

Curbing Illicit Financial Flows in Commodity Trade and Beyond

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Abstract

Establishing a more transparent, effective and equitable and framework for trade and taxation is crucial to enabling commodity exporting states to mobilise domestic resources for sustainable development. The current drive to reform the global governance of taxation offers opportunities, but takes place in the context of heightened North–South tensions, reduced trust in multilateralism and calls for deeper decolonisation. Drawing on a six-year multidisciplinary research project involving academic institutions from commodity exporting and trading countries, this chapter presents a research framework that the authors used for the study of illicit financial flows associated with commodity trade. It discusses major findings, and recommendations as to how to counter the ensuing tax base erosion in resource-rich developing countries. The latter can consider a range of policies and innovative measures to rein in commodity trade mispricing. But this is not enough. States hosting major trading and financial centres have to simultaneously address a range of pull factors. At the global level, fair taxation reform is key and must preserve a sovereign policy space, in which commodity exporting states may adopt context-specific solutions aligned with their institutional capacities. Finally, this chapter introduces the thematic volume of *International Development Policy* on illicit financial flows in the commodity sector and beyond.

1 Introduction

‘We don’t know the situation in your country. It’s *you*: *You* have to make regulations for your country. Not we in Switzerland.’ This is the response provided before the Swiss parliament in Bern by an elected member of a centre-right political party to a question posed by a journalist from Ghana. The latter was shooting a documentary film on the capacity of resource-rich developing countries such as Ghana to mobilise domestic resources to finance sustainable development. The documentary film involved researchers and advisers from a

multidisciplinary North–South consortium who studied the magnitude, root causes and major channels of illicit financial flows (IFFs) accruing from the mispricing of commodity trade.¹

While it is true that each sovereign state is expected to enact legislation to protect and advance its own interests, is this good enough to address IFFs? For example, do resource-rich developing countries have the policy space and the institutional capacity to adequately regulate the extraction and sale of their own natural resources? Do they have the ability to detect and identify the amount of commodity trade mispricing and abusive transfer pricing affecting their own country? If so, do they have the agency required to take the necessary corrective measures? In other words, is it enough to ask commodity-dependent developing countries to curb the push factors driving IFFs? Or should the pull factors be simultaneously tackled in major trade and financial hubs, and if so, how?

These are questions addressed by a group of economists, legal scholars and political scientists based in academic institutions in Ghana, Laos and Switzerland, led by the guest editors of this thematic volume of *International Development Policy*.² We have approached this complex, multifaceted phenomenon from a global perspective as well as through country cases and commodity-specific studies. Our overarching analytical framework consisted of looking at the whole value chain from extraction to consumption via trade and transformation, combined with an actor analysis focusing on the role and preferences of key stakeholders along that value chain, be it as regulators and policymakers, as policy implementers, as informants and data sources and generators, or as advocates and influencers.

In this thematic volume, we present selected findings from our North–South research consortium between 2018 and 2023 and discuss entry points for future

1 Koomsom, F., dir. (2024) *Missing Dollars: How Illicit Financial Flows Affect Developing Countries* (Geneva: Geneva Graduate Institute), available at <https://www.youtube.com/watch?v=5CUDoR8eeXo> (accessed on 13 February 2024).

2 The project includes researchers from the Institute of Statistical, Social and Economic Research (ISSER) at the University of Ghana, the Lao National Institute for Economic Research (NIER), The Geneva Graduate Institute of International and Development Studies, the Swiss Federal Institute of Technology ETH Zurich, and the Center for Development and Environment (CDE) at the University of Bern. The guest editors acknowledge financial support through grant 400340_169564 from the Swiss Programme for Research on Global Issues for Development (r4d.ch) jointly funded by the Swiss National Science Foundation (SNSF) and Swiss Agency for Development and Cooperation (SDC). They also gratefully acknowledge the constructive feedback of three anonymous reviewers on the papers in this thematic volume, as well as the editorial team of *International Development Policy* for generous and efficient support.

research on IFFs accruing from trade in commodities. The Volume looks primarily at trade in metals and minerals, situating it in the expanding academic literature and policy debates on IFFs and the governance of global taxation. Three contributions are from authors who were not part of our research consortium but have been associated as members of our international advisory group, whose members were invited to provide input throughout the six-year research project.³

2 Why Trade-Related IFFs Matter

There was not much to celebrate as the international development community gathered in New York in July 2023 to conduct a mid-term review of the Agenda 2030 for Sustainable Development. Halfway through, the Sustainable Development Goals (SDGs) are all off track globally. Initial progress on some SDGs, such as combatting hunger, has been reversed as a result of multilayered crises, including the socio-economic consequences of the COVID-19 pandemic, the impact of the armed conflict between Russia and Ukraine on food and energy prices, the accentuation of climate change resulting in more frequent extreme weather events, and the lack of sufficient means to finance the SDGs.

While official development assistance (ODA) and international climate finance remain largely insufficient, renewed high levels of indebtedness and tighter budgetary constraints combined with persistent IFFs prevent the majority of developing countries from mobilising the domestic resources required to pay for development in line with SDG Target 17.1.⁴ Paradoxically, this holds true particularly in the case of commodity exporting countries, which do not reap the benefit of selling their natural wealth to strengthen their tax base. Beyond corruption and criminal activities, IFFs accruing from trade mispricing and abusive transfer pricing were singled out as a major impediment to mobilising domestic resources for development at the very launch of the 2030 Sustainable Development Agenda (see, e.g., Kar and Spanjers, 2014; Carbonnier and Zweynert de Cadena, 2015). Indeed, IFFs erode the tax base of commodity exporters by shifting taxable income and profits towards major

3 See the project page at <https://curbing-iffs.org/the-advisory-group/> (accessed on 13 February 2024).

4 To the extent that ODA is not expected to cover more than 4 or 5 per cent of SDG funding requirements, curbing IFFs is critical to resource-rich developing countries being able to mobilise the domestic resources needed to implement the 2030 Agenda for Sustainable Development (Carbonnier, 2016).

trading and financial hubs that typically display lower tax rates and lax regulatory regimes. The international community also remains off track regarding SDG Target 16.4, which calls for IFFs to be significantly reduced by 2030.

As some guestimates have concluded that trade and transfer mispricing might result in 6 per cent of Africa's gross domestic product (GDP) leaving the continent in the form of IFFs (Kar and Spanjers, 2014), curbing such losses is of the essence for Africa as it goes through an unprecedented demographic boom and must invest billions in infrastructure, health, education and other social policies, and in leapfrogging in the development of a digital economy as well as creating shared, sustainable prosperity.

Delineating what falls under IFFs remains a contentious issue. Major multilateral fora such as the Organisation for Economic Co-operation and Development (OECD) define IFFs as cross-border financial flows that are illegally earned, transferred, or utilised. This implies that even in cases where the money is legitimately generated, it can become illicit if transferred abroad in violation of exchange control regulations, corporate tax law or international tax agreements (OECD, 2011). There are numerous ways to transfer illicit capital across borders, be it through the financial system, the physical movement of value in monetary or other forms, such as gold or precious stones, or the *mispricing of traded goods and services*. The last of these often materialises through firms underinvoicing commodity exports to reduce or evade corporate income tax and any potential export tax levied by commodity producer countries (UNCTAD, 2016). Export overinvoicing may also be practiced, for example to benefit from export subsidy schemes. Another important IFF channel is *abusive transfer pricing*, whereby affiliates of a multinational group over- or underinvoice intra-firm transactions for the purpose of tax optimisation. This shifts profits from higher- to lower-tax-rate jurisdictions, often resulting in significant revenue losses for developing countries.

Some cross-border financial flows may *prima vista* not violate the letter of the law but go against the spirit of the law. Aggressive tax optimisation measures are often situated in a grey zone between tax avoidance and tax evasion by exploiting loopholes in an evolving global tax governance framework. When one takes a closer look, some unlawful activity is generally involved, although it is not apparent at first sight. Defining what is unlawful requires considering not only domestic law but also the relevant principles and rules of public international law as well as legal developments in other jurisdictions. Legal scholars have argued that legal interpretation should take account of ongoing regulatory developments to ensure a level playing field between countries with stronger and weaker lawmaking and law enforcement capacity, as well as the extent to which certain practices have a detrimental developmental impact (Musselli

and Bürgi Bonanomi, 2020; UNCTAD, 2020). For example, cross-border financial flows associated with aggressive tax avoidance that siphon resources out of poorer countries will most likely contravene certain rules or principles of multilevel tax framework and fall within the scope of countering IFFs.

With the energy transition away from fossil fuels and the digitalisation of economies, the demand for critical minerals and metals is booming and shall represent a significant source of domestic revenue for producer countries (LeBillon, this volume). In this context, addressing commodity trade-related IFFs has become ever more critical with a view to strengthening the tax base of low- and middle-income countries (LMICs) where vast amounts of critical mineral deposits are located.

3 Policy Context and Scholarly Debate

Significant efforts have been made over the past decade to reform the global tax system and address the fiscal challenges posed inter alia by the digitalisation of the world economy. Efforts focused on the economic activities of both individuals and multinational corporations. Looking beyond the commodity sector, major advances include an international agreement to exchange tax information, which entered into force in 2017, and an agreement on a global minimum corporate tax rate of 15 per cent, made in 2021. Both agreements have been adopted by more than a hundred countries.

3.1 Global Tax Governance Reform

In its Report *Global Tax Evasion 2024*, the European Union (EU) Tax Observatory sought to evaluate the impact of these new policies on reining in tax evasion by high-net-worth individuals and multinational corporations. The authors estimate that the automatic exchange of banking information may have contributed to reducing offshore tax evasion by a factor of three: from some 90 per cent of undeclared financial wealth held offshore in 2013 to only 27 per cent of undeclared wealth held offshore in 2022. While households continue to own the equivalent of 10 per cent of the world's GDP residing in tax havens globally, with an estimated USD 12 trillion in wealth held offshore in 2022, the share of it evading taxation has sharply declined. Various recent proposals⁵ have been

5 For example, the EU Tax Observatory recommends introducing a new global minimum tax equal to 2 per cent of the wealth of ultra-high-net-worth individuals, which would generate close to USD 250 billion in receipts (EU Tax Observatory, 2023). By November 2023, the US Senate had started considering the introduction of a Billionaires Income Tax. See United

put forth by researchers and think tanks to levy taxes on ultra-high-net-worth individuals—that is to say, on the 2,800 billionaires who enjoy extremely low personal effective tax rates as they end up paying the equivalent of 0 to 0.5 per cent of their overall wealth in yearly personal income and wealth taxes (EU Tax Observatory, 2023, 12–13).

While the ‘data big bang’ associated with the automatic exchange of tax information by banks—and the further exchange of data frameworks (Musselli and Bürgi Bonanomi, 2018)—had a highly significant impact on cutting down households’ tax evasion, this has not been the case with the ambitious corporate tax policy reforms undertaken since the OECD/G20 launched the Base Erosion and Profit Shifting (BEPS) initiative in 2015. As in the past, about a trillion US dollars of corporate profits were shifted to tax havens in 2022. This is the equivalent of 35 per cent of all corporate profits earned abroad by multinational companies globally. The revenue losses for states are significant, and amount to nearly 10 per cent of global corporate tax revenues (EU Tax Observatory, 2023, 8–9).

The BEPS project rests on two pillars: the first is to ensure that companies pay taxes in the jurisdiction in which they perform significant economic activities; the second sets a global minimum tax rate on corporate profits for the first time. Despite this landmark, 2021 agreement—involving over 140 countries and territories committed to introducing a minimum corporate tax rate of 15 per cent (OECD, 2021)—the deal has been watered down by a range of loopholes, such as the preferential treatment of refundable tax credit, the exemption of domestic profits of US multinationals, and a significant carve out whereby states can keep tax rates below 15 per cent for firms establishing significant production activities in their jurisdiction, allowing such firms to deduct a share of their assets and payroll from taxation in the first year (Cobham et al., 2021).

Notwithstanding efforts by the OECD to include lower-income countries as participants in its standard-setting bodies on an ‘equal footing’, there have been heated debates on the extent to which OECD-led processes allow for the meaningful participation of developing countries, many arguing that the United Nations (UN) offers a more inclusive framework (Hearson, 2023; Picciotto, 2023). On December 30, 2022, the UN General Assembly adopted a Resolution on ‘Promotion of inclusive and effective international tax cooperation at the United Nations’ (UNGA, 2023) and mandated a process to consider a UN tax

States Senate Committee on Finance, 2023, <https://www.finance.senate.gov/chairmans-news/wyden-leads-democratic-colleagues-in-introducing-billionaires-income-tax> (accessed on 13 February 2024).

cooperation framework or instrument. In November 2023, the UN General Assembly adopted a Resolution to start working on a new Tax Convention under UN auspices, giving LMICs greater decision-making power over global tax issues.

In a nutshell, what seemed utopic a decade ago regarding reducing tax evasion by high-net-worth individuals and setting a new framework for corporate taxation became reality. Yet little or no progress has been made regarding reducing corporate profit shifting, notwithstanding the BEPS process and the introduction of country-by-country reporting. Proposals to implement a higher minimum corporate tax rate or to lift the expanding list of exemptions have little chance of success politically, at least in the medium term. Scholars have long argued that properly addressing profit shifting requires doing away with the fiction of individually taxing the affiliates of a multinational corporation as *separate entities* and adopting instead a unified approach of global firms with value-chain subdivisions (unitary taxation) to tackle the root cause of the problem (Picciotto, 2023; Musselli and Bürgi Bonanomi, 2020).

In particular, trade mispricing remains a major IFF channel that erodes the tax base of many countries. *Trade mispricing* refers to trade at distorted prices with the intention of boosting company profits and/or deceiving tax/customs authorities. It includes misreporting the value, quantity, or nature of traded goods or services (*trade misinvoicing*). It also includes manipulating prices between related companies (*transfer mispricing* or *abusive transfer pricing*) (Musselli, Bürgi Bonanomi and Lannen, 2021).

Trade and transfer pricing is legal as long as such transactions are handled at fair market prices in line with the arm's-length principle. For tax authorities, it is often difficult to establish fair market price ranges, particularly for non-tangible products and services such as licences or advisory, management and marketing services. Abusive transfer pricing may involve a parent company overcharging for such services, the overpricing of patent fees, or the undervaluation of raw materials exported by an affiliate to a parent company within the same group. Empirical studies show that multinational enterprises tend to shift profits in response to tax differentials between countries, next to other internal and external incentives such as the existence of thin capitalisation rules or effective mineral auditing agencies (see, e.g., Arezki, Rota-Graziosi and Senbet, 2014; Marur, 2019; Mehrotra and Carbonnier, 2021). At the policy level, the home countries of multinational enterprises have, for the last three decades and through the OECD, successfully defended arm's length-based transfer pricing methods as being international best practice. In doing so, they have sidelined any substantial debate over alternative, simpler approaches to

establishing transfer prices that would benefit developing countries (Brugger and Engebretsen, 2020).

3.2 *Assessing Trade Mispricing*

To assess the volume of trade mispricing, economists have long resorted to mirror trade statistics, which consist of capturing the gaps in macro trade statistics reported by exporting and importing countries for the same commodity for any given year. Following this approach, Global Financial Integrity (GFI)—a Washington-based research and advisory organisation pioneering work on IFFs—estimated that trade mispricing had already surpassed USD 100 billion in annual lost tax revenues for developing countries in the early 2010s (Kar and Spanjers, 2014). The High-Level Panel on Illicit Financial Flows from Africa—chaired by former South African President Thabo Mbeki—estimated that African countries had lost more than USD 50 billion annually to IFFs between 2000 and 2008 (Mbeki, 2015), which exceeds the total ODA granted to the continent over the same period.

Mirror trade estimates have depicted IFF volumes of over 4 per cent of the world's GDP and up to 6 per cent of Africa's GDP. These estimates have, however, been challenged with regard to their inaccurate aggregate trade data, questionable underlying assumptions and weak methodology (GFI, 2017). Mirror trade analysis typically assumes that trade data provided by customs authorities in developing countries is incorrect while that released by industrialised countries is accurate. This does not provide a rigorous basis on which to ascertain the magnitude of IFFs, particularly given that the data often fails to capture merchant trade, whereby commodities do not enter the customs territory of the trading partner, or product heterogeneity. Commodity traders and tax authorities have been quick in challenging the ensuing IFF guesstimates.

Price-filter methods provide an alternative approach that is being used ever more often in the academic literature. Price-filter analysis establishes a fair or 'normal' reference price range for product-specific transactions to identify those that appear abnormally underinvoiced or overvalued. It is possible to add additional layers of analysis to account for product heterogeneity, such as information on the purity grade of specific metals and minerals extracted from different mine sites. This allows analysis to capture the fact that unit prices within a product category such as unwrought gold doré may vary greatly for reasons such as differences in gold content, even if they are all recorded under the same customs category. Doré bars can indeed contain between 2 and 95 per cent pure gold, the balance being made up of silver, copper, other base and platinum group metals and impurities. Unwrought gold is then traded by intermediaries or directly transported by the mining companies to precious metals

refineries to be purified up to 99.99 per cent. Conducting detailed price-filter analysis often requires researchers obtaining access to confidential or proprietary data and signing confidentiality clauses. Besides, such data does not systematically report whether the trade transaction happens between related or unrelated parties—so, whether a given trade transaction involves abusive transfer pricing risks. Gaining insights from commodity traders as well as from tax and customs authorities in host and home states helps one more accurately evaluate the scale of commodity trade-related IFFs (see Carbonnier and Mehrotra in this volume for a detailed discussion on data and methods).

Beyond formal trade, commodities are often exported informally. Such transactions are not documented and they do not appear in export statistics. This holds particularly for gold mined by artisanal and small-scale producers, which are prevalent in at least 50 countries, but also for soft commodities like coffee in Laos. Typically, commodities are smuggled or otherwise illegally exported, or illegally produced commodities are legalised before/through formal export. Understanding the push and pull factors that incentivise informal trade, the mechanisms of such exports, the interfaces between the formal and informal realms and the actors facilitating these interfaces is a first step towards expanding the share of formally traded commodities (see Brugger, Proksik and Fischer, 2024; Brugger, Zongo and Proksik, 2024 for case studies on Bolivia, and Burkina Faso, respectively).

4 ‘Curbing IFFs in Commodity Trade’: Research Project Set-Up and Findings

The collection of chapters that make up this thematic volume draws on a six-year research partnership that includes the disciplinary fields of economics, law and political science.⁶ Mixing theoretical inputs with country case studies, the research project covered a variety of topics that showcase the multifaceted dimensions and complexity of IFFs as a phenomenon and the need to carefully consider the interactions between various policy responses and practical recommendations.

While research in this area tends to adopt a mono- or bi-disciplinary approach to estimating the magnitude of IFFs and the effectiveness of policy responses thereto and assessing global tax governance reform and policy

6 The publications generated by this research project are available on the project website: <https://curbing-iffs.org/publications/> (accessed on 13 February 2024).

options open to LMICs, our research project provides an interdisciplinary perspective on IFFs, with a focus on trade in soft and hard commodities. Grasping the interactions between push and pull factors and the incidence of various incentives and obstacles associated with a variety of regulatory and policy frameworks has required collaborative efforts, including from the fields of law, economics and political economy analysis. It has also necessitated greater cross-sector engagement between scholars, policymakers, trade practitioners and civil society groups from various regions able to address the feasibility and effectiveness of various options in different institutional settings, such as a socialist state with a controlled economy like Laos or a market economy like Ghana.

4.1 *Analytical Frameworks*

A unifying analytical framework allowed for the bringing together of different disciplinary approaches. It consists of two perspectives. The first (Figure 1.1) focuses on how trade and taxation are governed at and between the global, regional and national levels. This system comprises international agreements and soft laws such as transfer pricing methodologies, most brokered by the OECD, bilateral treaties regulating mainly foreign direct investment, and national laws and regulations in home and host countries. Together, they build a regulatory patchwork with overlaps, ‘underlaps’, different, sometimes even contradictory, incentives, risks, and opportunities that invite treaty shopping and regulatory arbitrage between jurisdictions.

The second perspective focuses on the value chains of particular commodities in specific countries, from extraction to consumption via transformation and trade (Figures 1.2 to 1.5). These value chains are embedded in the regulatory architecture featured in the first perspective. The interpretation and implementation—or not—of the regulatory framework in time and space along a value chain determine real-world tax and IFF outcomes.

The operationalisation of the methodological framework builds on a joint actor mapping along the value chain, as illustrated in Figures 1.2 to 1.5. Starting from this collective exercise, political scientists focus on the interests and policy preferences of key actors along the value chain, asking who gets their interests represented in rule setting and the negotiation of regulations, who generates, administers and controls data, and who intervenes to influence or bend the rules or to promote or restrict data access.

Legal experts map the regulatory landscape and assess the scope, interactions and interdependence of and between the local, national, regional and global levels, and where they create synergies or open loopholes. Legal

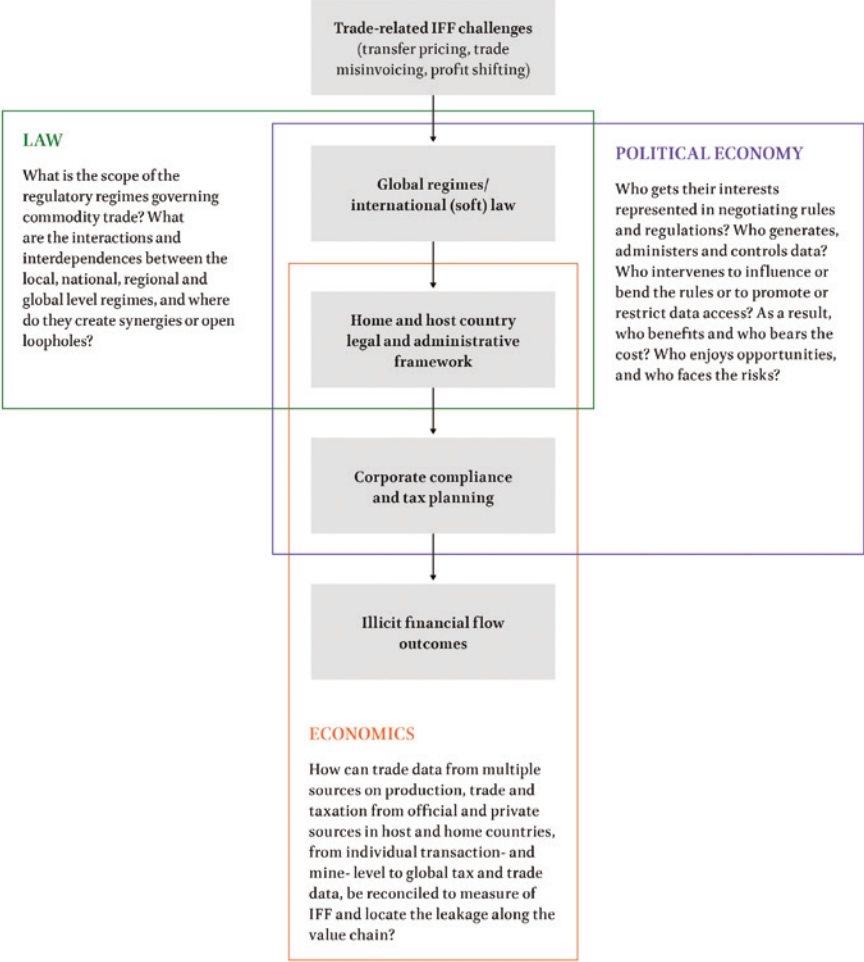


FIGURE 1.1 Conceptualising IFF push and pull factors and how they materialise in the commodity sector
SOURCE: THE AUTHORS

scholars also explore the existing policy space and evaluate as well as refine policy options in response to the weaknesses identified.

Economists use the analysis to identify, get access to and reconcile data from multiple sources on production, trade and taxation from both official and private sources in host and home countries, all the way from individual transaction- and mine-level data to global trade and financial data.

The cross-fertilisation between disciplines goes beyond the joint clarification and definition of IFF-related concepts and the complementary analysis

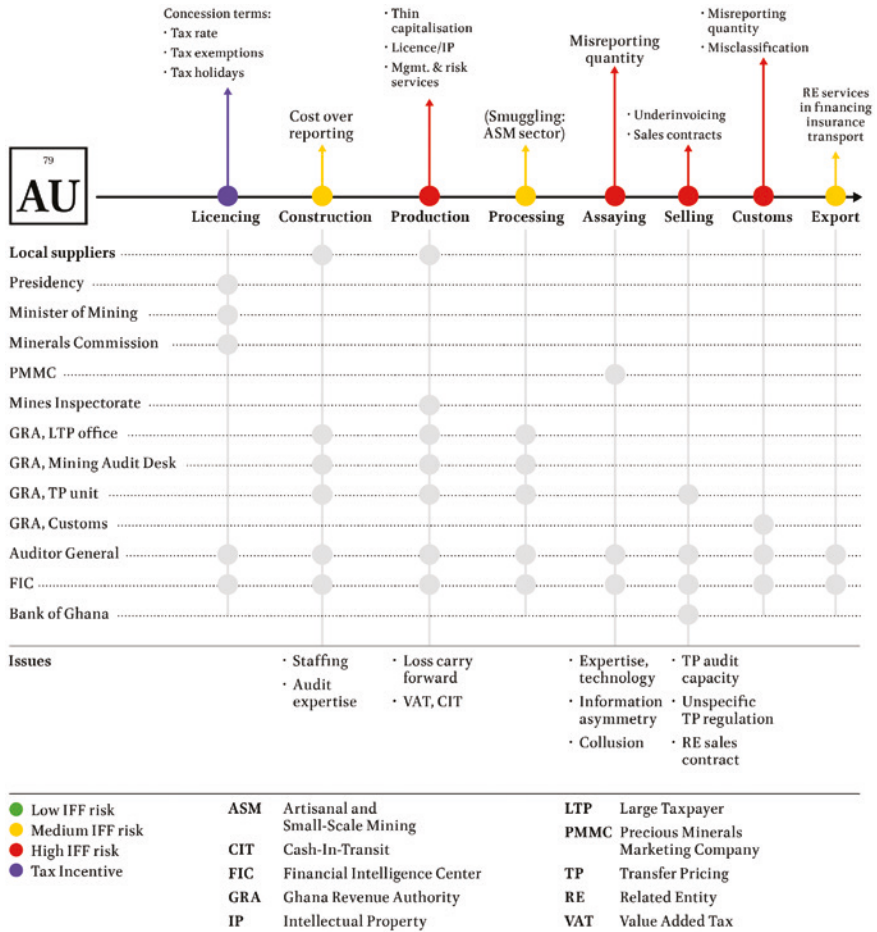
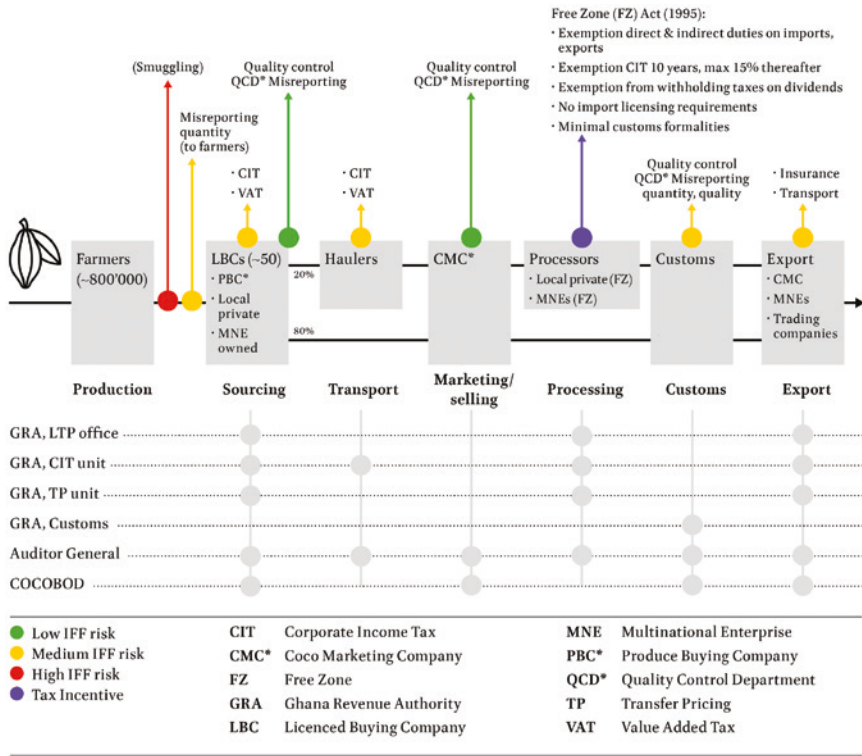


FIGURE 1.2 IFF risk analysis for the gold value chain in Ghana
SOURCE: THE AUTHORS

of the IFF phenomenon. Cross-fertilisation extends to the conceptual level, for example when economists borrow the ‘arm’s-length’ idea from tax law to develop the ‘fair price range’ concept for measuring IFFs. The transdisciplinary approach also advances the policy relevance of our research, for example when political scientists take the legal analysis of policy options (Musselli and Bürgi Bonanomi, 2021) and test, through a Q-study, “the policy space available for curbing IFFs” (Brugger and Proksik, this volume).

This last example also adds value to the heated debate over which policies are effective and should be pursued, a debate that slows down the progress of reform. Targeted transparency policies—that is, measures to improve access to



*COCOBOD subsidiary company

FIGURE 1.3 IFF risk analysis for the cocoa value chain in Ghana
SOURCE: THE AUTHORS

actionable information for tax authorities—find the strongest support across stakeholder groups. The strongest disagreement, meanwhile, is over whether low-income countries should take unilateral measures to curb IFFs. The parallel process leading towards a UN-based tax convention suggests that industrialised countries will benefit from shifting their policy stance from resistance towards more equal cooperation models. The case of the loosening up banking secrecy in Switzerland in 2017 suggests that such changes need not just be a losing or a zero-sum game, but can open new opportunities, even more so when policymakers anticipate them in a timely manner.

4.2 Specific Findings and Policy Recommendations for Home and Host States

Policy responses aimed at curbing cross-border profit shifting vary across governance levels and time: some can be implemented in the short run and

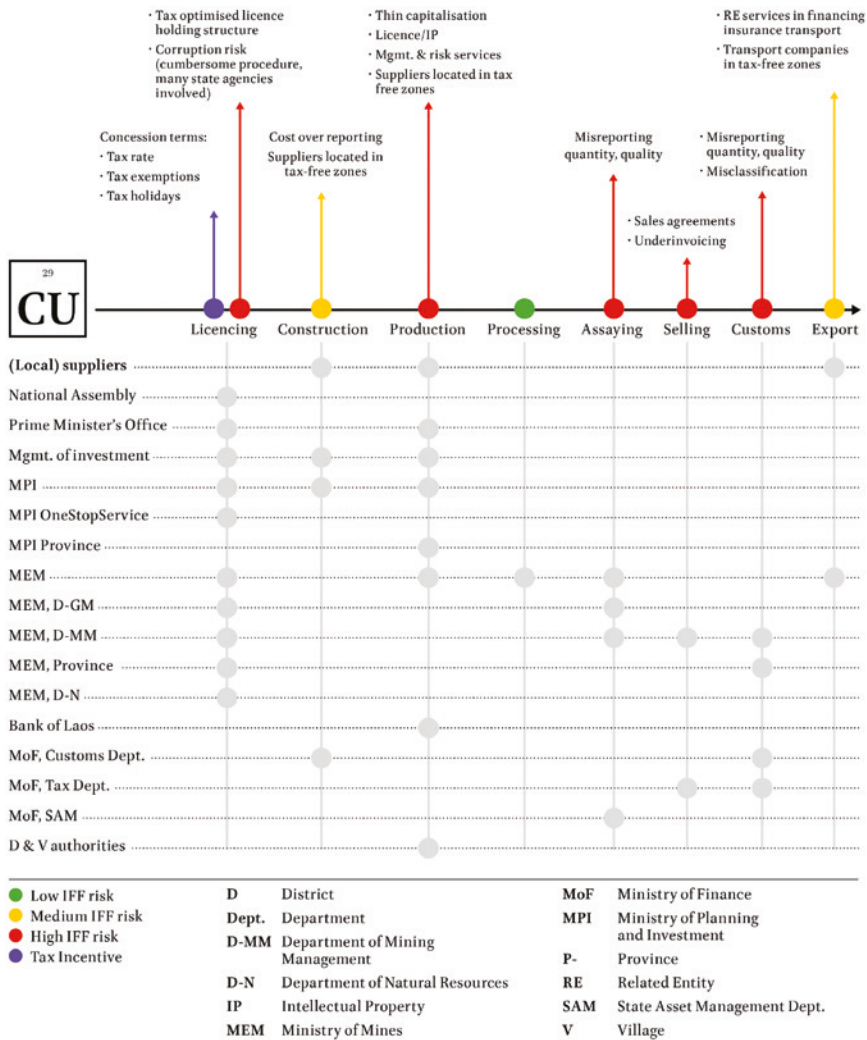


FIGURE 1.4 IFF risk analysis for the copper value chain in Laos
SOURCE: THE AUTHORS

seem to enjoy broad support in theory, such as improving data access and transparency. Other steps require deeper transformation and international cooperation, such as reforming the global corporate tax governance system as highlighted above. Several policy responses and technical fixes can be enacted individually by host and home countries, within limits set under international law as well as resource and capacity constraints.

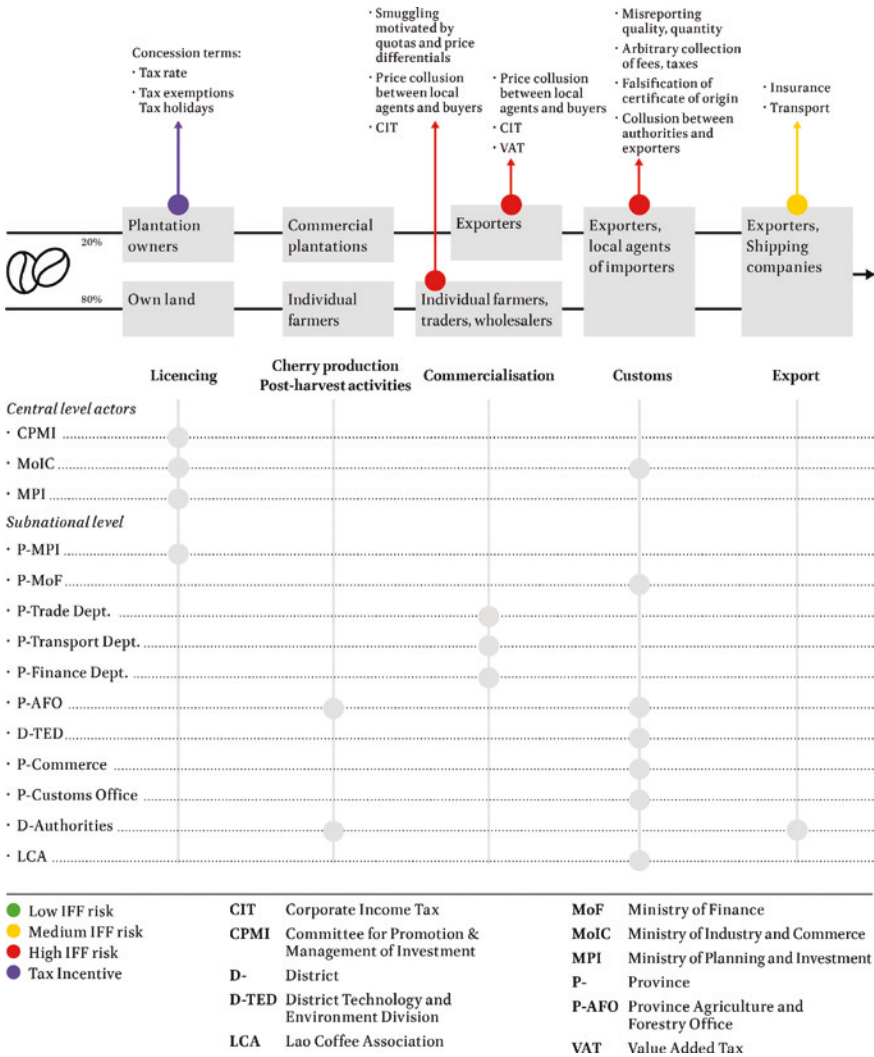


FIGURE 1.5 IFF risk analysis for the coffee value chains in Laos

SOURCE: THE AUTHORS

Beyond the international tax governance reforms referred to above, it is indeed crucial to look at policy responses and innovations that can be implemented *on an autonomous basis by host and home countries*. ‘Home’ refers to states where multinational companies are headquartered whereas ‘host’ refers to those in which foreign firms are producing or from which they are procuring commodities. Tax lawyers refer to them as ‘residence’ and ‘source’ states,

respectively—being aware that value chains are generally complex and that ‘home’ may also refer to the state in which subsidiaries are active.

4.2.1 Recommendations for Host States

In the research project, legal scholars from Switzerland, Ghana and Laos—jointly with the entire team—have identified a range of policy instruments with which *commodity-producing countries* may counter the mispricing of their commodity exports (see Musselli, Bürgi Bonanomi and Lannen, 2021; Musselli and Bürgi Bonanomi, 2021). Of particular importance are measures that can be taken relatively quickly. Based on a broad literature review and interaction with our Southern partners, the following approaches merit particular emphasis:

Technology-driven innovations to customs law enforcement:

- *Automated data matching* to prevent trade fraud. For example, commodity export documents can be systematically matched with import documents to uncover inconsistencies between recorded sale and purchase prices. Likewise, customs forms could be cross-checked with income tax returns filed by buyers in importing countries to check for potential discrepancies. Standardisation across jurisdictions will be required.
- *Improving the valuation of minerals*, whereby low-income countries could contractually require mining companies or commodity buyers to pay for pre-shipment inspection for quality, quantity and price or levy a fixed annual fee for independent quality inspection.
- *Use of ‘smart’ technologies* to detect meddling with physical commodities or documentation in transit: *electronic seals* to replace single-use mechanical seals on cargo containers, *smart containers* equipped with tracking devices and sensors, *fixed scanners* to support customs clearance by scanning containers faster and more systematically and *blockchain technology* to provide an unalterable record of commodity transactions.

Prescriptive approaches to taxation, respectively simplified transfer pricing methods to taxation, are important alternatives to consider for low-income countries with limited resources to acquire the technology and capacities to administer transfer-price and trade-invoicing controls. Our South–North research enabled us to develop and test innovative legal responses such as prescriptive approaches adapted to differing contexts, and several approaches can be applied to deter price manipulation:

- The so-called *sixth method* has been applied, for example, in Zambia, whereby mining companies are required to use publicly quoted benchmark prices as a basis upon which to determine the transfer price of mineral commodities.
- *Administered pricing*, whereby a trusted committee of experts mandated by the government—instead of by the companies concerned—can directly establish the value of commodity-related transactions for tax purposes. Norway uses such an approach for its oil exports.
- *Referencing in contracts*, whereby countries can mandate the use of relevant reference prices or price formulas directly in commodity sales contracts. Alternatively, exporting countries can apply *fixed profit margins and markups* to certain types of transactions or specific lines of business. As applied under Brazil's transfer pricing law, the accepted arm's-length price for commodity exports between related parties is the resale price in the destination country minus a fixed profit margin.
- *Restricting deductible taxpayer costs*, for example regarding interest and royalties paid by local mining companies to offshore entities, so as to preserve the tax base of the countries from which commodities are actually sourced.

Such prescriptive methods offer practical means of countering trade mispricing and profit shifting. Challenging the argument that prescriptive pricing methods would per se breach international trade and tax rules, we have instead argued that there is legal scope for prescriptive pricing methods under international economic law (Figure 1.6).⁷

4.2.2 Recommendations for Home States

Home country responses are equally important. For instance, the Swiss commodity trading industry and its regulatory environment has come under increasing scrutiny after revelations from the so-called Paradise Papers pointing to opaque commodity deals. This raises the matter of home countries' responsibilities to enhance transparency in commodity trading and establish an adequate legal framework to prevent IFFs.

Short-to-medium-term home country responses include increasing the transparency of relevant trade and tax data and enhancing information exchange with low-income countries.

⁷ Drawing on market theory, we argue for a hybrid form of market-based price regulation and public-private models of supply chain governance (Musselli and Bürgi Bonanomi, 2022).

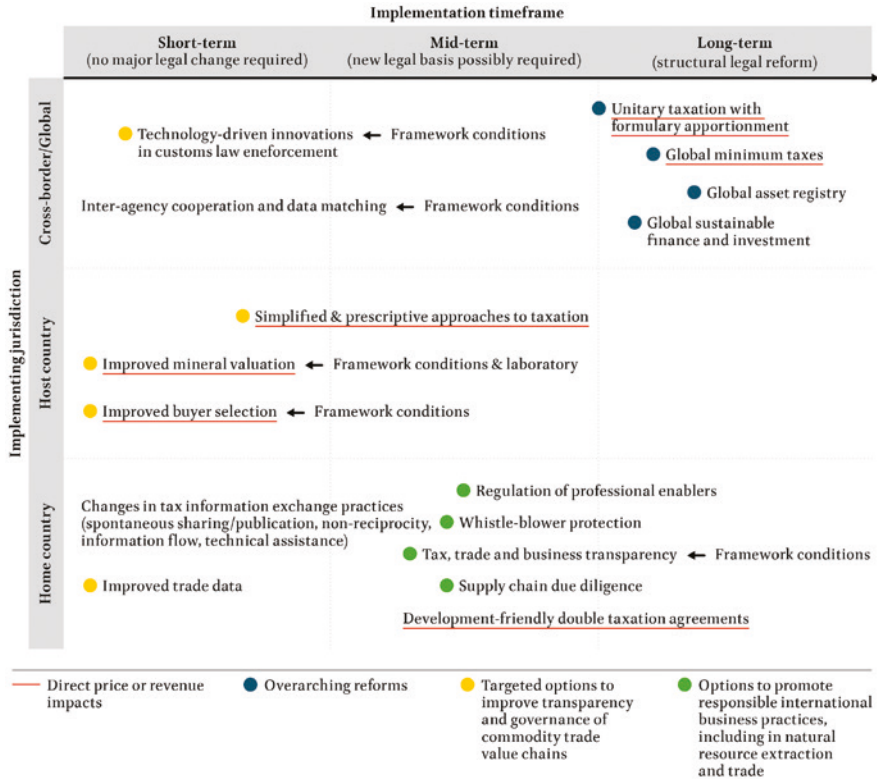


FIGURE 1.6 Implementation time frame and jurisdictions
SOURCE: MUSSELLI AND BÜRGI BONANOMI (2021)

- *Trade transparency at a disaggregate level* is a precondition for both rigorous academic research into and informed public debate about trade-related IFFs, their magnitude and the effectiveness of various policy responses. Product categories under the Harmonized System (HS) managed by the World Customs Organization should be specific enough to reduce product heterogeneity within the same 6-digit HS tariff line such as in the case of unwrought gold raised earlier.

CARBONNIER and MEHROTRA, 2024

- *Tax transparency regarding business structures and payment contracts.* Despite a sophisticated framework of exchange of information in tax matters in Switzerland for example, a variety of procedural rules and principles limit the use of exchange-of-information mechanisms for investigating commodity trade mispricing;

Among the many hurdles, the information exchanged may only be used for the purpose for which it is intended in the exchange agreement, which is often confined to the assessment of income and capital taxation, not customs duties; stringent rules constrain the flow of information between tax, customs, and other administrative units.

MUSSELLI and BÜRGI BONANOMI, 2018, 11

Supporting the flow of information between tax and customs units in the partner country and making greater use of country-by-country reports can bring improvement. Switzerland could also renounce reciprocity requirements, and use the data generated through exchange procedures for measuring progress in achieving SDG Target 16.4—dealing with IFFs.

- Applying corporate criminal offence regulation in cases of facilitation of tax evasion and extending anti-money laundering regulation to non-financial service providers such as legal consultants, with the introduction of penalties for enablers of aggressive tax avoidance schemes. Such enablers involve tax lawyers, accountants, fiduciaries, notaries and other service providers benefitting financially from designing, marketing or otherwise facilitating cross-border tax avoidance or evasion schemes. Greater international cooperation in cross-border tax matters in this regard is important, together with mandatory disclosure of such schemes.

MUSSELLI and BÜRGI BONANOMI, 2021

Research carried out specifically in Laos on mineral and agricultural exports included a study on the legal environment required to address trade-related IFFs and trade mispricing in the Association of Southeast Asian Nations (ASEAN) and its member states. Findings confirmed the validity of the recommendations outlined above regarding the strengthening of the legal framework and enforcement mechanisms. They also pointed to the adoption of international best practices. Collaboration across government agencies is required to ensure effective information exchange with trading partners, to carry out audits, and to facilitate technology-driven data analysis with a view to identifying and reining in potential tax evasion, tax avoidance and abusive transfer pricing. In parallel, capacity building is essential to efforts to strengthen the expertise of customs, tax, and trade officials in natural resource exports, price hedging and commodity valuation (see Sisouphanthong et al., this volume).

The research process conducted in Ghana uncovered mixed preferences and responses from policymakers and practitioners. Engagement with the Customs

Division of the Ghana Revenue Authority at the beginning of the study produced evidence on trade mispricing that has an immediate impact on improving data collection and the implementation of procedures to ensure more stringent verification of data provided by business entities. Feedback from our Ghanaian research team strengthened the understanding of the relevant authorities regarding the negative impact of remaining loopholes on identifying trade mispricing and reducing the ensuing IFF risks. Engaging with the relevant stakeholders in Ghana throughout the six-year research project has also led extractive industry officials and national statistical and tax authorities to cooperate with a view to enhancing the reliability and accuracy of data collection systems. That said, some actors expressed strong disagreement or outright opposition to our research work. This was the case for the revenue authorities and mining industry umbrella groups, who were concerned that study findings would give them bad publicity, particularly during media engagements. An important lesson learned was the need for even closer engagement with national tax and revenue authorities and the extractive sector for knowledge sharing to minimise some of the antagonism towards the domestic dissemination of research results.

4.3 *Implications for Future Research*

Six-years of North–South research has confirmed the importance of involving research institutions as well as the relevant governmental agencies in commodity-dependent developing countries from the outset. This is key to helping strengthen domestic capabilities to identify and effectively address IFFs from a host state perspective, including the testing and implementation of home-grown solutions.

Informing the public policy debate in Ghana, Laos and Switzerland and globally proved useful, including in promoting greater transparency and access to relevant data. Broader informed public debate can play an important role in heightening that momentum. Greater engagement across disciplines, in particular between tax lawyers and social scientists, has proved useful in capturing the political feasibility of and specific obstacles related to policy and regulatory options in specific legal domains and jurisdictions.

With ‘sustainable finance’ and investment expected to play a greater role in climate change mitigation and adaptation, the energy transition, and biodiversity conservation, a research agenda is needed to understand the potential for new IFF risks. Studying linkages between the IFF/tax justice and climate change agendas, investment law, nature conservation and sustainable finance can help further delineate the legal contours of ‘sustainable finance’ (Schäli and Bürgi Bonanomi, 2023).

Last but not least, the availability of reliable, accurate and granular commodity trade data and current, insufficient levels of transparency must be addressed as a matter of priority (see the next chapter in this volume). Clarifying the grey zone in which transfer pricing and tax optimisation practices reach the threshold of an IFF is necessary if we are to build consensus on assessing the magnitude of trade-related IFFs and the effectiveness of IFF-cutting measures, on looking at the impact of different policy measures, such as administered prices, adopted unilaterally by countries like Brazil and Zambia, or on the effects of the multilateral BEPS process over time.

5 Introducing the Thematic Volume

The variety of contributions in this thematic volume offers a mix of theoretical and empirical inputs and findings and recommendations drawn from macro- and micro-level analysis. It provides novel insights on issues such as the preferences of key stakeholders for short- and longer-term policy reforms, arbitral tax claims arising from prescriptive trade pricing approaches, and Ghana's recent gold-for-oil barter arrangement and ongoing efforts to address trade mispricing in Laos. With the exception of a chapter on metals streaming and royalty financing, this volume does not focus on contractual arrangements between extractive industries and states but on other commodity trade-related issues that have an incidence on the mobilisation of domestic resources for development.

The thematic volume is structured in four parts: Following this introductory chapter, Section 2 deals with the definition, measurement and drivers of IFFs. Section 3 turns to policy responses across space and time. The last contribution dwells on the urgency of strengthening host country fair taxation capacities in the face of a looming rush on the commodities required to power the energy transition.

Section 2 provides a framework for understanding and measuring commodity trade-related IFFs. Carbonnier and Mehrotra first present and discuss new data sources in conjunction with specific methodological approaches to rigorously capturing IFFs. The authors then make recommendations on how to improve access to the relevant and accurate data required to assess IFF volumes and evaluate the effectiveness and side-effects of various policy approaches to reducing these volumes. The subsequent chapter, by Sisouphanthong et al., examines the root causes and the volume of trade-related IFFs in Southeast Asia, providing evidence from soft and extractive commodities exported by Laos. The remaining two chapters in the section provide novel insights into

commodity trade–related IFF channels associated with various investment regimes and contractual arrangements:

- Omonbude reveals how metals streaming and royalty financing aimed at securing stable government revenue may end up depriving producer states of the full benefits of commodity sales, and recommends states address the stark information asymmetry between themselves, the mining industries, and royalty companies.
- Von Haldenwang et al. provide a fresh look at the impact of tax expenditures granted to corporations in the context of foreign direct investments in special economic zones (SEZs) on eroding the tax base of commodity exporting nations, as well as at the role of the patent box and other instruments aimed at attracting intangible assets in home countries (where multinational companies are headquartered).

Section 3 turns to policy responses, starting with an original Q-study by Brugger and Proksik on preferences for and the political feasibility of various policy responses and their implications in terms of the legal space that host states in particular can preserve in order to adopt policies of their own to effectively curb trade-related IFFs. Musselli and Mariottini De Oliveira then examine the feasibility of introducing prescriptive taxation methods with due regard to legal obligations accruing from international rules and principles as laid down in international investment regimes. Noting that these regimes can indeed limit the policy space for commodity exporting countries, the authors discuss the perceived risk of legal liabilities and investor claims. This risk may act as a significant uncertainty factor in the adoption of pragmatic approaches to combatting trade mispricing. The chapter addresses the legal aspects of ‘prescriptive’ pricing methods seen against the parameters of international investment law and also offers defence arguments that states can mobilise to justify such choices (see also von Haldenwang et al., this volume; Viñuales, 2015).

The next two chapters in Section 3 look at the impact of recent policy innovations in Latin America and Africa:

- Campodonico evaluates the impact of recent tax reforms in Chile, Colombia and Peru, looking too at the roles of various actors involved in the global competition for energy security and access to the critical minerals fuelling the energy transition.
- Dzanku et al. reveal the risk of renewed IFFs associated with a novel barter trade arrangement introduced in Ghana under a gold-for-oil transaction deal, combining analysis from economic, legal, and political economy perspectives.

The final section of this thematic volume concludes with a call to strengthen host state capacities to effectively curb IFFs at a critical juncture when a renewed rush on commodities to power the energy transition is leading to both great opportunities and great risks in view of mobilising domestic resources to pay for the SDGs. The author, LeBillon, provides practical recommendations.

It is our hope that this thematic volume of *International Development Policy* will contribute to advancing scholarly and policy debates on trade-related IFFs and to redressing a long dysfunctional taxation system.

6 Concluding Reflections

Reverting to the words of the Swiss parliamentarian that opened this chapter, arguing that individual host states such as Ghana have to tackle the issue of IFFs leaving their countries and the ensuing tax base erosion, our findings above confirm that this is only part of the solution. Several policy and regulatory reforms, together with capacity building and technological innovations, can help commodity-dependent countries curb trade-related IFFs. But this is not enough. Specific pull factors must be addressed in home countries as well as in major trading hubs, as detailed above. At the same time, global governance and taxation reform must preserve the policy space in which host countries can enact home-grown reforms aligned with local realities and the institutional capacity to implement them.

At the regional and global levels, there is a need for *greater international cooperation* between relevant authorities, including customs and tax or revenue agencies, in parallel with the strengthening of global tax governance frameworks. Yet trust in multilateralism is at a historical low. While double standards and unmet promises have been eroding trust and increasing North–South polarisation, South–South cooperation has intensified in a range of domains including in climate and taxation matters, and countries are pushing their demands with greater voice. In November 2023, 125 countries supported a Nigeria-led proposal to shift global tax governance from the OECD to the UN, and it was hailed as a victory in the decades-long fight of developing countries for fairer tax rules globally.

In a sense, IFF issues are at the heart of heightened North–South tensions and of the decolonisation agenda, to the extent that a fair and equitable global tax system would contribute to allowing developing states to mobilise the domestic resources needed for development. This is a critical part of a broader agenda to restore trust in the multilateral system.

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