application is suitable is to assess its level of user acceptability. The Technology Acceptance Model (TAM) [5] and the Unified Theory of Acceptance and Use of Technology (UTAUT) [6] are two well-known models in the area of user behaviour. Researchers evaluate user approval in many ways. Some scholars have argued that consumers' perceptions of the new services' usability, usefulness, privacy, and security are the most important factors in determining whether or not they would use them [7, 8].

Meanwhile, [9] The authors state that one's own sense of competence and the influence of one's peers are two of the most important elements in determining whether or not one would find mobile Internet to be easy to use and beneficial to their needs [9]. As a result, the elements utilised in the TAM [5] have a great deal of similarity with a number of variables that exist in other theories and models. The elements that were taken into consideration in this research of people' attitudes towards m-gov will be outlined [10].

In this light, we aim to understand factors that motivate the user to accept the m-gov services. Users who first embrace an m-gov might be expressing a demand for a quick and easy means to access governmental services. Thus, examining their motivation, be it intrinsically or extrinsically, towards the successful of m-gov acceptance. In this regard, we employ Self-Determination Theory (SDT) as a theoretical lens [11]. According to Deci et al. [11], while intrinsic motivation is an innate behaviour of an individual, extrinsic motivation refers to the user who decides to pursue something because of an external motive, e.g., the reward or punishment. Put simply, while intrinsic motivation is built based on the users' self-awareness, extrinsic motivation is driven by external factors. Thus, in the context of this study, we embrace SDT to portray the level of users' digital literacy that affects the intention to adopt the m-gov.

II. THEORETICAL BACKGROUND

A. M-Government

The term m-government (mobile-government or m-gov for short) refers to the use of mobile technology inside government administration for the purpose of providing public services to individuals and businesses [12]. It is swiftly becoming the cutting edge of service provision, and it's changing the way government operates by making public services more easily available to the general population. Governments in developing nations are making more use of wireless technology to provide access to information and services for consumers, companies, and government employees [1].

Increasing evidence shows that mobile communications have the ability to profoundly revolutionise governance by expanding access to locations where traditional infrastructure like the internet or conventional phone service is not available [13, 14]. Citizens now have greater access to government services in the areas of health, education, employment, public safety, finance, and more because to the widespread availability of affordable and user-friendly mobile devices. Hence, m-gov may aid in the advancement of social and economic circumstances globally, and it can significantly contribute to the success of the Sustainable Development Goals (SDGs).

Due to the continually decreasing cost of mobile devices, mobile technology is becoming an accessible tool to bridge the digital divide between the developed and developing worlds. By investing in websites and online portals and by setting up telecentres, kiosks, community centres, and other similar outlets to enhance access to the internet, developing and underdeveloped nations have already shown they are capable of reducing the digital divide. Mobile phone usage is another area where they are rapidly growing. With a growing number of governments around the world using mobile devices to send out messages to their constituents, be it through a simple text message (SMS), an alert notification, or a full-fledged mobile service, the private sector will have an opportunity to collaborate with governments to develop and distribute mobile services.

B. Self-Determination Theory

Essentially, the main concern of Self-Determination Theory (SDT) is user's motivation. SDT, according to Deci and Ryan [15], is the incentive of a person to pick up and manage a decision they make carefully. It sees people as proactive creatures whose inherent or natural functioning may either be aided or hindered by the social environment [16]. The sorts of motivation matter more than just the quantity when determining an individual's level of drive, such as whether they are more or less motivated. Both internal and extrinsic motivations are recognised in SDT. While intrinsic motivation is a volition as someone feels a satisfaction and interest in doing something, extrinsic motivation, on the other hand, is the propensity to do it because it could result in a reward. Autonomous and regulated motives were the terms used by to characterise it [15].

Once users reach the intrinsic level of motivation, they start acting in a way that is determinedly motivated by the goal they are working towards. Interventions are no longer necessary since the people have internalised and maintained the modified behaviour in this condition. Therefore, as

previously said, it is not necessary to manage motivation since this may only have a short-term impact. Instead, it is preferable to establish an atmosphere in which people may find satisfaction and interest so that their motivations can become innately ingrained in their selves [15].

In the context of the study, we see that users perceive to their self-efficacy towards the smartphone usage and their willingness to innovates service as instrument to motivate the intention to adopt m-gov. SDT is employed as the theoretical framework to portray the impact of these determinants. Understating this relationship is crucial as all the features and service equipped with and/or provided by the government digitally could be pointless since less user's motivation to recognise them. Three fundamental psychological conditions must be established in order to do this, according to SDT. They are perceived competence, perceived relatedness, and autonomy [11]. An individual's desire to take initiative and control their own behaviour is referred to as autonomy. Competence is the desire to feel successful in achieving desired objectives, while relatedness is the willingness to experience a sense of community with others. In order to maintain the intrinsic motivation, this is sought by providing a setting that makes them feel enjoyable and interesting [17].

C. Technology Acceptance Model

Understanding why users accept or reject a particular information technology has been a main subject in Information Systems (IS) research stream [5, 6, 18, 19]. Although IS scholars have proposed various approaches and factors to demystify these phenomena, however, they envisaged that the perceived usefulness and ease of use [5] are the key determinants that have a strong impact on a user's intention to adopt or refuse a particular information system. Davis [5], in his seminal work defined perceived usefulness as the degree to which a person believes that using a particular system would enhance his or her job performance, and perceived ease of use, in contrast, refers to the degree to which a person believes that using a particular system would be free of effort [5].

In this research, our view is similar to these that perceived usefulness and perceived ease of use are the determinants to the adoption intention of e-gov [5]. In particular, we see that users' self-efficacy in using the smartphone and their personal innovativeness are the antecedents describing the two determinants that lead to intention to adopt e-gov. As the two antecedents serve as the intrinsic motivations from the users, SDT is employed to portray them through competence, relatedness and autonomy. In the end, the intention to accept m-gov will be motivated as extrinsic one from the intrinsic represented by the mobile self-efficacy and personal innovativeness.

III. RESEARCH MODEL AND HYPOTHESIS DEVELOPMENT

Figure 1 drawn the research model.

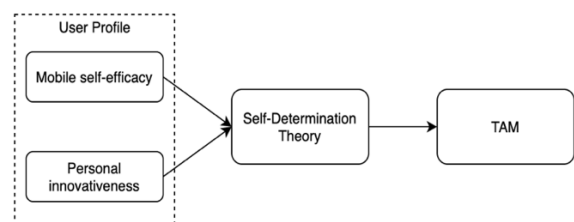


Fig. 1. Proposed research model.

It comprises user profile: mobile self-efficacy and personal innovativeness that affects the intention to adopt m-gov mediated by self-determination approach.

A. *The relationship between mobile self-efficacy and competency, relatedness, and autonomy*

We follow the definition of Nikou & Economides [20] about mobile self-efficacy, that is an individual's confidence in his or her ability to utilise mobile devices for certain purposes. Nikou & Economides [20] defined this as inspired by computer self-efficacy' definition of Compeau & Higgins [19], that is person's confidence in his or her ability to utilise a computer to complete a job. In the context of the study, we see that the mobile self-efficacy determines users' motivation intrinsically on the intention to accept m-gov services. In particular, the mobile self-efficacy influences the motive of the user to adopt m-gov. While motive in this study is measured using the competence, relatedness, and autonomy [21, 22]. In other words, users who have abilities to use smartphone, they perceive that they are competent to access m-gov, can be related to others by using it and they have autonomy to explore the online government service through their smartphone. Therefore, we hypothesise that:

H1: *Mobile self-efficacy significantly affects perceived competence*

H2: *Mobile self-efficacy significantly affects perceived relatedness*

H3: *Mobile self-efficacy significantly affects perceived autonomy*

B. *The relationship between personal innovativeness, and competency, relatedness, and autonomy*

Personal innovativeness is explained as the inclination of an individual to try out any new information systems [23]. In the context of e-commerce adoption, personal innovativeness plays a significant role as a significant positive effect on online shopping decisions [24]. Moreover, study showed that domain specific personal innovativeness predicts well the adoption behaviour of IT innovations [25]. Persons who are innovative tend to be talkative, inquisitive, active, risk-taking, and in need of constant mental challenge.

In other words, highly inventive people are those with innovativeness attitude who are always on the lookout for fresh perspectives and ideas. They are enthusiastic type of persons about IT new technology that leads them to always update it. That the particular attitude is seen as an internal force that motivates the users on the intention to accept m-gov. This is because providing the government services that can be accessed using smartphone is viewed as an innovative way to bring them closer to the stakeholders. Therefore, in the context of the study, examining the motives: competence, relatedness and autonomy determinant by the personal innovativeness is important to understand why a user accept or reject m-gov service. We then hypothesise that:

H4: *Personal innovativeness significantly affects perceived competence*

H5: *Personal innovativeness significantly affects perceived relatedness*

H6: *Personal innovativeness significantly affects perceived autonomy*

C. *The relationship between competency, relatedness, and autonomy, and perceived ease of use*

As earlier described, competence, relatedness and autonomy are about portraying users' motivations to the decisions they make [17]. While the perceived competence

sees that users have abilities to explore their smartphone confidently, the perceived relatedness is about the desire to feel connected to others and autonomy relates to the need to self-initiate and self-regulate one's own behaviour [17]. In the context of the study, these perspectives portray the intrinsic motivations from the mobile self-efficacy and personal innovativeness that led to the intention to accept m-gov.

As we employ TAM [5] to determine the intention to adopt, one of the two key determinants of it is perceived ease of use. The perceived ease of use is to capture the early adopter's technology, in this context is m-gov, about their experience in using it. As they conceived that it is easy to use, they might decide to accept it. Thus, in the context of the study, the perceived competence, relatedness, and autonomy will impact on how users' perception about the easiness of using the technology. Therefore, in this research, we hypothesise that:

H7: *Perceived competence significantly affects perceived ease of use*

H8: *Perceived relatedness significantly affects perceived ease of use*

H9: *Perceived autonomy significantly affects perceived ease of use*

D. *The relationship between competency, relatedness, and autonomy, and perceived usefulness*

In a similar vein, as we employ TAM to portray the intention to adopt the m-gov, another key determinant of it is perceived usefulness [5]. The perceived usefulness is about how users' view about the functionality of the technology that potentially helps them to improve their performance. As they see that that it is indeed useful after using it for a while, they might decide to adopt it. Thus, in the context of the study, the perceived competence, relatedness, and autonomy will impact on how users' perception about the usefulness of using the technology. Therefore, in this research, we hypothesise that:

H10: *Perceived competence significantly affects perceived usefulness*

H11: *Perceived relatedness significantly affects perceived usefulness*

H12: *Perceived autonomy significantly affects perceived usefulness*

Finally, both determinants of TAM, perceived ease of use and perceived usefulness influence the intention to adopt m-gov. Thus, we hypothesise that:

H13: *Perceived ease of use significantly affects adoption intention*

H14: *Perceived usefulness significantly affects the adoption intention*

IV. RESEARCH METHODOLOGY

A. *Sample*

Table 1 informs the socio-demographic characteristics of participants. A total of the participants is 303 users involving in this study. However, as the targeted respondents are those who have at least used one of the government mobile applications as shown in Table 1, there are 10 respondents were excluded from further analysis as they did not meet the requirement. Only 293 of them can be further analysed. The data also informed that the five most frequent government sites to access by the respondents are kbbi.kemendikbud.go.id (28%), covid19.co.id (24%), pajak.go.id (16%), imigrasi.go.id (12%) and bps.go.id (9%).

TABLE 1. SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Profile	Category	Freq.	%
Gender	Male	134	46%
	Female	159	54%
Domicile	Jabodetabek	148	51%
	Outside Jabodetabek	145	49%
Education	High school	40	14%
	Diploma/Bachelor	222	76%
	Postgraduate	31	11%
Age	< 17-year-old	6	2%
	17–25-year-old	229	78%
	26–40-year-old	46	16%
	> 40-year-old	12	4%
Occupation	Student	187	64%
	Entrepreneur	61	21%
	Government employee	10	3%
	Private employee	20	7%
	Others	15	5%
Average use of m-gov in a year	< 3 times	85	29%
	< 10 times	123	42%
	> 10 times	85	29%
How long using m-gov	< 1 month	34	12%
	< 1 year	87	30%
	< 2 years	89	30%
	> 2 years	83	28%

authors and some respondents to strengthen its readability and reduce ambiguities. Once the questionnaire was completed, we distributed it through social media platforms such as, Instagram, Twitter and WhatsApp and Facebook.

We addressed data collection using a purposive sampling strategy [29]. SmartPLS 4.0's Partial Least Squares-Structural Equation Modelling (PLS-SEM) is used as an analytical technique in this study. All the measurement items used in this study are adopted and adapted from previous studies. Table 2 describes the Confirmatory Factor Analysis (CFA) of all the research variables in this study, User profile: Mobile self-efficacy (MSE), Personal Innovativeness (INN), Self-Determination Theory (SDT): Perceived Competence (COMP), Perceived Relatedness (REL), Perceived Autonomy (AUT), and Technology Acceptance Model (TAM): Perceived Ease of Use (POU), Perceived Usefulness (PU), Adoption Intention (AIN). The references to all the measurement indicators of each variable are also shown in the table.

V. DATA ANALYSIS AND RESULT

A. Measurement Model Evaluation

The assessment of measurement models is the first of two steps in data analysis. The examination begins with a look at Factor Loadings (FLs). FL values are generally accepted if the value is more than 0.7 [30].

TABLE 2. CONFIRMATORY FACTOR ANALYSIS OF THE VARIABLE

Variable	Indicator		FL	Reference
MSE CA, CR, AVE = 0.720, 0.840, 0.638	MSE2	I can complete my work or assignment using my smartphone if someone teaches me how to use it	0.817	[20]
	MSE3	I am very keen using my smartphone	0.833	
	MSE4	I can use my smartphone to find information I need	0.744	
INN CA, CR, AVE = 0.856, 0.912, 0.777	INN1	I am following new Information Technology products (gadget, game, app, etc) faster than the others	0.879	[24]
	INN2	I am among the very first trying the latest IT products	0.905	
	INN3	I am very enthusiast to a new IT product	0.859	
COMP CA, CR, AVE = 0.861, 0.905, 0.704	COMP1	I feel that I am quite good using all the features in m-government	0.837	[20]
	COMP2	I feel that I am quite good using all the features in m-government compared to others	0.785	
	COMP3	When using m-government app, I feel that I am quite competent	0.879	
	COMP4	Using m-government is the activity I can do well	0.854	
REL CA, CR, AVE = 0.902, 0.939, 0.837	REL1	I have opportunities closer to the government by using the e-gov	0.926	[20]
	REL2	I feel closer to the government when using m-government app	0.951	
	REL3	I feel connected to the government by using the m-gov app	0.866	
AUT CA, CR, AVE = 0.762, 0.861, 0.676	AUT1	I have choices and freedom to participate when using m-gov app	0.703	[20]
	AUT2	I feel comfortable during my usage of the m-gov app	0.892	
	AUT3	M-gov gives me interesting choices of the provided features	0.860	
POU CA, CR, AVE = 0.821, 0.894, 0.737	POU1	My interaction with m-gov is clear and understandable	0.860	[26]
	POU2	It is very easy for me to master in using m-gov	0.868	
	POU3	I feel m-gov is easy to use	0.847	
PU CA, CR, AVE = 0.833, 0.900, 0.750	PU1	By using m-gov, all my issues can be addressed more effective and efficient	0.875	[26]
	PU2	By using m-gov, the procedure to complete my issues is clearer	0.860	
	PU3	By using m-gov, completing my issues can be done anywhere and anytime	0.863	
AIN CA, CR, AVE = 0.883, 0.928, 0.811	AIN1	I have plan to use m-gov in the future	0.901	[27, 28]
	AIN2	I will continue use m-gov application	0.917	
	AIN3	I will encourage my friend to use the m-gov I use	0.883	

B. Research instrument

As this is quantitative research, a questionnaire is built to collect the sample for this study, focusing on m-government users in Indonesia. We developed the questionnaire in Google Forms to swiftly submit it to the target respondents online. The respondents' replies are assessed using 5-point Likert scales, with 1 (one) representing strongly disagree and 5 (five) representing strongly agree, respectively. Prior to delivering the questionnaire to the respondents, it was piloted by all

As in Table 2, indicators MSE1 is excluded from further analysis as it did not meet the threshold. The internal consistency reliability is assessed employing both Cronbach's alpha (CA) and composite reliability (CR) values. All CA and CR scores are acceptable once the values are no less than 0.7 [30]. Convergent validity is the next one to evaluate using the Average Variance Extracted (AVE). It is accepted once the level is 0.5 or greater (Astrachan et al., 2014). The next to

evaluate is discriminant validity. This is based on the Fornell-Larcker criterion [31]. Our evaluation shows that discriminant validity is well established.

B. Structural Model Evaluation

Once the reliability and validity of the research instrument are evaluated in the measurement model evaluation, the structural model evaluation is examined. It is shown in Table 3. As in the table, out of fourteen hypotheses, twelve are accepted, two of them are rejected: H2 and H9 as their p-values are not statistically significant ($p < 0.05$). The measurement used two-tail evaluation as the developed hypotheses do not demand the direction (positive affect), with 5000 subsamples of bootstrapping procedure and a 0.05 significance level.

TABLE 3. STRUCTURAL MODEL EVALUATION

Hypothesis	T Statistics	P Value	Remark	
H1	MSE → COMP	9.924	0.000	Accepted
H2	MSE → REL	0.870	0.384	Rejected
H3	MSE → AUT	4.032	0.000	Accepted
H4	INN → COMP	3.783	0.000	Accepted
H5	INN → REL	6.761	0.000	Accepted
H6	INN → AUT	2.043	0.041	Accepted
H7	COMP → POU	8.100	0.000	Accepted
H8	REL → POU	0.553	0.580	Rejected
H9	AUT → POU	8.759	0.000	Accepted
H10	COMP → PU	4.100	0.000	Accepted
H11	REL → PU	2.392	0.017	Accepted
H12	AUT → PU	5.833	0.000	Accepted
H13	POU → AIN	2.297	0.022	Accepted
H14	PU → AIN	10.423	0.000	Accepted

As for the coefficient of determination (R^2), their values in a row are 0.409, 0.138, 0.114, 0.628, 0.401 and 0.490 for COMP, REL, AUT, POU, PU and AIN. These values show substantial coefficient of determination for Perceived of Competence (COMP), Perceived Ease of Use (POU), Perceived Usefulness (PU) and Adoption Intention (AIN). This coefficient represents the variance of the dependent variable that can be predicted by the independent variables or how well the statistical model predicts the outcome. In other words, how effectively the model reproduces observed outcomes is quantified by the fraction of result variance that is explained by the model. Figure 2 draws the complete of proposed research model evaluated.

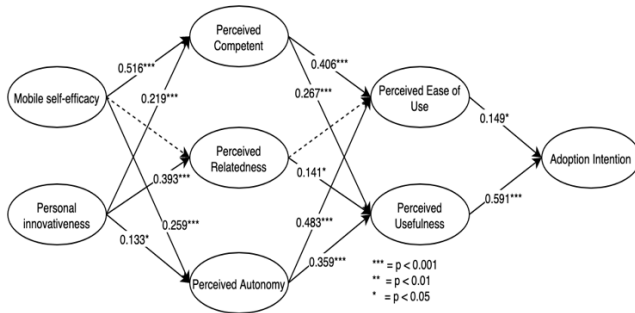


Fig. 2. Proposed model evaluated.

VI. DISCUSSIONS AND IMPLICATIONS

This study aims to investigate the intention to adopt government services through smartphone (m-gov). User profile related to the ability to use smartphone: mobile self-efficacy and personal innovativeness is envisaged as the

antecedents to the intention to adopt the m-gov. We employ the Self-Determination Theory (SDT) as a theoretical lens to portray the intention to adopt (perceived competent, perceived relatedness and perceived autonomy). As earlier described, Technology Acceptance Model (TAM) of Davis [5] is used as determinant to explain the adoption intention. Thus, perceived usefulness and perceived ease of use of it are the key determinants to the explain user's tendency to accept a new technology.

As in the structural model evaluation, out of fourteen hypotheses, twelve are accepted. These accepted hypotheses inform us that the users' behaviour to explore and update the latest information related to the Information Technology determine their intentions to accept the government services through their mobile phone. On the other hand, the findings also reveal that mobile self-efficacy shows no significant effect statistically to the perceived relatedness (H2) as its significance is higher than the threshold ($p\text{-value} > 0.05$). This result tells us that the users' ability to use and explore new smartphone gadget does not mean they are related to the government services. In addition, the findings also reveal that perceived relatedness has no significant impact statistically to the perceived ease of use (H8) as the significance is also bigger than the threshold. This demonstrates that users' feeling connected to the government as they access the government services through the smartphone does not mean the services are easy to use.

The finding also informs us the substantial coefficient of determination (R square) of perceived competent (0.409). This indicates that the perceived competence can be explained substantially by its variance, both mobile self-efficacy and personal innovativeness by 40.9% (H1 and H4). However, although both the antecedents also have significant relationship to the perceived autonomy (H3 and H6), they both have a weak coefficient of determination (0.114) to the perceived autonomy. In other words, the perceived autonomy can only be described by 11.4% of its variance: mobile self-efficacy and personal innovativeness. Moreover, as the perceived relatedness has only a significant relationship with personal innovativeness (H5), it is not a surprise it can only be explained by a weak (13.8%) coefficient of determination.

It is interesting from the findings that coefficient of determination of perceived ease of use (POU) is the highest, that is 0.628 although perceived relatedness has no significant effect statistically to it (H8). In other words, regardless the non-significant relationship to POU, the factor can be explained by its variance substantially by 62.8% (H7 and H9). The results also show that although the coefficient of determination of perceived usefulness (PU) is not as high as POU, however, it still can be explained substantially by its variance by 40.1% (H9-H11). Both perceived ease of use (H13) and perceived usefulness (H14) can explain substantially the intention to adopt m-gov services by 49%. In this research, we show how SDT serves as a mediation role between user profile and the intention to accept m-gov services.

The findings of the research have both theoretically and practically implications. Theoretically, SDT can be able to mediate the mobile self-efficacy and personal innovativeness to the intention to adopt the m-gov services. SDT is able to portray the motivations from the users as their attitude of curiosity of the updated information technology. In particular, this user's behaviour of curiosity serves as the intrinsic

motivation that leads to evoke the extrinsic one. As a result, both the antecedent will determine the acceptance of m-gov service.

Practically, improving users' mobile self-efficacy and personal innovativeness potentially can improve their intention to accept m-gov services. This for instance can be pursued through government social media campaign, website, etc. Once the users' have eagerness and willingness to explore their mobile gadgets (smartphone), their motivations to adopt m-gov services from their smartphone increase. In this context, this will ease the government to deliver the related information to the society as they can be "contacted" easily through their smartphone accessing the government's websites.

VII. LIMITATION AND FUTURE RESEARCH DIRECTIONS

Withstanding all the contributions both theoretically and practically of this paper, this study is limited by the respondents which hinders it to be generalised. As in Table 1, although the respondents represent both Jabodetabek and the outside, however, it does not clear that they represent Indonesia as a whole. In addition, the occupation and age categories demonstrate that the respondents are mostly those the young age: students and up to 25 years old. A further study could assess a more diverse respondent representing Indonesia as a whole for the purpose of generalisability.

VIII. REFERENCE

- [1] M. Abaza and F. Saif, "The Adoption of Mobile Government Services in Developing Countries," *International Journal of Computer Science Issues (IJCSI)*, vol. 12, no. 1, pp. 137-145, 2015.
- [2] L. El Baradei, M. Kadry, and G. Ahmed, "Governmental Social Media Communication Strategies during the COVID-19 Pandemic: The Case of Egypt," *International Journal of Public Administration*, vol. 44, no. 11-12, pp. 907-919, 2021, doi: 10.1080/01900692.2021.1915729.
- [3] V. Aurelia, "Indonesia's Smartphone Market Expected to Grow 8% in 2022 Despite Supply-Side Hindrances, IDC Reports." <https://www.idc.com/getdoc.jsp?containerId=prAP48973022> (accessed 10 Oct 2022).
- [4] *Peraturan Presiden (PERPRES) tentang Sistem Pemerintahan Berbasis Elektronik (SPBE)*, R. o. Indonesia, 2018.
- [5] F. D. Davis, "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology," *MIS Quarterly*, vol. 13, no. 3, pp. 319-340, 1989.
- [6] V. Venkatesh, M. G. Morris, G. B. Davis, and F. D. Davis, "User Acceptance of Information Technology: Toward a Unified View," *MIS Quarterly*, vol. 27, no. 3, pp. 425-478, 2003.
- [7] M. A. Almaiah, A. Al-Khasawneh, A. Althunibat, and S. Khawatreh, "Mobile Government Adoption Model Based on Combining GAM and UTAUT to Explain Factors According to Adoption of Mobile Government Services," *International Journal of Interactive Mobile Technologies (iJIM)*, vol. 14, no. 03, 2020, doi: 10.3991/ijim.v14i03.11264.
- [8] S.-Y. Hung, C.-M. Chang, and S.-R. Kuo, "User acceptance of mobile e-government services: An empirical study," *Government Information Quarterly*, vol. 30, no. 1, pp. 33-44, 2013, doi: 10.1016/j.giq.2012.07.008.
- [9] J. D. Twizeyimana and A. Andersson, "The public value of E-Government – A literature review," *Government Information Quarterly*, vol. 36, no. 2, pp. 167-178, 2019, doi: 10.1016/j.giq.2019.01.001.
- [10] I. Almarashdeh and M. K. Alsmadi, "How to make them use it? Citizens acceptance of M-government," *Applied Computing and Informatics*, vol. 13, no. 2, pp. 194-199, 2017, doi: 10.1016/j.aci.2017.04.001.
- [11] E. L. Deci, H. Eghrari, B. C. Patrick, and D. R. Leone, "Facilitating Internalization: The Self-Determination Theory Perspective," *Journal of Personality*, vol. 62, no. 1, pp. 119-142, 1994.
- [12] E. A. Shanab and S. Haider, "Major factors influencing the adoption of m-government in Jordan," *Electronic Government, an International Journal*, vol. 11, no. 4, 2015, doi: 10.1504/eg.2015.071394.
- [13] H. Abdelghaffar and Y. Magdy, "The Adoption of Mobile Government Services in Developing Countries: The Case of Egypt," *International Journal of Information and Communication Technology Research*, vol. 2, no. 4, pp. 333-341, 2012.
- [14] C. Wang, T. S. H. Teo, and L. Liu, "Perceived value and continuance intention in mobile government service in China," *Telematics and Informatics*, vol. 48, 2020, doi: 10.1016/j.tele.2020.101348.
- [15] E. Deci and R. M. Ryan, *Intrinsic Motivation and Self-Determination in Human Behavior*. New York, USA: Springer US, 1985.
- [16] R. M. Ryan and E. L. Deci, "Overview of Self-Determination Theory: An Organismic Dialectical Perspective," in *Handbook of Self-determination Research*, E. L. Deci and R. M. Ryan Eds. Rochester, NY: Rochester University Press, 2002, pp. 3-33.
- [17] D. I. Inan *et al.*, "Service quality and self-determination theory towards continuance usage intention of mobile banking," *Journal of Science and Technology Policy Management*, vol. ahead-of-print, no. ahead-of-print, 2021, doi: 10.1108/jstpm-01-2021-0005.
- [19] D. R. Compeau and C. A. Higgins, "Computer Self-Efficacy: Development of a Measure and Initial Test," *MIS Quarterly*, vol. 19, no. 2, pp. 189-211, 1995.
- [20] S. A. Nikou and A. A. Economides, "Mobile-Based Assessment: Integrating acceptance and motivational factors into a combined model of Self-Determination Theory and Technology Acceptance," *Computers in Human Behavior*, vol. 68, no. 2017, pp. 83-95, 2017.
- [21] Y.-S. Wang, M.-C. Wu, and H.-Y. Wang, "Investigating the determinants and age and gender differences in the acceptance of mobile learning," *British Journal of Educational Technology*, vol. 40, no. 1, pp. 92-118, 2009, doi: 10.1111/j.1467-8535.2007.00809.x.
- [22] K. Chen, J. V. Chen, and D. C. Yen, "Dimensions of self-efficacy in the study of smart phone acceptance," *Computer Standards & Interfaces*, vol. 33, no. 4, pp. 422-431, 2011, doi: 10.1016/j.csi.2011.01.003.
- [23] M. K. Chang, W. Cheung, and V. S. Lai, "Literature derived reference models for the adoption of online shopping," *Information & Management*, vol. 42, no. 4, pp. 543-559, 2005, doi: 10.1016/s0378-7206(04)00051-5.
- [24] C. Kim, M. Mirusmonov, and I. Lee, "An empirical examination of factors influencing the intention to use mobile payment," *Computers in Human Behavior*, vol. 26, no. 3, pp. 310-322, 2010, doi: 10.1016/j.chb.2009.10.013.
- [25] M. Y. Yi, K. D. Fiedler, and J. S. Park, "Understanding the Role of Individual Innovativeness in the Acceptance of IT-Based Innovations: Comparative Analyses of Models and Measures," *Decision Sciences*, vol. 37, no. 3, pp. 393-426, 2006.
- [26] V. Venkatesh and M. G. Morris, "Why don't men ever stop to ask for directions? Gender, social influence, and their role in technology acceptance and usage behavior," *MIS Quarterly*, vol. 24, pp. 115-139, 2000.
- [27] I. K. Mensah, G. Zeng, and C. Luo, "E-Government Services Adoption: An Extension of the Unified Model of Electronic Government Adoption," *SAGE Open*, vol. 10, no. 2, pp. 1-17, 2020.
- [28] X.-W. Wang, Y.-M. Cao, and C. Park, "The relationships among community experience, community commitment, brand attitude, and purchase intention in social media," *International Journal of Information Management*, vol. 49, pp. 475-488, 2019, doi: 10.1016/j.ijinfomgt.2019.07.018.
- [29] I. Etikan, S. A. Musa, and R. S. Alkassim, "Comparison of Convenience Sampling and Purposive Sampling," *American Journal of Theoretical and Applied Statistics*, vol. 5, no. 1, pp. 1-4, 2016.
- [30] J. F. Hair, G. T. M. Hult, C. M. Ringle, and M. Sarstedt, *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM) - Second Edition*. Thousand Oaks California: SAGE Publications. Inc., 2017.
- [31] J. F. Hair, C. M. Ringle, and M. Sarstedt, "PLS-SEM: Indeed a silver bullet," *The Journal of Marketing Theory and Practice*, vol. 19, no. 2, pp. 139-151, 2011.