Evidence Informed Policy Making: Ethiopian Perspective

North Eastern Africa Workshop Series on the Role of Science in Assisting Regional Policy Development

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The Disparity of World by Income (Global, Africa): Why the big difference?
What inclusive policy making process be in place to bring more African Economies in to the picture?
What role shall science play in narrowing the big gaps?
Difficult Pill to Swallow

• We Africans must admit and confront root causes for our lagging economies
  ✓ We operated under *top-down policy making* approach for too long
  ✓ Our development has dragged comparatively
  ✓ Our citizens remain *impoverished*
  ✓ Our resources are *misused, abused or unused*
  ✓ Our population is exploding resulting in high *youth unemployment (420 million Youth)*
  ✓ The world is entering the fourth industrial revolution - *the AI era, but we still toil in subsistence farming*
Industrial Revolutions: Where is Africa? How can Science help?

- **1st industrial revolution**: Mechanical production based on water and steam power.
- **2nd industrial revolution**: Mass production enabled by division of labor and electricity.
- **3rd industrial revolution**: Use of IT and electronics.
- **4th industrial revolution**: Cyber-Physical Systems, Internet of Things, Artificial Intelligence, and Big Data.

- First mechanical loom
- First conveyor belt
- First programmable controller
- First ifactory 4.0
Must adopt new strategy

- Increase our *knowledge and social capital* (African Union data)
- Invest in *science, technology and innovation* (STIP Review - UNCTAD)
- Involve *expert professionals* (Science Academies; Professional Associations; Think tanks;)
- Increase opportunities for youth *jobs* (ASET, Innovation hubs, Tech Jobs, etc)
Ethiopia: vision to become middle income country by 2025
Ethiopia: Science and Policy Context

- Education and Training policy
- STI Policy and Strategy
- GTP – II
- HSTP
- STISA-2024
- UN SDGs
The STI System of Ethiopia

Source: Ethiopia’s STI Policy, Strategy and Updates by Prof. Afework Kassu Gizaw State Minister Ministry of Science and Higher Education, Ethiopia
GTP Priorities vs SCIENCE

- Agriculture
- Health
- ICT
- Energy
- Manufacturing
- Water/Irrigation
- Mining
- Tourisms

- Agro-Processing
- Leather/Textile
- Foods/Beverages
- Metals
- Pharmaceuticals
- Chemicals
- Construction Inputs
Evidence Informed Policy Making

• Examples: Studies by sectoral ministries in collaboration with national and international bodies
  - MoH – Health Policy
  - MoST/MiNT – STI Policy
  - MoFA – Foreign Policy,
  - MoE/MoSHE – Education and Training Policy
Based on the national STI problem analysis and assessment of the characteristics of countries selected as benchmarks for their best practices, eleven critical policy issues are identified.

1. Technology Transfer,
2. Human resource development,
3. Manufacturing and service providing enterprises,
4. Research,
5. Financing and incentive schemes
6. National quality infrastructure development,
7. Universities, research institutes, TVET institutions and industries linkage,
8. Intellectual property system,
9. Science and technology information,
10. Environmental development and protection, and
11. International cooperation.
Example 2: Education and Training Roadmap and Policy

- Pre-primary
- Primary
- Secondary
- TVET
- HE

- Evidences Collected by various mechanisms used to develop the roadmap and draft policy
- Inclusive discussions involving intellectuals, leadership, practitioners, citizens, etc
Mandates of MoSHE

Proclamation No. 1097/2018: Definition of Powers and Duties of the Executive Organs of the Federal Democratic Republic of Ethiopia

Proclamation

26. The Ministry of Science and Higher Education

1. The Ministry of Science and Higher Education shall have the powers and duties to:
   a) ensure the expansion of higher education; oversee the sector;
   b) undertake and implement strategies that seek to synchronize higher education with the country’s overall developmental policies and sectoral specific developments;
   c) design strategy and upon approval follow up the implementation of the country’s technical and vocational education and training;
   d) design strategies to augment higher education and technical and vocational education institutions’ capacity in basic scientific studies and research; implement same; device opportunities for operationalization of scientific studies and research results;
   e) create conducive environment for technology development and operations by facilitating linkages and coordinated working procedures between higher education institutions and the industry sector;
   f) prepare higher education curricula framework;
   g) set standards required for higher education and technical and vocational education institutions; follow up the delivery of appropriate education and training in these institutions;
   h) follow up the performance of state-owned higher education institutions;
   i) ensure that the implementation of student admissions and placements in higher education institutions are equitable;

2. The powers and duties given by provisions of other laws currently in force to the Ministry of Education in relation to matters pertaining to higher education and technical and vocational education; and to Ministry of Science and Technology pertaining to science are hereby vested in the Ministry of Science and Higher Education.
Pillars of MoSHE

• The Federal Government established MoSHE putting three major pillars together:
  – Higher Education (i.e., Universities)
  – Science (generation and application of knowledge and technology)
  – Technical and Vocational Education and Training (TVET)

• Each pillar addresses critical issues that contribute to social transformation and economic development.
Reporting Institutions of MoSHE

HERQA

TVETA

MoSHE

HESC

TVETI

Ministry of Science and Higher Education

50 public & 201 private HEIs

1622 public & private TVET Colleges
Strategic Plan of MoSHE: 2019 - 2025

Strategic Issues/Themes
1. Access and equity
2. Quality
3. ICT integration into education, training, research and innovation capacities
4. Conduct, dissemination and commercialize research findings
5. Science, technology, community service and innovation development
6. Accountability and results-based leadership, governance and management
MoSHE Agenda to transform Science and HE

Primary and Secondary Data and evidences from various sources; Diverse stakeholders, intellectuals, professional advisers, being involved.
Areas of Cooperation and Collaboration

Interest

• Cooperation in the areas of HE: Ethiopian universities can work with those in other countries in diverse areas including:

1. Development of curricula
2. Joint programs and projects
3. Joint research
4. Training and capacity building of staff and Technical Assistants
5. Student and staff exchange
6. Structuring the education delivery system
7. Joint conferences and other discussion fora
8. Involvement in teaching and learning
9. Establishment of academic and research culture
10. Short-term and long-term training for leaders and professionals of higher education
11. Scholarship grants for academic and research staff
12. Furnishing libraries, laboratories and workshops

Outcome: Improved quality of education in HE
Areas of Cooperation and Collaboration
Interest - Cont’d

• Cooperation in the areas of science:
  - Capacity Building
    - science leadership capacity building
    - institutional capacity building
    - Researchers/scientists capacity building
  - STEM Education
  - ASET Skills Development
  - Science Culture Enhancement:
    - Science as Societal Culture
    - Indigenous Knowledge and Science
    - Responsible Conduct of Research
    - Science Ethics
    - Scientific Publishing (Science Journals, Monographs, Books etc)
  - Science Data Management
  - Science Council
  - Science Granting Schemes
  - Science Indicators

Outcome: Strengthened Science and Science Culture

Inclusive and collaborative
Summary 1: MoSHE’s New Path

• Policy Formulation Principles
• Establish effective systems
• Adopt participatory governance model
• Consult with stakeholders
• Internationalization
• Involve professional advisors
• Employ practical strategic plans
• Rely on evidence-based data
• Honor academic freedom
Summary 1: Where Headed?

- Rapid development
- Internationally competitive stance
- Evidence-informed policy making
- Middle-income economies and beyond
- Decisions based on genuine studies by competent scholars
- Productive, well to do, happy and healthy citizenry
Conclusion

- Three messages:
  - Studies by sectoral ministries in collaboration with national and international bodies largely used for policy formulation/review and revision
  - Advice by think tanks and professional associations to sectoral policies and strategies
  - Need for improved linkage between academia and policy makers for evidence informed policy making/review/revision and also to gear studies to the direction that they can be useful - “Problem solving model”
Thank you very much!

Better Tomorrow for our Future Generations