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# Generating Public Trust through Digital Government Transformation

## Research-in-progress

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## Abstract

Public trust has been acknowledged widely as an essential element in the success of public policy implementation. However, studies showed that it has declined over the years. To overcome this, the government could improve the public trust by leveraging the transparency through the use of digital technology. On the other hand, while research interest on digital transformation in government sector has been growing, studies related with public trust are scarce. Accordingly, this research-in-progress aims to investigate on how the public trust can be generated through digital government transformation (DGT). The proposed model has been drawn from IT business value model (Melville et al. 2004) and digital capability pillars (Peppard 2018) complemented with the cognitive theory of trust (Hill and O'Hara 2006). The research will contribute to the knowledge in the field of digital government transformation related with public trust and as an input for the government in generating public trust through DGT.

**Keywords** Digital Transformation, Digital Government Transformation, Public Trust.

## 1 Introduction

Public trust in government is important for the success of public policies implementation. Especially during COVID-19 pandemic, it is one of the vital elements for government to rapidly respond and support the citizens including the mitigation and recovery (OECD 2022). However, public trust in government institutions has been declined over the years (Mahmood 2016). According to Organization for Economic Cooperation and Development/OECD (2022), the percentage of citizens trusting their government is only 51%. Among others, lack of transparency contributes to the public trust degradation (Labarca et al. 2020).

Although the research interest on the digital transformation is growing (Kraus et al. 2021), the studies that correlate between the DGT with public trust relationship are infrequent (Mahmood 2019; Mahmood et al. 2020). Accordingly, it is crucial to study on how public trust can be generated with a coincidence of the DGT.

The proposed research model is based on the IT business value model by Melville et al. (2004) and digital capability pillars by Peppard (2018) complemented with the cognitive theory of trust by Hill and O'Hara (2006). Both IT business value model (Melville et al. 2004) and digital capability pillars (Peppard 2018) are underpinned from the resource-based view (RBV) (Barney 1991). IT business value model (Melville et al. 2004) has underlined on how the internal and external factors of the organization can impact to the value generation from the use of IT, whereas the digital capability pillars (Peppard 2018) describe on how the organization can embrace the value delivered from digital opportunities by strategically explore and exploit the digital technology.

The cognitive theory of trust describes that the trust can be established through a conscious or subconscious process and the lack of trust could eliminate beneficial opportunities or cause unnecessary tensions (Hill and O'Hara 2006). Although existing studies have elaborated the cognitive theory of trust to identify the citizens' trust as a key for the e-government service adoption (Chohan and Hu 2020), it does not explicitly cover the trust as an impact of value created by the DGT.

This paper and in progress research will contribute to the body of knowledge in the public trust and DGT field. The expected result would elaborate on how the success of digital government transformation with the moderation influence of transparency may lead to improve public trust. A convergent mixed-method research (Creswell and Plano Clark 2017) will be selected for the study and the research data will be collected from an Indonesian government agency.

The following sections are organized as follows: the next section provides the literature review of DGT and public trust with its influence factors. The proposed framework and future work will be discussed in section 3 and 4, respectively. Finally, section 5 will provide the conclusion of the study.

## 2 Literature Review

### 2.1 DGT (Digital Government Transformation)

The definition of digital transformation is varied across previous studies. Verhoef et al. (2019) identify 3 phases of digital transformation, namely digitization, digitalization, and digital transformation. The digital transformation goes beyond digitization or digitalization, and has been defined as the use of digital technology to enable the organization in developing a new business model for value creation that involves organizational-wide change (Verhoef et al. 2019). In this digital transformation phase, the transformation is not only related to software or hardware upgrade (Andriole 2017), but it also requires changing organization strategy, capabilities, and knowledge on how to strategically use new digital technologies (Peppard 2018; Warner and Wäger 2019).

In the government context, many researchers have been using the term "Digital Government Transformation" (Lindgren and Van Veenstra 2018; Liva et al. 2020; Tangi et al. 2021). Overall, the literature explain DGT as the application of digital technologies by the government while transforming organizational structure and governance system (Liva et al. 2020). This process often involves cultural, organizational, and relational change that could impact the individual, organization, and society (Tangi et al. 2021) with the aim to improve service delivery and public value to citizens (Lindgren and Van Veenstra 2018). This transformation is not only viewed as an internal transformation process, but it also involves the external transformation such as relationship between the government agencies and social political actors (Luna-Reyes and Gil-Garcia 2014).

## 2.2 DGT to Generate Public Trust

Public trust in government is easier to lose than to build (OECD 2020). Rousseau et al. (1998) define trust as “*a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another*” (p.395). In terms of public trust, OECD (2015) describes it as “*the confidence of citizens and businesses in the actions of governments to do what is right and perceived as fair*”. Public trust also can be defined as “*trusting the government to do things correctly and to behave properly*” (Bannister and Connolly 2011, p. 144).

Digital transformation may facilitate and empower new business models, new ways of user engagement, and new methods of collaboration with stakeholders' ecosystem (Peppard 2018). In the government sector, the use of digital technology could generate values such as improving the transparency and information visibility to public that would lead to leverage the citizens' trust (Bannister and Connolly 2011; Chohan and Hu 2020; Kamaruddin and Md Noor 2017; Mahmood et al. 2020). However, the value generated from DGT could not be acquired by using digital technology alone (Bannister and Connolly 2011), but it also requires other aspects involving various internal and external factors (Melville et al. 2004).

## 2.3 Factors Influence DGT to Generate Public Trust

**Digital capability.** Digital capability can be referred as the firm's ability and competency in continuously creating value by using various organization's resources that is often distributed across organization (Peppard 2018). To acquire digital capabilities, Peppard (2018, pp. 297-298) has identified six areas of macro-competences in digital transformation journey: “1) *crafting strategy to identify and evaluate the IT-based opportunities to formulate business strategy, 2) defining the IS requirement to translate the business strategy into information and change plans that conform to the organization's priority, 3) defining the IT capability which means that to translate the business strategy into long term IT resource architecture plan, 4) using information which consist of generate insight, informed decisions, and benefits delivery micro-competencies, 5) delivering change and services that include the deployment and development of IT resources to exploit capabilities of digital technology, and 6) supply of technology to maintain IT, application supply chain, and resource capacity.*”

**Governance.** To sustain organization transformation and to obtain value from the IT investment, implementing governance in IT is essential (Sambamurthy and Zmud 1999; Weill 2004). To have appropriate governance, the organization needs to conform with several characteristics, for instance it should be flexible and should maintain a manageable governance structure (Warner and Wäger 2019), it has to ensure transparency of governance mechanism, and it should be designed for multiple organizational levels (Weill 2004). In addition, the organization needs to establish some efforts such as creating steering committee across organization that enable IT business alignment to encourage the involvement of relevant units to foster cross-functional collaboration in the transformation (De Haes and Van Grembergen 2009; Peppard 2018; Vial 2019).

**Leadership.** Alongside with the governance, the leadership is also framing the digital capabilities in the journey of digital transformation (Peppard 2018). This leadership support is required not only from the IT leader but also the organization's leaders (Peppard 2018). According to the literature, support from top management is necessary and vital for the digital transformation process (Ashaye and Irani 2019; Haneem et al. 2019; Tangi et al. 2021). The Chief Digital Officer (CDO) has a vital role on leadership in organization to orchestrate digital transformation (Singh and Hess 2017) including supporting top management to design digital transformation strategy, establish proper change management activity, plan a short-term and long-term outcomes, and encourage all employees in transformational efforts participation (Tangi et al. 2021).

**Collaborative Environment.** The collaborative approach can be applied internally within organization and with external partners. In the organization, the collaborative process would not always follow the top-down approach guided by the organization leaders, but also bottom-up approach with active participation from all levels in the organization (Weerakkody et al. 2011). In term of external collaboration, sharing information with external stakeholders could support the transformational government agenda (Weerakkody et al. 2011). Studies of digital transformation in Audi AG and also in British and Dutch government have shown, as examples, that beneficial outcomes were yielded from cross-collaboration of multidisciplinary competencies (Dremel et al. 2017; Weerakkody et al. 2011).

**Transparency.** The transparency could improve the citizens' trust in the government as it empowers government's accountability of operations and processes for the citizens (Bannister and Connolly 2011; Chohan and Hu 2020). The effort and willingness of government for transparency will lead to the

citizens' higher expectation and better understanding that government is trying to transform in order to enhance citizens' trust (Kamaruddin and Md Noor 2017; Mahmood et al. 2020). Through the DGT, the government could enable the transparency by providing visibility in regards to the government decision making, operation, and process (Bannister and Connolly 2011; Chohan and Hu 2020; Kamaruddin and Md Noor 2017; Mahmood et al. 2020).

### 3 Development of Conceptual Framework and Hypotheses

The proposed conceptual framework on the Figure 1 is based on the IT business value model (Melville et al. 2004) integrated with digital capability pillars (Peppard 2018) and complemented with the cognitive theory of trust (Hill and O'Hara 2006). In addition, the proposed framework constructs have been generated from the aforementioned influence factors (section 2.3) which involves the digital capability, governance, leadership, collaborative environment, and transparency.

The digital capability construct is based on the digital capability pillars (Peppard 2018) and also it represents the IT resources in IT business value model (Melville et al. 2004). The collaborative environment is adapted from the complementary organizational resource in the IT business value model (Melville et al. 2004). However, Melville et al. (2004) have not used the two constructs of governance and leadership explicitly in their IT business value model. In addition, the public trust construct is postulated from the cognitive theory of trust (Hill and O'Hara 2006) and the transparency construct is added as a moderating variable in the relationship between DGT and public trust.

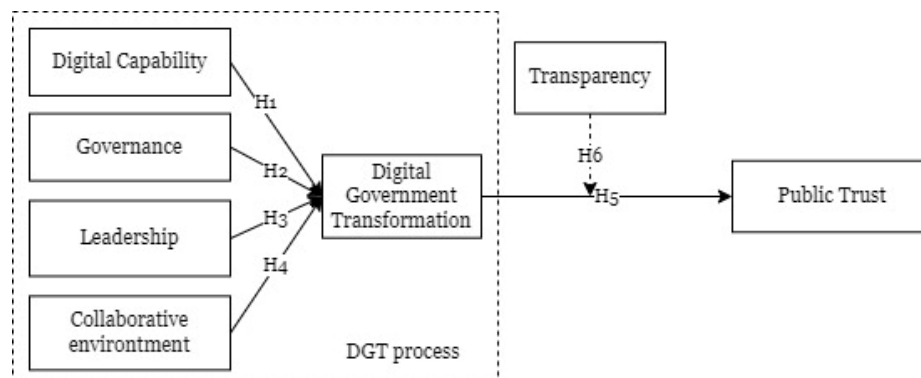


Figure 1. Proposed framework

Digital capability can be defined as the organizational ability and competencies by using various resources in order to continuously creating value and it is an important factor that scaffolds and rewires the organization to become digital (Peppard 2018). Sufficient digital capability could address the technical challenges of DGT such as the difficulty to adapt new digital technology, the lack of IT competencies and business process reengineering skills, and facing incompatibility of legacy systems (Cichosz et al. 2020; Dremel et al. 2017; Hess et al. 2016; Van Veenstra et al. 2011; Weerakkody and Dhillon 2008). Thus, it leads to the following hypothesis:

*H1= Digital capability will positively influence the DGT*

IT governance has been defined as “the specifying framework for decision rights and accountabilities to encourage desirable behaviour in the use of IT” (Weill 2004). Having appropriate IT governance could help organization to overcome challenges such as confusion of existing process, information fragmentation, insufficient IT governance, political pressure, difficulty in aligning business process and organizational structure to digital service, complexity of process, misaligned business objectives, inflexible business processes, and lack of strategic orientation (Agrawal et al. 2020; Cichosz et al. 2020; Dremel et al. 2017; Van Veenstra et al. 2011; Weerakkody and Dhillon 2008).

*H2=Governance will positively influence the DGT*

Embarking and sustaining the digital transformation journey requires leadership support from all leader teams including IT and business leaders (Peppard 2018; Singh and Hess 2017). Lack of leadership support can also lead organization to face other challenges in embarking with digital transformation such as lack of strategic orientation to digital, the absence of sense in urgency to embrace digital technology, insufficient financial support, and lack of coordination and collaboration (Agrawal et al.

2020; Ashaye and Irani 2019; Cichosz et al. 2020; Van Veenstra et al. 2011) . Accordingly, it can be hypothesized that:

*H3=Leadership will positively influence the DGT*

Extensive literature has discovered collaborative environment as a vital element to the digital transformation (Ashaye and Irani 2019; Tangi et al. 2021; Vial 2019; Warner and Wäger 2019; Weerakkody et al. 2011). The absence of collaboration such as fragmentation (silo structure) and reluctant to share IS/IT system and process can be impediments to the digital transformation process (Van Veenstra et al. 2011; Weerakkody and Dhillon 2008). Hence, this study proposes the following hypothesis:

*H4=Collaborative environment will positively influence the DGT*

As mentioned earlier, public trust in government is vital for the success of public policies implementation (OECD 2022). Scholars argue that the poor government service could decrease of citizens' trust (Ashaye and Irani 2019; Mahmood et al. 2019; Omar et al. 2020). In addition, the influence factors in the DGT process such as digital capability, governance, leadership, collaborative environment along with the encourage of the important element of transparency will lead to improve public trust (Chohan and Hu 2020; Grimmelikhuijsen 2009; Mahmood et al. 2020). Accordingly, this leads to the following hypothesis:

*H5= The DGT will positively influence generating public trust*

Government transparency is a vital element in improvement of the public trust (Chohan and Hu 2020; Grimmelikhuijsen 2009; Mahmood et al. 2020). Through the use of ICT and the emergence of digital technology, the government could enable the transparency by providing information regarding the government decision making, operation, and process to improve the public trust (Bannister and Connolly 2011; Chohan and Hu 2020; Kamaruddin and Md Noor 2017; Mahmood et al. 2020). Therefore, the following hypothesis is proposed:

*H6= Transparency will moderate the relationship between the DGT and public trust*

## 4 Future Work

To validate the proposed model, the research data will be collected from an Indonesian government agency which transforms national civil servants' recruitment through the use of digital technology in order to improve the public trust in government (World Bank Group 2018). This study will use the convergent mixed-methods research approach with both qualitative and quantitative data collected almost at the same time (Creswell and Plano Clark 2017). For quantitative analysis, the Partial Least Square-Structural Equation Model (PLS-SEM) will be used to test the hypotheses and to measure the relationship between multiple variables of the research model. PLS-SEM is suitable for small or large samples and it provides identification issues with more robust analysis (Hair et al. 2011). Regarding the qualitative analysis, the interview recordings will be transcribed, coded, and then analysed through text analysis software (Creswell and Plano Clark 2017) such as NVivo. The inferences from the qualitative and quantitative analysis will be integrated by using the bracketing and bridging approach to develop meta-inferences (Venkatesh et al. 2013).

## 5 Conclusion

This research-in-progress paper aims to study how citizens' trust in government could be leveraged through DGT. The proposed research model constructed from extant literature is expected to contribute to the knowledge in the field of DGT with relation to public trust, which is still limited. It also could contribute as valuable input for public administrators in generating public trust through DGT. However, the proposed framework in this initial stage of research might only have limited constructs. Thus, further study might provide additional construct towards more comprehensive frameworks.

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