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IMF MENA Research Conference

Session 4:
The Green Transition, AI, and the Future of Jobs

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Triple Transition, Triple Risk

- **The green transition**, where governments are committing to net-zero goals that will reshape entire industries and labor markets
- **The rise of AI and digital technologies**, which is already altering how work is organized, who performs it, and what skills are rewarded
- **MENA's demographic pressure**, particularly a youth-heavy population navigating a constrained labor market, marked by high unemployment, skills mismatches, and persistent informality.

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Labor Market Pressure Points-Egypt

- Egypt's Labor Market Characteristics
  - High Youth Unemployment
  - Low Female Labor Force Participation
  - A Dominant Informal Economy

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Youth Unemployment

- Remains among the highest in the region
  - Unemployment rate for youth aged 15-24 is over 25% and over 30% for young women
  - Among university graduates, unemployment rates are even higher
- This is not due to lack of education, but lack of adequate labor absorption and limited quality job creation

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Low Female Labor Force Participation

- By international and regional standards, FLFP in Egypt is extremely low
  - Less than 15% of women are economically active
  - In rural Upper Egypt, FLFP can drop to under 10%
  - Among young women aged 18-29, 63% are NEET

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Large-Scale Informality

- The dominant employment reality for youth and women
  - Over 60% of employment is informal
  - Rises to over 85% among youth in rural areas and in sectors like agriculture, construction and retail
- Informality has become the structural defailt

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Skills Mismatch and Underemployment

- Many graduates are overeducated for the jobs they take — not because the jobs are good, but because they have **no better options**.
- At the same time, technical and vocational jobs in growth sectors like green construction, renewable energy, and digital logistics **remain unfilled** because of stigma, and poor alignment with training systems.

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Rural Youth Vulnerability to Climate Change

- **Rising temperatures and humidity correlate strongly with increased informal and insecure employment**
- Labor market fragility undermines **adaptive capacity**.
- Workers who lack basic protections, rights, and stability can not pivot easily into green or AI-enhanced employment.
- Labor market resilience to climate change:
  - Expanding rural skilling programs
  - Integrating climate-resilient vocations into technical training
  - Investing in social protection for informal rural workers

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AI and Automation in MENA

- AI will not displace all jobs, but will reshape its tasks
  - Low AI exposure
    - **Only 12%** of employed Egyptians in 2023 held jobs requiring computer skills
    - **Digital platform work** is still marginal (only 0.4% of jobs)
    - Unemployed women have **stronger digital skills** than employed men, but are **excluded from work requiring those skills**

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Who is Most at Risk?

- Routine white-collar jobs
- Female dominated jobs
- Automated inequality

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Green Economy and Skills Demand

- Green jobs are increasingly concentrated in sectors like:
  - Renewable energy
  - Climate resilient agriculture
  - Energy-efficient construction
  - Sustainable transportation and logistics
  - Waste manegement and circular economy
- **Only 7.8%** of jobs in Egypt qualify as green; 80% are in the **private sector**, and 86% are held by **men**
- Women in green private-sector jobs earn **EGP 41.9/hr** vs. **EGP 23.6/hr** in non-green roles.
- Yet **52% of women** in green jobs are underqualified — a clear **skills bottleneck**
- In Egypt, up to 1 million green jobs could be created over the next decade
  - Solar, desalination and sustainable farming

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The Gendered Nature of Green Jobs

- Among green sector employees in Egypt, 21% are women
- Green jobs are seen as physically intensive and technically advanced
- Women are underrepresented in STEM fields
- Many vocational institutions are not physically or culturally accessible to women

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Opportunities in Green and Digital Sectors

- Green construction and energy efficient infrastructure
- Sustainable agriculture
- Digital economy and ICT services

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Skilling for Mobility

- The demand for migrant labor — particularly **skilled and semi-skilled workers** — is increasing in key destination countries
  - ELMPS data shows that **educated, unemployed women** have strong digital skills — a resource for international job placement in care, ICT, or education sectors.
  - Green jobs with global applicability (solar panel installation, recycling systems, sustainable logistics) are **not yet mapped to migration pathways**
- Complementary strategy for national development
  - Creating **migration-ready green TVET programs**, targeting specific GCC/EU demand

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From Diagnosis to Action

- Scaling modular skilling with sectoral alignment
- Reform Migration governance
- Build a social compact for transition