Managing commodity price volatility in commodity-dependent developing countries

By

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The views expressed are those of the author and do not necessarily reflect the views of UNCTAD.
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Commodity prices are highly volatile
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Volatility of wheat and cotton prices, 1961 m1-2023 m2

- First oil shock
- Global financial crisis
- COVID-19
Fuels, Minerals, ores and Metals have been the most volatile

Coefficient of variation of UNCTAD prices indices (Jan2000- May 2023)

- All groups: 0.38
- All food: 0.29
- Agricultural raw materials: 0.26
- Minerals, ores and metals: 0.42
- Fuels: 0.42
Drivers of commodity price volatility

- Geopolitical events
- Trade policy
- Exchange rates
- Demand
- Climate change
- Market transparency
- Technological change
- Supply
Multiple channels of impact on the economy

Commodity price volatility

- Growth volatility
- Terms-of-trade volatility
- Revenue volatility
- Capital flow volatility
- Exchange rate volatility

Uncertainty

- Lower investment
- Lower capital accumulation
- Slower growth
- Slower SDG progress

Terms-of-trade volatility
STRONG CORRELATION BETWEEN COMMODITY PRICES & GROWTH

UNCTAD Commodity Price Index and GDP per capita in developing countries excluding China, 1996-2021, (annual % changes)

Correlation coefficient = 0.62
The impacts of commodity price volatility at microeconomic level

Effects on households and firms

**Direct effects**
1. producer prices for agricultural commodity exports
2. food insecurity in Net-Food developing countries

**Indirect effects**
1. currency fluctuations: absorber or amplify shock
2. public investment and spending decline
How to manage the risks associated with commodity price volatility?
Financial instruments hedging commodity price risk

**Options** - Right but not the obligation, to buy (call option) or sell (put option)

**Futures** - Legal agreement to buy or sell a commodity, asset, or security

**Forwards contracts** - Customizable derivative contracts between two parties

**Swaps** - Agreement between two parties to exchange cash flows
Commodity exchanges market

- Regulated market platforms
- Improve market entry
- Price determination, risk management and trade facilitation
- Example: Ethiopian Commodity Exchange (ECX) and the Nigerian Commodity Exchange (NCX)
Commodity-linked bonds

- Coupon rates, repayments of principal or payment schedule linked to commodity prices
- Improve the ability to deal with price fluctuations, reduce fiscal vulnerabilities and promote long-term economic stability and sustainable development
- Challenges: market liquidity, elevated risk or novelty premiums, and political considerations.
Commodity stabilization funds & precautionary saving

**Stabilization funds**
- Protection against unexpected shocks and fluctuations in commodity revenues
- Counter-cyclical fiscal policy rules
- Example of Chile’s Economic and Social Stabilisation Fund

**Saving funds**
- Asset diversification to mitigate risk
- Example of Saudia Arabia
Information and communications technology (ICT)

Role of ICT

- Improve market transparency and provide timely and accurate information
- Improve supply chain management and reduce transaction costs

Benefits of ICT

- Reduce information asymmetries and promote great market efficiency
- Example of Agricultural market Information System (AMIS)
Long-term solution: Economic Diversification

- Reducing commodity dependency
- Mitigating associated risks
- Strengthening macroeconomic resilience
- Economic growth and development
Thank you!

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