# UNDERSTANDING THE EFFECTIVENESS OF E-INVITED SPACES IN INDONESIA:
A LITERATURE REVIEW USING THE HUMAN ACTION PERSPECTIVE

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KEY TAKEAWAYS

- Public-sector digitisation has transformed significantly from the early emergence of websites with limited functionalities to the current efforts to build transparency, accountability, and citizen engagement under the concept of e-Invited spaces.

- By introducing a human action perspective framework, this paper argues that the effectiveness of government-citizen interactions in e-Invited spaces depends on the alignment of governments' and citizens' expectations, along with supportive contextual factors for enabling social and technical interaction within the space.

- Based on the review of the two prominent e-Invited spaces in Indonesia, namely Lapor! and e-Musrenbang, the study reveals that managing the complexities of social interactions is the biggest challenge for building an effective e-Invited space. This is due to the fact that key factors for managing social interactions are embedded in local practices, cultures, and norms.

- There are different sets of enabling factors depending on the type of social interaction (i.e., strategic, communicative, or discursive action). This means, going forward, policy makers need to realise that there is no one-size-fits-all solution in managing an e-Invited space. Understanding of the types of interactions and these sets of enabling factors are the key for the government to manage its resources wisely.

- In terms of managing technical interactions, the study also uncovers the limitations of existing information technology as a medium for communication. Hence, there is the need to improve the existing technology infrastructure, tools, and digital literacy.
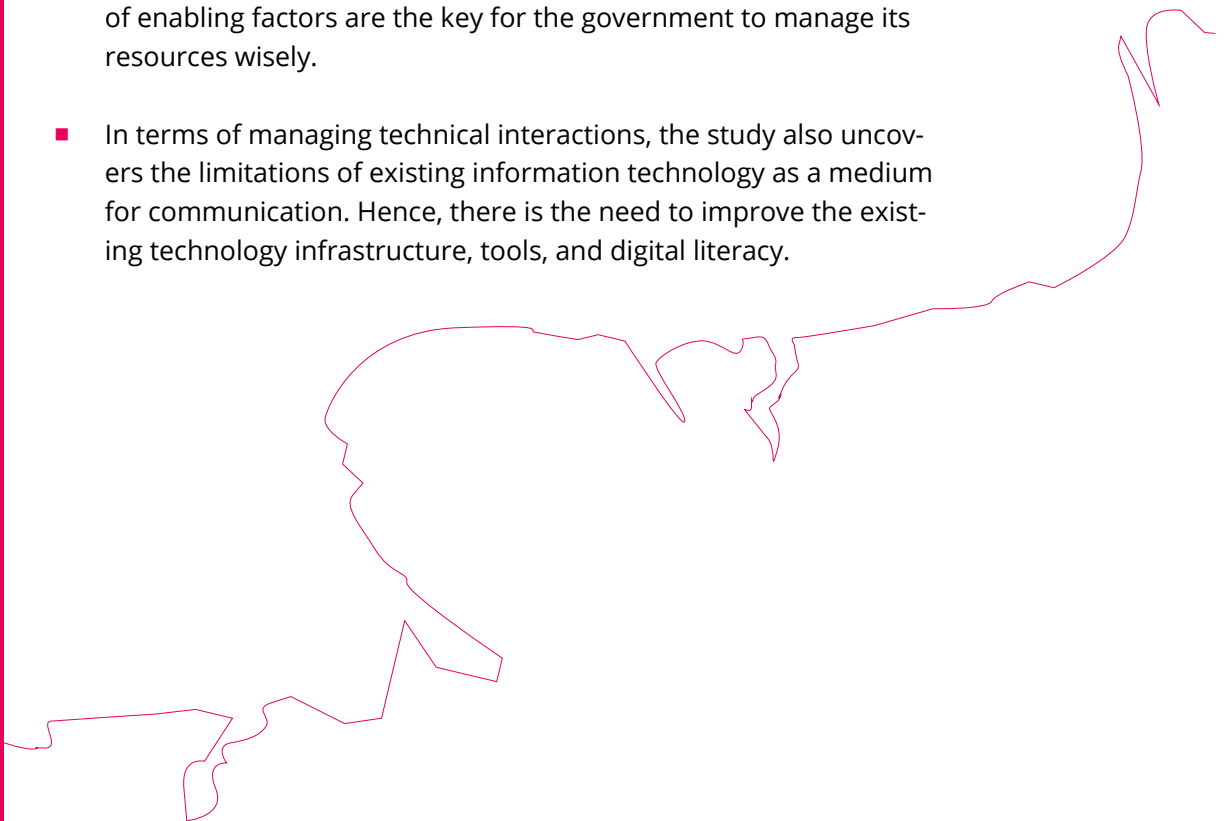
In recent years, the scope of a digital government has evolved significantly from mere digitisation and automation of government services towards more engagement, greater contextualisation, and specialisation of services and policy.[1] Prior studies have suggested that the effectiveness of the e-Invited space will depend on the alignment of providers' and citizens' expectations, along with supportive institutional incentives.[2] However, little is known about how such alignment can be achieved and which enabling factors can support it.

This study attempts to address this gap, to understand ways to improve the alignment of citizen-government interactions within the 'invited' spaces. Specifically, within the space where ICT is used to mediate interactions between the citizens and the government. Hence, the main question here is **how can an effective citizen interaction in ICT-mediated invited (e-Invited) spaces be achieved**? In addressing the question, the study introduces the concept of participation equilibrium as a key measure for the effectiveness of e-Invited spaces. It takes the perspective of the human action approach by utilising Habermas' Theory of Communicative Action (TCA) to understand ways to achieve participation equilibrium. The selection was made based on the results of the review of prior theories used in Information Systems literature,[3] which showed that Habermas' TCA, particularly his typology of human action, can be useful in explaining human actions during development of information systems, including user participation. The applicability of the framework is then tested by reviewing past studies on the effectiveness of two major e-Invited spaces implemented by local governments in Indonesia, namely LAPOR! and e-Musrenbang. ■

1   Janowski, Tomasz. 2015. "Digital Government Evolution: From Transformation to Contextualization." Elsevier.; World Bank Group. 2016. "World Development Report 2016, Digital Dividends." Washington DC, USA: International Bank for Reconstruction and Development.

2   Wetterberg, Anna, Jana C Hertz, and Derick W Brinkerhoff. 2018. "Social Accountability in Frontline Service Delivery: Citizen Engagement and Provider Response in Four Indonesian Districts." Development Policy Review 36.

3   Lyytinen, Kalle, and Heinz Klein. 1985. "The Critical Theory of Jürgen Habermas as a Basis for a Theory of Information Systems." in Research Methods in Information Systems. ed. E. Mumford, et al. Amsterdam: Elsevier.; Lyytinen, Kalle. 1992. "Information Systems and Critical Theory." in Critical Management Studies, ed. Mats Alvesson and Hugh Willmott. London, Newbury Park, New Delhi: Sage Publications.

EFFECTIVENESS OF E-INVITED SPACES

The new wave of democratic experiments aiming at transforming older forms of governance has led to a widening of the political space for public engagement of citizens with their government. Inspired by the promise of achieving better decision-making, improving government transparency and accountability, and maintaining efficient public service delivery, the creation of the "invited" space offers a reconfiguration of relationships and responsibilities that transforms interactions between citizen and state.[4] There are spaces where citizens are invited to participate by various authorities, from the neighbourhood forum initiated by the local government to a complaint-handling system at the national level. These spaces are referred to as "invited" spaces.[5]
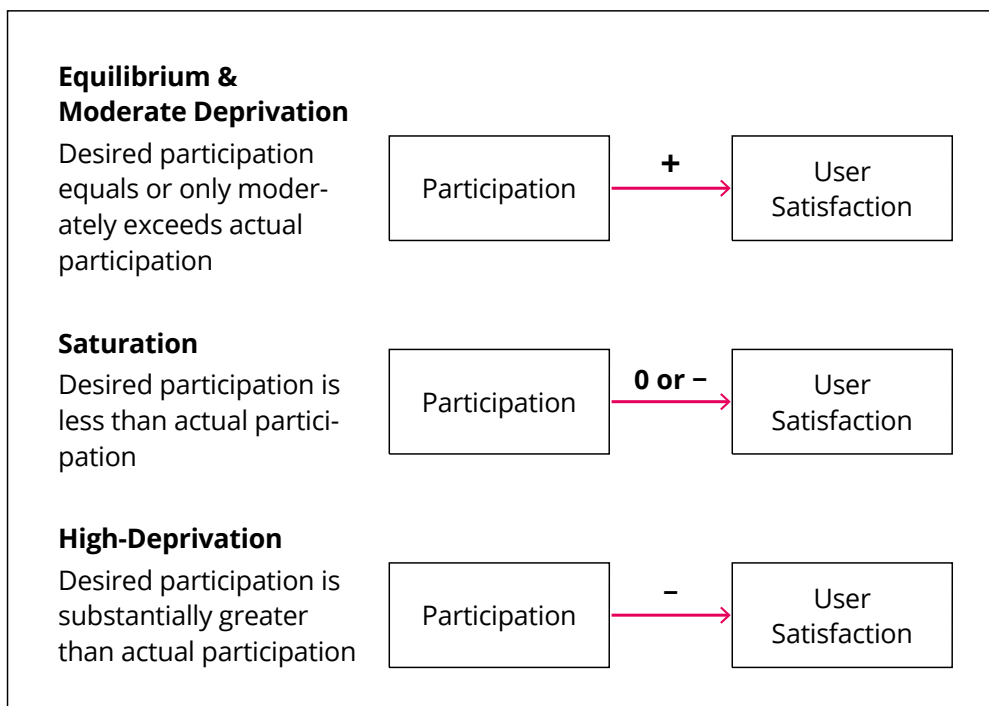
While opening spaces for citizen-government interaction is necessary, it is by no means sufficient to ensure effective citizen participation. If the spaces are not carefully designed or implemented, it may delay decisions, increase conflict, disappoint participants, and lead to more distrust. Indeed, previous studies have shown some inconsistencies concerning the effectiveness of government-citizen interactions in invited spaces,[6] particularly since there could be different interpretations of what constitutes effectiveness.[7] The theoretical framework introduced in this paper seeks to address this gap.

In Figure 1, the discrepancy model of user participation in the context of information systems development shows the conflicting findings regarding the effectiveness of user participation.[8] The model suggests that when the desired participation level is less or greater than the actual participation level, it has a negative or no effect on user satisfaction which is used to measure the success of user participation. Doll and Torkzadeh (1989) posited that user participation will have

4   Cornwall, Andrea. 2008. "Unpacking 'Participation': Models, Meanings and Practices." Community Development Journal 43, 3.

5   Gaventa, John. 2006. "Finding the Spaces for Change: A Power Analysis," IDS bulletin 37, 6; Cornwall, Andrea and VPS Coelho. 2006. "Spaces for Change? The Politics of Participation in New Democratic Arenas: Citizen, Participation and Accountability." Sussex: Institute of Development Studies; Cornwall, Andrea. 2004. "Introduction: New Democratic Spaces? The Politics and Dynamics of Institutionalised Participation." IDS bulletin 35, 2.

6   Yang, Kaifengand, and Sanjay K Pandey. 2011. "Further Dissecting the Black Box of Citizen Participation: When Does Citizen Involvement Lead to Good Outcomes?" Public Administration Review 71, 6.

7   Berner, Maureen M, Justin M Amos, and Ricardo S Morse. 2011. "What Constitutes Effective Citizen Participation in Local Government? Views from City Stakeholders." Public Administration Quarterly.

8   Doll, William J, and Gholamreza Torkzadeh. 1989. "A Discrepancy Model of End-User Computing Environment." Management Science 35, 10.

a positive impact only when it was done under the equilibrium condition, which exists when the actual level of participation roughly corresponds to the desired level of participation designed by the system. They found that under this condition, participation, whether low or high, has positive effects on all three physiological measures (i.e., value attainment, cognitive, and motivational).

Figure 1: Discrepancy Model of Participation[9]

Equilibrium & Moderate Deprivation
Desired participation equals or only moderately exceeds actual participation

Participation **+** → User Satisfaction

Saturation
Desired participation is less than actual participation

Participation **0 or −** → User Satisfaction

High-Deprivation
Desired participation is substantially greater than actual participation

Participation **−** → User Satisfaction

In practice, the desired level of participation is made up of different types of human actions expected to be performed during the interactions within the space, while the actual level of citizen participation is affected by contextual factors that make up a complex social and political structure within the space. Hence, achieving the equilibrium condition requires exploration of these elements. In this paper, two important concepts within Habermas' Theory of Communicative Action (TCA)[10], the typology of human action and the action-constitutive resources, are used to guide this exploration. ■

9 *Doll, William J, and Gholamreza Torkzadeh. 1989. "A Discrepancy Model of End-User Computing Environment."*

10 *Habermas, Jürgen. 1984. The Theory of Communicative Action: Reason and the Rationalization of Society. 2 vols., vol. 1. Boston, Massachusetts: Beacon Press.*
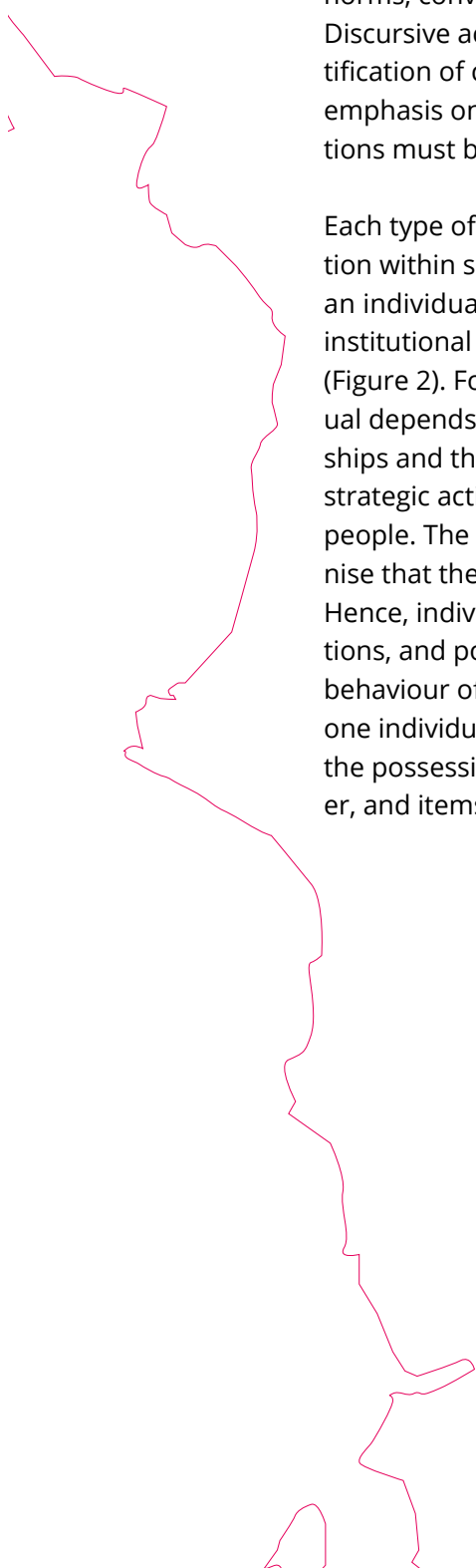
TYPOLOGY OF HUMAN ACTION

In TCA, Habermas derives a typology of human actions based on the observation of two human tendencies or orientations[11] (see Table 1). The first type of action is based on the tendency towards achieving their own success, which is called the "purposive-rational action". Purposive-rational actions are actions that are directed towards the achievement of given objectives. If the action is an intervention in the physical world and is achieved by following technical rules (or the non-social domain), the action is called "instrumental action". If the purposive-rational action is taken by considering the impact of the action on social situations or other people who may engage in counteraction, the action is called "strategic action".

Table 1: Habermas' Typology of Human Action.[12]

Domain of Action	Type of Action		Type of Interaction
	Purposive-rational or teleogical *One or more actors are oriented towards their own success*	**Communicative** *Actors (at least two) are oriented towards mutual agreement*	
Non-social	Instrumental action	N/A	Technical Action
Social	Strategic action	Communicative action Discursive action	Social Interaction

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11 *Habermas, Jürgen. 1987. Knowledge and Human Interests.Cambridge: Polity; Lyytinen, Kalle, and Heinz K Klein. 1985. "The Critical Theory of Jürgen Habermas as a Basis for a Theory of Information Systems."*

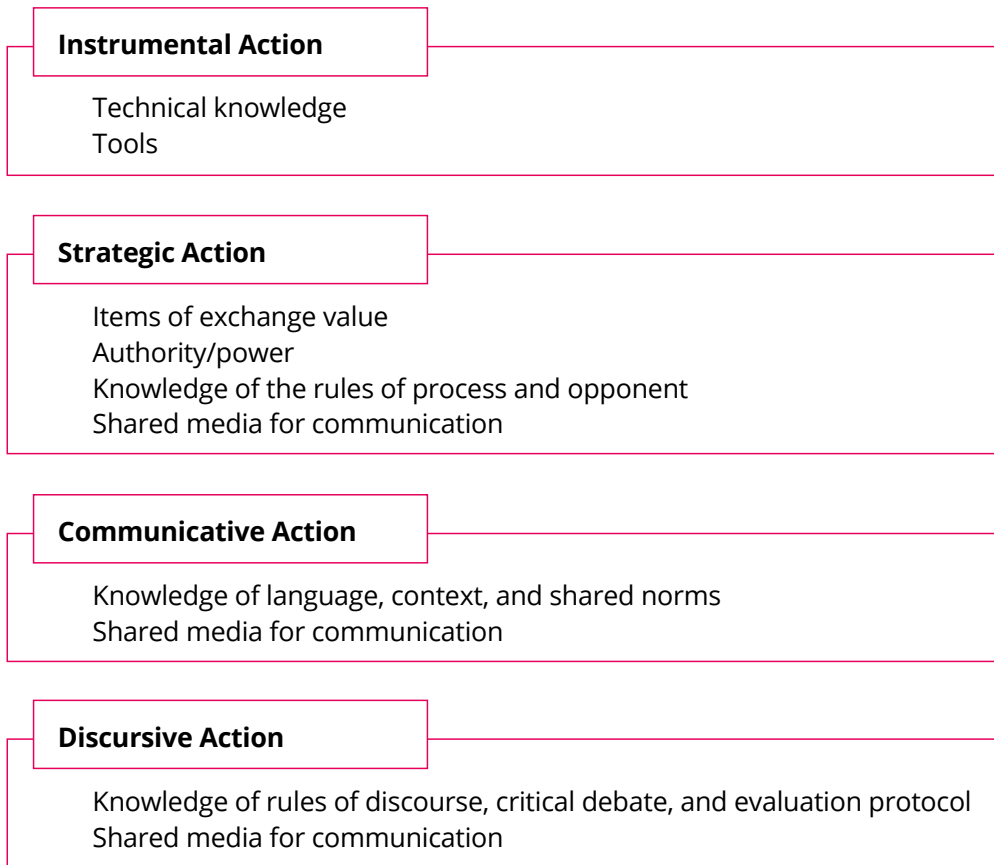12 *Habermas, Jürgen. 1984. The Theory of Communicative Action: Reason and the Rationalization of Society.*

The second type of human action is based on human orientation to achieve a mutual agreement. Here, the success orientation is replaced by a desire to understand a communicating partner. There are two types of action in this orientation: "communicative action" and "discursive action". With communicative action, people reach an agreement by having a common background of values, shared norms, conventions, habits, and assumptions about the world. Discursive action is oriented towards achieving clarification and justification of claims by providing reasons and evidence. It places an emphasis on the concept of argumentation where various assumptions must be carefully examined, clarified, and tested.

Each type of action assumes a set of resources for enacting the action within specific institutional practices. The basic resources that an individual needs to skillfully perform the action within specific institutional contexts are called "action constitutive resources"[13] (Figure 2). For the enactment of the instrumental action, the individual depends upon the technical knowledge of input-output relationships and the tools needed to achieve the given ends. In contrast, strategic action focuses on transforming the behaviour of other people. The individuals who engage in strategic action also recognise that their opponent may engage in intelligent counteraction. Hence, individuals need to recognise their opponent's goals, positions, and potential for counter actions.[14] The transformation of the behaviour of other people consequently requires the domination of one individual over the others. This power can be attained through the possession of social resources like social status, authority/power, and items of exchange value (e.g., time, expertise).

13 Ngwenyama, Ojelanki K, and Kalle Lyytinen. 1997. "Groupware Environments as Action Constitute Resources: A Social Action Framework for Analysing Groupware Technologies." The Journal of Collaborative Computing 6.

14 Ngwenyama, Ojelanki K, and Allen S Lee. 1997. "Communication Richness in Electronic Mail: Critical Social Theory and the Contextuality of Meaning." MIS Quarterly 21, 2.

Figure 2: Action Constitutive Resources for Each Human Action[15].

Instrumental Action

    Technical knowledge
    Tools

Strategic Action

    Items of exchange value
    Authority/power
    Knowledge of the rules of process and opponent
    Shared media for communication

Communicative Action

    Knowledge of language, context, and shared norms
    Shared media for communication

Discursive Action

    Knowledge of rules of discourse, critical debate, and evaluation protocol
    Shared media for communication

Communicative and discursive actions aim to achieve agreement among the participating individuals. Both actions presuppose the existence of shared media for communication. The communicative action is enacted via language and other forms of symbolic interaction to seek a possible basis for agreements and compromises, interpretations of shared norms, values, and the meanings of situated action. When the validity of the agreement is challenged, the individuals enter the discursive action, which is oriented towards restoring agreement and conditions for coordinated action. Discursive activity manifests through critical debate and argumentation. These two activities form the basis for joint decision-making and agreement. Habermas argues that the effectiveness of discursive activity depends on the existence of rules of discourse and critical debate, as well as the tools for analysis and evaluation of alternative arguments. ■

15 Ngwenyama, Ojelanki K, and Kalle Lyytinen. 1997. "Groupware Environments as Action Constitute Resources: A Social Action Framework for Analysing Groupware Technologies."

The findings from this study were largely derived from extensive desk research. This activity largely consists of reviews of prior studies related to the effectiveness of the two prominent e-Invited spaces, namely LAPOR! and e-Musrenbang created by local governments in Indonesia. A total of nine papers and five papers were identified for LAPOR! and e-Musrenbang respectively.

Using the proposed framework as the theoretical lens, insights gathered from the literature were divided into two main subsections. First, the typology of government-citizen interactions in LAPOR! and e-Musrenbang is explained by describing the types of human actions associated with the interactions. The second section describes the enabling factors for achieving participation equilibrium in the implementation of LAPOR! and e-Musrenbang. These factors were first identified from the papers described in the previous section.

Typology of Government-Citizen Interactions in LAPOR! and e-Musrenbang

LAPOR! (translated in English as "report") is seen as a successful e-Invited space in Indonesia. LAPOR! was introduced in 2011 to enable citizens to file reports or complaints regarding public services. These may range from a small, unfixed pothole in front of their homes to reported acts of bribery by public officials. The users can use the website www.lapor.go.id, Short Message Service (SMS), Twitter (@lapor1708) and mobile applications (Android and iOS) to access LAPOR!. As of January 2019, LAPOR! has 801,257 users and has registered more than 1.39 million complaints. The majority of the report is related to social security assistance, such as the social security card and temporary direct cash assistance.[16]

In LAPOR! once the citizens send their enquiries/complaints, they get a unique tracking number for each report and a notification when there is an official response. The government agencies are supposed to respond within five working days. If a citizen does

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16 *Surjandari, Isti, et al. 2016. "Application of Text Mining for Classification of Textual Reports: A Study of Indonesia's National Complaint Handling System." Paper presented at the 6th International Conference on Industrial Engineering and Operations Management. Kuala Lumpur: IEOM.*

not get a response within this time period, LAPOR!'s team calls the agency's liaison officer. If a week later there is still no progress, it sends a report to a senior official. The report includes which units in the agency received the most complaints and how they were managed. This usually pushes agencies to be more responsive. Finally, if that does not work, the agency can be reported to the Ombudsman of Indonesia which will investigate the case and give a binding order to the agency.

From the TCA perspective, the government-citizen interaction in LAPOR! appears to be manifested in the form of instrumental, strategic, and communicative action (shown in Table 2). The work-flow indicates that the government will decide how to satisfactorily address the complaint from the LAPOR! platform. In these two instances, there is no room for citizens to negotiate government action other than to accept, ignore, or file a new complaint. For a complaint-handling system like LAPOR!, the strategic interaction starts when citizens submit their complaints through the system with the objective that they will be satisfactorily addressed by the government.

Table 2: Typology of Citizen Interaction for LAPOR! and e-Musrenbang

E-Invited Space	Type of Human Action		
	Instrumental	**Strategic**	**Communicative**
LAPOR!	■ The citizens connect and interact with LAPOR! via website, SMS, or mobile apps.	■ The citizens send their enquiries/complaints. ■ Government officials verify the enquiries/complaints. ■ Government officials decide on the best solution to the enquiries/complaints. ■ Citizens decide whether the solution is satisfactory, if yes, the case is closed. Otherwise, a new case ID will be opened.	■ Government officials communicate the solutions to the citizens ■ Government officials check with the citizens if the solution is satisfactory.
e-Musrenbang	■ The citizens connect and interact with e-Musrenbang website	■ The citizens send their suggestions ■ Government officials verify the citizens' suggestions ■ Government officials decide the priority of the solutions and create the list of suggestions ■ Citizens may monitor the suggestions but have little or no opportunity to change the solution	

"Musrenbang" is an Indonesian abbreviation of the Development Planning Assembly. It is an annual process of community discussion about local development needs that takes place every January. Citizens deliberate on the issues facing their communities and decide upon priorities for short-term improvement which can be implemented in the following fiscal year. These discussions generally happen offline and are led by the head of the community unit. Once a list of priorities is made, it is submitted to the local government planning department via the online e-Musrenbang portal. Subsequently, the priority lists collected from the community units are discussed at the higher administrative levels, which are the subdistrict and city-wide levels. Based on these discussions, the final priority list is suggested and approved by the city councils, which assign resources to each neighbourhood depending upon the available funds and according to priority needs. Citizens can monitor whether their suggestions made it to the final list via e-Musrenbang portal.

In contrast to LAPOR!, Table 2 shows that human interaction in the e-Musrenbang platform only involves instrumental and strategic action. The instrumental action happens when citizens interact with the e-Musrenbang portal. Meanwhile, the interaction between the government and citizens is strategic, where the citizens provide suggestions on the development priorities, but it is the government who will decide on the final list of priorities. There is a lack of official data on how many suggestions are accepted by the government annually. However, a study by Ashari et al[17], shows that only 21% of the proposed projects in the final government annual development plan in the North Lombok district were derived from the proposals from the community. This number may vary from one local government to the other depending on several factors, including budget availability, quality of the proposal, urgency, and political interest. Except for the ability to monitor via the portal, citizens have little ability to influence the decision-making process. In strategic action, each human actor focuses on transforming the behaviour of other human actors. The government agency still maintains the authority to make the final decision about the development priority. Hence, in this instance, the agency is performing a strategic action.

17 *Ashari, Masjudin. 2016. "Analisis Perencanaan Pembangunan Daerah Di Kabupaten Lombok Utara (Studi Kasus Perencanaan Partisipatif Tahun 2009–2013)." Jurnal Ekonomi & Kebijakan Publik 6, 2.*

Understanding the Enabling Factors to Achieve Participation Equilibrium

Identifying the types of human action performed helps to understand the key enabling factors to achieve participation equilibrium in the e-Invited space. From the TCA's perspective, these enabling factors refer to the action-constitute resources, which are the resources needed to perform the human action.

Table 3: Mapping of the Enabling Factors for LAPOR! and e-Musrenbang from the Human Action Perspective

Interaction	Enabling Factors	Action-Constitutive Resources
Technical	■ Public awareness regarding the platform[18] ■ Human resource's e-Literacy[19] Citizen's ICT self-efficacy[20]	*Technical knowledge*
	■ Access to ITC infrastructure and tools[21] ■ Availability of easy-to-use technology (i.e., SMS, social media)[22]	*Tools*

18 *Siregar, Fajri et al. 2017. "Complaining to Improve Governance: Four Stories of Complaint-Handling Systems in Indonesia." in Making All Voices Count Research Report. Brighton: IDS.; For further supporting literature, please consult the reference list.*

19 *Jahidi, Idi and Ayuning Budiati. 2019. "The Improvement of E-Administration in Indonesia: An Analysis Based on U Theory." Paper presented at the First International Conference on Administration Science, ICAS 2019.;*

20 *Hidayanto, Nizar A et al. 2017. "Factors Influencing Citizen's Intention to Participate Electronically: The Perspectives of Social Cognitive Theory and E-Government Service Quality." Paper presented at the 2017 International Conference on Advanced Computer Science and Information Systems, ICACSIS.*

21 *CIPG. 2015. "How Public Is Public Reporting Tools?" Paper presented at the Presented for Indonesian Conference on Governance and Sustainability 2015, Jakarta.;*

22 *Feruglio, Francesca, and Amhad Rifai. 2017. "Participatory Budgeting in Indonesia: Past, Present and Future.";*

Interaction	Enabling Factors	Action-Constitutive Resources
Strategic	■ Clear incentives to the citizens (i.e., more funding at the neighbourhood level, better public services)[23]	*Items of exchange vaule*
	■ Support from the key political champion(s)[24]	*Authority/power*
	■ Consistent policies and regulations that support citizen engagement[25] ■ Availability of clear guidelines for citizen participation[26] ■ Capacity developement for government officials and citizen groups[27]	*Knowledge of the rules of process and opponent*
	■ Variety of communication channels[28]	*Shared media for communication*
Communicative	■ Prior government-user relationships[29] ■ User's prior experience with the e-Invited space ■ Citizens attitude towards the e-Invited space[31]	*Knowledge of contexts, language, and shared norms*
Discursive	■ Relevant communication channels[32]	*Shared media for communication*

23 *Feruglio and Rifai; Akbar, Gugun Geusan et al. 2019. "Innovation in the Public Sector: The Effectiveness of 'Lapor!' As One of the Smart City Programs in Bandung." Paper presented at the International Symposium on Social Sciences, Education, and Humanities, ISSEH 2018.*

24 *Kusumasari, Bevaola. 2018. "Humanizing or Dividing? The Challenge of Digital Democracy Implementation in Indonesia." Management Research and Practice 10, 4.*

25 *OECD. 2016. "Open Government in Indonesia."*

26 *Aswad, Setiawan et al. 2012. "The Roles of Procedural Justice and Social Learning in Improving Self Organizing Capabilities of Local Communities for Sustainable Development in Decentralized Indonesia." OIDA International Journal of Sustainable Development 3, 10.*

27 *OECD.*

28 *CIPG.*

29 *Wetterberg, Hertz, and Brinkerhoff.*

30 *Wetterberg, Hertz, and Brinkerhoff.*

31 *Wetterberg, Hertz, and Brinkerhoff.; Akbar et al..*

32 *CIPG.*

The e-Literacy impacts the citizens' ability to perform technical inter-action in e-Invited spaces. Prior studies have suggested that creating awareness is the key for continued use of the complaint-handling system.[33] Also, access to the ICT tools including access to the Internet is necessary. Siregar, et al[34] noted that "the geographic spread of complaints [submitted to LAPOR!] corresponds with the varying state of development across Indonesia, [but it] has not been able to reach more isolated citizens, who have no access to basic ICT infra-structure". Moreover, the availability of easy-to-use technology is essential to interact with the digital platform.[35] To this extent, LAPOR! offers several flexibilities. For example, to submit their complaint, citizens can use SMS, mobile apps, or the web portal. Citizens can use their Facebook or Twitter account to log into the system.

Looking through the lens of Habermas' TCA, strategic social interaction requires both government and citizens to rely on the resources at their disposal. Such resources are what Habermas describes as "social and material resources that are involved in the generation of power and dominion of some actors over others".[36] Habermas contends that such resources may include charisma, social status, authority, time, and financial resources or items of exchange value. Therefore, a symbolic action of support by the political champion contributes to the legitimisation of the e-Invited space and may persuade citizens to expend the effort required to participate meaningfully. Similarly, the incentive given to users is another important enabling factor. The literature on organisational change theory posits that people are generally used to the status quo and any disruptions may evoke human resistance.[37] However, when the perceived impacts are in line with their goals, people are more willing to participate.[38] Firuglio and Rifai[39] suggest that such benefits can be in the form of efficiency due to streamlining of budgeting processes or in the distribution of funds to the neigh-bourhood level.

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33 *Siregar et al.*

34 *Siregar et al.*

35 *Feruglio and Rifai.*

36 *Ngwenyama and Lyytinen, 76.*

37 *Tait, Peter and Iris Vessey. 1988. "The Effect of User Involvement on System Success: A Contingency Approach." MIS Quarterly 12, 1.*

38 *Lin, Winston T and Benjamin BM Shao. 2000. "The Relationship between User Participation and System Success: A Simultaneous Contingency Approach." Information & Management 37.*

39 *Feruglio and Rifai.*

Also, the availability of clear and consistent guidelines for citizen participation is necessary to provide an understanding of rules and processes. While the e-Musrenbang process is an important formal opportunity to involve the public in determining development priorities of local governments, several steps have been taken to improve the quality of the e-Musrenbang, such as socialisation to try to build a culture of participation and engagement, as well as measures to ensure concrete follow-ups.[40] Social interaction also requires a shared medium for communication. Implementation of LAPOR! and e-Musrenbang showed that IT can contribute to successful social interactions in the electronic-based system. Integration of the electronic system into the traditional Musrenbang has significantly expanded capacity and coverage of citizens included in the planning process. Likewise, the availability of easy-to-use technology such as social media or SMS has helped citizens to interact in the space. ■

40 *Siliwanti. 2014. "Measuring Civic Engagement for Better Open Government Policies and Services." in OGP Asia Pacific Regional Conference 2014.*

The paper has introduced the concept of participation equilibrium in defining the effectiveness and TCA as the theoretical framework to understand enabling factors to achieve the equilibrium condition. Based on the findings from the literature, several insights emerged from the study.

Sets of Conditional Factors

From the perspective of TCA, the emergence of e-Invited spaces indeed marks the shift from the purposive-rational oriented approach towards the communicative-oriented approach in public sector digitisation. This transformation also means that the government needs to be able to manage complexities related to human action(s) associated with each of the stages to achieve the participation equilibrium. These actions may be related to technical aspects in dealing with ICT systems (i.e., instrumental action) or social interactions (strategic, communicative, or discursive action) that happen within the spaces.

The framework also suggests that there are different sets of enabling factors for each e-Invited space depending on the type of human interactions performed within the space. With such knowledge, the government can focus on the key set of factors to achieve the equilibrium condition. This is particularly useful for the government to manage its limited resources wisely.

Technological Limitations

ICT provides a "medium for communication" necessary for social interactions among the key stakeholders in invited spaces. ICT also provides scale and speed in communication, which allows for effective and efficient use of resources during interactions within the space. Nevertheless, it is also apparent that the current ICT solutions have some limitations as we have shifted towards communicative-oriented interactions. The design of LAPOR! and

e-Musrenbang as feedback mechanism systems limits citizens' capability to perform follow-up action, which is needed when citizens need to perform discursive actions such as clarification, debates, or negotiation. At present, this limitation can be overcome by combining IT-based interactions with traditional in-person ones. For example, citizens can submit feedback using the IT-based system and use an in-person consultation session for discussing follow-up actions. In the future, e-Invited spaces may utilise advancements in digital communication technologies to replace in-person consultation.

Furthermore, in the context of developing countries, access to adequate ICT infrastructure and easy-to-use tools, as well as building the user's ICT knowledge and skills are still lacking. These limitations highlight the role of an intermediary to enable interaction between technology and the users who lack access to ICT due to many factors including illiteracy, lack of digital skills, financial constraints, and social empowerment issues.[41] The users who interact with the technology through an intermediary are often called secondary users.[42] Secondary users often emerge when digital technology implemented in developing countries, where direct interaction between users with technology might not be feasible. Depending on their technology operation competency, the intermediary may act as a surrogate, as an enabler, or as a translator.[43]
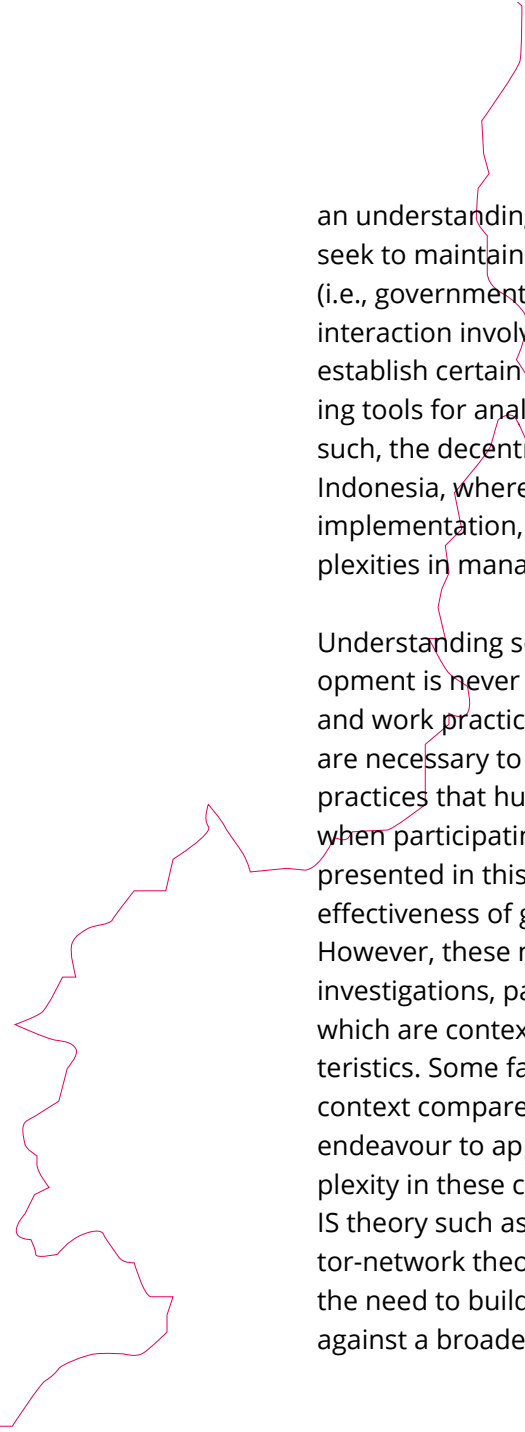
Local Context Matters

Facilitating social interaction in e-Invited spaces is a challenging task. This means that a one-size-fits-all strategy in governing the e-Invited space will certainly overlook these social complexities. The spaces with dominant strategic interaction will require an understanding of the needs of citizens and the ability to fulfil these needs. TCA referred to these resources as items of exchange value. On the other hand, the spaces with dominant communicative and discursive interaction require

41 Rajalekshmi, Kiran Gopakumar. 2007. "E-Governance Services through Telecenters: The Role of Human Intermediary and Issues of Trust." Information Technology for Development 4, 1.; Sein, Maung K and G Harindranath. 2004. "Conceptualizing the Ict Artifact: Toward Understanding the Role of ICT in National Development." Information Society 20, 1.

42 Parikh, Tapan S and Kaushik Ghosh. 2006. "Understanding and Designing for Intermediated Information Tasks in India," IEEE Pervasive Computing 5, 2.

43 Sambasivan, Nithya et al. 2010. "Intermediated Technology Use in Developing Communities" Paper presented at the CHI 2010, Human Factors in Computing Systems, Atlanta.

an understanding of contexts and shared norms and values as they seek to maintain mutual understanding among participating actors (i.e., government and citizens) engaged in coordinated action. As interaction involves discursive actions, the spaces also need to establish certain rules and procedures for critical discourse, including tools for analysis and evaluation of alternative arguments. As such, the decentralised implementation of the e-Invited spaces in Indonesia, where each local government is responsible for system implementation, has followed the right approach to navigate complexities in managing these social interactions.

Understanding social action in the context of community development is never fixed but involves the construction of knowledge and work practices of the local community. Hence, further studies are necessary to understand cognitive, emotional, and political practices that human actors nurture in their in-situ environment when participating in digital development projects. The typology presented in this paper also outlines sets of conjectures for the effectiveness of government-citizen interactions in e-Invited spaces. However, these need to be further refined through more empirical investigations, particularly the factors affecting social interactions which are contextually embedded in local practices and characteristics. Some factors might be more prominent in a certain local context compared to others. For this reason, future research may endeavour to apply different theories useful to capture the complexity in these contexts. Prior studies have applied contemporary IS theory such as Pettigrew's contextualist theory,[44] Latour's actor-network theory,[45] or Gidden's structuration theory[46] to confront the need to build analytical capability to account for IS innovation against a broader social context. ∎

44 Pettigrew, A M. 1985. "Contextualist Research and the Study of Organisational Change Processes." in Research Methods in Information Systems, ed. E. Mumford, et al. Amsterdam: Elsevier.

45 Latour, Bruno. 1991. Technology Is Society Made Durable: A Sociology of Monsters, ed. Law John, Essays on Power, Technology and Domination Law. London: Routledge.

46 Giddens, Anthony. 1984. The Constitution of Society: Outline of the Theory of Structuration. Cambridge: Polity.

CONCLUSION

The effectiveness of e-Invited space depends upon the alignment between the government and citizens' expectations. This paper introduces the concept of participation equilibrium as a measure to achieve such alignment. It also demonstrates the usefulness of TCA in identifying human action and subsequently the factors that enable effective interactions within the e-Invited space.

This literature review reveals several insights into ways of managing an effective e-Invited space. First, an e-Invited space's effectiveness depends on the facilitator's ability to manage the technical and social interactions within the space. Second, managing social interactions presents some complex challenges as they are deeply embedded in local culture and norms. However, the TCA could help in understanding different sets of conditional factors to facilitate these interactions. Third, the current ICT infrastructure has limitations in facilitating technical interaction. Therefore, there is the need to develop infrastructure, easy-to-use tools, and human ICT literacy in order to allow meaningful participation in e-Invited spaces.

Finally, it should be emphasised that the limitation of the study lies on the fact that the conclusions made in this paper are based on the review of past studies. Hence, they need to be further refined through primary research. Such exploration can utilise this framework as a priori theory. ■
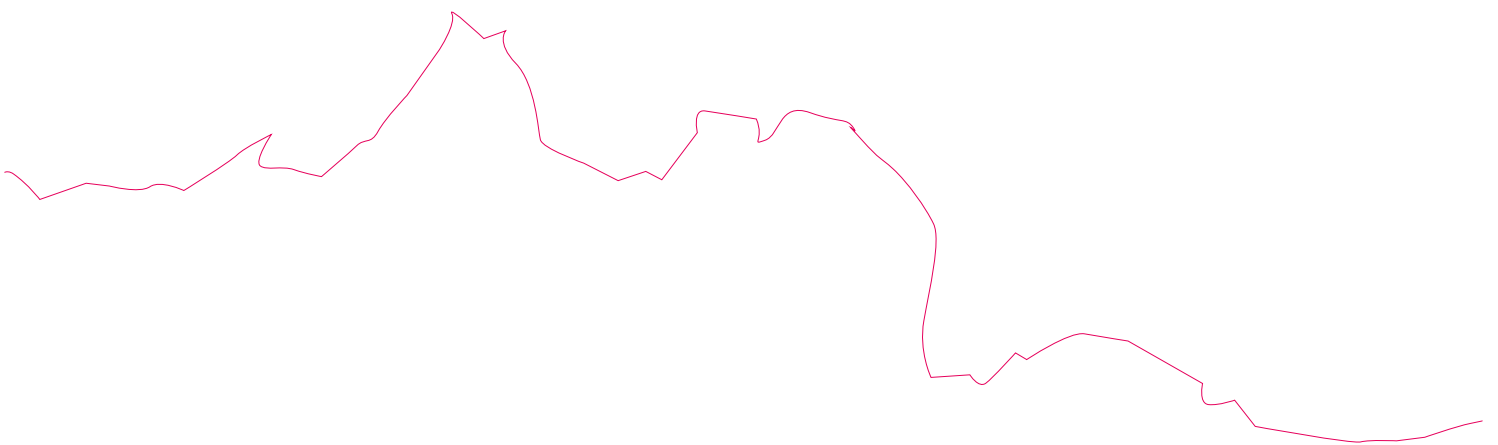
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