Public Sector Cloud Service Adoption: The Nigerian Case

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Cloud Computing

- Computing service delivered over the internet
- Based on user demand
- Access, **operate** rather than build, **operate** and maintain
- Driver of government services
  - E-government (or e-government development) through provision of online services, telecommunications connectivity and human capacity for government’s processes
  - E-governance (or e-participation): Use of online for government-citizens engagement
Rationale

- Inefficient e-government and e-governance mechanisms
- Data localization/sovereignty vs Data offshoring
- Lack of empirical (evidence based) studies
Objective

- To explore how government can modernise, capitalising on ICT innovations such as cloud computing to drive e-government and e-governance. Specifically, the study seeks to

  - Understand the extent to which cloud computing is provided or supported Nigeria’s public sector

  - Find out the technology, organization, environment factors that enable or inhibit cloud computing provision and utility in Nigeria’s public sector

  - To establish a case for cloud service provision and utility in Nigeria’s public sector
Research Questions

- To what extent is cloud computing provided or supported in Nigeria’s public sector?

- What are the technology, organization, and environment factors that enable cloud computing provisioning and utilization in Nigeria’s public sector?

- What are the technology, organization, and environment factors that inhibit cloud computing provisioning and utilization in Nigeria’s public sector?
TOE Framework

External Task Environment
- Industry characteristics and Market structure
- Technology support infrastructure
- Government Regulations

Organization
- Formal and informal linking structures
- Communication processes
- Size
- Resources slack

Technological Innovation Decision Making

Technology
- Availability
- Characteristics

Source: Tornatzky and Fleisher (1990)
Theoretical Framework

Framework

TOE Factors

Cloud Provision
- Enablers
- Inhibitors

Government Cloud Utility
- Enablers
- Inhibitors

Source: Authors
Methodology

- Approach and Design
  - Qualitative, Cross-case

- Population and Sampling
  - CSPs, Regulators and MDAs
  - Purposive sampling
  - 5 Providers, 6 MDAs, 1 Regulator

- Data Collection
  - Semi-structured interview guide

- Data Analysis
  - QDA using Nvivo
Overview of the Cloud Market

- Public sector cloud adoption is still low
- Cloud archetypes include PaaS, IaaS, SaaS and DRaaS
- Cloud on Ground services for a locally hosted cloud marketplace
- Carrier Neutrality
Preliminary Findings

- **Enablers of Cloud Services Provision**
  - Data localization efforts
  - Ease of doing business
  - Local content laws
  - Growing local capability
  - Pioneer status

- **Inhibitors to Cloud Services Provision**
  - High cost structures
  - Trust and Brand Equity
  - Lack of awareness of local providers
Enablers of Cloud Services Adoption

- High quality of service
- Right governance and frameworks
- Carrier neutrality
- State of the art facility
- Government data localization efforts

Inhibitors to Cloud Services Adoption

- Poor enforcement
- Poor funding of MDAs
- Low ICT use skills
Government and enabling environment

- Right policies
- Awareness creation

Government’s investment in ICT use skills

There is need for government to benchmark its cloud service deployment against global best standards
Q & A