

# **E-Governance and Anti-Corruption in Bhutan: emerging roles of multi-layered leaderships**

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## **Abstract**

E-governance initiatives are increasingly seen as a vehicle to tackle corruption. However, empirical evidence to help understand the mechanism is scarce, especially among developing countries. This inductive research explores the relationships between e-governance and corruption through compliance as a possible conduit to explain the phenomena. It answers the question of what are the determinants of compliance among government employee users in e-governance implementation. Bhutan is selected as a case study country, as it is perceived as a low corruption country, despite being a least developed country. The research selected 2 e-governance initiatives central to the government's anti-corruption efforts: the Asset Declaration System of the Anti-Corruption Commission and the electronic Public Expenditure Management System of the Ministry of Finance. Data collection was conducted through document analysis, observations, semi-structured interviews of 33 government officials and experts in 2019. The fieldwork resulted in 1) information system descriptions based on document analysis and observations; 2) evidence of compliance among government employee users obtained through semi-structured interviews; and 3) external expert views for data triangulation. The data is analyzed using coding, pattern matching and cross-case synthesis. The paper presents preliminary findings which identify possible determinants of compliance, with focus on multi-layered leaderships. Due to the technical complexity of e-governance systems, existing leaderships seem to play more supportive roles, while IT officials increasingly provide policy and decision-making roles in the case of Bhutan. The combination of leaderships and other determinants may explain the high level of compliance and low level of corruption in Bhutan.

## **1. Introduction**

The emergence of frontier technologies, such as quantum computing, artificial intelligence (AI), Internet of Things (IoT), Big Data, 3D printing and blockchain, have ignited a series of far-reaching transformations globally. Examples abound – autonomous or driverless vehicles, cryptocurrencies, machine-learning-empowered medical diagnosis and AI-enabled cyberattacks. Supported by an exponential growth in data availability, computing power and analytical capabilities, ground-breaking solutions, products and knowledge are being developed and introduced to markets and users on a daily basis.

These new phenomena have also compelled rethinking around conventional application of information and communications technology (ICT) for the advancement of the Sustainable Development Goals (SDG). Across the globe, developing countries have made significant progress in digital transformation by extending ICT connectivity and mainstreaming ICT applications. E-agriculture, e-learning, digital trade, intelligent transport systems, smart grid and e-governance, are a few. While significant progress has been made, the need for inclusive development and poverty reduction through ICT has remained one of the top priorities of a majority of developing countries.

Today, the emergence of frontier technologies has added a new dimension to the ongoing digital transformation in developing nations. In addition to the need to scale up and deepen inclusive digital transformation, countries are urged and compelled to embrace the frontier technologies and catch up with the technologically advanced ones. It concerns association with global supply chains, changing global consumer expectations and wide-ranging benefits the frontier technologies offer to the achievement of national development goals and SDGs.

The projected transition to frontier technologies requires careful examination of tangible and intangible assets as well as learning from past and existing initiatives, so as to capitalise on their data, resources and capabilities. A recent MIT study concludes that enterprise capabilities are key to delivering successful digital transformation and such capabilities provide the basis to launch newer, more efficient frontier technology-driven solutions. These digital enterprise capabilities are identified as 1) single, authoritative sources of information, 2) reliable end-to-end processes and 3) back office shared services (Ross, Sebastian & Beath 2018).

Against this background, my research focuses on e-governance initiatives, which build enterprise capabilities within governments and, in particular, those designed to control corruption in light of ongoing anti-corruption protests across the globe. E-governance initiatives are increasingly seen as a vehicle to tackle corruption across the globe. E-governance initiatives offer an unprecedented amount and visibility of data and information, which can be aggregated, disaggregated and analysed to identify patterns to help improve policies, procedures, and processes. But the systems alone would be insufficient to actually reduce corruption (Bertot, Jaeger & Grimes 2010; Benson, Torres, Royo & Flores 2012; Kumar & Best 2006; Jun, Wang & Wang 2014). Otherwise, we would have seen corresponding decreases in corruption with increasing number and scale of e-governance initiatives worldwide. Furthermore, despite the fact that similar e-governance functions and initiatives have been implemented across the world, the evidenced outcomes seem to vary markedly

from country to country (Lee 2010; Kumar & Best 2006; Jun, Wang & Wang 2014; Bolivar, Perez & Lopez-Hernandez 2015).

Another related question is the context in which e-governance initiatives are implemented. The few successful cases, such as OPEN in the Republic of Korea, which evidenced “positive impact on the reduction of corruption”, seem to have been implemented where technology, governance and social enablers already exist (Kim, Kim & Lee 2009, p.48). However, e-governance initiatives are particularly important in the context of developing countries, where governance deficits and resource constraints are more pronounced and systemic corruption widely observed (Grindle 2007; Srivastava, Teo & Devaraj 2016). In many of such countries, simply enabling access to government information and data may not enable citizens to hold governments to account and lead to reduction in corruption (Bertot, Jaeger & Grimes 2010). The role of e-governance in reducing corruption has been touted in qualitative and quantitative studies (Kim, Kim & Lee 2009; Shim & Eom 2009; Lio, Liu & Qu 2011; Elbahnasawy 2014; Krishnan, Teo & Lim 2013), but where and how that happens require adequate research (Andersen 2009; Starke, Naab & Scherer 2016), as detailed in this report’s literature review.

I believe these are pertinent and urgent questions in governance, political economy and Information Systems (IS) in the face of growing influence of technology, including frontier technology and the dynamic interactions among technology, institutions and human actors. Despite technological developments and its applications across the globe, corruption continues to frustrate people, divert limited resources and slow down efforts toward inclusive and sustainable development (Bhargava 2006). In particular, systemic corruption within the government may have a wider impact than isolated, ad hoc corruption (Boisvert, Dent, and Quraishi 2014; Byrne 2007; Aladwani 2016), because it tends to undermine formal institutions in their efforts to enforce their own policies, rules and regulations and achieve public policy goals for the public good (Coicaud 2016).

In response, an increasing number of people are resorting to innovative measures, including social media campaigns and leaks online (Mazzarella 2006; Fenster 2012; Starke, Naab & Scherer 2016). But we have yet to learn the magnitude, conduit and level of influence of social media, and other factors, on institutions and government officials, who are the main protagonists in this landscape. Government officials may feel compelled to comply with policies, rules and regulations because of the introduction of technology. Or some might still find a way to circumvent technology-induced visibility and scrutiny, convinced that impunity and invincibility would continue (Starke, Naab & Scherer 2016), as ICT has been regarded as favoring those in power (Bertot, Jaeger & Grimes 2010; Aladwani 2016; Samuel & Lowen 2010). ICT may be the key in empowering government employees in both scenarios.

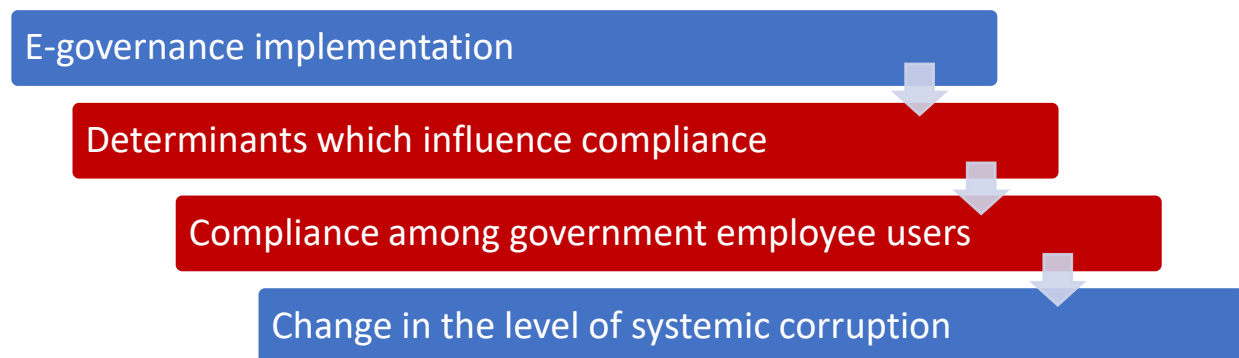
## **2. Research Question**

With this backdrop, my research question is,

**What are the determinants of compliance among government employee users in e-governance implementation?**

In this exploratory inductive research, compliance is identified as a conduit and part of mechanism to explain the phenomena of e-governance implementation. It is expected that the level and nature of compliance among government employee users would lead to eventual and subsequent changes in the level of systemic corruption, although it is not a main focus of my research. Graph 1.1, below, highlights the scope of this research investigation in red.

Graph 1.1: Diagram of variable relationships



E-governance implementation is typically accompanied by new policies, regulations and/or organisational setups, or updates to existing ones to integrate new functions, processes and procedures in prevailing organisational context. An example could be a new financial management system, which is designed to increase transparency and reduce unauthorised transactions in financial management. The new financial management system may require the use of e-signatures in authoring payments through updated financial management policies and regulations with new functions, processes and approvers. When government employee users comply with the new policies, regulations and organisational setups and duly process all transactions in the system, it is likely the e-governance initiative succeeds to address pre-existing challenges, increase transparency and reduce unauthorised transactions, as intended.

However, literature on e-governance and compliance, as will be detailed later in this paper, indicates that e-governance policies, regulations and organisational setups alone might not suffice to explain compliance, or non-compliance, among government employee users. While most e-governance initiatives produce associated e-governance policies, regulations and organisational setups, not all of them, necessarily translate into similar or comparable changes in compliance among government employee users across the globe, sectors, functions and types of e-governance systems.

Because of the visibility, traceability and business intelligence of an e-governance system, would government employee users comply with the new e-governance policies, regulations and processes? Or would they defy and find a way to make transactions outside the systems? What are the determinant factors, which influence compliance among government employee users when an e-governance system is introduced? Committed leadership? Fear of punishment for non-compliance? Fear for WikiLeaks and whistle-blowers? How do these determinant factors impact compliance?

My research focuses specifically on compliance, in the context of e-governance implementation, which aims to increase transparency and reduce corruption. The assumption is that when government employee users comply with e-governance policies and regulations, which are designed to curb corruption, it is expected that the compliance would lead to an eventual decrease in corruption, where such practices were observed before the implementation, and to no change, where such practices didn't exist (in which case it could be considered as prevention). On the other hand, if government employee users decide to not comply, it would lead to an eventual increase in corruption, where a corrupt practice was not prevalent, or to no change, where corruption was already rampant.

Understanding compliance and identifying the determinant factors of compliance among government employee users, therefore, is expected to provide a new avenue to explain the phenomena and mechanism between e-governance implementation and change in the level of corruption. It also provides insights into why there is variability in outcomes of e-governance implementation across the globe. It is expected that my study contributes evidence to the existing literature on e-governance and compliance, while at the same time, stimulating academic discourse on compliance in the context of e-governance implementation and prompt more case studies in other contexts and situations. It is hoped that my research findings and academic discussions will help design and implement effective e-governance initiatives for better results and impact.

### 3. Concepts and definitions

Bannister and Connolly (2012) defines **e-governance** as “the use of ICT in government in ways that lead to genuinely different structures or processes a consequence of which may be the greater effectuation of or changes in norms and public values” (p. 21). With emphasis on various stakeholders' involvement, UNESCO (2005) defined e-governance as “the application of ICT to the system of governance to ensure a wider participation and deeper involvement of citizens, institutions, NGOs as well as private firms in the decision-making process”. E-governance, therefore, covers a wider scope than e-government (Ashree and Sinduja 2015).

My research uses the extended terms, **e-governance policies, regulations and organisational setups**, to denote the policies, regulations and organisational setups, which are newly established or are updates to the existing ones, due to the implementation of e-governance initiative. In the afore-mentioned example of financial management system, an e-governance policy introduces the objective and use of e-signature as the legitimate means of financial transactions in the government. E-governance regulations could indicate responsible agencies, where and how e-signature could be used including types of transgressions, monitoring and reporting, among others. E-governance organisational setups could include the new workflow, assignment of e-signature approvers, technical support function, project management team and oversight and reporting lines. However, there could be e-governance initiatives, which are successfully implemented without codified policies, regulations and organisational setups. This exploratory study will be able to investigate such cases in an adaptable manner and understand how compliance takes place with determinant factors in such a situation.

**Government employee users** in my research refer to government officials, who directly or indirectly use the e-governance system under investigation. They could include heads of organisations as a leader, managers of administration functions, such as human resource, finance

and budget, e-governance project managers and users, who enter and retrieve data and information for their daily work.

**Compliance** is defined as “the mutual consistency of legal requirements and enterprise requirements” (Hassan & Logrippo 2008) with “the target acting in accordance with an influence attempt from the source” (Payan and McFarland, 2005). Sundstrum (2016) equates non-compliance to legal violation, as both denote deviation from formal rules. Compliance is also expressed as a degree of adherence, in such cases as not complying all the rules (only some) or not complying all the times (only sometimes). Compliance may contrast with enthusiastic commitment or reluctant obedience (Yukl, 1989) and may convey negative connotation associated with involuntary action (Gelderman, Ghijsen & Bruman 2006). The term “willing compliance” (Navarra & Cornford 2011) and “voluntary self-compliance” (Avgerou, Ciborra, Cordella & Kallinikos 2005) are used to describe the voluntary nature of action. As detailed in Chapter 4, compliance also takes the form of value-based/dispositional compliance and rule-based compliance (Batory 2012 and Webb 2012). According to several scholars (Webb 2012; Van del Wal, Graycar & Kelly 2016; Alon and Hageman 2017; Williams and Horodnic 2015), both types of compliance are needed to ensure sustainable compliance in society.

**Corruption** is defined as “the abuse of public power for private benefit” (Tanzi 1998, p. 8). Søreide, Tjen & Evans (2017) adds that corruption is, in essence, trade which shouldn’t be for sale, including extortion, bribery, collusion and negligence. Based on the typology of corruption defined by Bryne (2007), this report focuses on systemic corruption within government entities and does not cover other types of corruption, such as ad hoc, petty, grand, political or legal/moral corruption. Systemic corruption within the government may have a wider impact than isolated, ad hoc corruption (Boisvert, Dent, and Quraishi 2014), because it tends to undermine formal institutions when enforcing their own policies, rules and regulations and trying to achieve public policy goals for the public good.

## 4: Literature Review

### 4.1 Overview

To develop an overview on the topic, a literature review was conducted<sup>1</sup>. The below section summarises the main findings around the key topics of this research, followed by identified research gaps.

### 4.2 Research Gaps

Although the literature review so far provides valuable insights and confirms the importance of certain factors in implementing e-governance initiatives in government organisations, several research gaps seem to emerge:

- Few studies approached the topic of e-governance impact on corruption through compliance;

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<sup>1</sup> The Web of Science Core Collection was accessed on 2 April 2017, which resulted in 187 articles published since 2005 in selected sectors of social sciences. The key words, “e-governance”, “e-government”, “corruption” and “government\*”, were selected to elicit a broad overview on the topic from the perspectives of governance, institutionalism, IS and compliance. The 187 articles were then ranked by the level of citation and relevant articles which focus on e-governance/e-government, corruption, compliance and institutional factors were identified.

- Research on the relationship between e-governance institutional instruments and compliance among government employee users are scarce;
- Government employee users of e-governance initiatives are important actors but their perspectives are not extensively researched in existing case studies on e-governance (Kim, Kim & Lee 2009; Rana, Dwivedi and Williams et al 2015; Alaaraj and Hassan 2016; Al-Madi, Al-Shraideh and Khrais 2016; Sari 2016; Kumar & Best 2006; Kalsi & Kiran 2015), especially from the compliance perspective;
- Fountain (2007), Lanzara (2009), Srivastava, Teo & Devaraj (2016) and Bearfield and Bowman (2017) point out a greater need to take into account institutional dynamism and factors in analysing e-government initiatives, as institutions are important actors.
- Some of the above cited articles (Kim, Kim & Lee 2009; Rana, Dwivedi and Williams et al 2015; Bearfield and Bowman 2017) assume that providing access to government information through e-governance initiatives would empower citizens to hold government officials accountable. However, the existing literature does not fully explain how this happens in developing countries, in particular, Least Developed Countries (LDC) with less institutional and individual capacity (Fukuyama 2004; Grindle 2007).
- Insufficient research has been conducted on how e-governance initiatives could bring about changes within governments without fully functional democratic oversight mechanisms (Andersen 2009; Bertot, Jaeger & Grimes 2010).

In this context, my research will shed light on institutional dynamics within governments by examining relationships between e-governance implementation and compliance among government employee users. My research focuses on a LDC, where democratic oversight may not be a significant factor to ensure compliance among government employees and e-governance initiatives tend to rely on other internal and external factors for compliance.

#### 4.3 Institutional instrument and compliance

To deepen understanding of institutional instruments (i.e. policies, rules, regulations, processes and organisational setup) and compliance in e-governance implementation, I conducted a more focused literature review<sup>2</sup> and identified institutional instruments, which are evidenced to influence the type of compliance among government officials within the government. In this report, an institutional instrument is defined to “lay(s) down the general rules governing the functioning of the organisation”. (Amr 2003, p. 129) In explaining institutional instruments, Mingaleva & Mirskikh (2014) identified 1) legislation activities, 2) creation and development of organisations and 3) effective systems for regulation as the constituting factors.

Table 4.1 below disaggregates the geographic coverage of the 56 articles. It was found that 29% of the articles focus on Europe (16 articles), 21% on Asia (12 articles), 11% on Americas (6 articles), 7% on Africa (4 articles) and 4% on Oceania (2 articles), thus covering wide geographic areas. In addition, 29% (or 16 articles) investigated global and theoretical matters in their articles.

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<sup>2</sup> In order to identify the institutional instruments, their relationships, moderating and mediating factors, a systematic literature review was conducted. Using the Web of Science with key words “compliance” and “corruption” among targeted categories of journals (the detailed search criteria are listed in Annex 2), 142 relevant articles were found as of 20 June 2018 (the comprehensive list and summary of the articles attached as Annex 2). As a result of screening, 56 articles were found containing relevant institutional instruments, compliance and/or concepts and elements of the mediating and moderating factors. The selected 56 articles cover national/international cases, different industries/functions and institutional instruments with global and regional coverage.

Table 4.1: geographical distribution of identified articles

<b>Region (article#)</b>	<b>Country / countries of case (authors)</b>
Africa (4)	<ul style="list-style-type: none"> <li>• Kenya, Tanzania, Uganda and South Africa (Ali 2014),</li> <li>• South Africa (Webb 2012, Sundstrom 2016),</li> <li>• Africa (Schlenthner 2017)</li> </ul>
Asia (12)	<ul style="list-style-type: none"> <li>• Georgia and Armenia (Ademmer &amp; Börzel 2013),</li> <li>• Georgia (Schueth 2012),</li> <li>• Turkey (Yilmaz &amp; Soyaltin 2014, Ozarslan 2016),</li> <li>• 22 former Soviet countries (Alon &amp; Hageman 2017),</li> <li>• Cambodia (Sok 2014),</li> <li>• Indonesia (Rosid, Evans &amp; Binh 2016, Tjen &amp; Evans 2017),</li> <li>• China (Jiang 2017),</li> <li>• Eurasian countries (Williams &amp; Krasniqi 2017),</li> <li>• Pakistan (Cyan, Koumpias &amp; Martinez-Vazquez 2016),</li> <li>• India (Bina &amp; Yinghong 2016)</li> </ul>
Europe (16)	<ul style="list-style-type: none"> <li>• Ukraine (Darden 2008, Osipian 2010, Kantsir &amp; Plekan 2017),</li> <li>• Hungary (Batory 2012),</li> <li>• Estonia (Tavits 2010),</li> <li>• Southeast Europe (Williams &amp; Horodnic 2015, Camaj 2016),</li> <li>• Russia (Lokshin &amp; Yemtsov 2008),</li> <li>• Germany (Berghoff 2018, Hough 2017),</li> <li>• EU (Rodriguez-Arana 2017, Perez-Magro et al. 2017),</li> <li>• UK, Sweden and Italy (D'Attoma, Volintiru &amp; Steinmo 2017),</li> <li>• Spain (Villagrasa 2016),</li> <li>• Europe (Popescu, Onofrei &amp; Kelley 2016),</li> <li>• Romania (Michael 2012)</li> </ul>
Americas (6)	<ul style="list-style-type: none"> <li>• US (Sokol 2012, Weismann, Buscaglia &amp; Peterson 2014, De Figueiredo 2013),</li> <li>• Brazil (Timmons &amp; Garfias 2015),</li> <li>• Central America (Garcia-Tabuyo et al. 2016),</li> <li>• MERCOSUR countries (Garcia-Tabuyo, Saez-Martin &amp; Caba-Perez 2015)</li> </ul>
Oceania (2)	<ul style="list-style-type: none"> <li>• Australia (Van der Wal, Graycar &amp; Kelly 2016, Gilbert &amp; Sharman 2016)</li> </ul>
Global/theoretical (16)	<ul style="list-style-type: none"> <li>• Global (Cleveland et al. 2009, Cho, Dreher &amp; Neumayer 2014, Papyrakis, Rieger &amp; Gilberthorpe 2017, Vadlamannati, Cooray &amp; Brazys 2018, Baum, Gupta, Kimani &amp; Tapsoba 2017, Galiot 2017),</li> <li>• developing countries (Sovacool 2016, Dietrich 2011),</li> <li>• transition economies (Alon &amp; Hageman 2013),</li> <li>• theoretical (Bac 2018, Varvarigos 2017, Akerlof 2016, Rodriguez 2016, Mendez &amp; Sepulveda 2013, Kotzian 2011, Samuel &amp; Lowen 2010)</li> </ul>

As Table 4.2. below shows, the literature search produced articles, which investigated various aspects and functions of public administration (41% or 23 articles), enforcement (11% or six articles), international instruments (7% or four articles), taxation (20% or 11 articles) and migration and energy, extractive industry and labour (4% or two articles each). The review also includes one article (2%) on correctional services, military, fisheries, conservation, health and education. Thus, 59% of the reviewed articles may be relevant to institutional mechanisms of corruption and compliance, while the rest may focus on compliance related to service provisions and interactions with citizens and other beneficiaries. This diversity in case coverage is expected to mitigate a concentration of focus on one sector and its sector specific determinants.

Table 4.2: Article breakdown by function and sector

<b>Sector (#)</b>	<b>Function (authors)</b>
Cross-cutting functions in public administration (5)	<ul style="list-style-type: none"> <li>• Public service and administrations (Darden 2008, Batory 2012),</li> <li>• Public procurement (Rodriguez-Arana 2017, Popescu, Onofrei &amp; Kelley 2016)</li> <li>• Dispositional trust in institutions (Alon &amp; Hageman 2017)</li> </ul>
Access to information (4)	<ul style="list-style-type: none"> <li>• Information disclosure (Garcia-Tabuyo et al. 2016, Camaj 2016, Garcia-Tabuyo, Saez-Martin &amp; Caba-Perez 2015, Kotzian 2011)</li> </ul>
Anti-corruption control and regulation (14)	<ul style="list-style-type: none"> <li>• Regulations and red tape (Mendez &amp; Sepulveda 2013)</li> <li>• Audit (Kantsir &amp; Plekan 2017)</li> <li>• Fight against corruption (Tavits 2010, Ozarslan 2016, Rodriguez 2016),</li> <li>• Administrative control at local level (Osipian 2010)</li> <li>• Institution and corruption (Schlenthner 2017, Tjen &amp; Evans 2017)</li> <li>• Anti-corruption infrastructure and bodies (Hough 2017, Villagrasa 2016, Bina &amp; Yinghong 2016)</li> <li>• Public official non compliance (De Figueiredo 2013, Samuel &amp; Lowen 2010)</li> <li>• Code of conduct (Michael 2012)</li> </ul>
Enforcement (6)	<ul style="list-style-type: none"> <li>• Cartel (Sokol 2012)</li> <li>• Enforcement and persecution (Galiot 2017)</li> <li>• Rule violations (Akerlof 2016)</li> <li>• Bribery and enforcement (Cleveland et al. 2009, Berghoff 2018, Gilbert &amp; Sharman 2016)</li> </ul>
International instruments (4)	<ul style="list-style-type: none"> <li>• Compliance with EU anti-corruption requirements (Yilmaz &amp; Soyaltin 2014)</li> <li>• FCPA compliance and implementation (Weismann, Buscaglia &amp; Peterson 2014, Jiang 2017)</li> <li>• Special Data Dissemination Standard (Vadlamannati, Cooray &amp; Brazys 2018)</li> </ul>
Taxation (11)	<ul style="list-style-type: none"> <li>• Tax compliance (Ali 2014, Alon &amp; Hageman 2013, Schueth 2012, Rosid, Evans &amp; Binh 2016, Baum, Gupta, Kimani &amp; Tapsoba 2017)</li> <li>• Tax evasion (Williams &amp; Horodnic 2015)</li> <li>• Corruption reporting (Timmons &amp; Garfias 2015)</li> <li>• Gender (D'Attoma, Volintiru &amp; Steinmo 2017)</li> </ul>

	<ul style="list-style-type: none"> <li>• Culture (Varvarigos 2017)</li> <li>• Tax morale (Williams &amp; Krasniqi 2017, Cyan, Koumpias &amp; Martinez-Vazquez 2016)</li> </ul>
Migration and energy (2)	<ul style="list-style-type: none"> <li>• Anti-corruption (Ademmer &amp; Börzel 2013),</li> <li>• Anti-trafficking policies (Cho, Dreher &amp; Neumayer 2014)</li> </ul>
Extractive industry (2)	<ul style="list-style-type: none"> <li>• Compliance with international standards (Sovacool 2016, Papyrakis, Rieger &amp; Gilberthorpe 2017)</li> </ul>
Labour (2)	<ul style="list-style-type: none"> <li>• Wages and harassment (Bac 2018)</li> <li>• Undeclared work (Perez-Magro et al. 2017)</li> </ul>
Correctional services (1)	<ul style="list-style-type: none"> <li>• Prison management (Webb 2012)</li> </ul>
Military (1)	<ul style="list-style-type: none"> <li>• Conscription (Lokshin &amp; Yemtsov 2008)</li> </ul>
Fisheries (1)	<ul style="list-style-type: none"> <li>• Regulation and compliance (Sok 2014)</li> </ul>
Conservation (1)	<ul style="list-style-type: none"> <li>• Regulation and corruption (Sundstrom 2016)</li> </ul>
Health (1)	<ul style="list-style-type: none"> <li>• Compliance with aid requirements (Dietrich 2011)</li> </ul>
Education (1)	<ul style="list-style-type: none"> <li>• Perception of corruption (Van der Wal, Graycar &amp; Kelly 2016)</li> </ul>

Source: author

The above-mentioned 56 articles were examined to elicit:

- 1) institutional instruments, which may have impact on government officials' beliefs and behaviours and lead to change in the type of compliance;
- 2) factors considered to influence the process between institutional instruments and compliance; and
- 3) types of compliance.

The results are summarised in the Table 4.3 below.

Table 4.3: Summary of Institutional Instruments and their attributes – as filtered from the literature.

Institutional Instruments	How the instruments impact compliance
<b>Access to information</b>	<ul style="list-style-type: none"> <li>• Collecting and disseminating information about corrupt practices</li> <li>• Disseminating information on public services</li> <li>• Organising public campaigns against corruption</li> </ul>
<b>Anti-Corruption policy, legal and regulatory frameworks</b>	<ul style="list-style-type: none"> <li>• Anti-Corruption policies, laws and regulations</li> <li>• Administrable compliance guidelines and code of conduct</li> <li>• Anti-Corruption programmes</li> <li>• Risk assessment and management</li> <li>• Monitoring programme</li> </ul>

<b>Anti-Corruption-centered organisational reforms</b>	<ul style="list-style-type: none"> <li>• Anti-Corruption bodies and compliance and disciplinary offices</li> <li>• Resource allocation</li> <li>• Internal accounting and audit</li> <li>• Reducing compliance costs</li> <li>• Anti-Corruption Tools</li> </ul>
<b>Anti-Corruption reporting and enforcement</b>	<ul style="list-style-type: none"> <li>• Whistle-blower protection</li> <li>• Confidential reporting</li> <li>• Rewards and penalties</li> <li>• Control of violations</li> <li>• Detection, investigation and prosecution</li> </ul>
<b>Public sector reforms</b>	<ul style="list-style-type: none"> <li>• Efficient judiciary</li> <li>• Less interactions with government officials, including automation</li> <li>• Institutional and individual capacity</li> <li>• Simpler procedures</li> <li>• Sectoral reforms</li> <li>• Introducing value-based approach</li> <li>• Civil service reform</li> <li>• Less organisational complexity</li> </ul>
<b>Trust and social norms</b>	<ul style="list-style-type: none"> <li>• Trust in government</li> <li>• Trust heuristics</li> <li>• Peer influence and stigma</li> <li>• Leadership</li> <li>• Individual motivation</li> <li>• Organisational culture</li> <li>• Training and education</li> </ul>
<b>International instruments</b>	<ul style="list-style-type: none"> <li>• Role of foreign entities, such as companies</li> <li>• International conventions and foreign laws and legislations against corruption</li> <li>• International standards</li> </ul>

Source: author

In the literature review, two types of institutional instruments emerged, namely international and national institutional instruments. International institutional instruments, such as the United Nations Office on Drugs and Crime (UNODC) Convention against Corruption, set international standards for compliance by national governments (Papyrakis, Rieger and Gilberthorpe 2017; Sovacool et al. 2016; Vadlamannati, Cooray & Brazys 2018; Garcia-Tabuyo, Saez-Marin, Caba-Perez 2015) and set up procedures and mechanisms to address non-compliance wherever possible (Schlenthner 2017; Cleveland, Favo, Frecka, et al. 2010; Cleveland, Favo, Frecka, et al. 2010; Camaj 2016). National institutional instruments, such as transparency, Anti-Corruption-centered reforms and public sector reforms, evolve in the social, economic and political dynamics of the country.

Batory (2012) segmented the channel of compliance into compliance (outcome based on conformity of behaviours) and implementation (process). Webb (2012) further argued that compliance-based approach to be supplemented by value-based approach to reduce public service malfeasance, using analysis on South Africa's Department of Correctional Services. Based on the characteristic that Batory (2012) and Webb (2012) identified, I grouped two types of compliance as 1) rule-based compliance and 2) trust-based/dispositional compliance. According to several scholars (Webb 2012; Van del Wal, Graycar & Kelly 2016; Alon and Hageman 2017; Williams and Horodnic 2015), both types of compliance are needed to ensure sustainable compliance in society.

## **5. Research Methodology and Design**

### **5.1 Methodological orientation**

This chapter explains the methodological orientation, which enables me to answer the research question,

**What are the determinants of compliance among government employee users in e-governance implementation?**

I start with an explanation of the choice for the selected research strategy and design and case study selection criteria. The chapter then describes Bhutan as a case study country and will explain which e-governance initiatives were selected as case study initiatives and the criteria used for their selection. The chapter then continues with the description of research methods, data collection and processes of analysis used in my research. The chapter then ends with discussions on methodological limitations.

To answer the research question above, this exploratory research uses qualitative inductive methods, based on constructivist/interpretivist approach (Bryman 2016; Moses & Knutsen 2012; Matthews & Ross 2010). The phenomena surrounding e-governance compliance among government officials is complex and relevant empirical data are not readily available. Additionally, the literature review in Chapter 4 revealed that the mechanism of how e-governance initiatives work through the lens of compliance has not been sufficiently researched, in particular, from government employee users' perspectives and in the context of non-OECD country. According to Blaikie (2010), "(e)xploatory research is necessary when very little is known about the topic being investigated, or about the context in which the research is to be conducted" (p.70).

### **5.2 Research strategy and design**

My research uses a case study to answer the research question. According to Yin (2013), a case study is appropriate when the inquiry "copes with the technically distinctive situation in which there will be many more variables of interests than data points, and as one result relies on multiple sources of evidence, with data needing to converge in a triangulation fashion" (Yin 2003: 13-14). As my research question aims to identify possible multiple determinants of compliance and use multiple sources of evidence, a case study fits well for the research design.

More specifically, comparative case study fits the criteria developed by Goodrick (2014) as it is:

- exploratory, inductive research with little empirical evidence;
- a complex phenomenon, where the boundary between context and phenomenon is not known;
- research, which benefits from rich description and an in-depth interpretation of the case, and;
- intended to explain why and how in addition to the outcomes.

A synchronic comparison for cross-case variation at one point in time (Panke 2018) is found suitable. In my research, a multiple case study will help provide a detailed description of each case and theme within a case and across cases (cross-case analysis) for interpretation (Creswell & Poth 2016, p.100). Cross-case questions for a multiple case study could help contrast differences and identify similarities across cases, initiatives and organisations under investigation (Yin 2013). In each case, converging evidence is sought from facts and conclusions, which will then inform the conduct and focus of the other cases.

My research is based on the backward tracing research (BTR) method, in which I held the context of the case study country, including its laws and norms, constant and introduced variation in each case. Panke (2018) explains that BTR selects cases based on the dependent variable so as to “uncover the reasons that are most likely responsible for the observed variation” (p. 179). For this approach, it is recommended that the meso-level variables such as policy, and context kept constant, as “an inductive BTR is a trial-and-error enterprise when it comes to detecting the driving forces leading to a particular dependent variable” (Panke 2018 p. 179). For this reason, Panke adds that the language requirement for data collection, data accessibility and temporal dimensions are particularly important in BTR case studies.

The case variation is driven by ownership of the systems. The factor was identified during a case selection visit to Bhutan between July and August 2019. Several key informants indicated that the ownership of the initiatives (in the form of locally driven system design, funding and implementation of e-governance initiatives) could be one of the key determinants of compliance, with possible influence of size and complexity of implementing and user organisations. Therefore, the case study initiative selection was finalised, taking into account the ownership factor, as shown in Graph 5.1.

**Graph 5.1: Illustration of a case study country, constant factors and e-governance initiatives**

Ownership		Constant factors in the environment include political stability, anti-corruption institution, general ICT connectivity, macro-level financial and budgetary conditions, quality of overall political leaderships.
Local	Case 1	
Donor-funded	Case 2	

### 5.3 Case study country selection criteria

As Chapter 4 has shown, the existing literature has not produced sufficient empirical evidence on e-governance implementation in non-OECD, developing countries. Non-OECD countries are

generally characterised by a lower level of control of corruption than OECD countries. It is important to understand the level and nature of compliance and the determinant factors in a non-OECD country, where institutional, human and financial resources are more constrained.

In this research, the following factors determined the selection of a case study country:

- Country with High Control of Corruption (CC) Indicators of the Worldwide Governance Indicator (WGI): compliance was found associated with the existence of various CC frameworks, instruments and infrastructure, such as anti-corruption infrastructure and bodies (Hough 2017, Villagrasa 2016, Bina & Yinghong 2016) and enforcement (Cleveland et al. 2009, Berghoff 2018, Gilbert & Sharman 2016).
- Country in the category of medium-level e-government development, with the assumption that high-level e-government countries have many other enabling determinants in place and their compliance level may be high with or without e-governance initiatives, while low-level e-government countries may not have a sufficient number of operational e-government initiatives in place.
- Case study country should be implementing a variety of e-governance initiatives for at least five years to enable the examination of compliance determinants.
- Case study country should have improved ranking in various corruption indices and surveys, such as Transparency International Perception surveys, which indicates the likelihood of finding instances of compliance.
- This qualitative research intends to select an English-speaking country which is accessible and open to research and provides a safe environment, without the need for interpretation.

Table 5.1 mapped all countries included in Worldwide Governance Indicators (WGI) 2016 on the vertical column and UNDESA E-government Survey (EGOV) 2016 on the horizontal row. Countries were categorised either in WGI CC High (with scores higher than 0.5) or Low (with scores lower than 0.5). The EGOV categorisation of countries followed the approach used in the UNDESA Survey (UNDESA 2016).

Table 5.1: Categories of countries along WGI 2016 and EGOV 2016, global

	WGI CC High	WGI CC Low
<b>EGOV VERY HIGH</b>	AUS, AUT, BHR, BEL, CAN, DNK, EST, FIN, FRA, DEU, ISL, IRL, ISR, JPN, KOR, LTU, LUX, <b>NLD</b> , NZL, NOR, SGP, SVN, ESP, SWE, CHE, <b>ARE</b> , GBR, USA,	ITA
<b>EGOV HIGH</b>	ADO, BHS, BRB, BRN, CHL, CRI, HRV, CYP, CZE, GEO, GRD, HUN, JOR, LVA, LIE, MYS, MLT, MUS, OMN, POL, PRT, QAT, SAU, SYC, SVK, URY	ALB, ARG, ARM, AZE, BLR, BIH, BRA, BRG, CHN, COL, ECU, GRC, KAZ, KWT, LBN, MEX, MNG, MNE, MAR, PER, PHL, MDA, ROM, RUS, SRB, ZAF, LKA, THA, MKD, TTO, TUN, TUR, UKR, UZB, VEN, VNM
<b>EGOV MEDIUM</b>	ANT, BTN, BWA, CPV, CUB, DMA, KIR, LSO, FSM, NAM, RWA, WSM, SEN,	DZA, AGO, BGD, BLZ, BOL, KHM, CMR, DOM, EGY, SLV, ETH, FJI, GAB, GHA, GTM, GUY, HND, IND, IDN, IRN, IRQ, <b>JAM</b> , KEN, PRK, KGZ, LAO, LBY, MDV, MHL, NRU, NPL, NIC, NGA, PAK, PLW, PAN, PRY, SDN, SUR, SWZ, SYR, TJK, TZA, TMP, TGO, TON, TKM, TUV, UGA, VUT, ZMB, ZWE
<b>EGOV LOW</b>		AFG, BEN, BFA, BDI, CAF, TCD, COM, CIV, DJI, GNQ, ERI, GMB, GIN, GNB, HTI, LBR, MDG, MWI, MLI, MRT, MOZ, MMR, NEG, PNG, STP, SLE, SLB, SOM, SSD, YEM,

Out of 13 countries in the category of Medium EGOV/High CC in Table 3.1<sup>3</sup>, Bhutan, Botswana, Lesotho and Samoa meet the criteria in the order of suitability, also based on the country ranking of Transparency International Perception Survey 2017<sup>4</sup> and language requirements. According to the Bhutan E-government Master Plan (MoIC 2014), the country has been implementing e-government initiatives for more than five years. Bhutan is generally not the country of first choice for this type of studies, but the fact that the government provided access and objectively fits the criteria for case study country (sentence a little abstruse) makes Bhutan a compelling case.

#### 5.4 Bhutan as a case study country

This section describes the country as a background and why e-governance initiatives are considered important to its development. Bhutan is a kingdom, clasped in the Himalayan mountains, with a population of about 736,000 (National Statistical Bureau 2018) governed under the constitutional democratic monarchy. It is categorised as a least developed country (LDC), on the path to graduation in 2023 (Bhutan Broadcasting System 2018). Bhutan is a new democracy. It held its first democratic elections in 2008 (Gallenkamp 2013) and its constitution was enacted in the same year. The latest national elections of 2018 led to the formation of Cabinet under the current Prime Minister, Dr Lotay Tshering. Bhutan's national language is Dzongkha and English is widely used in official communications and government functions. The country's unique approach to development is conceptualised as the Gross National Happiness (GNH) (Mitra & Jeong 2017).

<sup>3</sup> These 13 countries are Netherlands Antilles, Bhutan, Botswana, Cape Verde, Cuba, Dominica, Kiribati, Lesotho, Federated States of Micronesia, Namibia, Rwanda, Samoa and Senegal.

<sup>4</sup> The improvements in ranking is most pronounced in Bhutan (27th), Botswana (35th), Lesotho (83rd) and Samoa (NA)

**Image 5.1: The centre of Bhutan's capital city, Thimphu**



Source: author

**Image 5.2 View of Thimphu City**



Source: author

Some other features of Bhutan relevant to my research include Transparency International's (TI) corruption perception survey. Despite being an LDC, Bhutan is ranked 25th out of 180 countries

assessed in the 2018 TI Corruption Perceptions Index<sup>5</sup>. In TI's regional analysis, Bhutan was compared with five other countries in the region (Bangladesh, Indonesia, Maldives, Pakistan and Sri Lanka) on the strength of their anti-corruption agencies (Transparency International 2017). Bhutan was scored the highest among the six assessed countries in four of the eight indicators of legal independence, financial and human resources, detection and investigation, prevention, education and outreach. What it scored low was in the public perceptions and accountability and oversight.

The Royal Government of Bhutan developed its first E-government Master Plan in 2014 (MoIC 2014), while some e-governance initiatives dated earlier than 2014. The Master Plan was developed with the objective of achieving GNH and promoting ICT for information society, good governance and sustainable socio-economic development in the country.

When implementation of e-government initiatives started, government employee users raised various concerns. I am sharing some of the reported concerns here as they form the context and are related to challenges the case study initiatives are expected to address. They ranged from the need for reliable Internet connectivity, back up of sensitive online documents and cybersecurity to proper infrastructure in offices in earlier years (Kuensel 2016b). Other issues emerging in the course of e-government implementation included lack of coordination for implementing ICT initiatives, low adoption rate among government agencies, lack of sufficient budget and human resource capabilities. A policy was suggested to be developed to provide clear guidance in coordination and implementation of e-government initiatives. It would enable the government to leverage existing and emerging technologies and avoid multiple and redundant investments and infrastructure (Kuensel 2017a).

During the course of conducting research, I found only one research paper on e-governance conducted on Bhutan. Miyata (2011) examined the vehicle registration system developed by the Road Safety and Transport Authority (RSTA) of the Ministry of Information and Communication (MOIC) of Bhutan and its impact, including corruption, in the country. She concluded that governance benefits outweigh cost efficiency, as computerisation in a small LDC such as Bhutan is costly. While the system was not evidenced to reduce costs, survey respondents stated that the time needed for registration was reduced and adherence to rules increased significantly. Due to lack of academic literature on e-governance in Bhutan and importance of good governance and anti-corruption efforts in the country, I expect that my research will add value to the academic community by providing evidence, which can then be used for policy recommendations.

## 5.5 Case study initiatives

The case study initiatives are selected from the 30 e-government initiatives listed in the Bhutan E-government Master Plan. Cases had to have the following elements to be eligible:

- 1) Initiatives which are not for policy or strategy development;
- 2) Initiatives which are not infrastructure, facilities or hardware-related;
- 3) Initiatives with an objective of increasing transparency and reducing corruption;

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<sup>5</sup> <https://www.transparency.org/country/BTN>, accessed on 18 August 2019.

- 4) Initiatives which are not designed for the entire government, so as to identify e-governance managers and government officials within a ministry or agency at the institutional level;
- 5) Initiatives which process transactions within the government;
- 6) Sectors where corrupt behaviors were evidenced in the literature review;
- 7) One initiative implemented with national and local resources (local ownership) and the other with donor funds (donor-funded ownership);
- 8) The implementing agencies agree to take part in the research.

In this context, steps were taken to identify eligible initiatives out of the 30 e-government initiatives listed in the Bhutan E-government Master Plan;

- 22 initiatives relate to cross-sectoral, infrastructure, data and service facility and policy development and were, therefore, eliminated as irrelevant to my research question.
- The remaining eight sectoral initiatives focus on providing applications and services for transactions in various sectoral ministries, and
- Further reviewed against the findings of the literature review on compliance (i.e. anti-corruption, public financial management) resulted in five initiatives in the Anti-Corruption Commission, Ministry of Finance, Ministry of Health, Royal Audit Authority and Royal Court of Justice.

I don't have access to the Royal Court of Justice, Ministry of Health and Royal Audit Authority and, therefore, the initiatives are not included in Table 5.2 below, for comparison. In this context, my research selected two initiatives, namely 1) online Asset Declaration System<sup>6</sup> (Anti-Corruption Commission, or ACC) and 2) *Electronic* Public Expenditure Management System (*e*-PEMS) of the Ministry of Finance (MoF). These two initiatives also demonstrate variation in terms of ownership. While the government funded and managed ACC's online Asset Declaration System, a multi-donor fund, administered by the World Bank funded and technically supported *e*-PEMS.

**Table 5.2: Comparison of identified case study initiatives:**

	Local ownership	Donor-funded ownership
Initiative/Implementing agency	Online ADS/ACC	<i>E</i> -PEMS/MoF

## 5.6 Data Collection

This section details the methods and procedures of conducting the research. Data collection is planned through document analysis, observations and semi-structured interviews, which are expected to render a broader account of events and behaviours and develop a converging line of inquiry (Yin 2013). The data collection will be split into three sections: 1) information system descriptions based on document analysis and observations, 2) obtaining evidence of compliance

<sup>6</sup> As part of ACC's corruption management system which has evolved into several systems since the inception of the Bhutan E-government Master Plan of 2014.

among government employee users through semi-structured interviews and 3) external expert views for data triangulation.

#### 5.6.1 Information system descriptions based on document analysis and observations

Data, such as e-governance policies and strategies, project documents, problem analysis reports, evaluation reports, user feedback and newspaper articles of various newspaper companies were gathered to be used during document analysis. Among others, it would provide an understanding of the country and organisational context, nature of the identified e-governance initiatives, political and socio-economic environment and project settings. The document analysis is also used to triangulate data collected from semi-structured interviews. I also observed, as non-participating observer, interactions in both organisations to obtain evidence of how the systems are actually used and managed. The observations and field notes informed the semi-structured interview questions.

#### 5.6.2 Obtaining evidence of compliance among government employee users through semi-structured interviews

Semi-structured interviews were conducted with interviewees identified based on their roles and functions in organisations implementing the identified e-governance initiatives and the Ministry of Information and Communication (MoIC), which coordinates and oversees the overall implementation of e-governance initiatives in Bhutan. They include e-governance managers, ICT team members, functional managers and leaders of organisations among others.

#### 5.6.3 External expert views for data triangulation

Additionally, I conducted semi-structured interviews with opinion leaders in society, who played an instrumental role in promoting, developing and implementing e-governance initiatives. During the case selection visit in July-August 2019, I introduced the research overview to key focal points and influential individuals in the country. As a result, access to documents, interviewees and case study initiative implementers was obtained, including access to pertinent insights needed to deepen understanding of the current political, social and economic context. Based on this visit, the actual data collection visits were carried out in September-December 2019.

#### 5.6.4 Data collection methods

Data collection was guided by interview protocols<sup>7</sup>. The protocol includes interviewees' rights, questionnaires for interviews and interview guide to ensure the same topic is covered in a similar format. Questionnaires were developed based on the research question, roles and functions of interviewees, literature reviews, observations, document analysis and the initial visit to Bhutan in July-August 2019. However, the format of semi-structured interview lends flexibility to identify new determinants, which the current literature or research might have left out. The interview protocol was tested on 21 September, 2019 to identify any unclear language and question formulation. They were accordingly revised based on feedback and suggestions received during the pilot testing.

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<sup>7</sup> The Ethics Committee approval from the University of Maastricht (UM) was obtained in June 2019. The UM ethics board requirements are available at <https://www.maastrichtuniversity.nl/research/integrity-ethics/ethical-review/ethical-review-committee-inner-city-faculties-ercic>

The interview questions were sequenced from introductory general questions to questions aligned with research objectives, leading to consolidation questions. Interviews were conducted in the natural environment of offices, except when interviewees requested other venues such as café, or interviews needed to be conducted outside office hours. The interview reports also contain researcher's observations and descriptive notes, open to all perspectives to gain insights. The questions were updated after each interview to focus on emerging and recurrent topics, while ensuring comparability across interviews. Interviews were carried out after obtaining informed consent from the interviewees. I explained the confidentiality requirements, set forth in relevant Dutch laws, in addition to the provision that a copy of my research could be provided on request.

The semi-structured interviews were sequenced to obtain data and information and gradually narrow down the scope of possible determinants in a logical manner. First, semi-structured interviews were conducted among four officials of DITT/MOIC and four opinion leaders/experts to gain deeper insights on political, economic and technological contexts in which the two initiatives were implemented. In particular, the latest information on the status of E-government Master Plan implementation, ICT infrastructure, programme, regulations and capacity was helpful to explain some of the phenomena, together with the information on corruption trends and government's anti-corruption efforts.

Secondly, after document review and observations, semi-structured interviews were conducted among government officials involved in the implementation and use of the two case study initiatives based on their roles and functions (e-governance manager, functional manager and ICT manager/team members). I started the semi-structured interviews at ACC and then proceeded to MoF. This sequence was intended to start with a locally owned initiative and identify possible determinants. The preliminary findings then guided the subsequent semi-structured interview for the MoF initiative, which is more complex with donor-funded ownership. In the case of online ADS of ACC, primary users were human resource officers (Asset Declaration Administrator, or ADA) and secondary users Schedule I and Schedule II officers of ministries<sup>8</sup>, autonomous agencies<sup>9</sup> and constitutional bodies<sup>10</sup>. In the case of *e*-PEMS of MoF, the primary users were finance officers and accountants of budgetary agencies<sup>11</sup> who process transactions in all ministries and agencies.

The government users for both initiatives were selected from ministries and agencies, using the criteria of size and complexity of organisation (measured by budget size) as well as its statute (autonomous or constitutional body). Size and complexity of user organisations were identified as a possible compliance determinant during my case selection visit to Bhutan in July-August 2019. A constitutional body<sup>12</sup> relevant to compliance is selected for comparison. Among the 10 ministries of Bhutan, the education sector received the largest share of national budget (16%), while the sector covered by MoIC received the smallest<sup>13</sup> (3%) (MoF 2019c, p. 43). However, teachers submit their asset declarations through Dzongkhag (district) administrations and, therefore, the Ministry of Education in the capital may not have a comprehensive picture of asset declaration compliance of

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<sup>8</sup> The list of all 10 ministries can be found at <http://www.bhutan.gov.bt/government/ministries.php>.

<sup>9</sup> They can be found at [https://www.nlcs.gov.bt/?page\\_id=103](https://www.nlcs.gov.bt/?page_id=103).

<sup>10</sup> Online ADS covers other entities, such as religious organizations, army, police, corporations and civil society organizations, but for the purpose of this research, I included only government agencies relevant to my research question.

<sup>11</sup> All the government agencies covered by the government budget, except the Army.

<sup>12</sup> All the constitutional bodies can be found at [https://www.nlcs.gov.bt/?page\\_id=115](https://www.nlcs.gov.bt/?page_id=115).

<sup>13</sup> Energy received 1%, but both Energy and Mining/Manufacturing (3%) are covered by the Ministry of Economic Affairs. In combination, the budgetary share of the ministry is larger than that of the Ministry of Information and Communication (MoIC).

all the government employee users under the Ministry. Therefore, the second largest budgetary agency, the Ministry of Agriculture and Forests (MoAF), was selected for the government user interviews. In terms of the constitutional body, the Royal Audit Authority (RAA) is selected for the relevance of the agencies' work to compliance. Therefore, MoAF, MoIC and RAA were selected for the semi-structured interviews intended for end users.

Against this background, save for one Skype interview, all others were conducted from 23 September 2019 to 3 January 2020 in Thimphu. During this period, 26 government officials<sup>14</sup> were interviewed in the above-mentioned ministries and agencies (ACC, MOAF, MOF, MOIC and RAA). Seven others from outside the government (mainly the media, civil society and private sector) participated in the semi-structured interviews for their insights and knowledge on the topic.

## 5.7 Data Analysis

This section provides steps and approaches to be taken for data analysis and interpretation, including the use of multiple triangulations to verify findings (Denzin 1989). Triangulation refers to "using more than one method or source of data in the study of social phenomena" (Bryman 2016, p.386). Yin (2013) notes that data triangulation will increase the concept validity with the use of different data sources to evidence the same phenomenon. The results of semi-structured interviews in my research were triangulated by information and data obtained from document analysis and observations. By comparing the results, common and differing elements across case study initiatives emerged.

The interview results will be coded to identify emerging patterns of influential factors and determinants. Coding is considered as "a transitional process between data collection and a more extensive data analysis" (Saldana 2015, p. 5) and is a cyclical act. The first cycle coding process involves coding a single word to an entire paragraph, followed by the second cycle coding process for generating categories, themes and concepts. Coding helps identify different patterns, such as similarity, difference, frequency, sequence and causation, while taking into consideration the complexity of social reality (Saldana 2015, p.7).

Pattern matching and cross-case synthesis will be used in coding to identify emerging commonalities and divergence from case to case. Categories, topics and themes were created from document analysis, observations and semi-structured interviews. Patterns are then identified and updated to assign meanings to descriptions and narratives. Cross-case synthesis is conducted based on thick description in each case study initiative, which provides sufficient details to determine the transferability to other contexts and settings (Lincoln and Guba 1985). These steps help identify common and different determinants of compliance across the case study initiatives and identification of themes (Miles and Huberman 2014). Discrepant data were addressed with various techniques, such as quasi-statistics and member checks (Maxwell 2004).

In analysing data, actor analysis and process tracing methods are applied to establish more nuanced perspectives of various actors and understand institutional dynamics as per identified research gaps. Hermans and Thissen (2009) presented 18 actor analysis methods. Considering the nature of internal and external actors, their types of interests and level of their involvement and interactions

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<sup>14</sup> This includes a second interview of one government official.

in this research, stakeholder analysis is found best suited for analysing the interview results. Taking into account stakeholder environments, the method was determined to help “assess cooperative potential and threat of obstruction” (p. 8). Bennett and Checkel (2014) underlined the use of process tracing method as a means to provide explanations in some cases and cast doubts in others.

## 6: Case study initiative: Online Asset Declaration System of Anti-Corruption Commission



Source: Author

### 6.1 Overview of the Asset Declaration System

**The Online Asset Declaration (AD) System** was developed internally by the Anti-Corruption Commission (ACC). The Commission was established in 2006 under a Royal decree as an independent authority, reporting to the National Assembly. With a total of 106 staff, the ACC is mandated to carry out three core functions of educating the public, preventing and investigating cases of corruption. The ACC developed the National Integrity and Anti-Corruption Strategies (NIACS) 2014-2018 and 2019-2023, which aligns the Commission's work with the country's Five-Year Plans (Anti-Corruption Commission 2018).

Fight against corruption has been a major development agenda and a Key Performance Indicator in the Government Performance Management System (Anti-Corruption Commission 2016). The latter was introduced by the Cabinet and has been managed under the Prime Minister's Office to monitor the performance of ministries and agencies against agreed milestones and deliverables<sup>15</sup>. The reduction of corruption is also a National Key Result Area in the 12<sup>th</sup> Five-Year Plan (Anti-Corruption Commission 2018) and ICT is seen as key to increasing transparency, efficiency and

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<sup>15</sup> The site is found at <http://www.gpms.gov.bt/>

effectiveness of service delivery on the e-governance platform in the National Integrity and Anti-Corruption Strategy 2019-2023 (Anti-Corruption Commission 2019).

Despite these efforts by the government and high-ranking in the Transparency International's Corruption Perception Survey (25<sup>th</sup> in 2018), there have been allegations of fraud, embezzlement, mismanagement and abuse of authority. According to ACC's 2018 Annual Report, 141 complaints were submitted by the ACC webmail, followed by post (109 complaints) and walk-in (73 complaints). Abuse of functions is the most often reported cases (54.7%), followed by alleged embezzlement (6.9%) and other alleged offenses. Complaints against ministries increased from 52 in 2017 to 84 in 2018, out of which most complaints were lodged against the Ministry of Education (28) and Ministry of Agriculture and Forests (23) during the reporting year (Anti-Corruption Commission 2018). According to an evaluation conducted in 2013 by the Basel Institute on Governance (BIG) and the Royal Institute of Management (RIM) of Bhutan, while the public perception on cash-based petty corruption improved, more sophisticated forms of corruption was emerging, which was difficult to prove (Anti-Corruption Commission 2013). Just to cite the magnitude of the challenge within the government, one newspaper article reported that there was Nu 604 million (\$8.5 million)<sup>16</sup> outstanding cases and unresolved irregularities found in the 2018 Annual Audit Report by the Royal Audit Authority (The Bhutanese 2019).

One form of corruption, which characterises Bhutan's corruption landscape is policy corruption, developed from land-transaction-based corruption cases. It is defined as "the misuse of privileged information or the misuse of office and power by a public official for private gain, whereby, privileged information or the power of public office is misused to influence policy making so that its execution results in personal gain of the public official(s) concerned (or their relatives or close associates)", which can also results in conflict of interest (Anti-Corruption Commission 2013, p. 12). Another form of corruption prevalent in Bhutan was identified as nepotism and favouritism, often found in recruitment, promotion, training and any other human resource related matters. It is also linked to conflict of interest in the context of Bhutan, which would require enhanced control and enforcement of standards. An ACC report underlined the importance of encouraging whistle-blowers to come forward, ensuring checks and balance and establishing quality assurance and control in detecting fraud and corruption (Anti-Corruption Commission 2013).

Both policy corruption and nepotism/favouritism are integral part of systemic corruption and how an e-governance system are deployed to monitor and control them and how compliance is used as an effective mechanism are demonstrated in this case study initiative of the Online Asset Declaration (AD) system. In particular, considering the nature of prevalent corruption in Bhutan, which are difficult to detect, a system, such as AD, may be an effective instrument to detect it from illicit enrichment and conflict of interest perspectives.

The AD system as a whole has been in place since the establishment of ACC in 2006 and has been strengthened with the adoption of AD Rules 2008 and 2012 (Anti-Corruption Commission 2015a and 2016). The latest AD Rules 2017 was derived from Section 38 (8) and Section 171 of the Anti-Corruption Act of Bhutan (ACAB) 2011. Section 38 of the ACAB 2011 specifically stipulates that "(p)ublic servants or other individuals using public resources shall prepare, declare accurately and

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<sup>16</sup> The exchange rate between USD and Bhutanese currency Ngultrum is USD 1 = Nu. 71.11 as of 14 October 2019.

truly and file their personal assets, income and liabilities, as well as, those of their spouses and/or dependents” (Anti-Corruption Commission 2017b, p. 1).

According to AD Rules 2017, it is one of the instruments to,

- detect and deter illicit enrichment
- ensure public trust through accountability
- manage conflict of interest by monitoring outside positions, post-employment arrangements and assets and income of family members

Conflict of interest becomes apparent when “a public official’s private interest could potentially influence the impartiality of the decision of a public official in his official duties” (Anti-Corruption Commission 2015a p. 29). Conflict of interest was added specifically in the AD Rules 2017 based on cases and examples of policy corruption mentioned earlier in this section. The AD Rules 2017 was implemented after conducting training among human resource officers, focal points and heads of agencies. The Commission employed specifically developed guidelines – Central Asset Declaration Administrator (CADA), Asset Declaration Administrator (ADA) and Disproportionate Asset (DA) determinators – for users (Anti-Corruption Commission 2018).

Article 9 of the AD Rules 2017 stipulates that concerned government officials register with the Online AD System so he or she can file his or her declaration as per the Rules. The frequency of the filing is mandated as, 1) within three months for those who newly join the office, 2) within one month before leaving the government service and within one month after leaving the service for those who make planned or unforeseen exits and, 3) from 1 February to 31 March annually for government officials, who fall in the category of “covered persons”, as detailed below. If a covered person fails to submit the annual declaration within the specified time, he or she will be allowed to submit from 1 May to 31 May with fines for late declaration. If a covered person fails to submit by 31 May, he or she will be considered a non-declarant with stipulated fines imposed.

There are two categories of “covered persons” for AD, Schedule I and II. Schedule I public servants include leaders of monastic bodies, Prime Minister, Ministers, Justices, Members of National Assembly, heads of agencies and army, among other high-level position holders. Schedule II public servants include those on contract longer than one year and in position level P5/SSA and above, except teachers. Public servants in certain sectors<sup>17</sup> are required to submit the declaration, irrespective of their levels. The focus is to target sectors, which could provide a potential opportunity for illicit enrichment.

Schedule I public servants submit the declaration to ACC, while Schedule II declarants do so to the Asset Declaration Administrator (ADA) of the respective agency he or she belongs to. The Central Asset Declaration Administrator (CADA) monitors the overall administration of AD at the ACC. ADA is the agency focal point in all AD matters and provides support, such as new user registration, regular updates on declarants, receiving and maintaining the submissions. In case the submission to the Online AD system is not possible, ADA distributes hard copy forms to declarants and enters

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<sup>17</sup> Administration, agriculture, architecture, engineering, land services, finance, audit, foreign services, forestry, environmental protection, human resource, legal, judiciary, legislative services, media and health services, trade, industry and tourism, transport and aviation services, among others.

the information on the hard copy into the Online AD System. In case fines are imposed, ADA ensures that the decision is properly implemented. ADA supports the head of agency in his or her reporting and implements decisions and actions.

The head of agency is responsible for assigning ADA, ensuring that declarations are kept in a secure location and examining AD submissions for possible conflict of interest. The head of agency is also required to integrate disciplinary actions in the agency's code of conduct. In case of breach, he or she imposes penalties in accordance with the AD Rules. He or she submits the AD report and the Action Taken Report (ATR) to ACC within a pre-set timeframe.

CADA is responsible for updating and maintaining the list and information of Schedule I declarants and ensuring that new declarants are registered with the Online AD System. The responsibilities are similar to ADA, but as the central coordinator of the entire process, he or she also submits the AD report for Schedule I and II to ACC within a set timeframe. CADA is also responsible for identifying and verifying Disproportionate Asset (DA) cases and coordinate meetings of the DA Committee and ACC. In case fines are imposed, CADA ensures they are collected and deposited into the Government Revenue Account.

An AD report contains a list of declarants, late declarants, non-declarants and DA cases with a master list of declarants. ACC then takes decisions on late declarants, non-declarants and DA cases, which the CADA are to implement. CADA also presents DA cases to the DA Committee during the first week of October and for the ACC's final decisions within the third week of October. CADA prepares the final AD report by 30 November to conclude a round of the AD. The public can request for information on certain declarant in writing, which is duly reviewed by the ACC according to the AD Rules.

Penalty for late submission is a fine equivalent to daily national minimum wage for the duration between the submission deadline and the date of submission. A non-declarant is asked to pay one year's national minimum wage. In case a government official fails to comply with the imposed penalty, it is considered an obstruction of justice. If ADA, CADA or head of agency fails to fulfil his or her duties, a fine of one month's national minimum wage is imposed, and for repeated failures, additional disciplinary actions are taken (Anti-Corruption Commission 2017a).

Generally, there is high level of compliance, especially among the highest-level policy and decision makers in the country. However, the compliance rate was not as high as today. According to 2012 Compliance Report of Asset Declaration, 85.97% for Schedule I public servants (325 out of 378) submitted their declarations on time, with 27 declarants (8.3%) submitting in April. Among Schedule I declarants, 204, or 62.77%, submitted their declarations online, while the rest submitted hard copies. Prime Ministers, ministers, secretaries, head of agencies, heads of army and district governors all complied and submitted their AD by the end of April. Nonetheless, 53 Schedule I officials failed to declare their assets and liability within the deadline (Anti-Corruption Commission 2012). The level of compliance improved steadily over the years. According to the 2015 AD compliance report, the compliance rate among Schedule I officials increased to 92.60% in 2015. Out of the 428 Schedule I declarants, 90.58% submitted their declarations online. Out of the submitted declarations, 15 were returned for incomplete information (Anti-Corruption Commission 2015b).

According to statistics extracted for this study by the ACC, Schedule I compliance for the reporting year 2018 was 98.9% and for 2017 it was 94.2%. For Schedule II, compliance in 2018 was 98.97% and in 2017, 96.93%. Table 6.1 below summarises the disaggregated compliance rates by the type of organisation for 2018, and Table 6.2 summarises the same for 2017. Names of agencies are found in Annex 1.

Table 6.1 Schedule II Compliance rates by type of organisation, 2018

SN	Parent Agency	No. of Agencies	Total Covered Person	Compliance %
1	Armed Forces	3	1248	100
2	Autonomous agencies	40	1800	97.67
3	Constitutional bodies	6	519	99.81
4	Corporations	55	4957	99.7
5	CSOs/NGOs	35	262	98.47
6	Dzongkhag Admins	20	4351	97.47
7	Dzongkhag Courts	22	276	99.28
8	Financial Institutions	10	2800	99.39
9	Ministries	14	6775	99.11
10	Thromdes	4	421	98.81
<b>Total</b>		<b>209</b>	<b>23409</b>	<b>98.97</b>

Source: ACC

Table 6.2 Schedule II Compliance rates by type of organisation, 2017

SN	Parent Agency Name	Agencies	Total cover person	Compliance %
1	Ministries	14	6561	95.67
2	Dzongkhags	20	3944	94.5
3	Dzongkhag Courts	22	247	99.19
4	Thromdes	4	385	98.18
5	Corporations	51	4533	98.32
6	Autonomous agencies	41	1634	98.71
7	CSO/NGOs	27	207	100
8	Constitutional Bodies	6	470	99.36
9	Armed Forces	3	1149	99.56
10	Financial Institutions	10	2510	98.01
<b>Total</b>		<b>198</b>	<b>21640</b>	<b>96.93</b>

Source: ACC

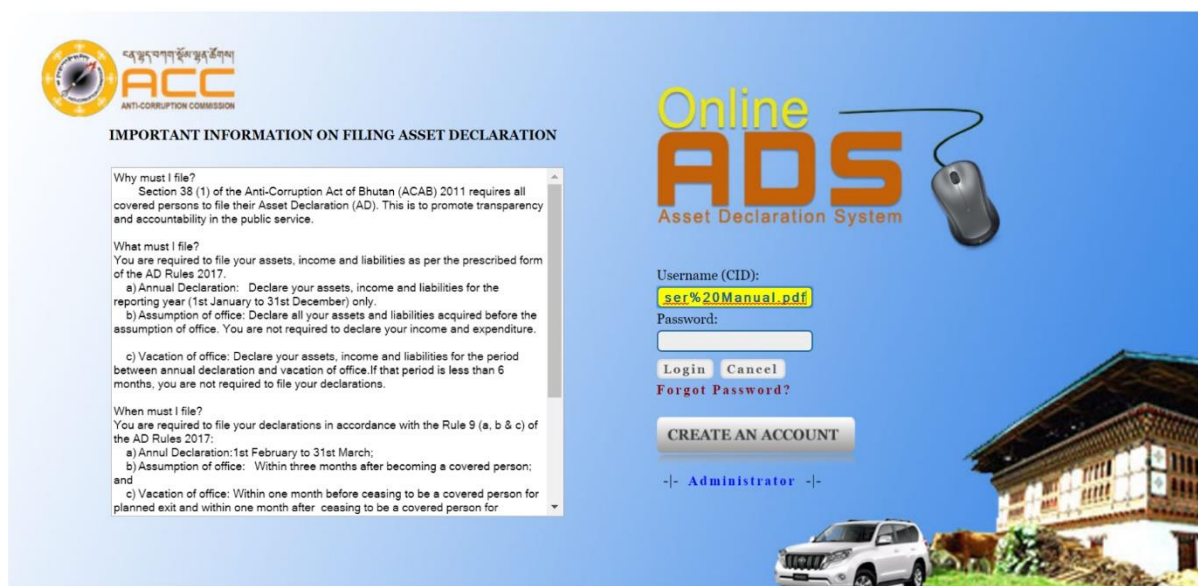
Every year, the compliance report lists names and functions of non-declarants on the website, which may have led to the “name and shame effects”. Outcomes of the AD reports, especially the names of non-declarants, are regularly reported in newspapers too (Kuensel 2018b). The ACC Annual

Report 2017 indicated that Nu 33,250 (\$468) from Schedule I and Nu 703,106 (\$9,888) from Schedule II were collected in fines for late and non-declaration in 2016 (Anti-Corruption Commission 2017e). In addition to the fines, the name and shame effect may be a more prominent factor in encouraging compliance.

## 6.2 The Online AD System as ICT system innovation:

The Online AD System was developed to implement the AD Rules 2012, which was revised later in 2017. Since the system was introduced, ACC continuously enhanced the system based on user feedback and comments and conducted periodic trainings for ADAs to implement the 2017 AD Rules. ACC also plans to share information through systems with oversight institutions, tax authorities and property registration authorities (Anti-Corruption Commission 2016). The system is accessible from ACC AD site at <http://adsnew.acc.org.bt:88/adsnew/UI/default.aspx>. A new user is asked to create an account. Figure 6.1 below illustrates the homepage of the Online AD System.

Figure 6.1: Online AD system entry page



Source: <http://adsnew.acc.org.bt:88/adsnew/UI/default.aspx>

The user registration example is found in Figure 6.2 below.

Figure 6.2: Online AD system user registration screen

**Anti-Corruption Commission of Bhutan**  
Online Asset Declaration System

**USER REGISTRATION FORM**

**PERSONAL DETAILS**

☐ Bhutanese ☐ Non-Bhutanese

CID / Work Permit No:

Title:

First Name:  Middle Name:  Last Name:

Date of Birth:  28 / 12 / 2017 Marital Status:  Select Gender:  Select

**EMPLOYMENT DETAILS**

Employee Category:  Select

Agency Name:

Current Posting:  Headquarters

Designation:

Schedule Category:  Select

Employee ID No:

**CONTACT DETAILS [ENTER AT LEAST ONE CONTACT NO / FAX NO.]**

Tel (O):  Fax (O):  Tel (R):

Mobile:  e-Mail Address:  Confirm e-Mail:

☐ Clicking 'I Accept' means you agree to the Terms and Conditions of [Asset Declaration Rules](#).

Source: Anti-Corruption Commission User Manual for Asset Declaration (2017b), p. 2 at <https://www.acc.org.bt/sites/AD%20User%20Manual.pdf>

Once the user completes the form and accepts, it is submitted to the ADA of the user's agency and the user receives an e-mail notification on successful registration. When the ADA accepts the registration, another e-mail notification is sent with the user name and default password. Figure 6.3 is a sample of user personal information screen.

Figure 6.3: Online AD system personal information screen

**Anti-Corruption Commission of Bhutan**  
Online Asset Declaration System

Welcome :: **UGYEN DEMA**

Dashboard Create Declaration Email Inbox/Receipts Change Password

**MY PROFILE**

**PERSONAL DETAILS**

CID / Permit No: 10703001207

Name: Ugyen Dema

Gender: Female

Date of Birth: 21/04/1989

Marital Status: Single

**CONTACT DETAILS**

Tele (O):

Fax (O):

Tele (R):

Mobile: 17931916

e-Mail Address: ogendee@acc.org.bt

**EMPLOYMENT DETAILS**

Schedule Category: Schedule II Public Servant

Employee No:

Employee Category: Constitutional Office

Agency Name: Anti-Corruption Commission

Current Posting: Thimphu

Designation: AIPO

**PERMANENT DETAILS**

Dzongkhag: Mongar

Gewog: Chaskhar

Village: Kharnang Lamtak

Source: Anti-Corruption Commission User Manual for Asset Declaration (2017b), p. 4 at <https://www.acc.org.bt/sites/AD%20User%20Manual.pdf>

Figure 6.4: Online AD system reasons for declaration screen.

Source: Anti-Corruption Commission User Manual for Asset Declaration (2017b), p. 5 at <https://www.acc.org.bt/sites/AD%20User%20Manual.pdf>

Figure 6.5: Online AD system personal and family information screen

30

Source: Anti-Corruption Commission User Manual for Asset Declaration (2017b), p. 6 at <https://www.acc.org.bt/sites/AD%20User%20Manual.pdf>

For each individual, employment and income (for outside positions) details will then be asked as in Figure 6.6.

Figure 6.6: Online AD system additional jobs/employment income screen

**CREATE DECLARATION**

- Personal Information
- Family Details
- Details of additional job/employment (Outside position)**
- Details of your Post Employment Arrangement/ Plan
- Immovable Properties
- Shares & Stocks
- Vehicle / Machineries
- Personal Savings
- Convertible Assets
- Commercial activities and intellectual properties
- Income Statement
- Liabilities
- Educational Expenditure

### 3. ADDITIONAL JOB/EMPLOYMENT

Please provide the details, if you have held any additional job/employment apart from the position held in current office, whether paid or unpaid.

#	NAME	CID NO	AGENCY	POSITION	INCOME	REMARKS
: Outside Position details skipped!						

#### DETAILS OF ADDITIONAL JOB/EMPLOYMENT (OUTSIDE POSITION)

Position Title: \*

Agency Name: \*

Income : \* **Yes**

**You need to declare your income from Outside position under the income statements.**

Remarks:

**Save Close \*Compulsory/Mandatory Field**

**Add Next**

Source: Anti-Corruption Commission User Manual for Asset Declaration (2017b), p. 8 at <https://www.acc.org.bt/sites/AD%20User%20Manual.pdf>

The system also asks the user to specify any post employment arrangements and plans as in Figure 6.7.

Figure 6.7: Online AD system post employment arrangement and plan screen

**4. POST EMPLOYMENT ARRANGEMENT/ PLAN**

Please provide the following information on any post employment arrangement/plans for other jobs/employment you have made after your separation from the current office.

#	NAME	CID NO	AGENCY	OFFER/ACCEPTANCE MADE	SPECIFY	REMARKS
Post Agreement details skipped!						

**POST EMPLOYMENT ARRANGEMENT/ PLAN**

Agency Name: \*

Any Offer or acceptance Made: \* Yes

Specify: \* Explain in detail

Save Close

\*Compulsory/Mandatory Field

Add Next

Source: Anti-Corruption Commission User Manual for Asset Declaration (2017b), p. 9 at <https://www.acc.org.bt/sites/AD%20User%20Manual.pdf>

The system requires users to enter details of immovable properties, such as land and building, including transaction status and payment made as in Figure 6.8.

Figure 6.8: Online AD system immovable property entry screen

**5. IMMOVABLE**

In your declaration, all declarations separately

Asset details skipped!

**WHO ACQUIRED**

Type of property: \*

**Property Details**

Thram No./Plot No./House No.: \*

Size/Qty: \*

Location: \*

**Who acquired it?:**

Relationship: \*

Name: \*

How was it acquired?: \*

When was it acquired? \*

Transaction Status: Under-Process

In whose name is the property registered? \*

Remarks:

Save Close

\*Compulsory/Mandatory Field

Source: Anti-Corruption Commission User Manual for Asset Declaration (2017b), p. 10 at <https://www.acc.org.bt/sites/AD%20User%20Manual.pdf>

Similar information is requested for ownership of shares and stocks, vehicles/machineries, personal savings, convertible assets, commercial activities and intellectual properties. The system then requires the user to enter income statement, liabilities, educational expenditures and other expenditures. If the declaration is correct, the final submission page in Figure 6.9 allows the user to submit the declaration.

Figure 6.9 Online AD system submission screen

The screenshot displays the 'Online Asset Declaration System' interface. At the top, the header includes the ACC logo, the name 'Anti-Corruption Commission of Bhutan', and a welcome message for 'UGYEN DEMA'. A navigation bar contains links: 'Dashboard', 'Create Declaration', 'Email Inbox/Receipts', and 'Change Password'. The main content area is divided into two columns. The left column, titled 'CREATE DECLARATION', lists various declaration categories: 'Personal Information', 'Family Details', 'Details of additional job/employment (Outside position)', 'Details of your Post Employment Arrangement/ Plan', 'Immovable Properties', 'Shares & Stocks', 'Vehicle / Machineries', and 'Interest Deposit'. The right column, titled 'AFFIDAVIT', contains a declaration text: 'I swear or affirm that all the information that I have written on this form is true, correct and complete to the best of my knowledge, information and belief. I understand that I can be prosecuted for perjury if I have intentionally given false information. I also know that I may be asked to show proof of any information i have given. I also hereby authorize the Commission or its duly authorized agency to obtain and secure from all appropriate agencies, including the department of revenue and customs, such documents that may show such income, assets and liabilities, including those of my spouse, children and dependent, covering previous years, including the year I first assumed office.' Below the text, there is a signature field with 'UGYEN DEMA', a submission date of '28/12/2017', a designation of 'AIPO', and an email ID of 'ogendee@acc.org.bt'. At the bottom of the form, there are two buttons: 'Preview' and 'Submit', with the 'Submit' button circled in red.

Source: Anti-Corruption Commission User Manual for Asset Declaration (2017b), p. 19 at <https://www.acc.org.bt/sites/AD%20User%20Manual.pdf>

A successful declarant receives an acknowledgement e-mail. In case of an error or correction, the declaration is returned to the declarant, who then rectifies the information as per the reasons for return specified in the e-mail notification. Common errors observed in submissions include calculation of salary by month instead of year, following old rules and spelling mistakes. These errors are pointed out by ADA and CADA against the user guide which derives from the AD Rules 2017 and ACC orders. Once the declaration is accepted and verified, the declarant receives the final confirmation e-mail (Anti-Corruption Commission 2017b).

The Online AD System is also used to flag potential disproportionate asset (DA) cases. In the 2016 ACC Annual Report, 157 declarations, or 34%, were flagged by the system for DA among Schedule I, but were later dropped in the verification process, as the increase occurred due to import of vehicles (an entitlement for parliamentarians), increase in property values and typology errors. Among Schedule II declarations, 3,169 cases, or 16%, were flagged by the system, but only 1,500 could be verified due to shortage of resources. Among the cases, 1,446, or 96.4%, were dropped and 54 cases, or 3.6%, were identified for Discreet Enquiry (DE) or further action (Anti-Corruption Commission 2016). ACC 2017 Annual Report mentioned that 99 DA cases were flagged among the Schedule I declarations, a decrease from 157 the year before. Out of the 99 cases, 97 were dropped and two were forwarded for further inquiry. Among the Schedule II declarations, 4,596 cases were flagged. Although not all cases were reviewed due to human resource constraints, the reviewed

3,462 cases were dropped. The 54 DA cases identified for further action were cleared after finding no issues in the subsequent declarations (Anti-Corruption Commission 2017e).

Although most DA cases seem to have been dropped, there was a recent case where the DA function played an instrumental role in a large investigation. A former labour minister was found to have concealed his asset, income and liabilities in his asset declaration in 2017 and had solicited and accepted investment from a foreign national to set up a partnership business using proxies (Business Bhutan 2019). According to the revised AD Rules 2017, if a covered person makes a false statement with the intent to conceal his or her asset, income or liabilities, it is considered an offence according to Section 64 of the Anti-Corruption Act of Bhutan (ACAB) (Kuensel 2017b). The section stipulates that “(p)ublic servants or other individuals using public resources shall be guilty of an offence if they knowingly make false declarations with a view to conceal their assets, income and liabilities” and the offense is considered as a misdemeanor (Anti-Corruption Commission 2011a, p. 54), punishable according to the Penal Code (Parliament of Bhutan 2011).

### **6.3 Opportunities and challenges of the Online AD System**

The National Council (NC) members of the Parliament also see the AD system as a way to detect policy corruption and fake asset declaration. They recommended strengthening the asset declaration system and developing an integrated IT system, which enables automatic information sharing on properties, liabilities and tax contributions of government officials and employees. A National Assembly member from the Gasa District was quoted as saying that “ACC’s access to information on transaction of assets, indiscriminate of private and public servants, is a must to fight and curtail corruption” (Kuensel 2016a). The integration of existing systems is expected to enhance information and data consistency and ensure checks and balance. That way ACC’s work, in using emerging technologies for anti-corruption efforts, is expected to expand (Anti-Corruption Commission 2019).

Fear of sanctions associated with non-compliance, especially fines, was one reason for high compliance rates. However, a report on ethics and integrity infrastructure noted limitations in the current system namely, 1) the AD is perceived as a formality and the importance of detecting illicit enrichment is not widely understood; and 2) the declarants are unaware the ACC verifies information with concerned authorities, such as the Royal Audit Authority, the National Land Commission Secretariat, the Road Safety and Transport Authorities and banks (Anti-Corruption Commission 2015a). The verification is conducted against the Asset Verification Protocol (Anti-Corruption Commission 2011b), which is published online but not many users are aware of the document nor its verification methodology.

Another challenge lies in how the verification of submitted declarations is structured. The ADA is expected to examine the submitted declarations and notify the head of agency in case of disproportionate assets or complaint against allegations or possible contraventions. However, not all ADAs are equipped to verify DA. The afore-mentioned report on ethics and integrity infrastructure recommended that decentralised verification should be strengthened with random audits and checks by the ACC. To overcome the challenge and ensure detection of illicit enrichment, the same report suggested the development of relevant indicators, such as disciplinary actions,

prosecutions and public requests for AD, in addition to the level of compliance (Anti-Corruption Commission 2015a).

Initially, implementation of the online AD system encountered challenges in verifying submitted information as the storage of declarations was not centralised and information not updated, in addition to territorialism and lack of information sharing policy (Anti-Corruption Commission NA). In 2013, 12 agencies were reported to have failed in the submission, which is considered a breach of responsibility of heads of agencies and ADA. The RAA conducts the compliance audits among agencies, which provides additional impetus to enhance compliance (Anti-Corruption Commission 2015a).

The ACC believes that lax management practices led partially to the initial challenges. To overcome the challenge, the government needs to strengthen internal control, which consists of systems, policies, procedures and practices. Internal controls are seen as the foundation for adherence to policies, laws, rules and regulations (Anti-Corruption Commission 2016). This is, somewhat, in line with a recommendation of the National Integrity Assessment 2016 that ACC and the National Statistics Bureau of Bhutan conducted with funding from Swiss Agency for Development and Cooperation (SDC). Some of the recommendations from the report focus on promoting e-services and implementing guidelines to manage conflict of interest in the public sector. While respondents found internal integrity as a whole to be effective, it was mainly driven by organisational culture and ethics. The same report noted that measures for corruption control such as whistle-blower protection, internal checks and balance and internal audit system were found ineffective (Anti-Corruption Commission 2017d).

An evaluation conducted on the National Anti-Corruption Strategy (NACS) by the Basil Institute of Governance and the Royal Institute of Management of Bhutan noted that “(t)he ACC and its leadership are highly respected in the Bhutanese society, though also somewhat feared still due to the perceived focus on punishment.” (Anti-Corruption Commission 2013, p.5) The 2016 National Integrity Assessment report corroborated the findings. Among respondents, 52% reported that ACC is doing very well and 41% fairly well (Anti-Corruption Commission 2017d).

## **7. Case study initiative: the *electronic* Public Expenditure Management System (*e*-PEMS) of the Ministry of Finance**

### **7.1 Overview of Bhutan’s Public Financial Management**

In Bhutan, large-scale financial scandals and frauds are rare, but when they occur, they involve a number of officials in different functions. Unaddressed, such systemic corruption could escalate and multiply rapidly. In this chapter, I investigate an initiative called the *electronic* Public Expenditure Management System (*e*-PEMS) of the Ministry of Finance of Bhutan, which is at the heart of the government’s financial management. Before detailing the functionality of the system, let me start with some of the incidents that form the context in which the system operates and what the system is expected to do to prevent the recurrence of such systemic corruption in Bhutan.

In 2018, the Anti-Corruption Commission (ACC) found eight government employees working at the Paro International Airport involved in the embezzlement of Nu. 7.278 million (\$102,348) between

2013 and 2017. These were immigration officers who had been responsible for collecting visa fees at the airport. They were provided booklets to issue receipts for visa fees received from foreign visitors. Internal audits by the Ministry of Home and Cultural Affairs (MoHCA) found that 1,300 pages from the booklets were missing and alleged that they were used for the purpose of embezzlement (Business Bhutan 2018a). The fact that this case implicated as many as eight employees in a crime that had spanned four years attracted public attention.

There were other articles exposing government employees reporting false travel claims. The Royal Audit Authority (RAA) reviewed travel and daily allowance claims by officials of the Ministry of Agriculture and Forests (MoAF) and Dzongkhag (district) Administrations of Thimphu, Paro and Punakha between 2012 and 2017. The authorities found that Nu 1.110 million (\$15,610) had been claimed without undertaking or substantiated travel in 2016 and 2017. Significant deficiencies and weaknesses were reported over travel budget use, such as non-compliance with travel procedures, inadequate controls over processing and scrutiny of travel claims, despite travel being the second highest budget expenditure item (Business Bhutan 2018b). Another newspaper article on the same topic reported that from the lowest position to the highest, everyone seems to be involved in such inflated claims, which left no one to file a complaint, while previous audit observations seemed to have gone unheeded (Kuensel 2018a). The RAA report concluded that effective coordination between controlling and disbursing officers and closer monitoring would be essential to ensure that travel budget was spent prudently and in compliance with travel rules (Royal Audit Authority 2018).

In 2019, RAA published its 2018 annual report and revealed that the authority had recovered Nu 106.368 million (\$1.5 million) after issuing 597 audit reports to government agencies and public corporations. Unresolved audit cases still amount to Nu 604.380 million (\$8.5 million), up from Nu 407 million (\$5.7 million) in 2017. The irregularities were caused by shortfall, lapses, deficiencies, non-compliance with laws and rules, mismanagement, fraud, corruption and embezzlement. One official was quoted as saying that despite improvements in internal management systems, there remained weaknesses in internal control and management and a lack of experienced employees (Kuensel 2019c, The Bhutanese 2019).

In the context, IT systems, in particular, the public financial management systems, are expected to address such cases and enforce compliance through internal control and other means among government employee users. Government expenditure control is a backbone of public financial management and, at the same time, a critical function as a country strives towards e-government and control of corruption. Lack of effective expenditure control threatens macroeconomic stability, fiscal discipline and public trust in government.

In controlling government expenditures, a financial management information system (FMIS) plays an increasingly important role. One of the functions FMIS normally undertakes is payment. A payment order authorises a payment after available funds have been checked and designated officials approve of it. Payment instruments include cheques, electronic fund transfer (EFT), and cash. In a centralised system, an accounts department issues payment orders for payments. The accounts department at the Ministry of Finance establishes relevant regulations and guidelines by issuing instructions related to preparation of financial accounts, financial reports and bank reconciliations. Lines ministries execute the budget allocated to them by procuring goods and services and making payments, and report to the Ministry of Finance on their financial operations.

FMIS eases transaction processes, consolidates data, implements control and produces management and financial reports at the Ministry of Finance (International Monetary Fund 2016). If an FMIS is well designed and functions optimally and the government employee users comply with the system requirements, it would be difficult to embezzle funds or hide discrepancies unaddressed as in the real cases in Bhutan mentioned earlier in this Chapter.

Government revenues and expenditures are managed by several IT systems in Bhutan, such as the Planning and Monitoring System (PlaMS) of the Gross National Happiness Commission (GNHC), the Multi-Year Rolling Budget System (MYRB) of the Department of National Budget under MoF, as well as, the Public Expenditure Management System (PEMS). The Department of Revenue and Customs manages the Revenue Administration Management Information System (RAMIS), which was developed with Asian Development Bank (ADB) funding. Payroll accounting also uses the data from the Civil Service Information System (CSIS) of the Royal Civil Service Commission (RCSC) (Royal Audit Authority 2016).

The PEMS obtains budget data from the Multi-Year Rolling Budget (MYRB) that Department of Budget maintains. PEMS provides the functionality of budget execution and reporting by booking expenditures and providing the basis to monitor the budget, including at municipal levels. All budgetary agencies, or agencies covered in the budget, are required to initiate and execute transactions in PEMS. The system also captures closing cash balances on a daily basis. The year-end closing cash balance is reported through the DPA in July every year. Each budgetary agency submits its Budget Utilization Plan (BUP) on approval of its budget to the DPA through PEMS. Based on the BUP, agencies then submit fund release requests in the system. Funds are released to agencies through Letter of Credit/Project Letter of Credit (LC/PLC)<sup>18</sup> authorisations to the agencies' LC/PLC accounts. Subsequently, payments are made by respective agencies according to BUP. Various control functions are embedded in the PEMS to mitigate risks of errors in financial statement, fraud and other irregularities. For example, PEMS restricts disbursements beyond budget appropriations (Royal Audit Authority 2016).

Relationships among the above-mentioned ICT systems is illustrated in the below Figure 7.1.

Figure 7. 1: Relationships between PEMS and other financial management systems implemented by MoF

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<sup>18</sup> LC and PLC are sub-accounts of the Government Consolidated Accounts.

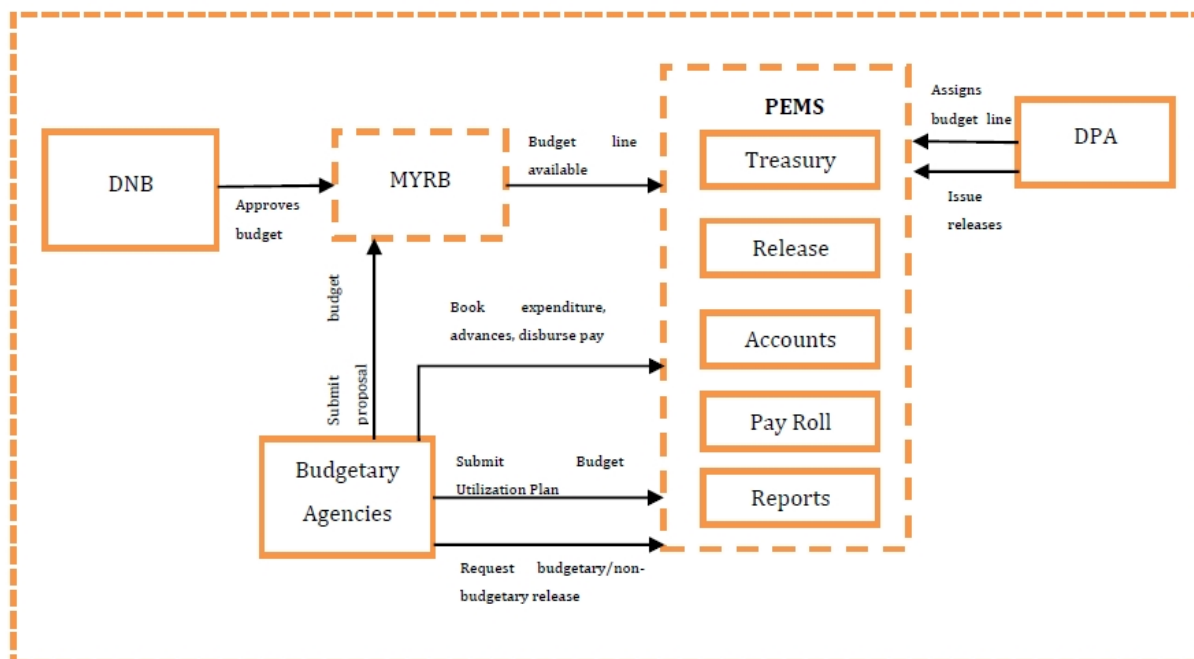


Figure 2.1: Business process flow in PEMS, prepared by the RAA (Source: DPA)

Access and privileges to financial records and information are granted as per the Public Finance Act of 2007 and 2012 and Financial Rules and Regulations. The user is given a unique identity with passwords and different levels of access depending on the individuals' roles and responsibilities, such as System Administrator, agency heads, division chief, supervisor, verifying officer and approving officer. Access level is controlled by role management in the system and user identity is recorded with each transaction, thus enabling an audit trail to identify each user and transaction in the system. Each agency has an internal audit unit, which is given read-only access to records and information of the agency, while external auditors are given full read-only access to conduct audits. Changes to financial records are restricted by level of access and associated privileges and such changes are maintained in the system for audit trail. PEMS can generate reports on all financial transactions for further review and analysis (World Bank 2016).

Against this context, the World Bank conducted an evaluation of Bhutan's Public Expenditure Management System (PEMS) in 2016 using the Public Expenditure and Financial Accountability Framework (PEFA). It rated key functions of Bhutan's public expenditure management and financial accountability from A to D, with A being satisfactory and D unsatisfactory. The evaluation also touched on the functionalities PEMS offered. Internal control was rated as D with a comment stating that "(t)here are serious weaknesses in internal controls in PEMS payroll module and significant observations are made by the auditor on the adequacy of controls to ensure integrity of the payroll data" (World Bank 2016, p. 88). Public asset management, regularity of reconciliation and clearance of suspense accounts and that of advance accounts, all done in PEMS, were rated as B, C, and B respectively (World Bank 2016).

Discrepancies and non-compliance in using PEMS have been observed and reported by both the World Bank and RAA. Monthly payroll was processed in PEMS, which triggered direct bank transfers to government employees' bank accounts. Personnel records were maintained in CSIS of

RCSC and changes were made in CSIS and PEMS separately, using unique Employee Identity Number (EID). When making changes to records, the World Bank report noted the existence of maker-checker control in the PEMS payroll module but smaller agencies do not follow this control requirement. In particular, non-finance employees were unfamiliar with the PEMS and could not operate it meaningfully. Therefore, a finance officer implemented all transaction steps, including creating and approving transactions, regardless of the internal control requirements. In the case of payroll processing, the finance staff generated a payroll voucher in PEMS and a hard copy had to be signed by supervisors for approval, but the voucher did not contain the details of individual employees. This segregation of duty is established on paper, but not in the system, and could pose a weakness in internal control. As a consequence of such practices, the same World Bank report noted that inconsistent numbers of employees and their contributions to the Provident Fund had been found in PEMS and other records (World Bank 2016).

The Royal Audit Authority (RAA) conducted an audit, specifically on PEMS, to determine “the existence, adequacy, and effectiveness of controls in PEMS in relation to financial management” (p.1), while aiming to identify vulnerabilities in the system, which could be exploited for manipulations and fraud. More specifically, the audit reviewed policy and procedures to safeguard financial data from unauthorised access, documentation to enable future enhancements and system upgrades. The audit identified several weaknesses in PEMS, including non-segregation of duties, weak input control, inadequate audit logs and trails to record information about activities and transactions, weak master file controls, limited ICT security policy and a lack of change management process (Royal Audit Authority 2016). RAA had found payroll irregularities of Nu 9.6 million (\$135,002), including duplicate payments, in 2013-2014 (World Bank 2016). The auditor noted that project documents or systems documents were unavailable at the time of audit and that the IT personnel performed the maintenance and enhancement based on their tacit knowledge. The RAA recommended that identified weaknesses be addressed, including improving controls and implementing electronic fund transfer, such as e-payment gateway (Royal Audit Authority 2016). Based on the audit observations, the MoF established a Technical Working Group at DPA and has been working on improving the PEMS in consultation with various agencies (World Bank 2016).

Despite limitations, PEMS functioned well in producing timely, relevant and reliable financial information, which is critical for government’s decision making both on fiscal and budget matters. The World Bank report concluded that financial data integrity was good, judging from daily and monthly reconciliation of receipts and payments with bank statements as well as access and change control in PEMS. Fiscal discipline was maintained with the assistance of PEMS, in areas of orderly execution of budget, timely and reliable financial reporting and audits (World Bank 2016).

## **7.2 Overview of the *electronic* Public Expenditure Management System (*e*-PEMS)**

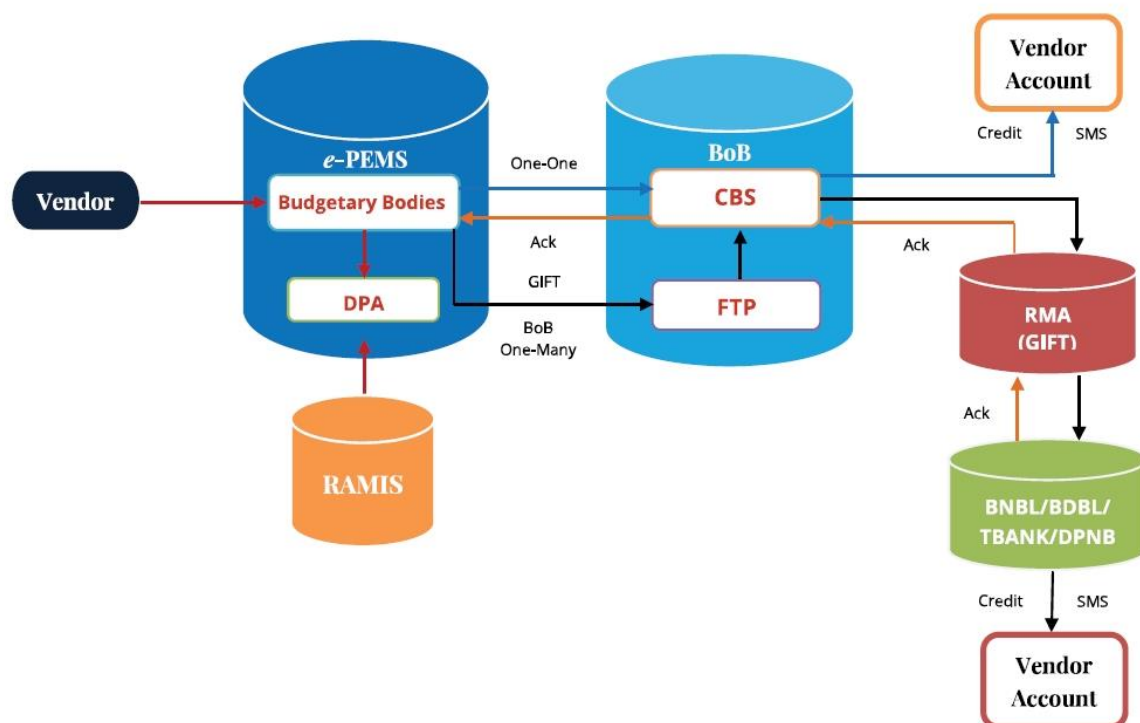
In recognition of the shortcomings emanating from PEMS, in particular the weaknesses in internal control, the *e*-PEMS was developed based on the Public Finance Act 2007 and its amendment 2012 as well as Financial Rules and Regulations of the Royal Government of Bhutan 2016. The finance secretary established the *e*-PEMS team comprising staff from the Department of Public Accounts, ICT Section and consultant (Ministry of Finance 2019a). The functional and technical requirements were developed using the International Monetary Fund report entitled “Shifting expenditure

control to the Public Expenditure Management System” (IMF 2016). The functional specifications were developed around the major objectives of,

1. Enabling real-time inter-banking settlements for all types of transactions
2. Issuing acknowledgements for payment orders and for payments by payees and suppliers
3. Enabling correction of wrong transactions
4. Meeting audit requirements
5. Automating links among the *e*-PEMS, BoB and RMA systems
6. Ensuring approval of payments with authorised signatories
7. Improving payroll and remittance payments
8. Enhancing system security and reliability

The system was developed by DPA in collaboration with BoB, RMA, Department of Revenue and Customs (DRC) and DITT funded by a multi-donor trust fund with contributions from the European Union and Austrian Development Agency, administered by the World Bank. The training was provided to users of the system with 24/7 technical support system (Ministry of Finance 2019a and 2019b). All *e*-PEMS transactions have to be routed through the BoB, which manages the government accounts. Therefore, the development of the Global Interchange for Financial Transaction (GIFT) in March 2019 by RMA enabled *e*-PEMS transactions with non-BoB banks (Kuensel 2019d), as illustrated in Figure 2 below.

**Figure 7.2: Relationship between e-PEMS and BoB**



Source: Ministry of Finance (2019b)

The functional and technical requirements were developed to enhance PEMS and enable electronic payments, system security enhancements and the interface between PEMS and the BoB system. For the purpose of my research, I focus on the electronic payment part of *e*-PEMS implementation as it has direct relevance to compliance among government employee users. More specifically, the *e*-PEMS implementation included the functional and technical features below, which are relevant to preventing corruption and ensuring compliance:

- User management
- Voucher preparation, verification, approval and reversal with payment instructions
- Maker-checker processes

### User Management

As RAA audit findings and World Bank evaluation indicated, a weak user management would undermine efforts for establishing audit trails, while enabling unauthorised access to the system and then financial transactions. The previous user management in PEMS allowed duplicate and generic user names to be created in a decentralised manner. In the *e*-PEMS, there is a one-time user creation, managed centrally by the DPA PEMS administrator according to a new User Management policy and naming convention. A finance officer or any other designated officer will be assigned as agency administrator in the *e*-PEMS. He or she will assign agency users to the LC/PLC accounts of the agency, create payroll departments and assign the users to the payroll departments in the *e*-PEMS. Different levels of authorisations (voucher verification, voucher approval, payment instruction, release request approval and release approval) are given to users as detailed in Table 7.1.

Table 7.1: Types of users and level of authorisation

Role	Authorized Signatory				
	Voucher Verification	Voucher Approval	Payment Instruction	Release Request Approval	Release Approval
System Admin	NO	NO	NO	NO	NO
Agency Admin	YES	YES	YES	YES	NO
FTMD Chief	NO	NO	NO	NO	YES
TMD Chief	NO	NO	NO	NO	NO
Accounts Division Chief	YES	YES	YES	YES	NO
Agency User	YES	YES	YES	YES	NO
TMD User	NO	NO	NO	NO	NO
FTMD User	NO	NO	NO	NO	NO
Director	YES	YES	YES	YES	YES
PEMS Client Support	NO	NO	NO	NO	NO
Agency Report View	NO	NO	NO	NO	NO
DNB User	NO	NO	NO	NO	NO
PEMS SDS Head	NO	NO	NO	NO	NO
RAA User	NO	NO	NO	NO	NO
GNHC User	NO	NO	NO	NO	NO

Source: Ministry of Finance (2019a), p. 21

### Voucher

This module is used to post transactions, which is a critical system function to prevent corruption. If government employee users ignore the system requirements in creating, verifying and approving vouchers, it might be easy to embezzle funds and initiate frauds. There are four types of vouchers

in the *e*-PEMS, disbursement, journal, reversal and others. Disbursement vouchers are used to process payments and is linked to LC/PLC accounts. Both bank and cash transactions were previously processed in the PEMS. Journal vouchers are used to correct disbursement, journal and other vouchers. Reversal vouchers are used to cancel disbursement, journal and other vouchers. When a voucher is reversed, a reverse voucher is automatically generated. Other vouchers are used to record cash receipts, recovery of advances and other types of deposit. These vouchers are verified and approved by the verifying and approving officers. E-mail notifications are sent to verifying officer when an accountant submits vouchers for verification.

In the *e*-PEMS environment, payees' details in voucher documents are derived from master file with an option of manually uploading information for special transactions. The payment modes are expanded into bank, cash and direct transactions. Cheque and ETFCS are fully eliminated in the process, and cash is allowed only for advance adjustments and the recovery of excess payments. Direct transactions are possible only for payment for fuel, official credit card transactions and bank charges. A voucher is then submitted for verification and approval. The voucher is rejected in case of a mistake. If it is approved, payment instruction is generated along with the accompanying reference code. The payment instruction is then validated before being sent to BoB online. In the case of a correction of disbursement, journal or other voucher, reversal takes place by selecting LC/PLC, months and voucher number and providing justification for reversal. Once the reversal is verified and approved, a reversal voucher is automatically generated. There is no rejection option for a reversal voucher.

#### Maker-checker processes

The maker-checker concept aims to prevent one person from creating and approving a voucher, thus establishing checks and balance in the process, which is an essential internal control mechanism. Before the *e*-PEMS was implemented, there were three levels of checks, voucher preparation, voucher verification and voucher approval. In the *e*-PEMS, an accountant prepares a voucher and submits it for verification. The same person will create a new one in case the voucher is rejected by the verifying or approving officer. When a new voucher is submitted after rejection, the same verifying or approving officer will verify or approve the new voucher. Once approved, the approving officer will generate the payment instruction and validate it before sending it to the bank. If BoB rejects the payment instruction, it is returned to *e*-PEMS with a pre-established rejection code. Only the DPA can modify the instruction and then return it to the approver for approval before sending it back to BoB (Ministry of Finance 2019a).

Within a month of its introduction, *e*-PEMS recorded 17,923 transactions worth over Nu 3 billion (\$42.19 million). The RMA governor was quoted as saying that *e*-PEMS would promote transparency and accountability because the centralised database was available to policy makers, legislators and auditors to examine government expenditures, while the process of manually writing and processing cheques would be made redundant (Kuensel 2019d).

Delays in the system are inevitable and often lead to unwanted consequences. Indeed, one delay in *e*-PEMS reportedly led to the death of a baby in a remote district of Dagana. The district health officer was quoted in a newspaper article saying that when *e*-PEMS was introduced, it took time to obtain budget, which was supposed to be used to fuel ambulance. By the time the ambulance

reached the village, it was too late and the baby had died. The story written by the father of the deceased baby went viral on Bhutanese social media (Kuensel 2019a). However, MoF officials responded that training on the use of *e*-PEMS had been provided to officials including those at the Dzongkhag levels.

In addition to the above, issues were also reported in relation to government employee salary payments after *e*-PEMS was introduced in July. In the previous system, monthly loan and insurance payments from government employees had been deducted at source but *e*-PEMS facilitates only made statutory deductions, such as taxes, health contributions, among others. Personal loans were to be paid using mobile banking applications. Initially, there was insufficient awareness among government employees on the new procedures, which resulted in loan defaults, but the problem had subsided by September. In the first two months, the volume of *e*-PEMS transactions exceeded Nu 6.3 billion (\$88.6 million). Transparency and accountability are expected to increase as vendors and service providers need to register and be paid directly without having an accountant issue a cheque (Kuensel 2019b).

## **8. Conclusions and recommendations**

During the four months from September to December 2019, I could collect data and documents for document analysis, observed the operations and conducted semi-structured interviews of 33 government officials and experts in Bhutan<sup>19</sup>. I also met with representatives of civil society organisation and international organisations to inform them of my research and obtain their general views surrounding my research topic. From the document analysis, the salient point detailed below emerged:

### **1) The Online Asset Declaration System of the Anti-Corruption Commission**

Bhutan's systemic corruption takes distinctive forms of policy corruption, nepotism and abuse of authority, which are difficult to capture at the time of their occurrence. Therefore, a system, such as ACC's Online AD System may be effective in capturing illegal enrichment of assets by recording assets of high-level government officials and officials performing key government functions. The success, however, depends on the compliance among government officials. Thanks to the multi-pronged efforts of the ACC, CADA and ADAs in line ministries, the awareness and compliance rates of asset declaration norms grew over the years. In 2018, the latest data available at the time of my research, the compliance rates of both Schedule I and II were almost 100% despite the fact that the total number of declarants was over 20,000. The possible determinants of compliance could include the well-established governance system, trust among users and carefully designed training and outreach programmes. Furthermore, availability of declarations in the form of structured data since the system was established could well prepare ACC to embrace frontier technologies, such as Big Data and predictive analytics. The system was designed and developed using the government budget and resources with careful considerations. The high compliance among users may mean expressed confidence among government users and gained competence of ACC's ICT team.

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<sup>19</sup> One interview was conducted online and one interviewer was interviewed twice for verification of findings.

Challenges may centre around the use of available data to detect disproportionate assets more effectively and efficiently.

## 2) The *electronic* Public Expenditure Management System of the Ministry of Finance

Funded by the World Bank, the *e*-PEMS was developed by functional and technical officials of DPA of the MoF. One of the major achievements of the system was the elimination of cheques in the government payments, which had previously caused errors, delays and lacked transparency. The system also aimed at addressing critical shortcomings identified by the World Bank and RAA in recent years. The transaction volume itself proves the high compliance among government officials, despite anecdotal evidence of initial implementation problems. The opportunities and challenges were also identified in the World Bank report. Internal integrity, organisational culture and ethics were identified as positive determinants for Bhutan, while weaknesses were found in the functions of whistle-blower protection, internal checks and balance and internal audits.

The possible determinants of compliance found in the thick descriptions of both initiatives are well aligned with the institutional instruments, which were identified in the literature review in Table 4.3. However, more careful examinations between the identified factors in document analysis and Table 4.3 would be needed.

At the time of writing this report, the analysed data was unavailable, as it requires the transcription of the semi-structured interviews and iterative coding of the obtained data. However, I summarised the initial findings in bullet points below based on the available transcription date.

1. The two case study systems are performing as required, despite multitude of shortcomings, and are contributing to the government's anti-corruption efforts;
2. Both systems recorded high compliance among government officials;
3. Technology-based solutions, rule-based and trust-based compliance are confirmed as key to the high-level of compliance, but rule-based compliance seemed less important;
4. Support in the functional or occupational groups was seen as being critical;
5. New dynamics of decision making between ICT officials and agency heads was identified;
6. High-integrity among key officials in key positions was identified;
7. The new type of support provided by the Department of Information Technology and Telecommunication was found to be a critical factor to ICT teams across the government to ensure the soundness and sustainability of e-governance systems;
8. Despite the initial assumption that the ownership of the systems had an impact on compliance, it did not come across as a direct factor, however, the ownership may have had indirect effects on the way the systems were developed and maintained by respective teams;
9. Internal control, cybersecurity, documentation, technological maturity are largely missing and could be vulnerabilities;
10. Both initiatives, although at different maturity levels, seem ripe to move forward and embrace more advanced frontier technologies, which could address some of the identified challenges, such as effective and accurate detection of disproportionate assets in the case of Online AD system and internal checks and balance and internal control in the case of *e*-PEMS.

However, further data analysis and triangulation would be needed to make any conclusions.

The limitations of my research include the findings that may not be directly generalisable to other contexts, as they are context specific. However, compliance as a conduit to explain the phenomena between e-governance implementation and compliance among government users could be further explored in other cases in Bhutan and elsewhere. Furthermore, various institutional instruments and possible determinants found in the literature review could be useful in further research in the academia and in designing projects and interventions by development practitioners. Finally, this research was designed as exploratory, inductive research and, therefore, I selected the best case study country, where compliance could be easily found. In future, this research framework could be tested in different circumstances, where compliance is expected to be lower despite the maturity of e-governance systems.

# Annex 1: the names of the agencies covered by ACC AD System

No	Parent Agency	Agencies
1	<b>Armed Force</b>	Royal Bhutan Army
2		Royal Bhutan Police
3		Royal Body Guard
4	<b>Autonomous Agencies</b>	<sup>4th</sup> King Secretariat
5		Alternative Dispute Resolution Centre
6		Agency for Promotion of Indigenous Craft
7		Bar Council
8		Bhutan Chamber for Commerce and Industry
9		Bhutan Council for School Examination and Assessment
10		Bhutan Electricity Authority
11		Bhutan Health Trust Fund
12		Bhutan Info-comm and Media Authority
13		Bhutan Medical and Health Council
14		Bhutan Narcotic Control Agency
15		Bhutan National Legal Institute
16		Bhutan Olympic Committee
17		Bhutan Standard Bureau
18		Cabinet Secretariat
19		Centre for Bhutan Studies
20		Construction Development Board
21		Dratshang Lhentshog
22		Drug Regulatory Authority
23		Druk Holding and Investments
24		Dzongkha Development Commission
25		Gross National Happiness Commission
26		His Majesty's Secretariat
27		Jigme Singye School of Law
28		Khesar Gyalpo University of Bhutan
29		National Assembly Secretariat
30		National Centre for Hydrology and Meteorology
31		National Commission for Women and Children
32		National Council Secretariat
33		National Environment Commission
34		National Land Commission Secretariat
35		National Pension and Provident Fund
36		National Statistical Bureau
37		Office of the Attorney General
38		Privy Council of Bhutan

39		Royal Education Council
40		Royal Institute of Management
41		Royal Securities Exchange of Bhutan Limited
42		Royal University of Bhutan
43		Tourism Council of Bhutan
44	<b>Constitutional office</b>	Anti-Corruption Commission
45		Election Commission of Bhutan
46		Royal Audit Authority
47		Royal Civil Service Commission
48		Supreme Court
49		High Court
50	<b>Corporations</b>	Army Welfare Project
51		Basochhu Hydropower Plant
52		Bhutan Agro Industry Ltd.
53		Bhutan Board Product Ltd.
54		Bhutan Automation and Engineering Ltd.
55		Bhutan Broadcasting Service Ltd.
56		Bhutan Carbide Chemical Ltd.
57		Bhutan Duty Free Ltd.
58		Bhutan Ferro Alloys Ltd.
59		Bhutan Hydropower Service Ltd.
60		Bhutan Livestock Development Corporation Ltd.
61		Bhutan Polymers and Company Ltd.
62		Bhutan Postal Corporation Ltd.
63		Bhutan Power Corporation Ltd.
64		Bhutan Telecom Ltd.
65		Bhutan Times Ltd.
66		Bhutan Tourism Corporation Ltd.
67		Construction Development Corporation Ltd
68		Chhukha Hydro Power Energy Ltd.
69		Dagachhu Hydro Power Corporation
70		Druk Air Corporation Ltd.
71		Druk Ferro Alloys Ltd.
72		Druk Green Power Corp. Ltd.
73		Druk Horticulture Pvt Ltd
74		Druk Plaster and Chemical Ltd.
75		Druk Satair Corporation Ltd.
76		Druk Wang Alloys
77		Dungsam Cement Corporation Ltd
78		Dungsam Polymers Ltd.
79		Farm Machinery Corporation Ltd.

80		Financial Institution Training Institute Ltd.
81		Food Corporation of Bhutan Ltd.
82		Green Bhutan Corporation Ltd.
83		Jigmi Mining Corporation Ltd.
84		Kholongchhu Hydro Energy Ltd.
85		Koufuku international Ltd.
86		Kuensel Corporation Ltd.
87		Kurichhu Hydropower Plant
88		Mangdechhu Hydroelectric Project Authority
89		Menjong Sorig Pharmaceuticals Corp Ltd.
90		National Housing Development Corporation Ltd.
91		Natural Resources Development Corporation Ltd.
92		Penden Cement Authority Ltd.
93		PHPA I
94		PHPA II
95		Royal Bhutan Helicopter Services Ltd. Old Hangar, Paro International Airport
96		Royal Bhutan Lottery Ltd.
97		Rural Enterprise Development Corporation Ltd.
98		S.D. Eastern Bhutan Coal Company Ltd.
99		State Mining Corporation Ltd.
100		State Trading Corporation of Bhutan Ltd.
101		Tala Hydro Power Corporation
102		Tangsibji Hydro Energy Ltd.
103		Wood Craft Centre Ltd.
104		Thimphu TechPark Ltd
105	CSO/NGOs	Ability Bhutan Society
106		Association of Bhutan Tour Operators
107		Association of Bhutanese Industries
108		Bhutan Association of Women Entrepreneur
109		Bhutan Cancer Society
110		Bhutan Centre for Media & Democracy
111		Bhutan Ecological Society
112		Bhutan Film Association
113		Bhutan Kidney Foundation
114		Bhutan Network for Empowering Women
115		Bhutan Transparency Initiative
116		Bhutan Trust Fund for Environment Conservation
117		Bhutan Youth Development Fund
118		Construction Association of Bhutan (CAB)
119		Chithuen Phendhey Association
120		Disabled Person Association of Bhutan

121		Draktsho Vocational Centre for Special Children & Youth
122		GNH Centre Bhutan
123		Guide Association of Bhutan
124		Gyalyum Charitable Trust
125		Handicraft Association of Bhutan
126		Journalists Association of Bhutan
127		LHAK-SAM
128		Menjong Foundation
129		Music of Bhutan Research Centre
130		Phuntsholing Sports Association
131		RENEW
132		Royal Society for Senior Citizens
133		Royal Textile Academy
134		RSPN
135		SABAH-Bhutan
136		Tarayana Foundation
137		The Lhomon Society/SJ initiatives
138		Loden Foundation
139		VAST Bhutan
140	<b>Dzongkhag Court</b>	Bumthang
141		Chukha Court
142		Dagana Court
143		Gasa Court
144		Haa Court
145		Lhuntse Court
146		Mongar Court
147		Paro Court
148		Pema Gatshel Court
149		Punakha Court
150		Samdrupjongkhar Court
151		Samtse Court
152		Sarpang Court
153		Trongsa Court
154		Trashigang Court
155		Trashy Yangtse Court
156		Tsirang Court
157		Thimphu Court
158		Wangdue Court
159		Zhemgang Court
160		Gelephu Dungkhag Court
161		Phuntsholing Court

162	<b>Financial Institutions</b>	Bhutan Insurance Ltd.
163		Tashi Bank Ltd.
164		Bank Of Bhutan
165		Bhutan National Bank
166		Credit Information Bureau
167		Royal Monetary Authority
168		Royal Insurance Corporation of Bhutan Ltd.
169		Druk Punjab National Bank
170		GIC Bhutan Re Ltd.
171		Bhutan Development Bank Ltd.
172	<b>Dzongkhag Administrations</b>	Bumthang
173		Chhukha
174		Dagana
175		Gasa
176		Haa
177		Lhuntse
178		Mongar
179		Paro
180		Pema Gatshel
181		Punakha
182		Samdrupjongkhar
183		Samtse
184		Sarpang
185		Thimphu
186		Trongsa
187		Trashigang
188		Trashie Yangtse
189		Tsirang
190		Wangdue Phodrang
191		Zhemgang
192	<b>Ministries</b>	Ministry of Agriculture and Forests
193		Ministry of Economic Affairs
194		Ministry of Education
195		Ministry of Finance
196		Ministry of Foreign Affairs
197		Ministry of Health
198		Ministry of Home and Cultural Affairs
199		Ministry of Information and Communications
200		Ministry of Labour and Human Resources
201		Ministry of Works and Human Settlement
202		JDWNRH

203		Mongar Regional Referral Hospital
204		Gelephu Central Region Referral Hospital
205		Phuntsholing Hospital
206	<b>Thromde</b>	Thimphu Thromde
207		Phunthsoling Thromde
208		Gelephu Thromde
209		Samdrupjongkhar Thromde

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