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Contribution by ESCWA

to the CSTD 2024-2025 priority theme on "Diversifying economies in a world of accelerated digitalization"

ESCWA Input to CSTD, Priority Theme#1

Diversifying economies in a world of accelerated digitalization

1. What are the specific challenges developing countries face to develop or adapt frontier technologies and AI?

   Developing countries encounter numerous challenges in adopting frontier technologies and AI. These include inadequate infrastructure, insufficient funding, a shortage of skilled professionals, and regulatory barriers. The lack of collaboration between academia, industry, and government further exacerbates these issues. Additionally, digital literacy levels are low, and access to quality data and advanced technologies is limited. These challenges hinder the ability of developing countries to fully leverage the benefits of AI and other frontier technologies.

   More specifically, challenges developing countries face to develop or adapt frontier technologies and AI are:

   - Limited Funding: Scarce financial resources make it difficult to invest in advanced research and development (R&D) and the necessary infrastructure for frontier technologies and AI, and to develop the needed technological infrastructure.
   - Limited Access to Technology: Rural and underserved areas often have limited or no access to adequate digital infrastructure and modern technologies, creating disparities within the country.
   - Human Capital and Skills Gap: There is often a significant shortage of professionals with expertise in AI, data science, and other advanced technological fields.
   - Regulatory and Policy Challenges: Many developing countries lack comprehensive regulatory frameworks to govern the development and use of AI and frontier technologies, leading to uncertainties and potential misuse.
   - Data Privacy and Security: Ensuring data privacy and security can be challenging due to weaker regulatory frameworks and enforcement mechanisms.
   - Limited Access to Global Networks: Developing countries may have limited access to international collaborations, partnerships, and networks that are crucial for knowledge exchange and technology transfer.

2. Can you provide successful examples of adoption or development of AI and other frontier technologies you contributed to?

   ESCWA has promoted AI in its projects, substantive reports and meetings targeting the Arab countries. The AI is one of the promising technologies for advancing digital government and accelerating the achievement of SDGs[1]. Additionally, AI was mentioned as one of the

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[1] https://www.unescwa.org/events/technology-and-innovation-arab-public-institutions
https://www.unescwa.org/events/enact-project-kicks

important technologies for advancing specific sector such as the land transport sector in the Arab region[2]. Furthermore, ESCWA is supporting its member states for the formulation of policies and strategies for AI, and some Arab countries such as the UAE, Palestine and Jordan have officially adopted their national AI strategies

In the ESCWA region, there are several interesting applications of AI. For example : UAE have multiple initiatives using AI in providing Government Services, and in Jordan, AI-powered diagnostic tools have been integrated into healthcare systems, significantly improving medical services and patient outcomes.

3. Can you provide examples of inclusive policies for innovation and economic diversification specifically tailored to diffusion of digital technologies and AI?

   The UAE's National Artificial Intelligence Strategy 2031 aims to position the UAE as a global leader in AI by integrating AI technologies across various sectors. The strategy focuses on enhancing digital skills, fostering innovation, and creating a supportive regulatory environment for AI development. This comprehensive approach ensures that the benefits of AI and digital technologies are widely accessible, contributing to economic diversification and sustainable development.

4. Do you have examples policy instruments to favour the diffusion of frontier technologies in the economy targeting specific sectors?

   Based the conclusion of ESCWA study related to "Technology and innovation for the development of land transport in the Arab countries", it is important for developing countries, especially Arab countries:

   - Having a clear vision and clear policy directives for the use of new technology for economic development and in specific sectors. Such a vision must be accompanied by a government plan or strategy, which should be shared with all stakeholders to ensure that it is well implemented in the whole country3.

   - As frontier technologies offer a lot of potential in various sectors, it is important to adopt a flexible regulatory approach to enable competition, attract investment and take full advantage of emerging technologies. Such flexibility will support smooth and effective integration of new technology in specific sectors.

   - There is a need to develop and improve the innovation and entrepreneurship ecosystems, as they are essential for the development and spread of use of emerging digital technologies in various sectors.

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[2] https://www.unescwa.org/publications/technology-innovation-development-land-transport-arab-countries
[3] https://www.unescwa.org/publications/technology-innovation-development-land-transport-arab-countries

As example, Saudi Arabia's Vision 2030 includes several policy instruments to promote the diffusion of frontier technologies. These policies include funding for startups, tax incentives, and the establishment of tech hubs. The Digital Transformation Program aims to integrate digital and emerging technologies into key sectors such as healthcare, education, and finance, thereby fostering innovation and improving service delivery across the economy.

5. Are you engaged in putting in place mechanisms to strengthen industrial capabilities through partnerships among different stakeholders (e.g., university-industry, or private-public)?

ESCWA has facilitated several university-industry partnerships in Lebanon, where universities collaborate with local tech firms to develop AI-driven solutions for agriculture. These partnerships are crucial for transferring knowledge, fostering innovation, and building local capabilities. By leveraging the expertise and resources of both academia and industry, these collaborations help in creating practical solutions that address specific regional challenges.

6. How can international cooperation support the uptake of new technologies and the development of technological capabilities and ensure that industrial policies will benefit all and do not worsen inequality?

International cooperation can significantly support the uptake of new technologies by facilitating technology transfer among developed and developing countries, providing funding for regional and national initiatives related to the integration of new technologies in industry, supporting technical expertise, and capacity-building programs.

Initiatives such as the Digital Cooperation Organization (DCO) aim to enhance digital transformation and bridge the digital divide through collaborative efforts. By sharing resources and knowledge, these initiatives help developing countries build technological capabilities and ensure that the benefits of digital transformation are equitably distributed.

Additionally, international cooperation can support the uptake of new technologies and the development of technological capabilities through the development of regional and international frameworks for the Governance of frontier technologies and AI.

7. What can do the UN CSTD to support an economic transformation that enhances the productive capabilities of countries and foster an inclusive digital transformation?

The UN CSTD can support economic transformation by advocating for policies that promote digital economy, facilitating knowledge exchange and best practices, and providing

technical assistance to developing countries. By fostering partnerships between stakeholders and supporting initiatives that enhance technological skills, the UN CSTD can help countries build the necessary capabilities to achieve an inclusive and sustainable digital economic transformation.

Additionally, the UN CSTD can take the lead in raising awareness of policy makers about the needed policies and strategies to enhance AI and FT governance in MSs and can advise to develop instruments to measure the progress in enhancing AI and FT governance,