

Lean thinking in Medical commodities Supply Chain: Wastes; Drivers and Practices

- RESEARCHERS: SEVERINE KESSY; GLADNESS SALEMA & YUSTA SIMWITA
- FUNDED BY: AFRICA RESOURCE CENTRE (ARC)

- Contact: gladness.chitama@gmail.com; +255713243661



UNIVERSITY OF DAR ES SALAAM
BUSINESS SCHOOL

www.udsm.ac.tz

"Innovative Business Management for
Inclusive Industrialization"

Background

- The observed global pressure to increase efficiency
- Trend to adapt “lean thinking philosophy”

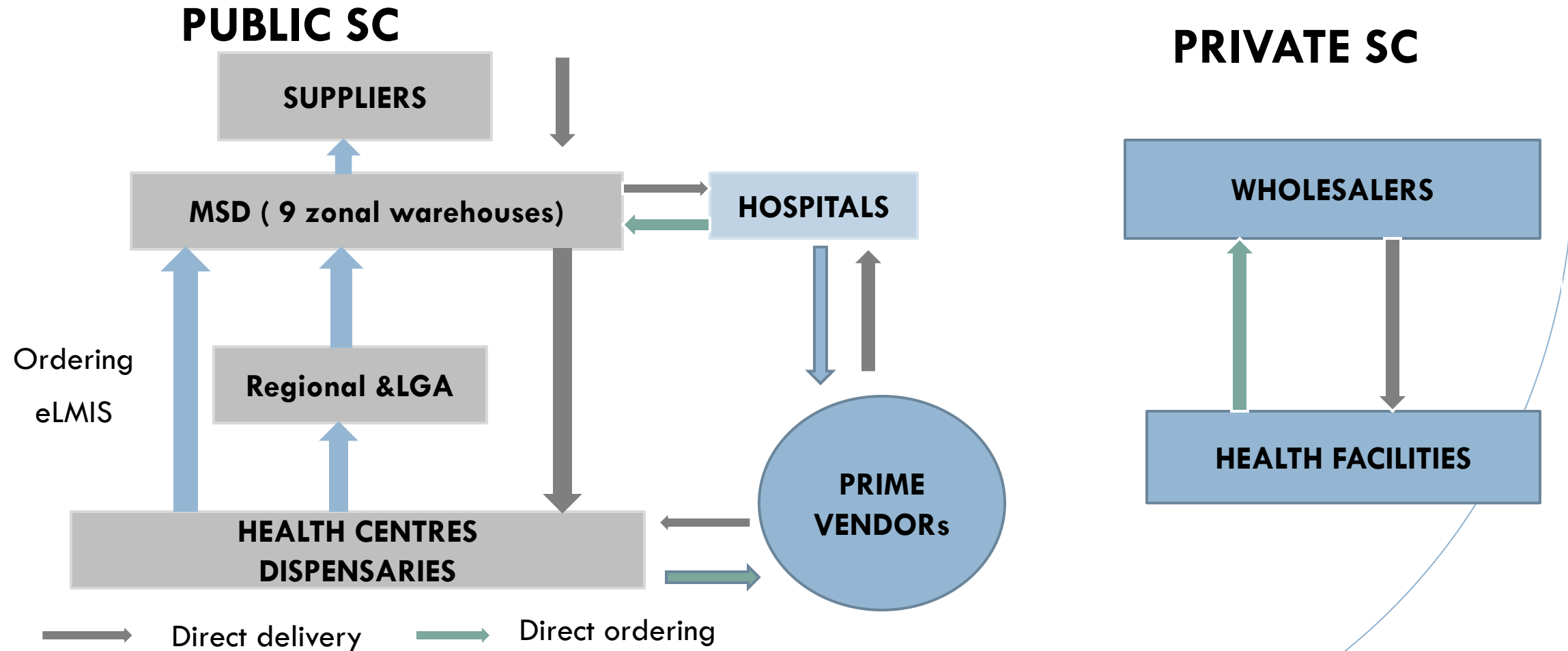


**Adoption in
health care
setting still
limited**



**Evidence
from public
and private
settings is
still limited**

Study context



Research objective & questions

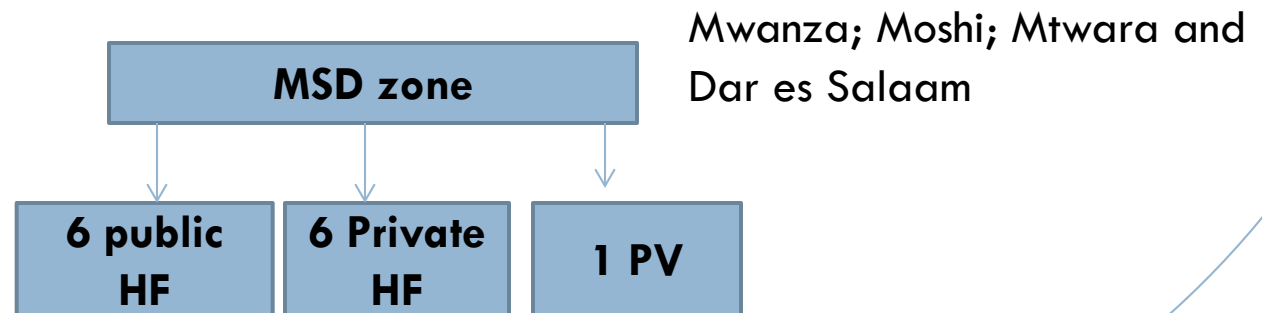
Research objective: to explore lean management in the medical commodities supply chain in terms of wastes, drivers and practices

Research questions:

- i. What are the critical wastes in in the medical commodities supply chain?
- ii. What are the drivers of waste in the medical commodities supply chain?
- iii. What are the lean tools and practices applied in the in the medical commodities supply chain?
- iv. What are contextual factors for effective implementation of lean practices in the medical commodities supply chain processes?

Methodology

- **Main approach:** case study (health facilities and suppliers)
- **Unit of analysis:** SC for medical commodities.
- **Population:** public and private health facilities & suppliers
- **Case selection:**



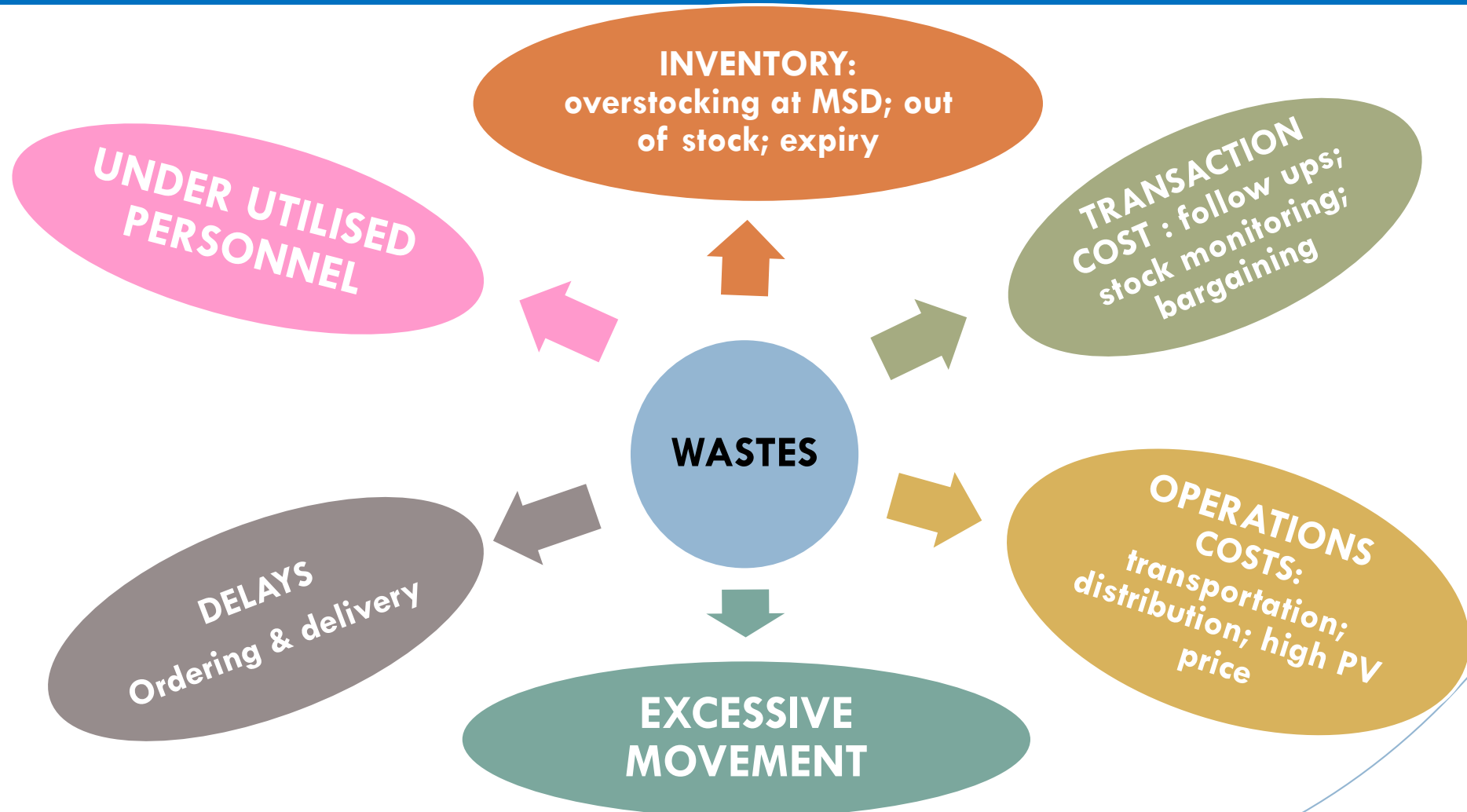
Methodology

Data collection method:

- (i) in-depth interview with key informants (HF pharmacist; PMU, lab technologist, PV, regional pharmacist)- based on the interview guide
- (ii) 4 FGDs: 1 per region with regional pharmacist, nurse, medical officer in charge, HF pharmacist;
- (iii) 4 FGDs: 1 per MSD zone (including the zone manager; logistics officer; sales officer, warehousing officers)

- **Instrument:** interview guide
- **Data analysis:** Within-case and across-case analyses
- **Data validation:** stakeholder workshop

Study findings: FIVE TYPES OF WASTES



Study Findings: Drivers of waste

Demand management

- Poor quantification
- Limited involvement of MSD&PV in demand planning
- Many types of lab equipment
- Poor calibration of lab equipment's

Institutional framework & governance

- District-regional approvals
- Fund management VS quantification
- Mix of PUSH & PULL systems

Supply chain capabilities

- Limited HR capacity at PHF level
- Operational problems with MIS- GOTHOMIS
- Limited system interoperability between eLMIS (HFs) & Epicor 10 (MSD)
- Limitations with eLMIS to report actual orders

Study Findings: Drivers of waste cont

Culture

- Limited joint action and information sharing
- Medical personnel medication beliefs & preferences
- Patients beliefs and preferences

Incentives

- Motivation for extra work

Supplier collabo& devept

- Trainings to PVs
- Operational problems with MIS- GOTHOMIS
- Limited system interoperability between eLMIS (HFs) & Epicor 10 (MSD)
- Limitations with eLMIS to report actual orders

Study findings cont:

Lean practices

Common practices

- i. LMIS – Public& Private
- ii. Standardization -Public
- iii. Visual management- Private

Contextual factors

- i. Supportive infrastructure “Unreliable internet supply’- Public
- ii. Changes in treatment regimens e.g ARV- Public
- iii. Variation of physicians and patient’s preferences on medication- Public & Private

Findings: SC issues Public VS Private

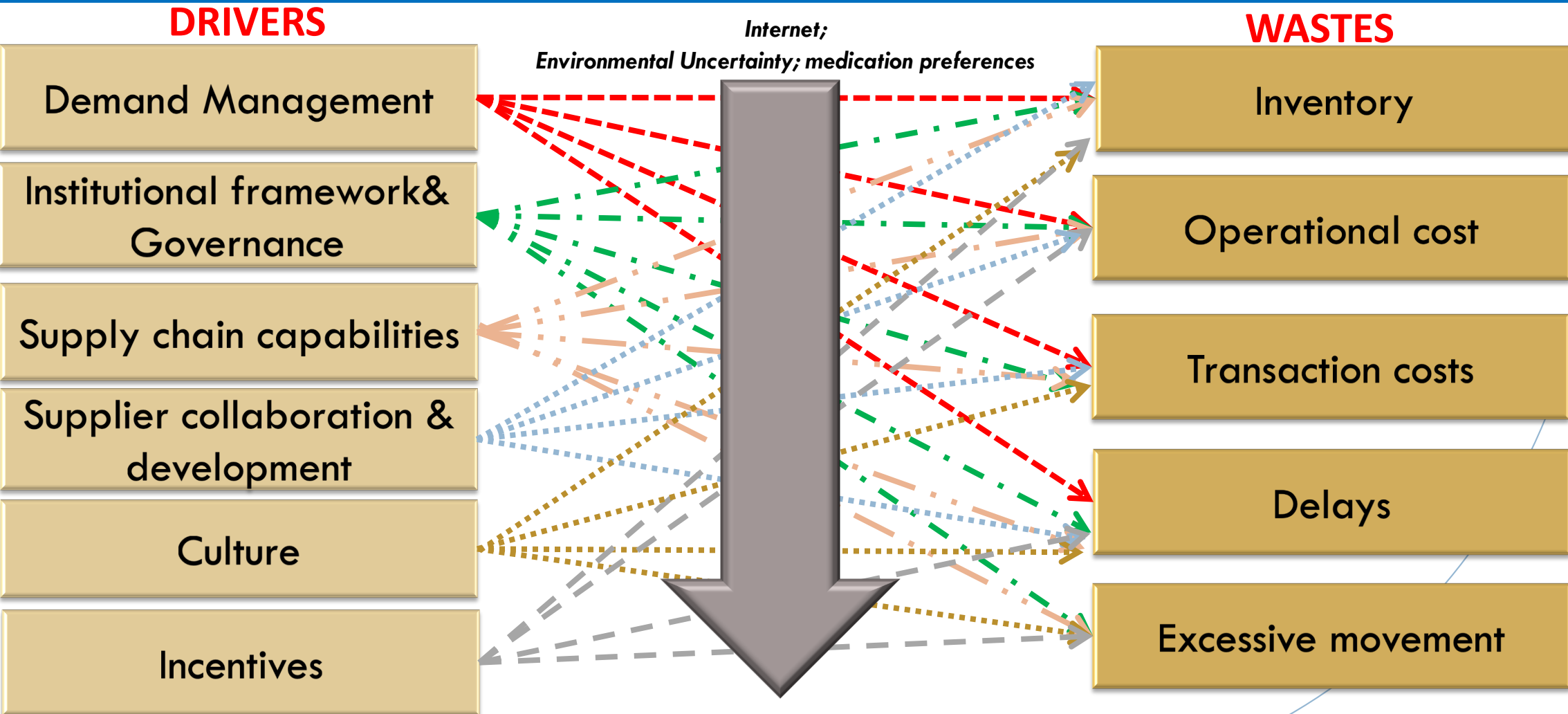
Public health facilities

- ❑ High levels of standardization
- ❑ Less frequency
- ❑ Poor internal visibility
- ❑ Limited supplier integration
- ❑ Integrate with MSD through eLMIS

Private health facilities

- ❑ Visualization of stock
- ❑ High internal visibility
- ❑ High frequency of ordering
- ❑ Close collaboration with suppliers
- ❑ No MIS with suppliers; use emails; phone calls

Conclusions: Propositions



Policy issues

-Implicated policies/institutional frameworks: pharmaceutical master plan; system redesign standard operating procedures;

- Create awareness to policy makers
- Facilitate adoption and integration of lean management
- Review, dialogue and advocacy on the existing system redesign and governance structure (including financing)
- Institutionalization and integration of Prime Vendors in the SC system
- MIS review and harmonization
- Capacity building to actors (both public and private)

Target stakeholder: Academia, key Ministries , DPs, CSOs, Practitioners, Private hospitals association

Thank you