



## 8<sup>TH</sup> GLOBAL COMMODITIES FORUM

# BUILDING SKILLS FOR SUSTAINABLE DEVELOPMENT

23–24 APRIL 2018

Room XXVI, Palais des Nations, Geneva, Switzerland



## Summary and Policy Recommendations

UNCTAD held the eighth Global Commodities Forum on 23-24 April at the Palais des Nations in Geneva. With its theme of “Building skills for sustainable development”, the Forum examined how developing skills and enhancing productivity in commodities sectors can contribute to diversification and long-term economic growth in developing countries, as well as increased incomes for small producers. The programme included an opening ceremony, four expert panels on skill-related themes and a special session on the role of natural gas in the energy transition.

On behalf of Secretary-General Mukhisa Kituyi, Paul Akiwumi, Director of the Division for Africa, Least Developed Countries and Special Programmes, underlined the broad consensus on the role of human capital as an engine of economic growth and development. He urged participants to move from this theoretical consensus to concrete action in commodity-dependent developing countries, building the skills and human capital necessary to transform their economies and achieve the Sustainable Development Goals.

The following three sections review cross-cutting themes echoed by panellists in the Forum’s different sessions. The final section concludes with three policy recommendations on these themes for developing countries.





## Developing human capital is a long, gradual process

Developing human capital is a long-term endeavour, as with the other building blocks of structural transformation, such as the rule of law, sound macroeconomic management and a conducive investment climate. Value-chain upgrading strategies rightly target high-skill, high-value activities over the long term, but training programmes must respond to skill needs at the intermediate steps along the way.

Duke University's Value Chain Centre proposes a helpful typology of human capital interventions over time, categorized as:

- Early interventions that scale up and improve “what exists”, in terms of programmes and capabilities, in collaboration with employers, including on-the-job training;
- Ongoing interventions that develop new products and processes, still in collaboration with the private sector, but also engaging research institutions; and
- Future interventions that anticipate the skills required to enter long-term target markets, delivered through the education system.

Although each of these interventions prepare for a different stage in value chain upgrading, they need not be sequential – a long-term human capital development plan should include all three types of interventions in parallel.

As well as being a decades-long process, developing human capital touches on a range of policy areas, including education, industry, labour and sector-specific policies. Coordinating these policies over decades requires leadership and formal government systems that allow policy makers and institutions to cooperate across mandates. Policy coherence is therefore a government-wide undertaking, with applications and benefits far beyond human capital development. Furthermore, policy coherence is a priority theme for many development partners, through which countries can access funds, best practices and technical support in these efforts.

## Public-private collaboration on demand-driven training is indispensable

Countries need to promote public-private collaboration when developing demand-driven training programmes. Private employers can help draft responsive curricula, recruit trainees and deliver on-the-job training. Public training institutions can gain valuable exposure to industrial applications of innovation and technological change. Over time, this public-private engagement can serve as a platform for dialogue on the adaptation of training programmes to meet evolving skill demands.

For technical and vocational education and training (TVET) to bridge the skills gap in the workplace, governments and training institutions must engage the private sector in setting programme curricula that respond to their skill demands. Empirical evidence also shows that successful technical and vocational training programmes typically involve on-the-job learning, in which employers collaborate with training institutions to offer direct training modules and internships. Furthermore, whereas many developing countries worry about seeing their investments in professional training – for doctors and nurses, for example – lost due the “brain drain” effect, technical and vocational skills are more tightly linked to domestic labour demand, meaning returns from investments in TVET programmes are more likely to be retained in the country.

Effective public-private collaboration on training is important in all economic sectors, but especially in oil, gas and mining, in which the fast pace of technological change is transforming employers' business models, including the skills they require in their workers. Training programmes designed solely by governments are rarely equipped to respond to the pace of these changes. In addition, the increasing prevalence of local content requirements in the extractive sector places pressure not only on foreign operators to meet local procurement and hiring quotas, but also on training programmes to deliver a sufficient number of trained graduates. If these programmes fall short, operators' quotas go unmet and local content requirements fail.



The Forum also recommends including business modules in multi-skill training programmes. Moving up regional and global value chains is crucial for commodity-dependent developing countries to transform their economies. Competing in markets for more technologically advanced goods and services requires not only technical capabilities, but also business acumen. Evidence shows that actors throughout the chain – farmers, entrepreneurs, firms and even engineers – are better able to capitalize on opportunities when they have business skills to complement their technical expertise. As a result, multi-skill training programmes, combining business, technical and vocational material, can help create more, better-paid jobs.

## **Natural gas has a backup role to renewables in the energy transition**

Achieving universal access to clean energy (SDG 7) and the targeted reductions of greenhouse gas emissions in Paris Agreement implies a profound transition in the sources of energy we use, as well as the systems that deliver them. Increasing the share of cleaner and renewable sources in the energy mix is the consensus priority in this transition. Beyond this, a country's context will determine the most suitable energy mix to support its transition.

Present-day renewable technologies are not ready to fulfil all demand segments, for example peak winter heating demand in cold climates, baseload electricity supply to cities or fuelling road and seaborne transportation. The energy transition therefore requires that countries employ other energy sources, over the short- and medium-terms, in applications for which renewables are not yet competitive.

Natural gas is suited to these complementary applications, as burning it emits less carbon dioxide than oil or coal and fewer particulates than biomass. Crucially, natural gas markets, technology and infrastructure exist today to efficiently replace coal, oil and biomass in many electricity and heating applications.

Natural gas is not a panacea, however. For example, no viable gas-based technologies currently exist to replace oil as the fuel for our road and seaborne transportation fleets. Also, the extraction and transmission of natural gas by pipeline is prone to leakage of methane, which is roughly 30 times stronger than carbon dioxide at trapping heat in the atmosphere over the long term. Therefore, if a natural gas grid's methane leakage isn't kept to a minimum, its cleaner-fuel argument dissipates.

National contexts will further determine the most suitable energy mix for a country's transition. For example, as a region, Europe has the highest regional share of renewables in power generation, at around 30 per cent in 2016. Nevertheless, 50 per cent of power is still generated from coal and oil. As a result, even as European countries steadily replace fossil fuels with renewables, they will also continue to develop natural gas as a parallel substitute. Meanwhile, China has attracted most new investment in renewable energy capacity in recent years and has steadily replaced its coal-fired power with natural gas or renewables. Nevertheless, in China and India, the two major demand growth markets, the bulk of installed infrastructure means that coal will retain an important place in the energy mix beyond 2030.

In general, Latin America countries started from a lower base in terms of renewables, but offer examples of an energy mix that balances current needs with future targets. Natural gas and oil are the main energy sources, while coal is mostly phased out. New investments range from conventional liquefied natural gas (LNG), to renewables, to controversial hydroelectric projects, as well as niche technologies, such as small-scale LNG for transportation and off-grid applications. Meanwhile, in the Least Developed Countries, most of them in Africa, the relative absence of energy infrastructure means there are some opportunities to "leapfrog" other countries' track dependency on fossil fuels. Nevertheless, the priority in LDCs remains to attract investment in infrastructure to expand access to energy – with renewables where possible, or with natural gas in a backup role.

These examples underline that countries must keep all options open, and create a stable policy environment, to arrange a diversified energy transition that balances their current needs with long-term targets.

## Policy recommendations

### Recommendation 1: Commit to a coherent, incremental approach to skills development

- Prepare for existing, impending and future needs in parallel, rather than sequentially, in a long-term human capital development plan.
- Undertake a government-wide policy coherence exercise, capitalizing on available support and best practices from development partners.

### Recommendation 2: Promote public-private collaboration on demand-driven training

- Enlist employers to help draft responsive curricula, recruit trainees and deliver on-the-job training.
- Establish mechanisms for knowledge sharing between instructors, researchers and on-the-job trainers.
- Include business modules to complement technical and vocational material in multi-skill training programmes.
- Establish training programmes with a critical mass of graduates before imposing local content hiring quotas for skilled jobs.

### Recommendation 3: Pursue a diversified energy transition

- Countries should prioritize renewables in their energy mix, but employ other energy sources, over the short- and medium-terms, in applications for which renewables are not yet competitive.
- Employ natural gas in a backup role to renewables, where it offers an efficient, lower-emissions transition from coal, oil or biomass.
- Invest in cost-effective energy infrastructure in LDCs, using renewable energy technologies where possible, or with natural gas in a backup role.
- Ensure a stable, forward-looking policy environment that allows the development of diversified energy investments and markets.

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