

United Nations Trade and Development (UNCTAD)

**15th Multi-Year Expert Meeting on Commodities and Development
14-16 October 2024, Geneva**

Structural transformation through domestic value addition: Fuel commodities

**Claudine Sigam
Commodity Research and Analysis, Commodities Branch
UN Trade and Development (UNCTAD)**

The views expressed are those of the author and do not necessarily reflect the views of UNCTAD.

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16 October 2024

Geneva, Switzerland

Claudine Sigam

Commodity Research and Analysis

Commodities Branch

sigamc@un.org



Industrialization - Benefits to value addition



Optimize resource use

Increase the **unit value of processed products** derived from the commodity



Reduce dependence on raw commodity's price volatility

Empowerment by mitigating the impact of external market fluctuations



Increase product complexity

Foster **technological advancement, skills and capabilities and job creation**

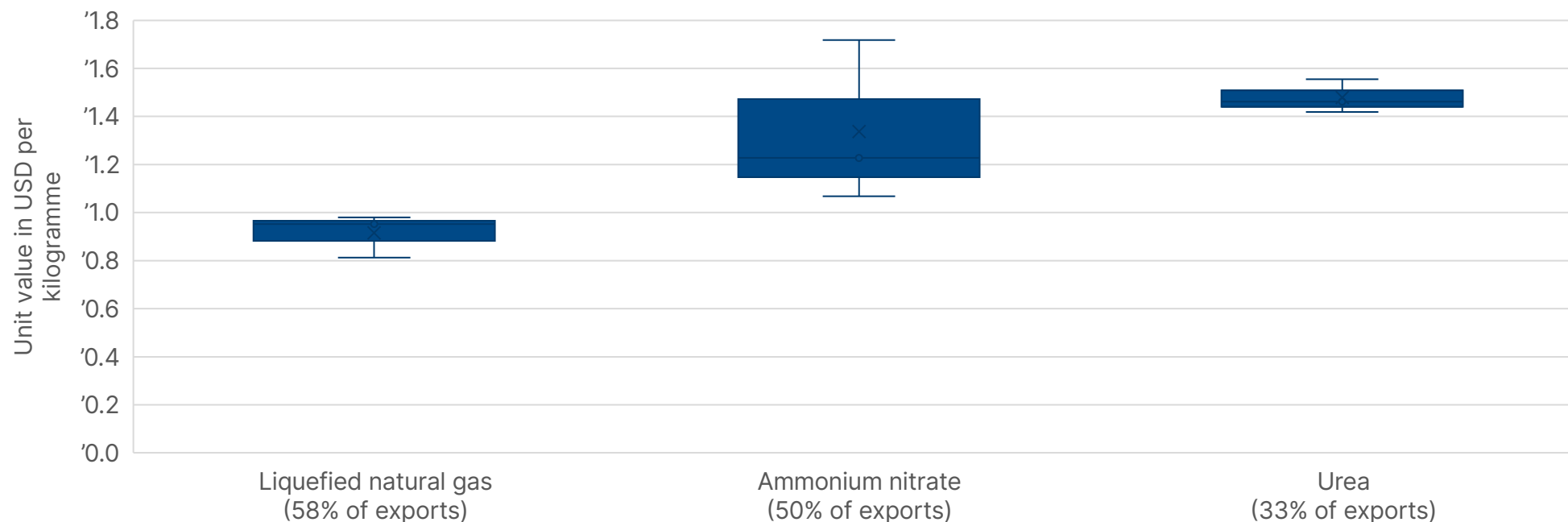


Seize the opportunities generated by the twin transition

Leverage **value chains** integrating decarbonization & digitalization (AI...)

➤ Processed products - Greater unit value

Unit value of top three exporting countries of liquefied natural gas and selected fertilizers, 2022 (USD per kilogramme)

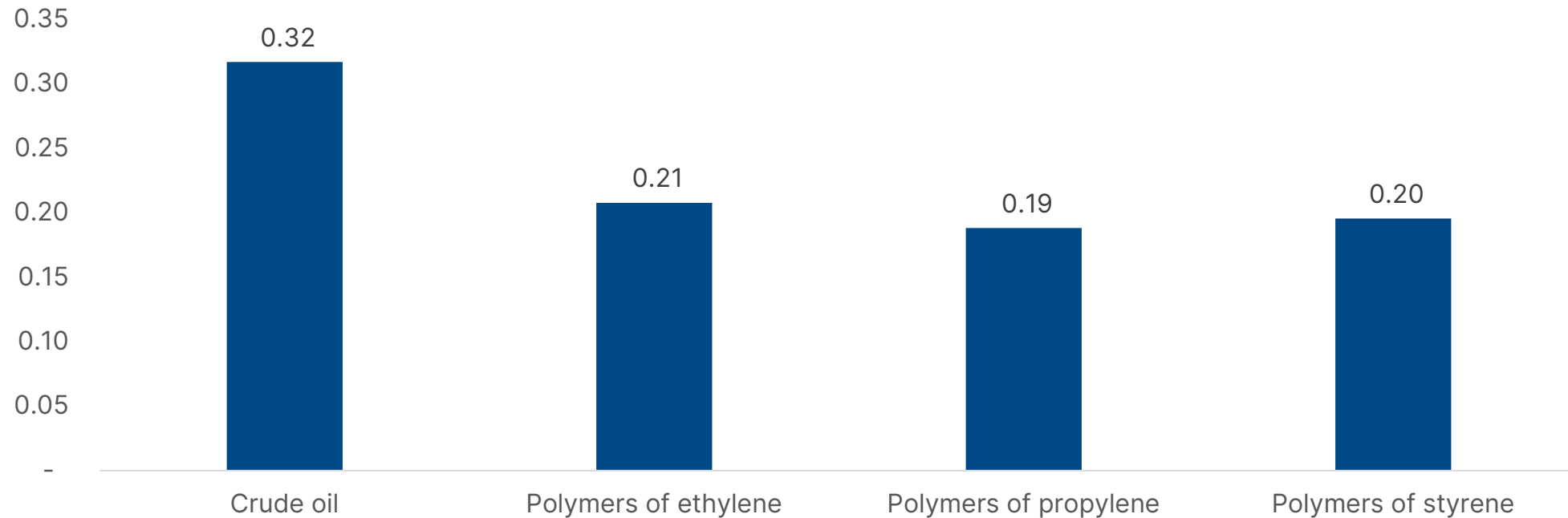


Source : UNCTAD secretariat calculations, based on data from the Comtrade database.

Note : The top three exporting countries are as follows: USA, Australia and Qatar for LNG; Russian Federation, Georgia and Bulgaria for ammonium nitrate; and Oman, Russian Federation and Qatar for urea. Unit values for different products were calculated using the following HS 6-digit level code classification: 271111 for liquefied natural gas, 310230 for ammonium nitrate, whether or not in aqueous solution, and 310210 for fertilizers, mineral or chemical; nitrogenous, urea, whether or not in aqueous solution. Unit value is calculated by dividing trade value by net weight.

➤ Processed products - Lower price volatility

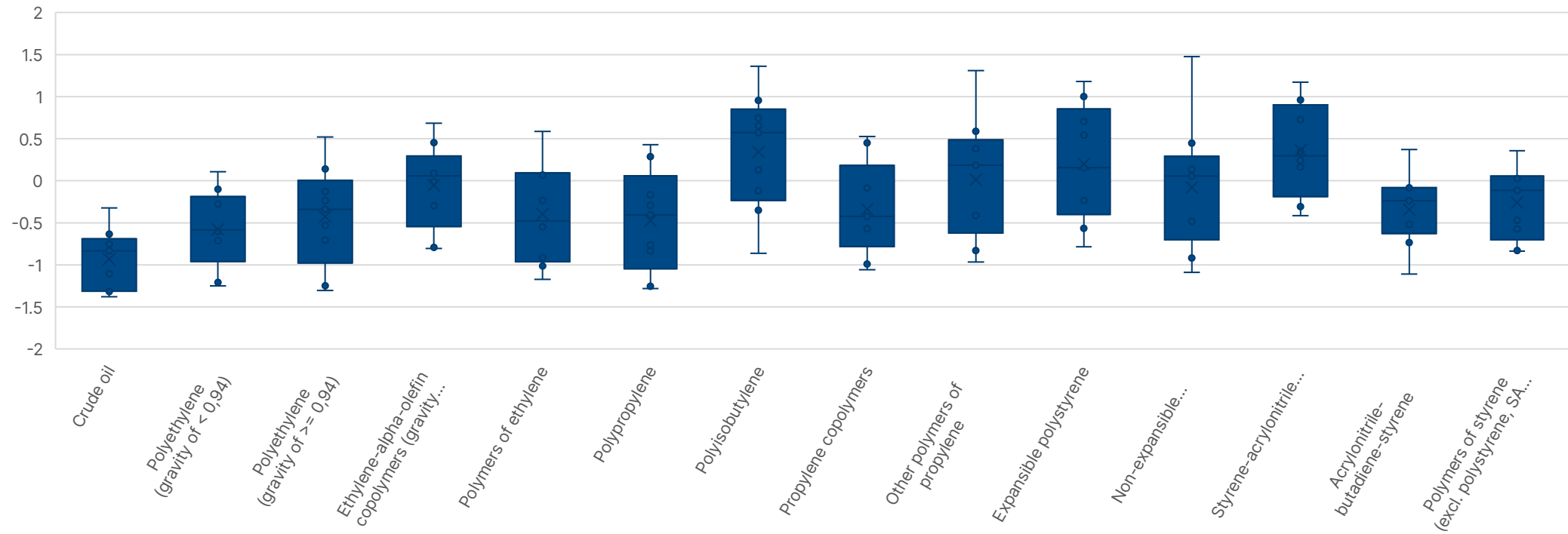
Price volatility of crude oil and different polymers, 2019-2022



Source : UNCTAD secretariat calculations, based on monthly data from the Comtrade database.

➤ Greater product complexity - Higher technological sophistication and value-added activities involved

Product complexity of crude oil and polymers, 2022



Source: UNCTAD secretariat calculations, based on data from the Comtrade database.

Note: A product complexity value of 0 indicates the average product complexity globally, and a value of 1 indicates the standard deviation

➤ In-country value addition – Identifying the invariants



Brazil's Ethanol Fuel Programme

National programme launched in 1975 amid global oil crises, to reduce dependence on imported oil :

- guaranteed purchases,
- low-interest loans,
- minimum blend mandates,
- plan gradual introduction of flex fuel technology

Lessons learned from Brazil Ethanol's example

- ▶ **Voluntarist policy: coherence and targeted measures**
- ▶ **Leveraging country-specific characteristics (e.g. market size for alternate vehicle fuels)**
- ▶ **Incentivising production, through guaranteed purchases and price fixing**
- ▶ **Forward and side linkages to other industries**

➤ **THE JUST ENERGY TRANSITION (JET) AND THE RISK OF STRANDED ASSETS**

- **AN EMERGENCY: THE CASE OF THE COUNTRIES IN THE PROCESS OF INDUSTRIALIZATION**
- **THE IMPLICIT HIERARCHY OF NORMS** – UN Economic and Social Rights (1966), Right to Development (1986), Sustainable Development Goals (2015).... and constraints of climate change
- **FROM STRANDED ASSETS TO STRANDED SKILLS**



THE JUST ENERGY TRANSITION AND THE RISK OF STRANDED SKILLS

- FROM « JUST » TO « EQUITABLE »
- ADVANCEMENT OF RESEARCH & TECHNOLOGY AT STAKE
- THE COST OF STRANDED SKILLS
- THE IMPERATIVE OF RESKILLING

➤ Domestic policy considerations

- **Regulatory frameworks** aligned with national development plans
- Human capital and **capacity building**, through curriculum updates, partnerships and training
- Investing in **infrastructure**, including industry-specific facilities for processing
- **Industrial parks** and special economic zones
- **Public-private** partnerships
- Incentive packages for **attracting investments**
- Financial instruments to facilitate **access to credit** and capital
- **Regional value chains** and cooperation
- **Environmental and social safeguards**

At the international level...



Regional trade agreements



Technology transfer and knowledge sharing



Regional cooperation in human capital development



International investments in infrastructure



International standards

Thank you

