Python – Bamboolib for Pandas

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If you are a Data Science enthusiast or a Data Scientist you know that Pandas is an indispensable library that allows you to perform data wrangling, where you can read your data, preprocess your data, handle missing data etc. before building Machine Learning models.

Pandas sure does makes a lot of the work very easy and is very powerful but using it and mastering it can be a great challenge. To resolve this and make the use of pandas more convenient we have a library available in python which is called the **Bamboolib library**.

Bamboolib: It is a GUI extension for pandas data-frames for easy data exploration and transformation that enables anyone to work with Python in Jupyter Notebook or JupyterLab.

Let us have a look at some of the functionalities of this library and how to use them.

Note: Bamboolib is available for free only on Kaggle and Binder for open data. You can use the paid version on your computer as well.

Installation of Bamboolib library:

Before getting started we need to install the library first. Follow these steps to install the library correctly.

```
#install bamboolib on linux or anaconda prompt

 pip install bamboolib
```

- If you want to use the library on Kaggle or Binder you can stop at this step, else continue-

After the installation is complete run the following commands:


```
jupyter nbextension enable --py qgrid --sys-prefix

jupyter nbextension enable --py widgetsnbextension --sys-prefix

jupyter nbextension install --py bamboolib --sys-prefix

jupyter nbextension enable --py bamboolib --sys-prefix
```

If you want to use this on Jupyter notebook then you can stop here but if you want to use this on JupyterLab as well you can continue following the steps to complete the installation.

Make sure you have `node.js` and `npm` installed.

```
#install nodejs on anaconda prompt

 conda install -c conda-forge nodejs

#install npm on anaconda prompt

 pip install npm
```

Next run these commands:

```
jupyter labextension install @jupyter-widgets/jupyterlab-manager --no-build

jupyter labextension install @8080labs/qgrid --no-build

jupyter labextension install plotlywidget --no-build

jupyter labextension install jupyterlab-plotly --no-build

jupyter labextension install bamboolib --no-build


jupyter lab build --minimize=False
```

Now the installation is complete.

How to use Bamboolib:

To see how to use this library we are going to use Binder.For this browse to github.

```
In [1]: import pandas as pd
        import bamboolib as bam
        bam.enable()
        df = pd.read_csv("data/titanic.csv")

        Success: the bamboolib extension was enabled successfully. You can disable it via 'bam.disable()'. You will now see a magic bam
        boolib button when you display your dataframes, for example via 'df'

In [2]: df
```

Show bamboolib UI

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
0	1	0	3	Braund, Mr. Owen Harris	male	22.0	1	0	A/5 21171	7.2500	NaN	S
1	2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th...	female	38.0	1	0	PC 17599	71.2833	C85	C
2	3	1	3	Heikkinen, Miss. Laina	female	26.0	0	0	STON/O2. 3101282	7.9250	NaN	S
3	4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35.0	1	0	113803	53.1000	C123	S
4	5	0	3	Allen, Mr. William Henry	male	35.0	0	0	373450	8.0500	NaN	S
...	...	...	...	...	...	...	...	...	...	...	...	...

Now you can use the Show bamboolib UI button to perform various functions. You can see mainly 3 options available:

1. Explore DataFrame
2. Create Plot
3. Search for transformation

```
In [2]: df
```

Show static HTML

🖉 ↺ ⟳   History   Export   ☑ Live Code Export

        3   2   1

Search transformations   or   Create plot   or   Explore DataFrame

891 rows × 12 columns - preview   [All columns] ▼   Update

	i PassengerId	i Survived	i Pclass	o Name	o Sex	f Age
0	1	0	3	Braund, Mr. Owe...	male	22.0

1) Explore DataFrame:
You have 4 options available, namely:
1. **Glimpse:** In this you get information about the columns in the dataset. You can know about the data type of the column, number of unique
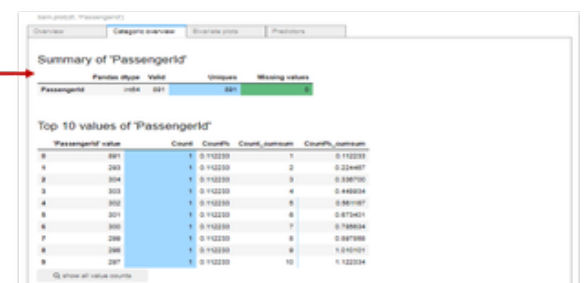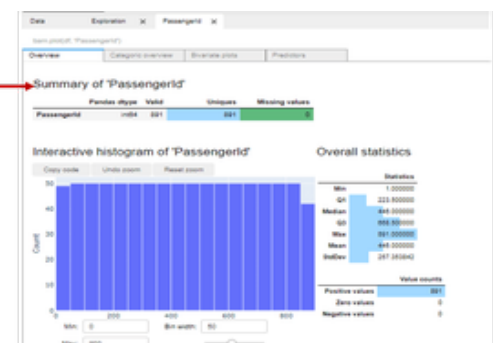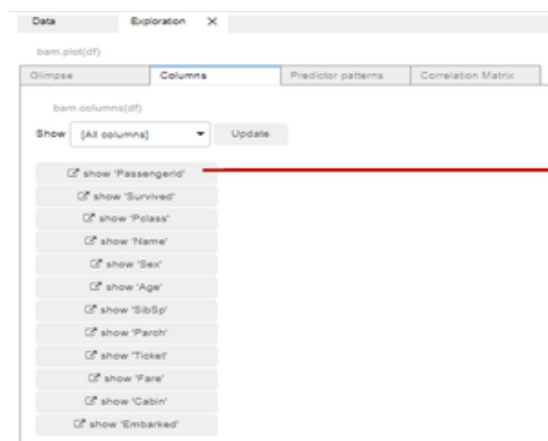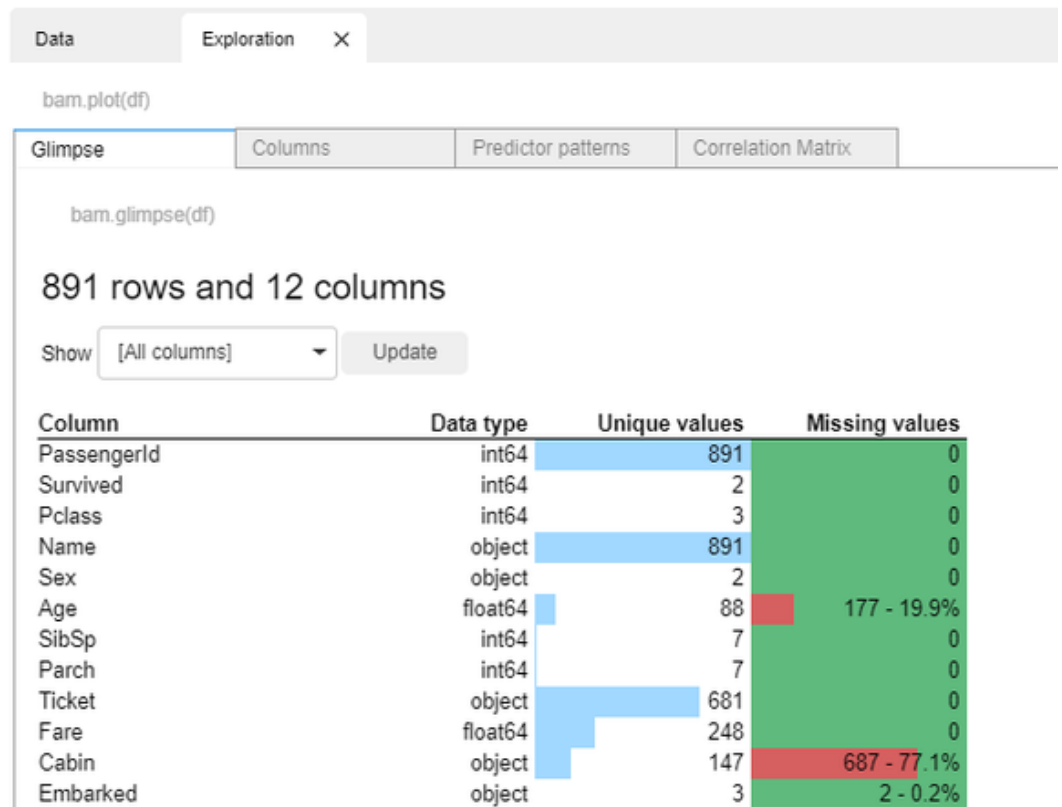
information about the dataset.
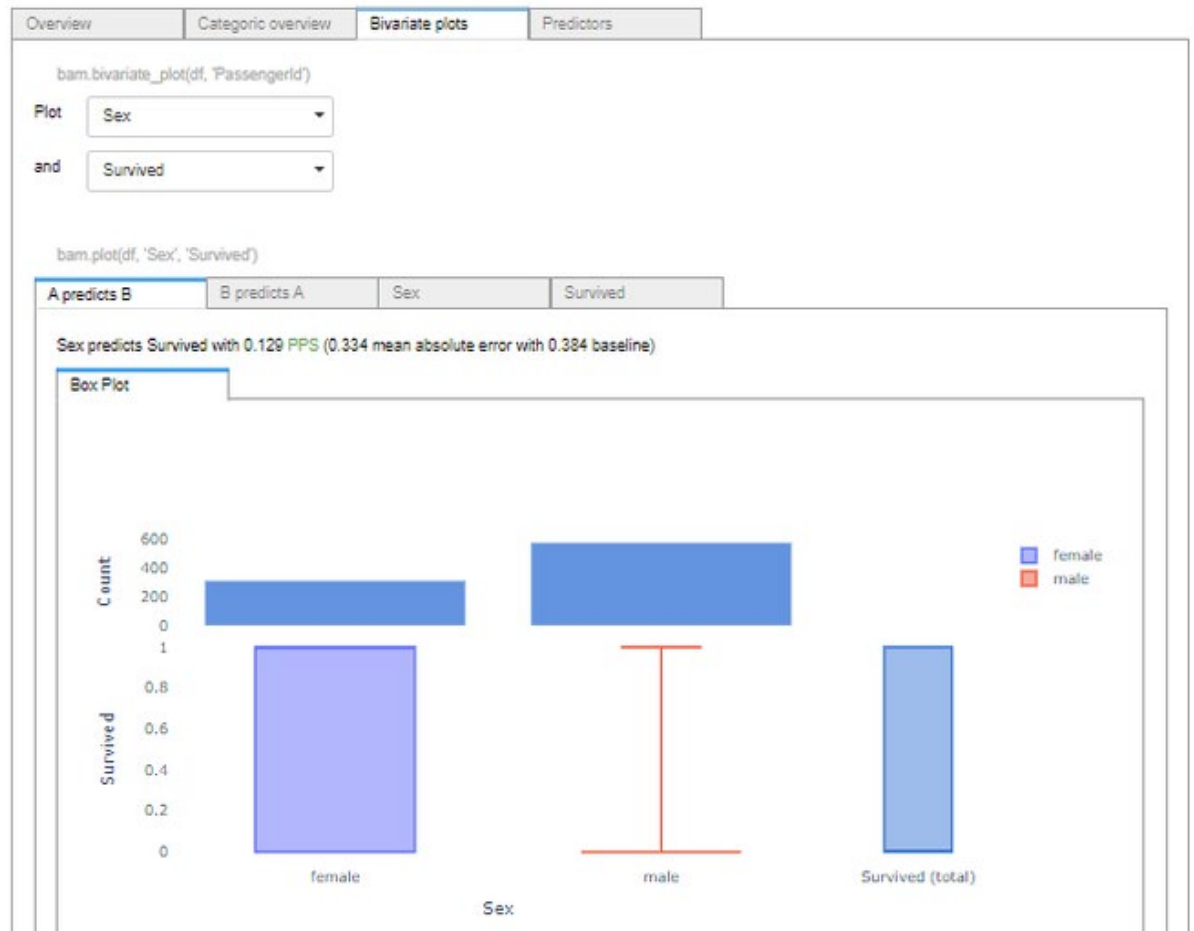
3. **Predictor Patterns:** You can predict the patterns of the dataset by clicking on any cell of the heatmap to get the relation between the columns.
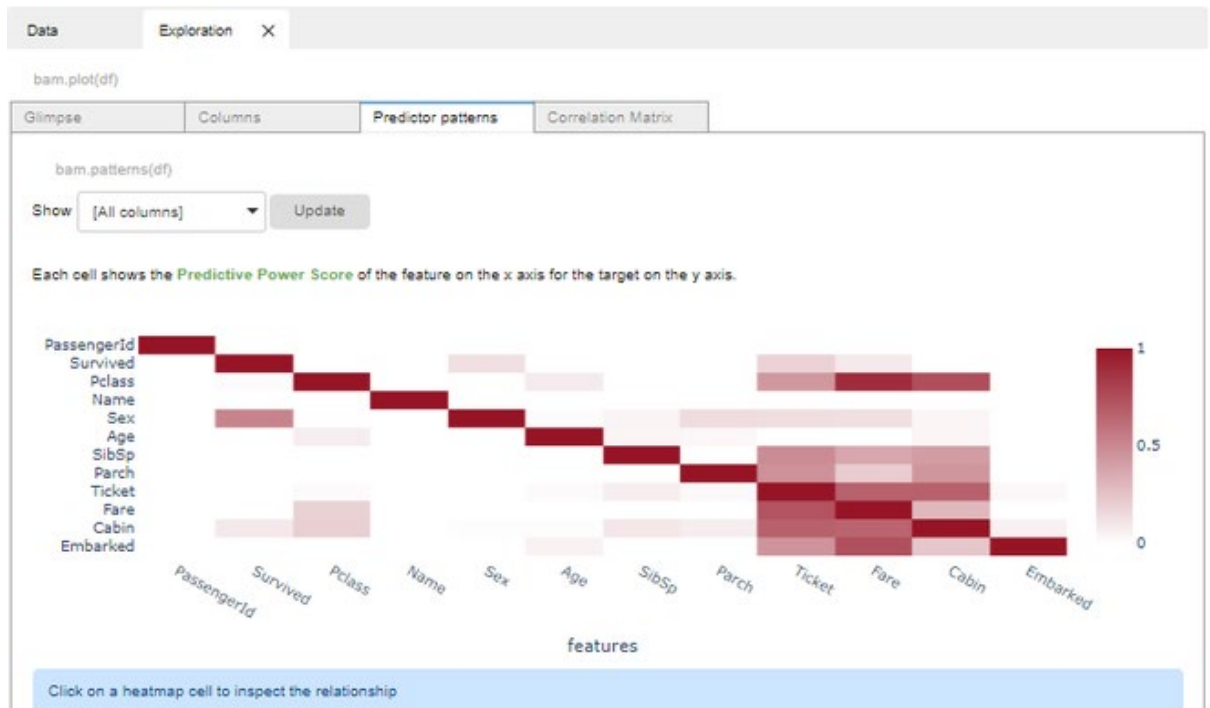
4. **Correlation Matrix:** You can get the correlation matrix between any of the columns.

2) Create Plot:

You can create any plot like bar plot, histogram, scatter plot etc. and can add different properties. The pandas' code for developing the plot is also available which you can copy and paste as well to get the same output.
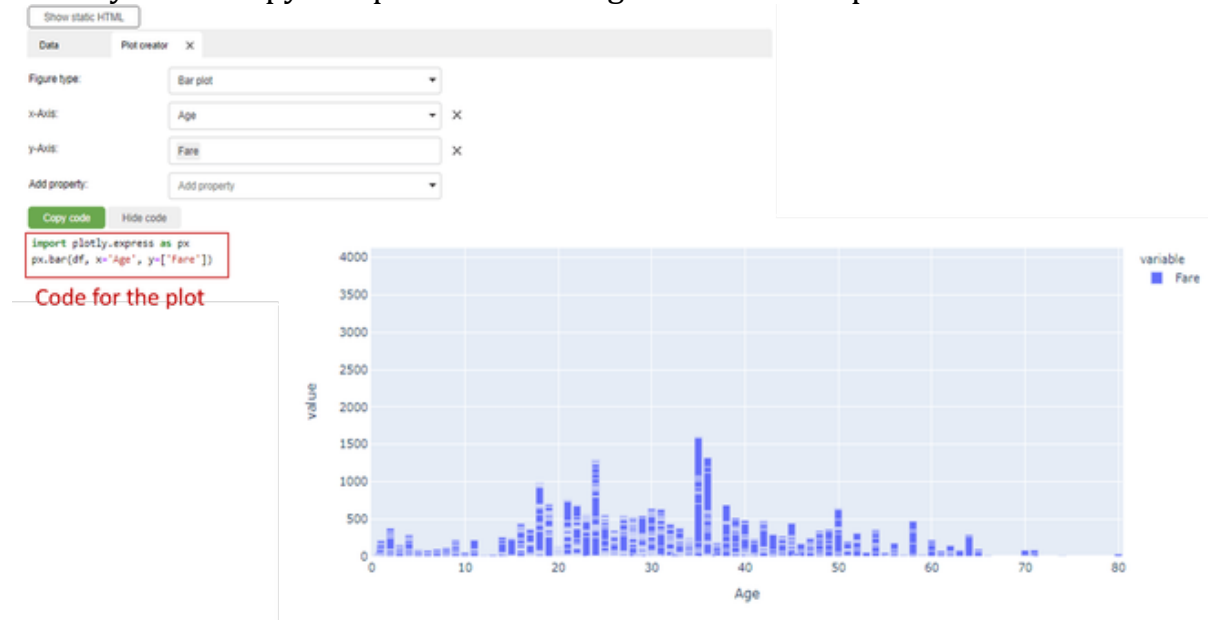
3) Search for Transformation:

You can perform various transformations on the dataset. Some of the few are:

Drop Column: Since in the dataset used we can see that Cabin has a high number of missing values so we can remove/drop this column from the dataset. Choose the Select or Drop columns option, fill the fields and press Execute.
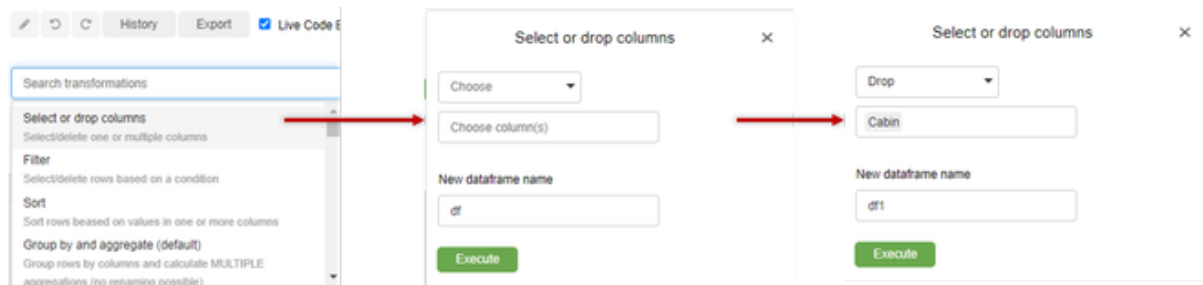
You get the pandas code automatically and is executed for this transformation that you have performed.The new dataframe is displayed as output.

Filter: Using this option you can create subsets of data to analyze it applying certain conditions.This is the most used technique to get meaningful insights in the data.Here we have filtered the dataset on the 'Age' column to access the records with Age>25.
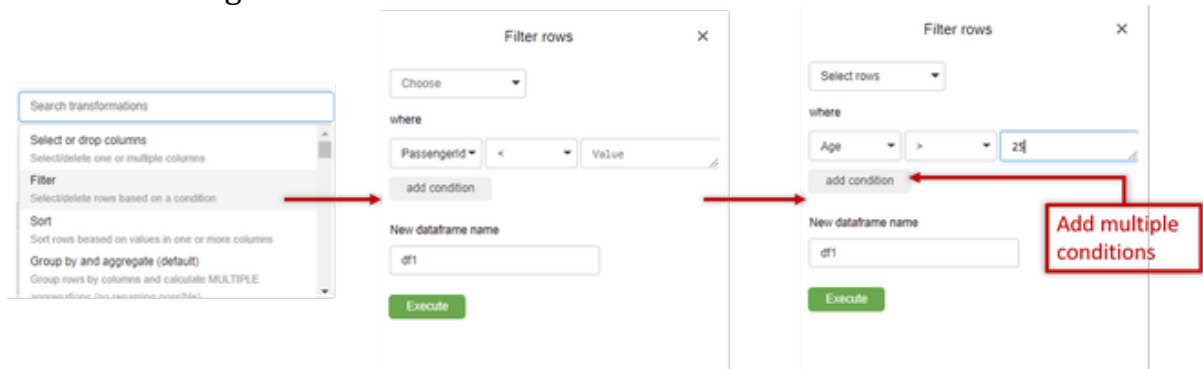
New dataframe is displayed as output.

Sort: You can sort your dataset on columns using this transformation.Sorting can also be performed for multiple columns simultaneously.Here we have sorted the data on the 'Name' column in ascending order.
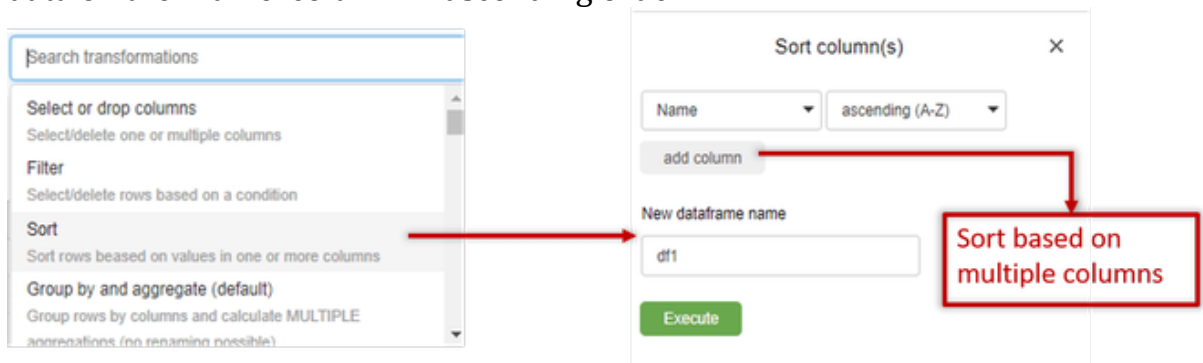
Note:

- To undo or redo any transformation you have performed on the dataframe you can click on the **History button**.
- To get the code of previous transformation go to **Export**. If Live Code Export is checked then you'll get the code automatically.

Get code for previous transformation
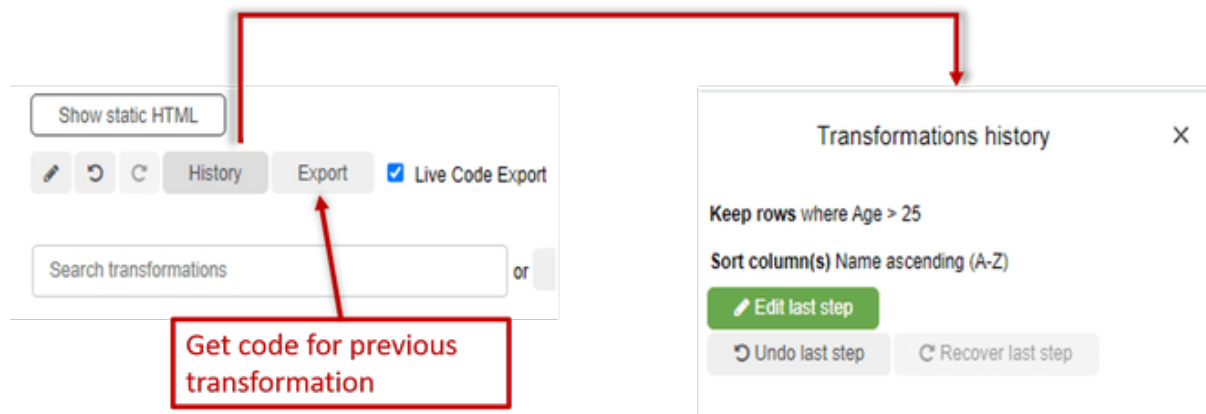
Bamboolib offers many other transformation options such as **Group by and aggregate**, **Rename columns**, **Replace Value**, Change column datatypes etc.

Benefits of using Bamboolib:

Bamboolib is a very handy and easy to use.Transformations of huge data-frameworks can be performed in no time.It is great for organizations as employees with little programming knowledge can also use this tool without struggling or looking up for the syntax to get the task done and can get the syntax for the operation or transformation afterwards.This is also helpful for programmers as they can play around with data and study the syntax for the user specific problem instead of looking up for different cases and trying to extract the required result.

Now that you have learned this amazing hands-on tool, give it a try for yourself and explore the hidden information your data can provide. For any queries do leave a comment down below.

ILLICIT FINANCIAL FLOWS

GSS/ISODEC TRAINING FOR GHANA, LIBERIA, NIGERIA AND SIERRA LEONE

(Bishop Akolgo-IFFS CONSULTANT)

PROBLEM STATEMENT

- High Levels of trade mis-pricing in Ghana's Trade

- High exposure and vulnerability to IFF in Trade, FDI, Double Tax Treaties, financial secrecy and Corporate Tax Haven activities of partners with adverse implications for:

- inwards FDI, import/export trade,

- withholding tax yields for interest payments, royalties, banking claims and divided payments.

WHAT HAS BEEN GHANA'S RESPONSE TO IFFs?

- Two Options:
- **Option 1-Shift Tax Mix** away from profit taxes towards less pricing – manipulation taxes like production-based taxes, i.e. royalties
- 2. **Option 2-Introduce or strengthen arms** length transfer pricing regulations and implementation capacity
- Ghana opted for the later with promulgation of Transfer Pricing section 70 of Act 592 in 2012
- **Transfer Pricing Enforcement Not Sufficient for Control**
- Problem involves more than determination whether pricing is "arm's-length"; many of the transactions involved are inherently artificial and should not be recognized regardless of pricing used
- Even where mispricing is part of the problem, factual inquiries required to enforce arm's-length pricing unrealistic for even well-resourced tax administrations
- Recent OECD BEPS analysis acknowledges that remedies should extend beyond transfer pricing rules.

ACTIONS TAKEN TO STEM IFF IN GHANA

- Countries have responded differently to Illicit Financial Flows and the tactics of multinational companies and their local allies in two main ways: Option 1-Shift Tax Mix away from profit taxes towards less pricing-manipulation taxes like production-based taxes, like royalties or

- Option 2-Introduce or strengthen arm's length transfer pricing regulations and implementation capacity. Ghana opted for the later with the promulgation of Transfer Pricing section 70 of Act, 592 in 2012 and amended in 2020.

- to correct the issues raised by the Financial Action Task Force (FATF), Ghana promulgated the the new Anti-Money Laundering Act, 2020 (Act 1044).

- Act 1044 addresses the deficiencies of the old Anti Money Laundering Act, 2008 (Act 749) and seeks to make Ghana's anti money laundering laws adhere to international standards.

OTHER MEASURES TAKEN TO STEM IFFS

- **Transfer-Pricing** (TP law) passed and **Financial Intelligence Centre** det up and operational in line with its anti-money laundering and terrorist financing obligations and is taking steps to integrate the relevant data bases to facilitate its work ,

- **Transfer Pricing Return Form-** multinationals are bound to file with the Transfer Pricing Unit, with **Completion Note** which clarifies what is expected from the tax payer

- a general **anti-avoidance provision in section 112** as amended gives the Commissioner-general discretionary power to recharacterise or disregard an arrangement or part thereof that is entered into as part of a tax avoidance scheme which is fictitious or doesn't reflect its substance

- to improve transparency on tax matters an **Automatic Exchange of Financial Information** (OEFI) law has been passed and concrete steps taken to implement this law.

- A register of **Beneficial Owners of Companies** (BO) Law, an essential tool for tracking tax evasion and illegality has been passed.

- The GoG has also undertaken a comprehensive review of revenue administration, using the Tax Administration Diagnostic Assessment Tool (TADAT), to identify strengths and weaknesses of the system.

- A comprehensive Tax Cap Analysis has also been carried out to identify sources of leakages

- Measurement of IFFs in accordance with the UNCTAD/UNECA guidelines and methodologies ongoing

STATE INSTITUTIONS USED IN STEMMING IFF

- The lead agencies of state on IFFs are the Ghana Revenue Agency on Transfer-Pricing, the Transfer Pricing Unit(TPU) and the Ghana Financial Intelligence Centre (FIC) which was set up under the Anti-money Laundering and Terrorism Financing law and is actively involved in those activities.

- With the institution of the Technical Working Group on the measurement of IFFs, more institutions are involved including the natural resource agencies, the Academia and CSOs like the Tax Justice Network and Anti-corruption ones.

MEASURES SPECIFIC TO MINING/PETROLEUM

- Ghana's 1992 Constitution provides for separate regulators for each natural resource like for lands(Land Commission), solid minerals(Minerals Commission), Water(Water Resources Commission), Forests(Forests Commission), Marine(Fisheries Commission) and Hydrocarbons(Petroleum Commission).

- In the case of thin-capitalisation, Section 71 provides for debt to equity ratio of 2:1 as allowable deduction.

- The ratio of a company's interest-bearing exempt debt to its exempt equity contribution held by the Parent or associate of the parent should be 2:1. Any interest charges or exchange losses in excess of the ratio is disallowed in assessing the Ghanaian company.

- Government has worked with CSOs and the UNDP to model IFFs losses in imports and exports, esp from 2000 to 2012 in trade with USA and EU

GOVERNMENT INSTITUTIONS INVOLVED IN IFFS

- Minerals Commission-MC , Petroleum Commission-PC , Ghana Revenue Authority, Ghana-GRA, Financial Intelligence Centre (GIC) and their parent ministries that exercise policy, monitoring and evaluation functions are involved in the stemming of IFFs.

- The lead agency of state on IFFs is the Ghana Revenue Agency on Transfer-Pricing, the Transfer Pricing Unit(TPU).

- The Ghana Financial Intelligence Centre (FIC) was set up under the Anti-money Laundering and Terrorism Financing law and is actively involved in those activities.

- On The legislative side, four committees of Parliament are critical to the fight against IFF: 1) Public Accounts Committee-budget and appropriation, 2) lands and natural Resources, 3) Mines and energy-given the importance of natural resources in the national economy and potential for IFF leakages, 4) Trade and Industry committee.

VOLUME OF RESOURCES RECOVERED OR CURTAILED FROM LEAVING GHANA ILLICITLY

- In September, 2013, a Civil Society organisation, the Oil and Gas Platform(CSPOG) raised alarm on Transfer Pricing Concerns and alleged that the China Gas Pipeline project SINOPEC's quoted amount for the GPP was $40million more than expected.
- The ISODEC/UNDP/GOG analysis of Ghana's trade with USA and EU for 2000 to 2012 led to losses of, for the 13-year period:
- Undervaluation of Import from Ghana: €2.7bn (EU), $0.63bn (US)
- Overvaluation of Export to Ghana: €2.8bn (EU), $0.57bn (US)
- ISODEC/UNDP/GOG/TA/Ford study on Gold and cocoa
- ISSER study on IFFs in Gold and cocoa

MECHANISMS FOR COORDINATING STATE INSTITUTIONS INVOLVED IN FIGHTING IFFs

- There is yet no Whole-of-Government approach to stemming IFFs
- The nearest are the following initiatives:
- Periodic meetings of Revenue collecting agencies
- Bilateral arrangements where two or more agencies carry out joint audit or monitoring like in the mining or petroleum sectors
- Inter-Agency Working Group on measurement of IFFs
- Proposed Inter-Agency coordinating and collaboration committee on natural resource governance and IFFs to be chaired by the President or his Vice with sub-committees on: fiscal/consumption, economic and industrial linkages, legal/admin, IFFs and Research/Development.

CAPACITY OF STATE INSTITUTIONS INVOLVED IN FIGHTING IFFs

- There is generally weak capacity to stem IFFs amongst the agencies:
- GRA needs capacity to track trade mis-pricing in real time
- FIC and GRA need capacity to undertake geographic IFFs risks assessment and monitoring
- Ministry of Finance and Economic Planning need capacity to be able to estimate and monitor the size of the Shadow economy, conduct cost/benefit analysis of double taxation agreements and tax yields from natural resources as well as model mining and petroleum revenues
- The various legislative committees require capacity in IFFs to be able to better hold the executive accountable for policies and laws towards stemming IFFs in Trade, banking, investments and natural resource activities
- CSOs require capacity to be able to exercise their advocacy and oversight

EXISTING LAWS TO ENABLE GOVERNMENT ACT ON IFFs

- Countries have responded differently to Illicit Financial Flows and the tactics of multinational companies and their local allies in two main ways: Option 1-Shift Tax Mix away from profit taxes towards less pricing-manipulation taxes like production-based taxes, like royalties or

- Option 2-Introduce or strengthen arm's length transfer pricing regulations and implementation capacity. Ghana opted for the later with the promulgation of Transfer Pricing section 70 of Act, 592 in 2012 and amended in 2020.

- Anti-money laundering/counter-terrorist financing (AML/CFT) regime

- Law requiring beneficial ownership registration for companies.

- Tax authorities have sufficient powers to obtain and provide banking information on request without qualifications. Section 125(5) of the Internal Revenue Act (Act, 2000, Act 592, repealed by Act 896)

- Ghana ratified the UN Convention Against Corruption on June 27, 2007, and ratified the UN International Convention for the Suppression of the Financing of Terrorism on September 6, 2002.

CONTENDING ISSUES

- Emerging Tensions With Ghana's Ambition To Be A Financial Centre
- IFF, Multinational Companies And Elite Behaviour-
- Taxing The Digital Economy
- Need Broader Concept And Definition Of IFF, like HARMs framework
- Change In The Direction Of Trade And Implications For Risks And Vulnerability
- The Securitization Of Natural Resources And Revenues Accruing
- Small Scale Mining And IFF
- Beyound Transfer Pricing Regulations
- Outstanding capacity of relevant institutions and need for whole-of-government approach to stemming IFFs

What data can we use for economic channels between countries?

- Macro: 8 channels in 4 bilateral external economic datasets:
  - Trade: Imports and Exports – UN COMTRADE
  - Foreign Direct Investment: Inward and Outward – IMF Coordinated Direct Investment Survey
  - Banking: Liabilities and Claims – Bank for International Settlements
  - Portfolio Investment: Liabilities and Assets – IMF Coordinated Portfolio Investment Survey
- Micro: transaction level data

Economic channels & illicit financial flows

Flow	Manipulation	Illicit motivation
Exports	Over-pricing	Exploit subsidy regime
		(Re)patriate undeclared capital
	Under-pricing	Shift undeclared (licit) income/profit
		Shift criminal proceeds out
		Evade capital controls (including on profit repatriation)
Imports	Under-pricing	Evade tariffs
		(Re)patriate undeclared capital
	Over-pricing	Shift undeclared (licit) income/profit
		Shift criminal proceeds out
		Evade capital controls (including on profit repatriation)
		Shift undeclared (licit) income/profit
Inward investment	Under-pricing	Shift undeclared (licit) income/profit
		Shift criminal proceeds out
		Evade capital controls (including on profit repatriation)
	Over-pricing	(Re)patriate undeclared capital
	Anonymity	Hide market dominance
	Anonymity	Hide political involvement
Outward investment	Under-pricing	Evade capital controls (including on profit repatriation)
	Over-pricing	Shift undeclared (licit) income/profit
		Shift criminal proceeds out
	Anonymity	Hide political involvement

Source: UNECA/AUC, Report of the High Level Panel on IFFs from Africa, 2015, Annex II, 88-89

Change In The Direction Of Trade And Implications For Risks And Vulnerability

- Ghana and most African countries vulnerability, intensity and exposure to IFFs is largely imported from her trade partners

- In 2012 China was the leading partner in trade with Ghana at 20.11 % followed by the United States at 9.63 %(table 9).

- For exports, it was South Africa that led the pack at 27 % followed by United Emirates at 9.95%, Switzerland at 7.88% and France at 7.31 %(table10).

- In terms of exports and its vulnerability to IFF, as shown in table10, Switzerland leads at $1.868.7bn, followed by UAE at $1.427.3bn, then India at 1.557.7bn and China at $941.8 million.

Change In The Direction Of Trade And Implications For Risks And Vulnerability

Goods imports (2012) by leading partner			Percent	Goods exports (2012) by leading partner			Percent
1	CHN	China	20.11%	1	ZAF	South Africa	27.00%
2	USA	United States	9.63%	2	ARE	United Arab Emirates	9.95%
3	BLX	Belgium-Luxembourg	5.18%	3	CHE	Switzerland	7.88%
4	GBR	United Kingdom	5.04%	4	FRA	France	7.31%
5	NLD	Netherlands	5.01%	5	ITA	Italy	6.67%
6	IND	India	4.13%	6	NLD	Netherlands	4.95%
7	ZAF	South Africa	3.53%	7	CHN	China	3.82%
8	DEU	Germany	2.98%	8	DEU	Germany	2.85%
9	NGA	Nigeria	2.50%	9	GBR	United Kingdom	2.52%
10	FRA	France	2.36%	10	TGO	Togo	2.49%
11	CIV	Cote d'Ivoire	2.32%	11	BFA	Burkina Faso	2.23%
12	ARE	United Arab Emirates	2.24%	12	USA	United States	2.17%
13	ESP	Spain	2.14%	13	MYS	Malaysia	1.84%
14	BRA	Brazil	2.04%	14	TUR	Turkey	1.79%
15	KOR	South Korea	2.03%	15	IND	India	1.73%

GHANA EXPORTS-2000
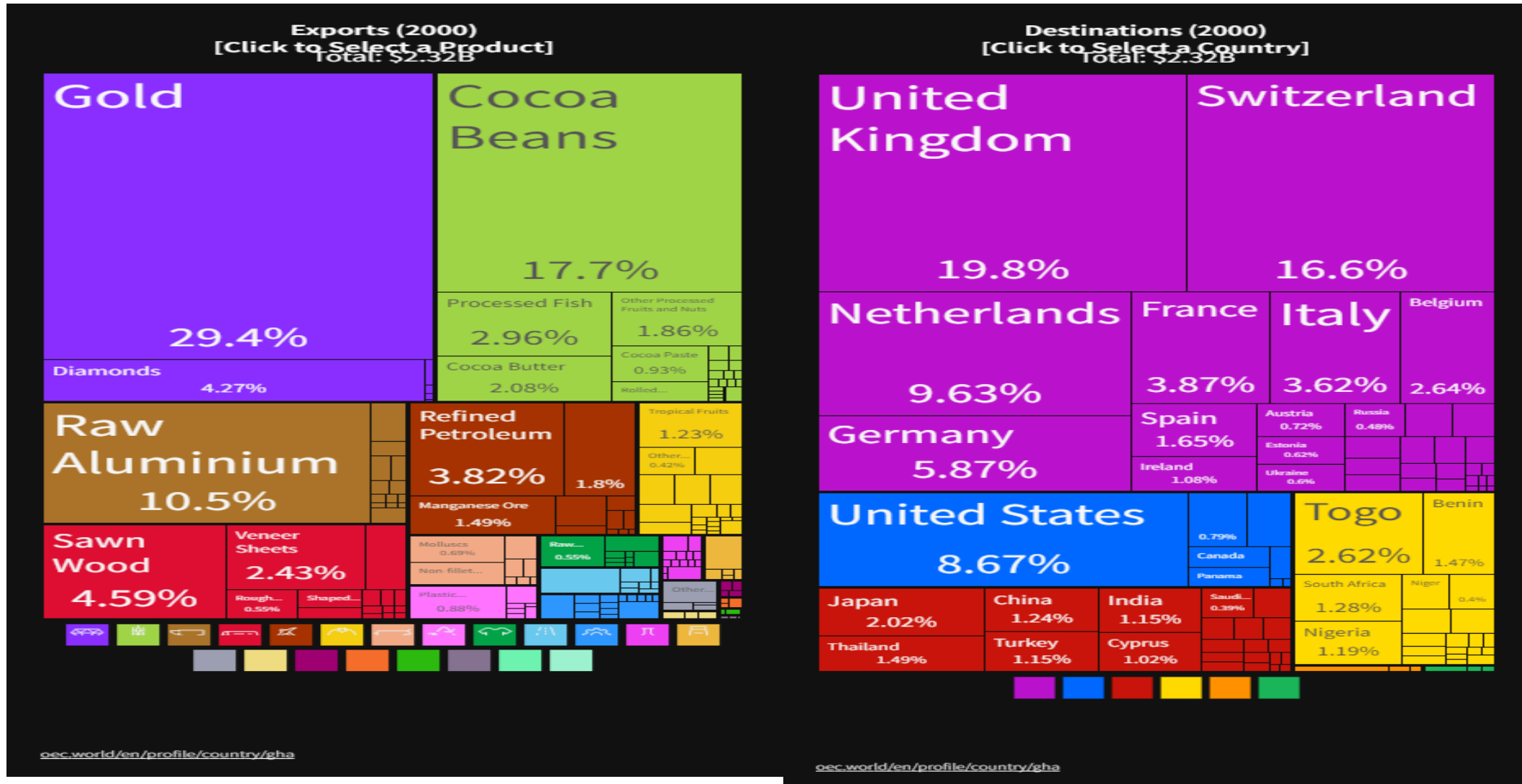
SOURCE: OEC(2021)

GHANA IMPORTS-2000
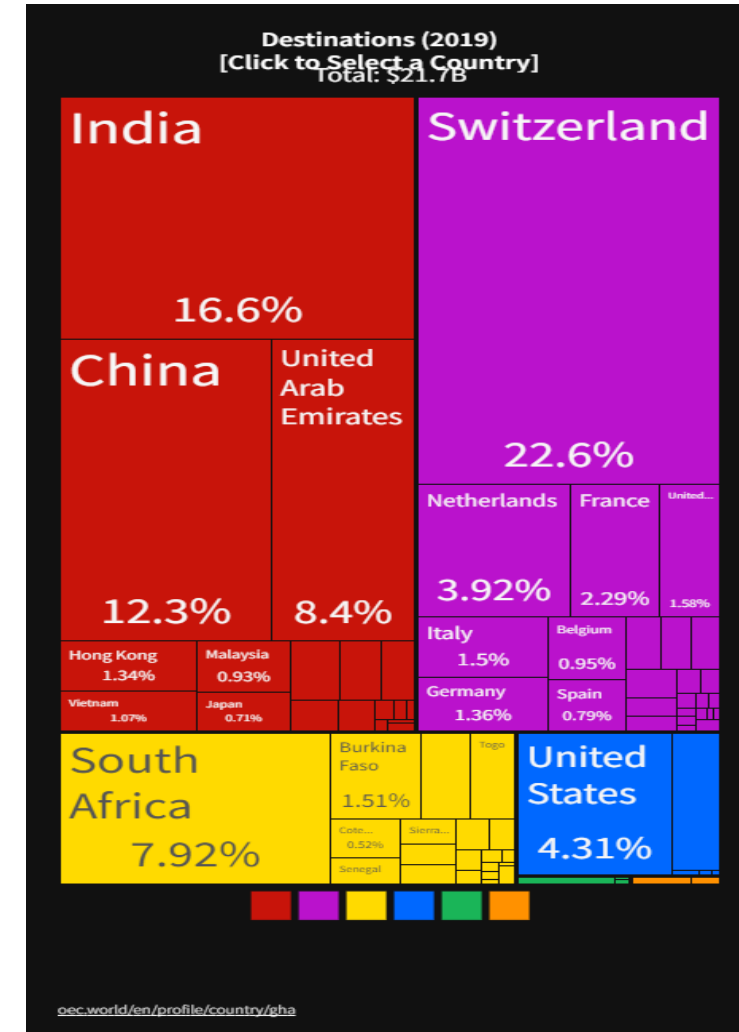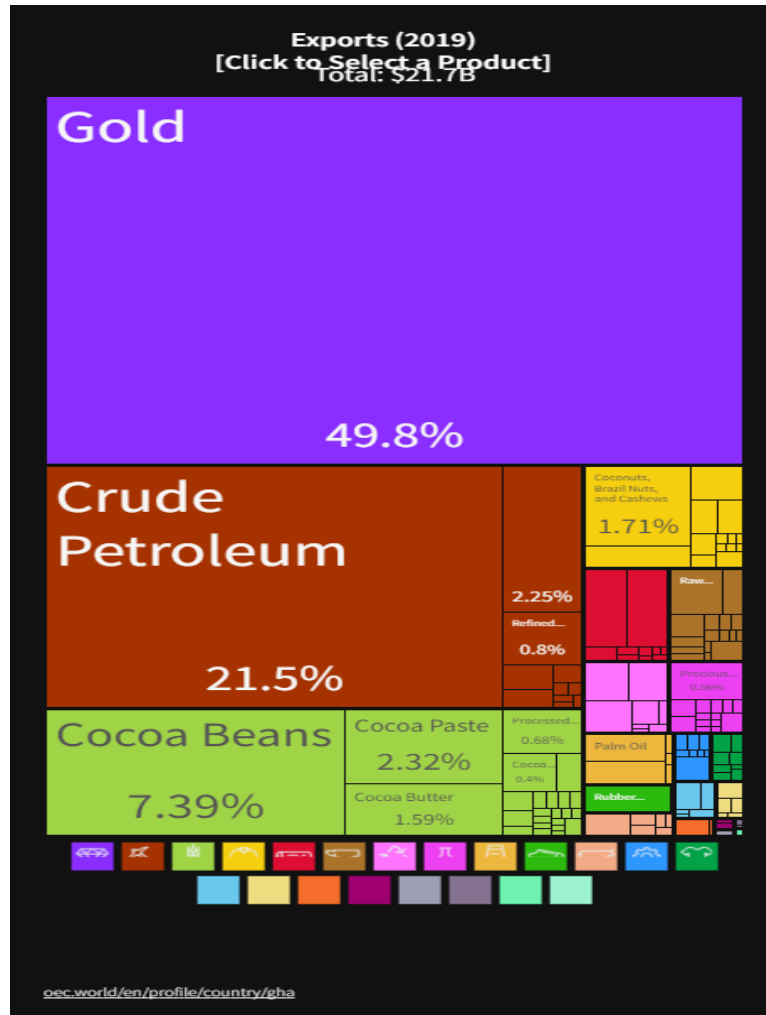
SOURCE: OEC(2021)

Direction of Trade-2016 onwards?

Rank	Country	Secrecy Score	Vulnerability Share	Exports (m) (USD)
1	Switzerland	76	25%	1868.7
2	United Arab Emirates	84	21%	1427.3
3	India	52	14%	1557.7
4	China	60	10%	941.8
5	Netherlands	66	5%	443.0
6	South Africa	56	4%	350.8
7	Malaysia	72	3%	215.0
8	United States of America	60	2%	197.0
9	Brazil	49	2%	201.0
10	Italy	49	2%	188.7

DIRECTION OF TRADE-2018-2019

- FASTEST GROWING EXPORT MARKETS (2018 - 2019)
- Switzerland, $1.59B (+ 47.8%)
- United Arab Emirates, $646M (+ 54.8%)
- China, $425M (+ 18.9%)

- FASTEST GROWING IMPORT MARKETS (2018 - 2019)
- Nigeria, $3.69B (+ 1.04k%)
- United Kingdom, $196M (+ 34.8%)
- Turkey, $169M (+ 56.5%)

KEY RECOMMENDATIONS-1

- Operationalise the inter-ministerial natural resources coordination committee chaired by HE the President or his vice, with the sub-committee on IFFs to look at forest, fisheries, solid minerals and petroleum in a holistic, coordinated and harmonious manner. This will allow the country to use these as catalyst for the structural transformation and industrailisation of Ghana by building linkages between these resources and the rest of the national economy;

- Develop and or strengthen capacity for transaction level, real time risk assessment for GRA, customs and FIC, and:
  - Test geographic risk applications in operations (Audits, prioritization of custom controls, national risk assessments, suspicious transaction reporting, foreign exchange transfers). If successful, embed geographic secrecy and corporate tax avoidance risk in operations (audits, prioritisation, national risk assessments). Consider collaboration with TJN through executing a Memorandum of understanding with GRA, customs, FIC for micro-data applications;
  - If successful, embedding geographic secrecy and corporate tax avoidance risk in operations (audits, prioritisation, national risk assessments).
  - Embed IFF risk analyses across all relevant government agencies.

KEY RECOMMENDATIONS-2

- Design, implement, monitor and evaluate a real-time model for tracking and eliminating trade mis-pricing in commodities and train and resource the tax authority to implement same;

- Consider Pan-African (AU level) coordination on countering IFF risks, especially given the nature of some specialized goods and services, especially intangibles, it can be difficult to determine what exactly a fair market price is.

- There is often also a case of asymmetric information between the tax administration and the taxpayer in this regard.   To help overcome this, it is important to establish and exchange information on "benchmark costing" for solid minerals mining and petroleum activities and sharing same with other African Countries to help counter information asymmetry between resource-rich countries like Ghana and international extractive companies;

- Consider bilateral tax on the digital economy pending and AU position

KEY RECOMMENDATIONS-3

- Work with bilateral and multilateral organisations to forbid tax havens as all base erosion techniques typically involve tax haven subsidiaries like "Finance subsidiaries" to facilitate intercompany loans, "Intangibles holding companies" to facilitate intercompany royalty payments, "Service companies" through which intragroup service charges are routed and "Supply chain hubs" which purchase, resell inventory in intragroup transactions, with "entrepreneurial profit" captured in the tax haven.

- Look critically at other ways and alternatives to traditional tax administration as Transfer Pricing Enforcement is Not Sufficient for Control. The Problem involves more than determination whether pricing is "arm's-length" as many of the transactions involved are inherently artificial and should not be recognized regardless of pricing used.

- Even where mispricing is part of the problem, factual inquiries is required to enforce arm's-length pricing and this is unrealistic for even well-resourced tax administrations and recent OECD BEPS analysis acknowledges that remedies should extend beyond transfer pricing rules.

- Roll back appetite for International Financial centre as could be conduit for IFFs, thus increasing our exposure and vulnerability

KEY RECCOMMENDATIONS-4

- Strengthen domestic policies and capacity to counter IFFs, including by analyzing Ghana FSI and CTHI profiles;
- Provide legal basis and policy for the maintenance of a central register of bank accounts and real estate ownership;
- Empower GRA to estimate tax due in the case taxpayer does not comply fully with information requests;
- Build capacity for modeling oil and gold production revenues;
- Analyse country risk profiles and consider adequate capacity and/or policy and/or audit response
- When engaging in automatic exchange of information, legislate for public statistics on AEOI (e.g. Australia, template in Knobel/Meinzer 2017); consider joint AU position towards USA?

IMPORTANCE OF WHOLE-OF-GOVERNMENT APPROACH

GSS/ISODEC TRAINING FOR GHANA, LIBERIA, NIGERIA AND SIERRA LEONE

IFFs in West Africa

IFF OCCURRENCE, TRENDS AND CHALLENGES

(Bishop Akolgo-IFFs concultant)

WEST AFRICAN TRADE

- Most trade for ECOWAS countries takes place outside of the region, mostly with the European Union as a traditional primary trading partner, both for imports and exports (OECD, 2018)

- Côte d'Ivoire, Ghana and Nigeria account for 80% of West Africa's exports – mainly comprising fuel and food products – to the European Union.

- West Africa's imports from the European Union consist of fuels, food products, machinery, chemicals and pharmaceutical products (OECD, 2018).

- Nigeria accounts for 73,5% of total registered ECOWAS exports, primarily as a result of its petroleum exports but also due to its larger economy. The country also dominates total ECOWAS imports (52%) as well as food imports specifically (51%).

- The second and third economy of the region, i.e. Ghana and Côte d'Ivoire, are the main ECOWAS food exporters, largely due to cocoa, followed by Nigeria.

- West Africa has a positive (overall and agricultural) trade balance, but it faces a negative food trade balance, which has been deteriorating rapidly over the last decade (Torres & Seters, 2016).

IFFS IN WEST AFRICA AND WHY BOTHER

- Several countries in the region post extremely low development indicators, have weak state institutions and present capacity gaps for regulation.

- As in many developing countries, a large share of economic activity takes place in the informal economy.

- Not everything informal is bad: in fact, the informal sector often provides precious livelihoods, particularly for the poor. Yet what happens informally happens outside the checks and balances of regulatory systems.

- As a result, illicit or criminal activities may flourish more easily, with negative implications for governance, peace, stability and development.

- Under these conditions, resource diversion and illegal acts affecting a country's development can thrive, damage the integrity of institutions, and distort political governance in ways that disrupt the relationship between citizens and the state.

- IFFs are known to have resourced violent and protracted conflicts; in the Sahel, they resource terrorist groups. There is a north-south dev divide or inequality in almost all the countries

- Although it is impossible to isolate specific conditions leading directly to criminal activity, structural factors (such as high unemployment and income inequality, exposure to violence, low levels of gross domestic product and weak institutional capacities) are known to contribute to a country's vulnerability.

THE KEY IFFS CHALLENGE IN WEST AFRICA

- A report by AfDB, GIABA, OEDC, NEPAD and published by OECD(2018) looked at IFFs in West Africa and concluded that:
- Criminal economies interact depending on three factors: whether the good is sourced
- locally or externally; who are the actors and networks involved; and how IFFs are earned
- and where they are invested. The analysis leads to the following broad findings:
- Informal activities generating IFFs that remain in the region cannot always be
- stigmatised as criminal. not all activities are strictly illegal, and not all illicit activities are stigmatised as criminal by the individuals affected
- Criminal industries driven by natural resources whose IFFs are invested outside of
- the region present the most significant net losses.
- Transit-trade goods with a limited local market are most likely to induce high-level corruption and protection network, commensurate with their value.
- Criminal economies with a significant local market are most likely to play into
- local power hierarchies, potentially leading to insecurity, violence and conflict.

A TOPOLOGY OF CRIMINAL ECONOMIES IN W.ARICA

	Illegal activities	Illicit trade in legal goods	Illicit resource extraction
Definition	Activities or commodities that are illegal in all contexts (or, in the case of drug trafficking, are illegal except when used for specific purposes, i.e. medical or scientific purposes); thus, any association with their trade is illegal by default.	Activities that relate to resources predominantly sourced outside of the region, and for which West African countries are a destination or major transit zone.	Activities that relate to resources sourced in the region that are inherently legal, and for which government control and taxation would be expected in normal circumstances, but which have never entered the formal economy, or have moved into the illicit economy at some point between source and market.
Examples	Drug trafficking Kidnapping for ransom Human trafficking Smuggling of migrants Counterfeiting Cybercrime/fraud Maritime piracy	Illicit tobacco Arms smuggling Commodity smuggling	Illicit mining Oil bunkering Environmental crimes (including illegal, unreported and unregulated fishing)

SELECTED CONFLICTS IN WEST AFRICA

Name of conflict	Country	Years	Nature of conflict	Estimated fatalities
Guinea-Bissau War of Independence	Guinea-Bissau	1962-74	Insurgency	15 000
Biafran War	Nigeria	1967-70	Civil war	500 000-2 000 000
Casamance conflict	Senegal	1982-present	Insurgency	5 000
First Liberian Civil War	Liberia	1989-96	Civil war	100 000-220 000
First Tuareg Rebellion	Mali	1990-95	Insurgency	–
Sierra Leone Civil War	Sierra Leone	1991-2002	Civil war	50 000-300 000
Guinea-Bissau Civil War	Guinea-Bissau	1998-99	Civil war	655
Second Liberian Civil War	Liberia	1999-2003	Civil war	150 000-300 000
First Ivorian Civil War	Côte d'Ivoire	2002-07	Civil war	3 000
Niger Delta Conflict	Nigeria	2004-09	Insurgency	2 500-4 000
Second Tuareg Rebellion	Niger	2007-09	Insurgency	270-400
Boko Haram uprising	Nigeria	2009 – present	Insurgency	11 200
Second Ivorian Civil War	Côte d'Ivoire	2010-11	Civil war	3 000
Conflict in Northern Mali	Mali	2012-13	Insurgency	1 270

Source: Marc et al. (2015).

SELECTED MECHANISMS TO COUNTER CRIMINAL ACTIVITIES AND IFFS

Regional body	Description	Membership	Date created
ECOWAS Convention on Extradition	The Convention stipulates the conditions under which criminals can be extradited between signatory countries.	Burkina Faso, Cabo Verde, Ghana, Guinea, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo	1994
ECOWAS Convention on Mutual Assistance in Criminal Matters	The Convention stipulates states parties' commitments to assist each other in criminal investigations and proceedings.	Burkina Faso, Cabo Verde, Gambia, Ghana, Guinea, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo	1998
Intergovernmental Action Group against Money Laundering in Africa (GIABA)	This is a specialised body to strengthen capacity of member states in preventing and controlling money laundering and terrorist financing.	ECOWAS plus Sao Tome and Principe	1999
ECOWAS Protocol Relating to the Mechanism for Conflict Prevention, Management, Resolution, Peace-keeping and Security	The Protocol creates a wide range of bodies, organs and instruments to prevent and end conflict. It states political positions and sets out areas for co-operation.	ECOWAS	1999
2008 ECOWAS Regional Action Plan, Political Declaration and Operational Plan against Illicit Drug Trafficking, Abuse and Organised Crimes	The Action Plan is a formal articulation of ECOWAS Member States' positions on drug trafficking and on several other crimes.	ECOWAS	2008
ECOWAS Committee of Chiefs of Security Services	The Committee of national gendarmerie commanders collaborates with INTERPOL, developing co-operation among regional security forces, and defining and implementing a strategy for cross-border crime.	ECOWAS	2009
West Africa Coast Initiative	The Initiative has significant international funding to tackle serious organised crime by setting up transnational crime units in West African states.	Côte d'Ivoire, Guinea-Bissau, Liberia and Sierra Leone	2009
Network of West African Central Authorities and Prosecutors against Organized Crime	The Network strengthens the capacity of central authorities and prosecutors to combat organised crime, as well as increases regional co-operation on criminal matters.	ECOWAS, plus Mauritania	2012

LEGISLATION ENACTED TO COMBAT MONEY LAUNDERING AND TERRORISM FINANCING

ECOWAS Country	Criminalised drug money laundering	Criminalised money laundering beyond drugs	Know your customer Provisions	Report large transactions	Report suspicious transactions	Maintain records over time	Disclosure protection "safe harbour"	Criminalise "tipping off"	Cross-border transportation of currency	Financial Intelligence Unit	International law enforcement co-operation	System for identifying/forfeiting assets	Arrangements for asset sharing	Criminalised financing of terrorism	Report suspected terrorist financing	Ability to freeze terrorist assets without delay	US or international sanctions/penalties
Benin	Y	Y	Y	N	Y	Y	Y	Y	Y	Y*	Y	Y	N	N	Y	Y	N
Burkina Faso	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N	N	Y	Y	N	N
Cabo Verde	Y	Y	Y	Y	Y	Y	Y	N	Y	Y*	Y	Y	N	Y	Y	N	N
Côte d'Ivoire	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
Gambia	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y*	Y	Y	N	Y	Y	Y	N
Ghana	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N
Guinea	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	N	N	Y	N	N	N
Guinea- Bissau	Y	Y	Y	N	Y	Y	Y	N	N	Y*	Y	Y	Y	Y	N	N	Y
Liberia	Y	Y	Y	N	Y	Y	Y	Y	Y	Y*	Y	Y	N	Y	Y	N	N
Mali	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	N	N
Niger	Y	Y	Y	N	Y	Y	N	Y	Y	Y*	Y	Y	N	Y	Y	N	N
Nigeria	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	N
Senegal	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Sierra Leone	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y*	Y	Y	N	Y	Y	N	N
Togo	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N

Notes: Y = Yes, N = No.

THE "HARMS" FRAMEWORK

- There are several overlapping mutually reinforcing criminal economies operational in west Africa
- They use different methods and are enabled by networks of both domesitc and international actors
- Existing approaches do not capture the relations between IFFs and criminal economies.
- In particular, Goal 16.4 of the 2030 Agenda for Sustainable Development (ASD 2030) requires development actors to respond to the challenges of organised crime and IFFs.
- We therefore need a framework for analysing and prioritising responses, based upon a wider analysis of harm revolving around five areas crucial to development:

THE DEVELOPMENT HARM FRAMEWORK

OECD(2018)
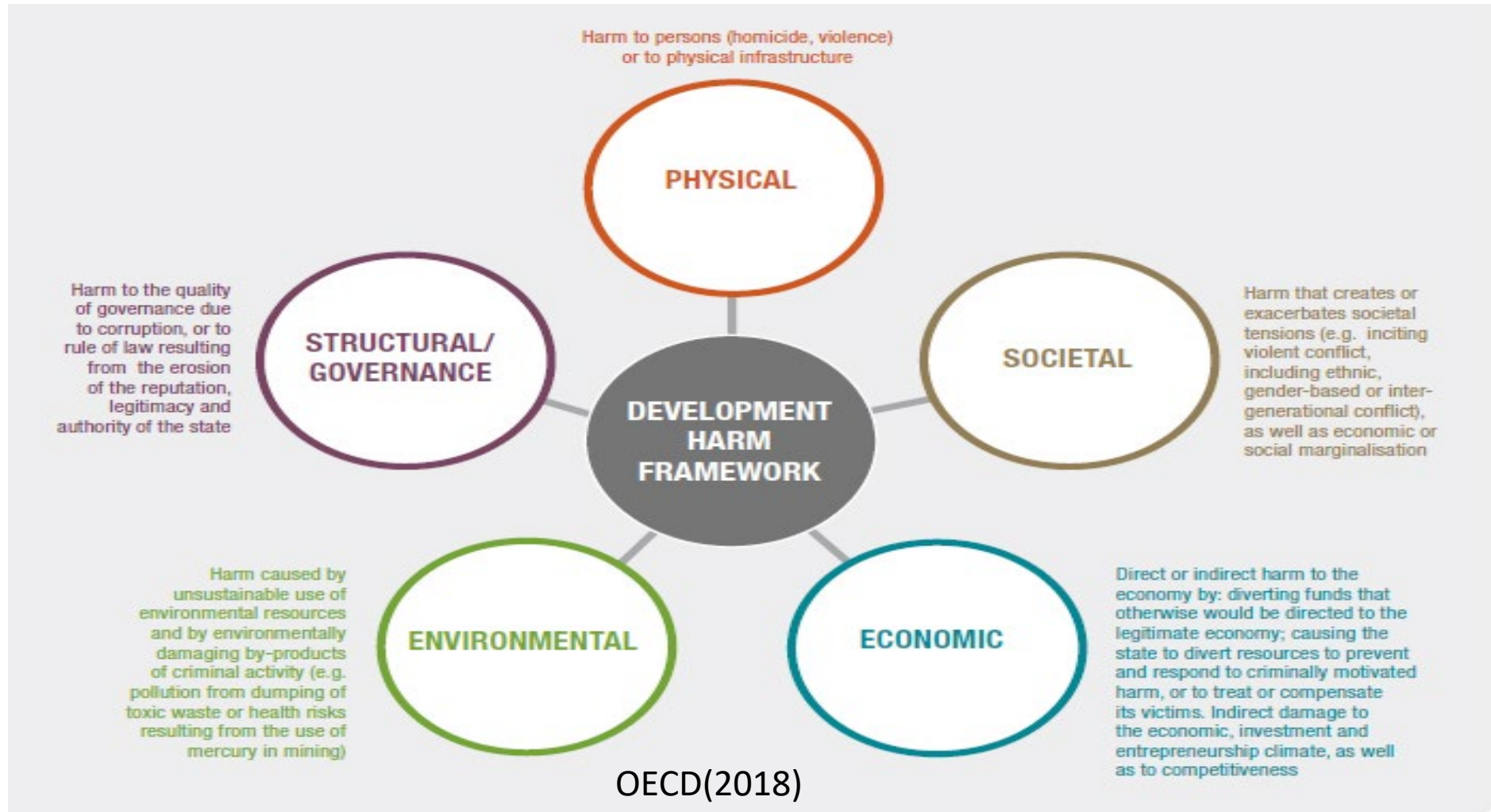
APPLYING THE HARM FRAMEWORK

	Cocaine traffic	Counterfeit goods	Artisanal gold mining
Where is the good sourced; and is there a local market?	**Externally:** cocaine is produced outside of the region, with only a small existing market for cocaine within the region. Trade is concentrated in a limited number of hands regionally; the main facilitators of the trade and beneficiaries of the IFFs generated are high-level public officials.	**Externally:** counterfeit goods are predominantly produced outside of the region, and yet enjoy a large local market. Depending on the goods, they sometimes compete with local products. Many actors engage in the movement and marketing of counterfeit goods. Depending on the product, the barriers to entry into the country are generally low.	**Locally:** gold is indigenous to the region. There is a sizeable local market for the good, which is used as a currency equivalent for local and cross-border trading.
Who are the actors involved?	**Latin American Cartels and high-level military and political officials.** Colombian or Latin American drug cartels work through high ranking and well-connected individuals, including key political and military personnel – individuals that control transport hubs or deploy military assets to protect trade.	**Entrepreneurs and corrupt officials/border guards.** The higher-level perpetrators of illicit trade in counterfeit or fake goods are "business executives" operating legitimately registered enterprises, corrupt officials and border guards. The producers and distributors of these goods are also important actors in the supply chain.	**Networks of local actors.** There is a diverse array of actors, from buyers to dealers, exporters and pre-financiers. Criminal groups co-opt state officials to protect the illicit flows, and former combatants are known to be involved in some ground-level operations. China and India lead the global demand for gold. Dubai and Switzerland are seen as leading the transit hubs.
Where are the IFFs earned and invested?	**Externally.** The bulk of the profits from the cocaine trade are realised externally to the region. The local IFFs are predominantly used to finance local operations, corruption and protection for those involved in the illegal trade. A small proportion of the locally realised flows are then laundered abroad.	**Externally.** The bulk of the IFFs are accrued outside of West Africa. Some profits are accrued by local importers and traders, but the majority are realised by producers. Locally accrued IFFs are often re-invested in local counterfeit operations, or make their way into the local economy.	**Locally.** The bulk of the IFFs accrued locally by the miners are invested locally in subsistence livelihoods or used in cross-border trade. A minority share of the IFFs produced along the value chain leaves the country through a limited number of mining companies or gold-dealing corporations.

Source: OECD, WORLD BANK, AFDB & NEPAD, 2018)

APPLYING THE HARM FRAMWORK(CONT)

	Cocaine traffic	Counterfeit goods	Artisanal gold mining
Assessment of harm	The primary results from the cocaine trade include: – damage to health from drug use, which is still limited in West Africa – increased corruption through enrichment of local powerful elites, which may be colluding with criminals – violence resulting from increased armed protection and competition among groups that control the trade.	The primary harms from the counterfeits include: – negative impact on local industries – health and safety risks for consumers, e.g. from consuming counterfeit medication – loss of domestic revenue – increased corruption through enrichment of local powerful elites, which may be colluding with criminals.	The primary harms from artisanal scale mining include: – health and safety risks for artisanal miners, e.g. resulting from dangerous work practices or the use of toxic products – damage to the environment, resulting from the use of toxic products (e.g. mercury) – loss of government revenue – resourcing of local power brokers.
Implications of the response	Because of the limited local cocaine market (cocaine's penetration into social groups is commensurate with its high cost), responses should concentrate on their impact on the balance of power: – improved measures to seize the commodity prior to its transiting through West Africa (with the caveat that this will displace flows elsewhere) – targeted interventions (e.g. strengthening transparency and oversight to keep senior government officials from controlling the flow of drugs) – interventions focusing on breaking down the trafficking networks.	Counterfeit goods, though the object of limited attention from authorities in the region, are in heavy demand, mostly because of the lack of affordable legitimate alternatives. Responses should include: – for the goods most likely to cause physical harm (e.g. counterfeit medications), controlling the flows that cause the most harm to consumers and raising consumer awareness of the risks involved – providing viable market alternatives to consumers, possibly through government investment or subsidies – intervening with those producing and supplying the goods – addressing corruption, e.g. targeting relevant authorities with measures to improve transparency and oversight	Artisanal gold mining is more an informal than a criminal activity. Most of the value-chain benefits remain in the country, particularly in the community of the individuals involved. Responses should include: – mitigating harm to the environment – protecting those exposed, such as small-scale miners – shifting informal activity into the formal sector, both through legal and regulatory action, and providing incentives to the actors involved – creating/enforcing corporate regulation to address IFFs flowing outside of the region

OECD(2018)

THE FIVE COMPONENTS OF THE "HARMS"

- ❑ **Physical harm** is harm to persons (homicides, violent crime) or physical infrastructure (damage to property).

- ❑ **Societal harm** creates or exacerbates societal tensions (including inciting violent conflict, and ethnic, gender-based or inter-generational conflict or violence), as well as economic or social marginalisation.

- ❑ **Economic harm** in the form of direct and indirect harm to the economy. Directly,

- IFFs withdraw funds from the legitimate economy; they may incite the state to divert resources in order to prevent and respond to criminally motivated harms, or treat or compensate its victims. Indirectly, IFFs damage the economic climate, competitiveness, and investment and entrepreneurship cultures.

- ❑ **Environmental harm** is caused by unsustainable use of environmental resources

- and the by-products of criminal activity.

- ❑ **Structural/governance harm** is damage done to the quality of the governance or rule-of-law system as a result of corruption, and through the erosion of the state's reputation, legitimacy and authority.

- These harms can be analysed and felt at the individual, community, national and international levels, with differences based on demographics, gender and specific vulnerable groups.

THE CRIMINAL ECONOMIES OF WEST AFRICA

- Informal enterprise accounts for anywhere between 40% and 75% of gross domestic product (GDP) and employs anywhere between 50% and 80% of the available workforce in different West African countries.

- By one estimate, the informal sector currently accounts for around 60% of all urban employment and provided 90% of all new employment created in the 1990s (Fortune et al., 2015).

- Consequently, economic growth has translated into increasing inequalities, and a highly visible gap between the "haves" and the "have nots".

- This, in turn, has caused young people to become disillusioned with their governments and has entrenched intergenerational differences (Reitman and Shaw, 2014; Marc et al., 2015).

- Arguably, these schisms have exacerbated social fractures and weakened the rule of law, with implications for the recruitment of youth into criminal industries.

NATURE OF THE LOCAL ECONOMY AND IFFS

Category A	Category B	Category C
Informal (unregistered) traders or firms operating entirely outside the formal economy	Formal (registered) firms fully evading trade-related regulations and duties (e.g. avoiding official border-crossing posts)	Formal (registered) firms partially evading trade-related regulations and duties by resorting to illegal practices (e.g. under-invoicing)

Source: ECA (2012).

POROUS BORDERS AND CRIMINAL ECONOMIES

- one of the most significant border regions in West Africa lies between Nigeria and Benin. The economies of these two countries rely upon both illegal and legal cross-border trade, "an essential part of the Abidjan-Lagos transport and migration corridor", which "also represents a key transport vein in the ECOWAS region" (Blum,2014).

- A similar narrative applies to the Saharan states bordering North Africa, where variable pastoral conditions, minimal domestic resources or industries, and heavily subsidised commodities in the oil-rich states of North Africa contribute to highly mobile populations and active cross-border trading networks.

- With 16, 794 kilometres of land borders between the Sahel states, Algeria and Libya, cross-border trade in subsidised commodities is significant (OECD/SWAC, 2014).

- Research has shown that Algeria provides transport subsidies in the range of USD 12.5 million per year to ensure that subsidised commodities reach communities in the country's southern regions.

- This has created a cross-border smuggling economy, estimated at around USD 50 million with communities in northern Mali.

- The fiscal cost of food and energy subsidies from the government of Libya before the current crisis amounted to USD 11.5 billion a year (equivalent to nearly 14% of Libya's GDP); smuggling of licit commodities from Libya alone has been estimated at USD 4 billion per year (Reitano and Shaw, 2014).

SAHEL AND WEST AFRICA SIDE

- In the Sahel and West Africa, active networks of informal cross-border trade have facilitated the growth of more damaging criminal cross-border trafficking.

- Local border populations – who depend on, protect and sustain smuggling networks – do not distinguish between commodities with varying degrees of illegality (OECD/SWAC, 2014). This has implications for those seeking to combat illicit trade.

- Strengthening lengthy and porous borders requires overcoming the entrenched nature and legitimacy of cross-border informal trade, and accounting for the livelihoods associated with it. Most of the goods available in this region are smuggled commodities; in fact, the communities provide services for traffickers.

- Successful smugglers and traffickers are seldom stigmatised, and may be lauded by communities where informal trade is the rule, rather than the exception (OECD/SWAC,2014; Reitano and Shaw, 2014).

SEABORNE TRADE SUPERCEDES LAND-BASED

- As seaborne trade has increasingly superseded the need for land-based trade, smuggling and trafficking of increasingly high-value illicit commodities have penetrated the informal economy.

- Some analysts have argued that the distinction between informal and formal economies is less valid, and that the economy should instead be understood as a series of social networks based around kith and kin (Meagher, 2005).

- Most transactions in the informal economy – including those supporting illegal activities – are paid in cash or through informal financing mechanisms.

- Financial services in the ECOWAS region are available to a small segment of the population: access to finance averages only 20%, ranging from 6% in Sierra Leone to 51% of the adult population in Cabo Verde (Inter-Governmental Action Group against Money Laundering in West Africa [GIABA], 2014a).

- Similarly, a large proportion of remittances – which are among the largest contributors to domestic income in most West African economies – travel outside of the formal banking system.

- For example, surveys in Burkina Faso and Senegal revealed that over 60% of the receiving households used informal channels for cross-border remittances (World Bank, 2011).

RESEARCH AND INVESTIGATIVE AGENDA

- (i) Where is the good sourced, and is there a local market?
- (ii) Who are the actors and networks involved in the illicit trade or economy?
- (iii) Where is the IFF earned and invested?

GROUP WORK

- GROUP 1-What IFFs-Related Crimes?

- Group 2-Where are the Hotsposts?

- Group 3-Who are involved?

- Group 4-What commodities are involved?

GSS/ISODEC TRAINING FOR GHANA, LIBERIA, NIGERIA AND SIERRA LEONE

Channels And Mechanisms Of Transmission Of IFFs

Ghana's IFFs institutional mapping

KEY PROBLEM

- Lack of conversion of natural resources into lasting benefit for society:
- Why?
- Lack of competencies?
- Ignorance?
- Greed?
- Poor incentives?

RELATIONS WITH INVESTORS

MULTI-NATIONAL COMPANIES-Earthworms or Eggplants

Earthworms
take what they need from the soil, but put back in the form of rich humus. Thus they enrich the soil and leave it better than they found it. In so doing they co-operate with one another and work together

Eggplants
take all the goodness out of the soil and leave it totally denuded. They put nothing of value back and each eggplant operates alone, with only its own interests at heart and is dependent on the soil for sustenance
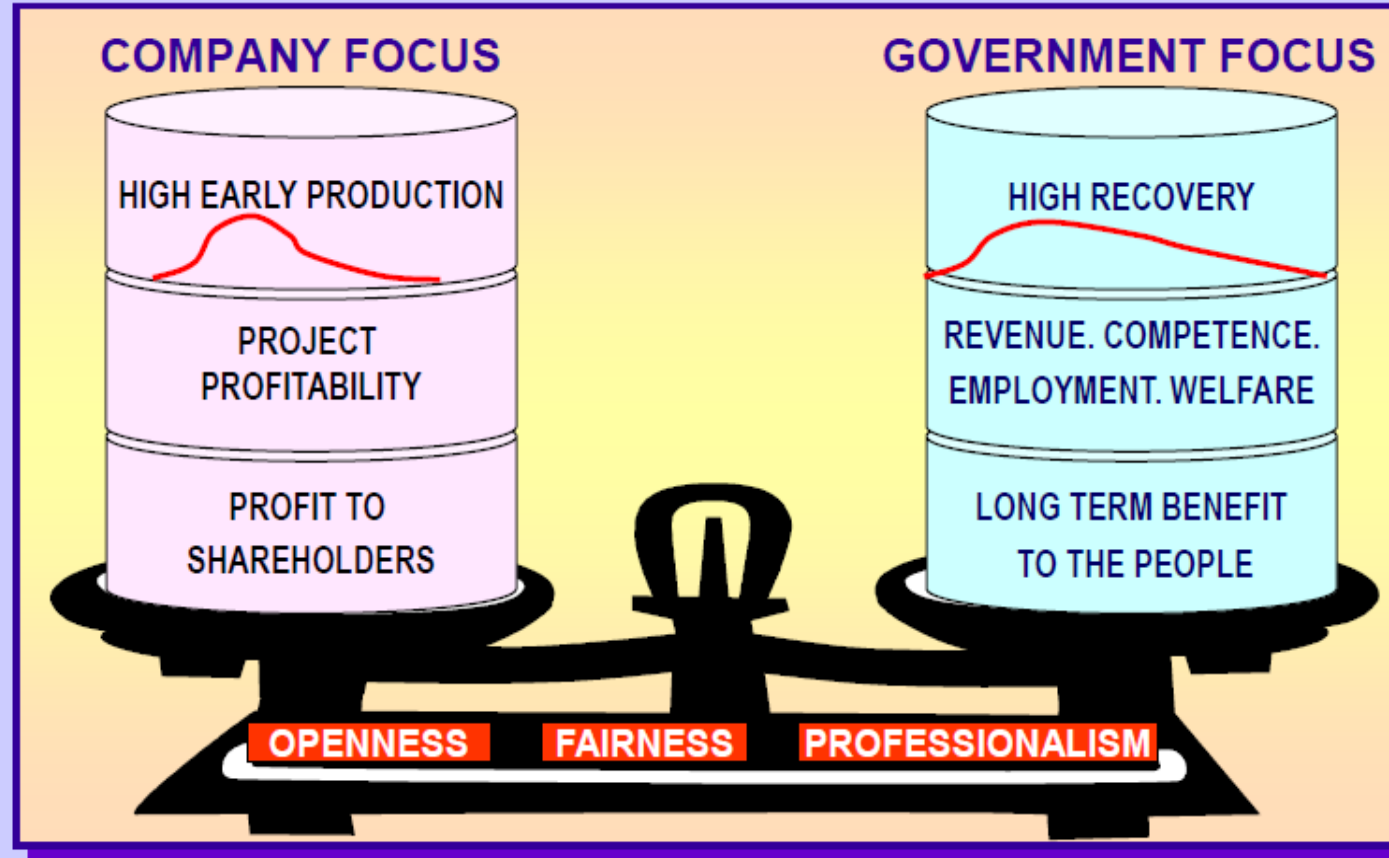
Source: PETRAD(2008)

HOW CAN GHANA MAKE A DIFFERENCE?

- To turn natural resource endowments into lasting benefits:
- Have a vision of extractives
- ***Have a Game Plan defining and articulating, enforcing:***
- Defensive, Offensive positions
- How to interface natural resources to the national economy
- Especially, mid-stream to national economy interface
- Local content and indigenisation, backwards, forward, vertical/horizontal R&D, Consumption and fiscal links
- An open, price neutral but key role for the sate
- Tough on corruption and rent-seeking
- ***Empower CSOs, Media and Legislature for oversight***

WHY COLLABORATION AND CORDITATON?

- Overlapping mandates of Agencies
- Turf wars among Government Agencies
- Scarce resources needing collective use
- Strength and might of IOCs
- Reduce transaction costs and be more efficient and effective
- No central government agency for NRG
- Interest of investors and national Authorities do not necessarily coincide or align

HOW?

- Inter-agency collaboration and coordination committee chaired by Vice President with sub-committee and TOR:

- Backwards, Horizontal And Forward Linkages

- Consumption And Fiscal Linkages

- Research And Development

- Legal, Institutional And Administrative Systems

- Each with TOR, convenor and reporting to chair

CAPACITY BUILDING

- Who IOCs are and their Mode of operations

- Cost Engineering

- Logistics and Procurement

- Under-invoicing and over-invoicing

- Strategic communication

- Transaction-chain management combined with proactive local content, local participation and localisation

MAPPING OF AGENCIES FOR IFFS

STATISTICS
- NSOs
- Statistical units of Customs, Central Bank

GOVERNMENT & POLICY
- Line ministries
- Financial intelligence units
- Government agencies

ECONOMY & TRADE
- Chambers of commerce
- Trade unions

LAW ENFORECEMENT
- Police
- Customs/border control
- Criminal intelligence units

PRIVATE SECTOR
- Commercial banks
- Businesses

CIVIL SOCIETY
- NGOs
- Citizen science

IFF

The stakeholders that may have a role to play in the collection, provision or compilation of data related to IFFs include, for instance The list of stakeholders has been selected and extended by UNCTAD based on FATF (2013).

- **National statistical authorities**: The NSO is a key player as it has the coordinating role of the national statistical system and holds a lot of relevant data, e.g., on businesses and individuals and often compiles the national accounts for the country. Important unit within the NSO is the LCU, with expertise and integrated data on MNEs from various statistical domains within NSS. The statistical units of Customs hold trade transactions data which are essential for analysing the commercial IFFs, including trade misinvoicing. The statistical units of Central Banks are typically in charge of compiling the balance of payments statistics and other financial and government statistics. Statistical units dealing with relevant data may also be hosted by the ministries of finance, justice, foreign trade, economy etc.
- **Policy-making bodies**: Policy-making bodies should, where relevant, be included in the mapping – not as providers of information, but as the principal users – in order to ensure that statistical development considers high-level questions that require data. They have a role to play in expressing data needs but cannot participate in methodological decisions.
- **Tax and other regulatory and supervisory authorities** gain a unique knowledge and data basis of transactions related to income, tax, types of institutions, products, sectors and associated customers, and have expertise on related policies, procedures and controls. They can provide views on particular risks and how to adequately identify those. Tax authorities typically possess large data sets for assessing the tax gap, part of which consists of IFFs crossing country borders, and they can engage in international data exchange, as necessary.
- **Financial intelligence centres (FICs) and intelligence and/or security services**: FICs are ideally placed to identify threats and vulnerabilities based on the suspicious transaction reports and other information and analysis they have. They can also advise on analysis techniques, methods and trends, and may have access to databases on specific products or transaction types. Intelligence agencies have specialised expertise on intelligence analysis and can review or validate risk and vulnerability assessments.
- **Law enforcement and prosecutorial authorities** include police, Customs/border control, and criminal intelligence agencies and anti-corruption bodies where appropriate. These authorities may be able to provide information on specific cases, share substantive knowledge and assist in data provision. They may have relevant statistics on investigations, prosecutions and convictions, assets seized, confiscated, repatriated etc. or hold information about criminals' modus operandi obtained in their investigations. They may also be able to provide information on new trends and risks, and assist in identifying vulnerabilities.
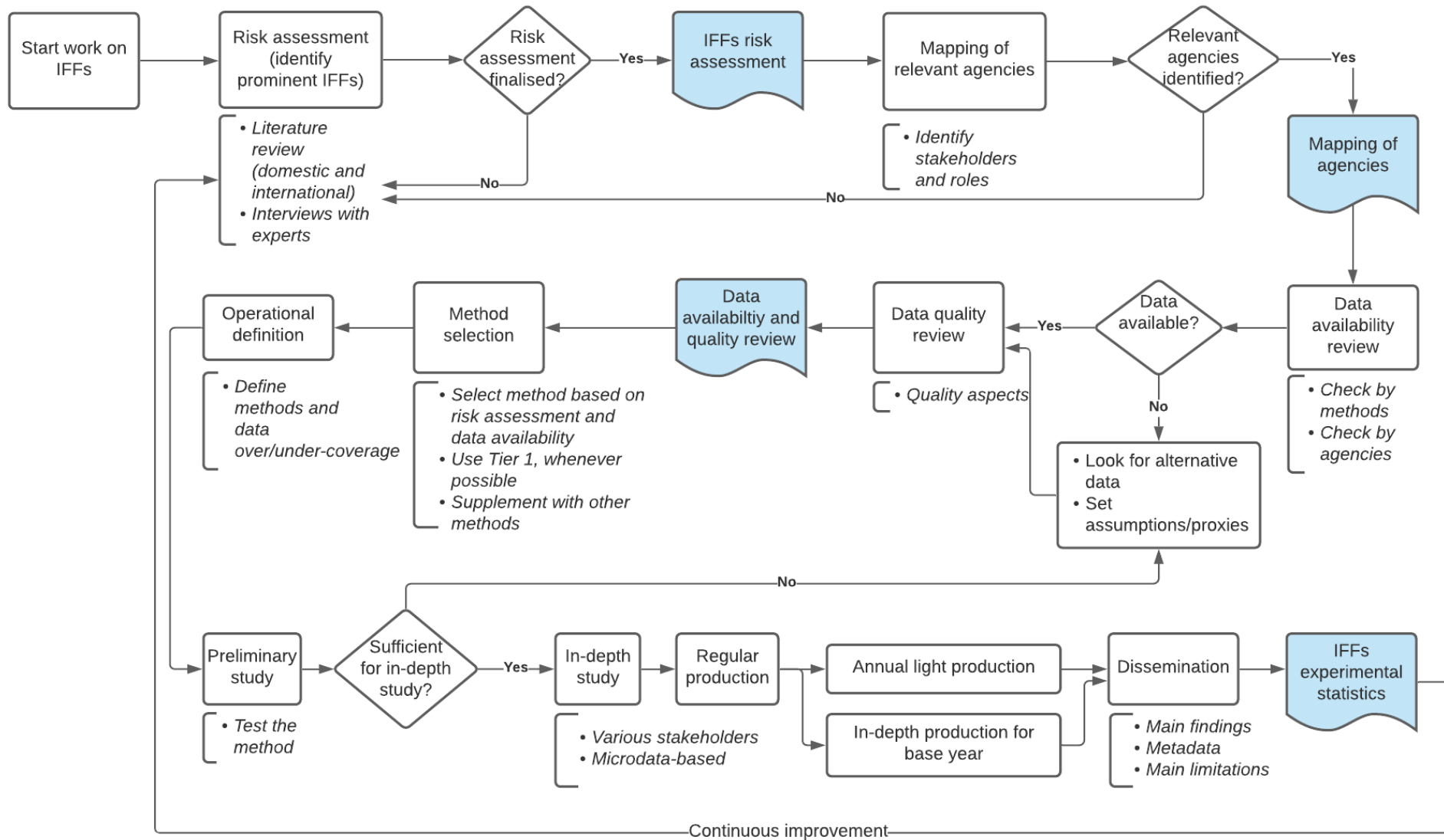- **Ministries of foreign affairs and trade, chambers of commerce** etc. may hold relevant information on trade-related IFF risks, exporters and importers, trade flows and the related international collaboration and initiatives.
- **International and foreign partners** may or may not be relevant in the national mapping of agencies. However, they provide useful guidance, e.g., the materials related to SDG indicator 16.4.1 by UNCTAD and UNODC. FATF-style regional bodies of which a country is a member may be a useful source of information on risk and on work carried out elsewhere in the region to identify and understand IFFs. Similarly, foreign partners, such as statistical and other authorities from other countries, may also be a potential source of information.
- **CSOs-research and or advocacy CSOs , Think-tanks** may have data and analysis report that contain or make use or even collect primary data useful for IFFs

IFFS WORKFLOW

Commodity trade mispricing: Drivers and regulatory enablers/incentives

Regulatory enablers / incentives

Input and output sides

Mainly output side

Commercial / corporate law & CSR
- Issues of contract transparency and contract allocation procedures
- Insufficient due diligence and reporting by companies

Mineral valuation
- Poor mineral sampling and testing standars, and poor reporting requirements

Customs valuation and clearance
- Poor valuation, traceability, no data cross-matching
- Poor internal cooperation (with Tax and line departments) / No external cooperation

Tax
- Tax rate differentials and preferential regimes / offshore tax structures
- International mismatches in entity and instrument characterisation & regulatory arbitrage
- Treaty 'shopping' and treaty abuse
- Secrecy, lack of transparency
- Transfer pricing rules
- Tax treatment of related party debt-financing, etc.
- Issues of jurisdiction to tax (indirect transfer of interests, etc.)

Drivers of revenue loss

Shift profit offshore (profit shifting)
...Harmful tax incentives?
... Non competitive markets (buyer power)?

Source: Musseli & Bonanomi(2019)

OUPUT SIDE

INPUT SIDE

Project focus

Pricing of the traded commodity

Pricing of inputs (equipment, management fees, equity/debt, licences) ...

(Related) buyer in China/Thailand ← **Mining company in Laos** ← **Parent in Australia**

... related outbound payments (service fees, dividends, royalties, interests)

Commodity trade mispricing: Regulatory enablers/incentives and regulatory responses

TAX

- Tax rate differentials and preferential regimes / offshore tax structures ← Changes to the international tax architecture / alternative framework (minimum taxes, formula apportionment, etc.)
- International mismatches in entity and instrument characterisation & regulatory arbitrage ← Anti-hybrid rules
- Treaty 'shopping' and treaty abuse ← Limitation of benefits (LOB) rules and other anti-treaty abuse rules
- Secrecy, lack of transparency ← Exchange of information and cooperation in tax matters
- Transfer pricing rules ← Simplified TP mechanisms and alternative approaches (formulary apportionment, etc.)
- Tax treatment of related party debt-financing, captive insurance, etc. ← Restrictions on interest deductibility (thin capitalization and other rules)
- Issues of jurisdiction to tax (indirect transfer of interests, etc.) ← Strengthened source country taxing rights

CUSTOMS

- Poor valuation and clearance procedures (valuation, traceability, data cross-matching) ← Reference databases, traceability systems and data cross-matching (rules and regulations)
- No internal cooperation (tax department, mines/line ministries) ← Internal administrative assistance (protocols and procedures)
- No external cooperation ← Customs cooperation agreements

MINERAL VALUATION

- Poor mineral sampling and testing standars, and poor reporting requirements ← Strengthened mineral valuation frameworks and procedures

COMMERCIAL / CORPORATE

- Issues of contract transparency and contract allocation procedures ← Contract registration, traceability systems, inter-locked paper trials / technologies (block chain?), auctions
- Insufficient due diligence and reporting by companies ← 'Incentivize' traders' due diligence and reporting by leveraging trade facilitation, exchanges, finance/investors, etc.

Source: Musseli & Bonanomi(2019)

Cooperation frameworks

- Internal administrative assistance (bank supervisors, AML units, tax authorities, law enforcement)
- Customs valuation

➤ Trade provisions, including trade facilitation (Authorized Economic Operator status etc.)
➤ Investment treaties/contracts (Denial-of-benefits clauses, etc.)
➤ Business and Human Rights (and environment)

Switzerland

- Bribery of foreign officials and private persons in international business transactions

Anti-corruption/ bribery law

Customs and trade transparency

- Tax crime as a predicate offense of AML
- Financial intermediaries due diligence and disclosure requirements
- Extension of AMN regulations to designated non-financial businesses and professions, including traders
- Suspicious activity reporting system, internal administrative assistance (customs, tax authorities, banking supervisors)

Anti-money laundering (AML) law

Mutual legal assistance in criminal matters

Exchange of information and assistance in the collection of taxes

Cooperation options

Customs mutual assistance agreements

Transmission of CbC reports and TP documentation

- Country-by-country (CbC) reporting & transfer pricing (TP) documentation
- Obligation to disclose payments to governments
- Identification of the beneficial owners of legal entities
- Transparency regarding legal entities, including companies with bearer shares

Disclosure / accounting rules

Ghana and Laos

Pre-shipment inspection and valuation; customs enforcement and trade transparency

Corporate governance and directors' duties

Anticorruption laws & AML legislation

Internal administrative assistance (tax authorities, customs agencies, law enforcement, banking supervisors/FIUs, etc.)

Elimination of potentially harmful tax practices:
- Preferential tax incentives for license income with no substantial activity
- Preferential tax treatment of holding, domiciliary (auxiliary) and mixed companies at cantonal level
- "Commissionaire" ruling regime

Corporate tax law

Transfer pricing rules, procedures and documentation

Other anti-abuse rules

Corporate disclosure requirements and transparency

Tax provisions (general tax law, mining law, mining contracts)

Investment regulation (institutional set up, concessions/licences, operations)

Criminal law issues (Switzerland: SCC, AMLA & Ordinances, ACLA)

Company law issues (Switzerland: CC, CO, CISA, FAIS)

Tax law issues

Customs laws, regulations and procedures

Source: Musseli & Bonanomi(2019)

INPUT AND OUTPUT SIDE ISSUES OF IFFS

Output
Traded commodity output

Input
Production inputs

Costs of mining, smelting, refining inputs

Pricing of intra-group services (marketing, management …)

Payment of royalties

Inter-company loans & guarantees

Deductions for price risk management

Source: Musseli (2019)

REGULATORY USE OF REFERENCE PRICES AND MARGINS TO TRACK DOWN MISPRICING

Procedural

- Risk assessment
- Reversal of the burden of proof
- Dispute settlement
- Safe harbours
- Advanced pricing agreements
- Sixth method
- Resale minus / cost plus with fixed margins
- Deemed profits, fractional apportionment and other formulary methods
- Administrative pricing
- Contract regulation

Transfer pricing regimes

Profit allocation rules

Prescriptive

TOOLS FOR DATA EXPLORATION AND ANALYSIS

NINE KEY PYTHON-BASED TOOLS

(By Bishop Akolgo)

(GSS/UNCTAD WORKSHOP ON THE MEASUREMENT OF IFFS)

ISODEC CONFERENCE ROOM-Accra-24th to 28th APRIL, 2023

WHAT IS THE INTERQUARTILE AND WHY USE IT

- **five-number summary** is mostly used IN STATISTICS as it gives a rough idea about the dataset.
- **1.Minimum value**: It is the minimum value in the data set.
- **2.First Quartile, Q1**: It is also known as the lower quartile where 25% of the scores fall below it.
- **3.Median (middle value) or second quartile**: It is basically the mid-value in the dataset.
- **4.Third Quartile, Q3**: It is also known as the Upper quartile in which 25% of the data is above it and the rest 75% falls below it.
- **5.Maximum value**: It is the maximum value in the dataset.

PRICE FILTER METHOD

- Arm's length price filter: benchmark upper and lower bounds of prices for each commodity

- a. Market price filter: (market price) +/- 5%, 10%, or more

- b. Non-market price filter (Pak and Zdanowicz (1994): Statistical estimates

- Upper and lower prices in quintiles (eg: quartile, quintile, or decile) for each commodity code

- c. Requires detailed trade data at transaction level

- No need for partners' trade statistics

Interquartile Range

- Mathematically, it is basically defined as the difference between the third quartile (75th percentile) and the first quartile (25th percentile).

- Q3-Q1

- IQR denotes the middle 50% hence also known as **midspread** or **H-spread** in statistics

THE EXERCISE

Exercise: Price-Filter Method

This table lists all U.S. export records of Aluminum wires in 2011, a total of 195 records.

0. Calculate the implied price of each record.

1. Find the lower quartile, median, upper quartile prices in 2011

2. Identify records with prices above the upper quartile prices

3. Identify records with prices below the lower quartile prices

4. Estimate overvalued amount or undervalued amount of each record

5. What is the total overvalued amount for all the exports to Ghana?

Interquartile range calculation

- Follow the below steps to calculate the same:

- Step 1: Insert the dataset.

- Step 2: Select any cell where you want to write the formula to calculate the values of Q1, Q3, and IQR.

- Step 3: First find the values of Q1 and Q3 using the quart values as 1 and 3 respectively.

- Step 4: deduct Q1 from Q3

- Step 5: Lets practice

CREATING INTERQUARTILE RANGE

- PRICE=Value/Quantity
- Total 195 records
- Low Quartile at 195*0.25 = 49th (go to row 52)
- Median price at 195*0.5 = 98th   (go to row 102)
- Upper quartile at 195*0.75 = 146th (go to row 149)

- Overpriced =(price - upper quartile price) or zero if negative
- Underpriced = (PRICE -lower quartile price) or zero if negative
-           Lower Quartile Price=3.803468208
-           Upper Quartile Price=6.020361991

SUMMARY-PRICE FILTER METHODOLOGY

- Estimate Mispriced amount
- a. Identify abnormally priced / mispriced transactions outside the benchmark bounds
- Overpriced if above the upper bound price
- Underpriced if below the lower bound price
- b. How to measure mispricing?
- **Overvalued** = (Declared value) – (value based on **upper bound** price)
- **Undervalued** = (value based on **lower bound** price) – (Declared value)

LIST OF POSSIBLE TOOLS

1. Pivot Tables
2. Power Pivot
3. PandasGUI
4. JupyterLab Desktop
5. Bamboolib
6. **Atoti**
7. Mito
8. Terality
9. Streamlit

WHAT IS PIVOT TABLE AND WHY USE IT?

- A PivotTable is an interactive way to quickly summarize large amounts of data.

- You can use a PivotTable to analyze numerical data in detail, and answer unanticipated questions about your data.

- A PivotTable is especially designed for: Querying large amounts of data in many user-friendly ways.

- Also helps you to clean and format your data ready for analysis

PIVOT TABLES OR POWER PIVOT?

- Power Pivot **enables users to manipulate data input, create relationships, and better understand where the company currently stands in relation to one metric or another**.

- Power Pivot also enables users to create visual data that can be outputted to Excel worksheets. It includes PivotTables and PivotCharts.

- Power Pivot is an Excel feature that enables the import, manipulation, and analysis of big data without loss of speed/functionality.

- **Power Pivot tables are pivot tables** that that allow the user to mix data from different tables, affording them powerful filter chaining when working on multiple tables.

Creating a Pivot Table

- To Manually create a PivotTable
- Load your data
- Clean your data
- Click a cell in the source data or table range.
- Go to Insert > PivotTable. ...
- Excel will display the Create PivotTable dialog with your range or table name selected. ...
- In the Choose where you want the PivotTable report to be placed section, select New Worksheet, or Existing Worksheet.

Creating the Pivot Table

- Step 4: Create a Pivot Table
- Select the Data You Want to Analyze.
- Choose "Pivot Table" from the "Insert" Tab.
- Select the Data You Want to Add to Your Table.
- Open the New Worksheet Tab.
- Choose the Fields for Your Pivot Table.
- Drag the Fields to the Desired Area.
- Change the Value Field.
- View Your New Pivot Table.

EXAMPLE-PRACTICE EXERCISE

- Load the practice file called ???
- When file opens,go to

PANDASGUI

- PandasGUI is a GUI for viewing, plotting and analyzing Pandas DataFrames.

- PandasGUI is a Python-based library that facilitates data manipulation and summary statistics to be applied on the dataset using GUI.

- That means that all the operations will be performed via the graphical user interface (GUI), but pandas will be used to execute them under the hood.

PANDASGUI KEY FEATURES

- **Features**
- View DataFrames and Series (with MultiIndex support)
- Interactive plotting
- Filtering
- Statistics summary
- Data editing and copy / paste
- Import CSV files with drag & drop
- Search toolbar

INSTALLATION AND USAGE

- **Installation**
- Install latest release from PyPi:
- pip install pandasgui Install directly from Github for the latest unreleased changes:
- pip install git+https://github.com/adamerose/pandasgui.git
- **Usage**
- Create and view a simple DataFrame
- import pandas as pd from pandasgui import show df = pd.DataFrame({'a':[1,2,3], 'b':[4,5,6], 'c':[7,8,9]}) show(df) PandasGUI comes with sample datasets that will download on first use. You can also import all_datasets which is a dictionary of all sample datasets like Dict[str, DataFrame]
- from pandasgui import show from pandasgui.datasets import pokemon, titanic, all_datasets show(pokemon, titanic) show(**all_datasets)

2.MITO

- Mito is a spreadsheet interface for Python.
- It allows you to call a spreadsheet front-end into your Python environment, and
- **each edit you make in the spreadsheet generates the equivalent Python in the code cell below**.

MITO MAIN FEATURES

- Mito allows you to do full EDA and Data Analysis in a visual environment. With Mito, you can:
- Merge Datasets
- Create Pivot Tables
- Graph and Visualize Data
- Use Spreadsheet Formulas and Functions
- Fill Null Values
- Filter and Sort Datasets
- Look at Summary Statistics
- And more!
- Here is the full documentation.

MITO INSTALLATION

• To install Mito, use these commands at your terminal:

1.python -m pip install mitoinstaller
2.python -m mitoinstaller install
3.jupyter lab

• To open the Mitosheet run, run these commands in your notebook:

1.import mitosheet
2.mitosheet.sheet()

COMMON INSTALLATION PROBLEMS

- **According MITO:**
- **If your current mitosheet installation is not rendering a sheet when you call `mitosheet.sheet()`,** please try these instructions in the terminal where you installed your mitosheet:
  ```
- pip uninstall mitosheet
  pip install mitoinstaller
  python -m mitoinstaller install
  ```

  These new commands should fix your mitosheet installation going forward. You can see instructions for keeping up to date with mitosheet upgrades here.
-
- Please note that these package changes may cause your current mitosheet installation to require later versions of JupyterLab than current.

3.JupyterLab

- JupyterLab enables you to work with documents and activities such as Jupyter notebooks, text editors, terminals, and custom components in a flexible, integrated, and extensible manner.

- You can arrange multiple documents and activities side by side in the work area using tabs and splitters. Documents and activities integrate with each other, enabling new workflows for interactive computing.

- JupyterLab also offers a unified model for viewing and handling data formats. JupyterLab understands many file formats (images, CSV, JSON, Markdown, PDF, Vega, Vega-Lite, etc.) and can also display rich kernel output in these formats. See File and Output Formats for more information.

-

The JupyterLab Interface

- JupyterLab provides flexible building blocks for interactive, exploratory computing.
- While JupyterLab has many features found in traditional integrated development environments (IDEs), it remains focused on interactive, exploratory computing.
- The JupyterLab interface consists of a main work area containing tabs of documents and activities, a collapsible left sidebar, and a menu bar. The left sidebar contains a file browser, the list of running kernels and terminals, the command palette, the notebook cell tools inspector, and the tabs list.
-

untitled.txt	35 minutes ago				
zika_assembled_g...	an hour ago				

4	5.0	3.6	1.4	0.2	setosa
5	5.4	3.9	1.7	0.4	setosa
6	4.6	3.4	1.4	0.3	setosa
7	5.0	3.4	1.5	0.2	setosa
8	4.4	2.9	1.4	0.2	setosa
9	4.9	3.1	1.5	0.1	setosa
10	5.4	3.7	1.5	0.2	setosa
11	4.8	3.4	1.6	0.2	setosa
12	4.8	3.0	1.4	0.1	setosa
13	4.3	3.0	1.1	0.1	setosa
14	5.8	4.0	1.2	0.2	setosa
15	5.7	4.4	1.5	0.4	setosa
16	5.4	3.9	1.3	0.4	setosa

and no

other p

bar.vl.js

Simple 0 $_ 0 Python 3 (ipykernel) | Idle

INSTALLATION

- JupyterLab can be installed using conda, mamba, pip, pipenv or docker.
- **Conda-**
- If you use conda, you can install it with:
- conda install -c conda-forge jupyterlab
- **mamba¶**
- If you use mamba, you can install it with:
- mamba install -c conda-forge jupyterlab
- **pip¶**
- If you use pip, you can install it with:
- pip install jupyterlab
- If you are using a macOS version that comes with Python 2, run pip3 instead of pip.
- If installing using pip install --user, you must add the user-level bin directory to your PATHenvironment variable in order to launch jupyter lab. If you are using a Unix derivative (FreeBSD, GNU/Linux, macOS), you can do this by running export PATH="$HOME/.local/bin:$PATH".
- **pipenv¶**
- If you use pipenv, you can install it as:
- pipenv install jupyterlab pipenv shell
- or from a git checkout:
- pipenv install git+git://github.com/jupyterlab/jupyterlab.git#egg=jupyterlab pipenv shell
- When using pipenv, in order to launch jupyter lab, you must activate the project's virtualenv. For example, in the directory where pipenv's Pipfile and Pipfile.lock live (i.e., where you ran the above commands):
- pipenv shell jupyter lab
- Alternatively, you can run jupyter lab inside the virtualenv with
- pipenv run jupyter lab

4.BAMBOOLIB

- bamboolib is developed by 8080 Labs, a software company specialised in developing tools that let anyone leverage the power of Python in Data Science.

- 8080 Labs creates both paid and open-source software.

- Enables anyone to analyse data in Python without having to write code

- Reduces employee on-boarding time and training costs

- Enables team members of all skill levels to collaborate within Jupyter and to share the working results as reproducible code

- No lock-in. You own the code you created with bamboolib

- All your data remains private and secure

INSTALLATION

- It is a GUI extension for pandas data-frames for easy data exploration and transformation that enables anyone to work with Python in Jupyter Notebook or JupyterLab.

1.pip install bamboolib # Jupyter Notebook extensions python -m
2.bamboolib install_nbextensions # JupyterLab extensions python -m
3.bamboolib install_labextensions

HOW TO USE BAMBOOLIB

- After installing bamboolib, open notebook or jupyterlab:
- 1.import bamboolib as bam
- 2.import pandas as pd
- 3.bam
- 4 now load your data as excel or CSV file.

Raw Data
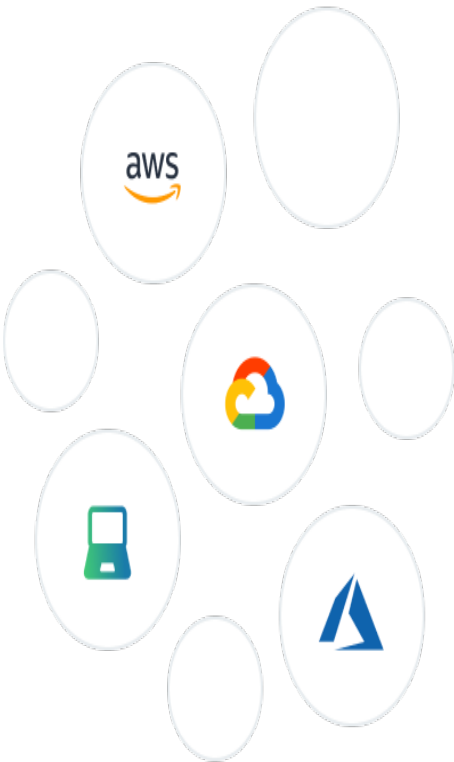
Explore & Transform

Prepared Dataset
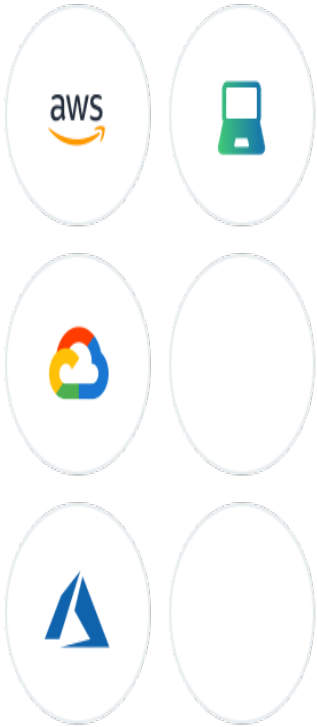
terality

Custom Apps

ML/AI Models

Dashboard & Bi Tools

INSTALLATION AND USAGE

- **Create a free Terality account**

- Go to the Terality dashboard, and create your account.

- **Follow the instructions on your Terality dashboard**

- Once your account is created, follow the instructions on the dashboard. It should take less than 3 minutes. During this step, you will

- Install the Terality client library

- Generate an API key

- Configure the Terality client

TERALITY

- Terality is Pandas' evil twin born with superpowers. It has identical syntax with Pandas but works at lightning speed and doesn't depend on your machine to work its magic.
- **What is Terality, and how does it work?**
- Terality is a serverless data processing engine running on giant clusters. You can work with datasets of any enormous size blazing fast without worrying about scaling resources on the clusters or any infrastructure.
- This means two things:
- There is virtually no limit on memory, thus on the dataset size.
- You only need a good Internet connection to process hundreds of GBs, even on a 4GB RAM machine.
- And the selling point of Terality — its Python package has the same syntax as Pandas. You only need to change a single line of code to switch from Pandas to Terality.

WHAT IS ATOTI?

- atoti is a free Python BI analytics platform for: Quants,

- Data Analysts,

- Data Scientists &

- Business Users to collaborate better, analyze faster and translate their data into business KPIs.

1.ATOTI HIGHLINGHTS

- Analyze millions of rows on your laptop and up to several terabytes in the cloud
- Create what-if scenarios and compare them side by side
- Enable multi-dimensional analysis with OLAP cubes
- Visualize data in interactive widgets without coding from Jupyter notebook
- Share results with peers and partners
- Explore data from atoti's dashboarding web application or Excel

INSTALLATION

- **Installation**
- Python package [(docs)](#):
- > pip install atoti[jupyterlab] Conda package [(docs)](#):
- > conda install atoti atoti-jupyterlab python -c conda-forge -c https://conda.atoti.io Docker image [(docs)](#):
- > docker pull atoti/atoti
- LINKS:
- Refer to https://docs.atoti.io/latest/lib/atoti.session.html#atoti.session.Session.link.
- You can find more examples in their notebook gallery: https://github.com/atoti/notebooks

HOW TO USE ATOTI

- We'll see how to:
- Load normalized data in multiple tables to create a multidimensional cube.
- Define aggregated measures to provide application-specific and high-level insights.
- Build no-code interactive charts and tables in JupyterLab.
- Create dashboards in the built-in web app.

EXAMPLE OF ITS USE

From CSV to Cube

In this part of the tutorial, you will create your first cube from a CSV file and learn multidimensional concepts such as *cube, dimension, hierarchy, measure*.

Let's start by creating a *session*:

[1]:

```python
import atoti as tt session = tt.create_session()
```

We can now load the data from a CSV file into an in-memory table called a *table*:

[2]:

```python
sales_table = session.read_csv("data/sales.csv", keys=["Sale ID"])
```

We can have a look at the loaded data. They are sales from a company:

[3]:

```python
sales_table.head()
```

"KEY CONCEPTS AND DEFINITIONS.

(By Bishop Akolgo-IFFS CONSULANT)

The ISODEC Economic Literacy Series for CSOs-Bishop Akolgo

DEFINITION OF ILLICIT FINANCIAL FLOWS

- No single agreed definition but with the narrow and the expanded definitions
- IFFs, can be understood to mean both illegal and legal, but legally or morally contentious and otherwise not fully legitimate (Fontana and Hearson, 2012).
- Money illegally earned, used or transferred(ECA/AU, 2013)
- Epstein (2005) defines IFFs as "capital taken abroad in a hidden form, perhaps because it is illegal, or perhaps because it goes against social norms, or perhaps because it might be vulnerable to economic or political threat".
- According to the OECD (2013), IFFs are cross-border capital transactions either concealing illegal activities or facilitating them.
- OECD argues that 'There are various definitions of illicit financial flows, but essentially they are generated by methods, practices and crimes aiming to transfer financial capital out of a country in contravention of national or international laws.
- For the world Bank, IFFs are flows that have a direct or indirect negative impact on (long-term) economic growth in the country of origin (depending on the particular national development situation).

DEFINITIONS(continued)

- GFI (2013) defines illicit financial outflows as 'all unrecorded private financial outflows involving capital that is illegally earned, transferred or utilised, generally used by residents to accumulate foreign assets in contravention of applicable capital controls and regulatory frameworks'.

- TJN-Illicit financial flows are transfers of money from one country to another that are forbidden by law, rules or custom

- The 'broad' definition of IFFs stretches the concept further by including transactions that are deemed unethical, even if not illegal in the assessed jurisdiction (High Level Panel on Illicit Financial Flows from Africa, 2015;Independent Expert on the Effects of Foreign Debt, 2016; UNCTAD, 2014)

- Leads to three other issues:

- (1) the type of cross-border transfers that qualify as IFFs—whether money flows or anything with monetary value, from loans embedded in private contracts to smuggled physical goods;

- (2) the type and degree of illegality involved; and

- (3) whether the source, the use, or the transfer mechanism of a cross-border transfer should be assessed as illegal.

DEFINITION-NARROW OR BROAD?

- 1.International development organizations focus on transnational illicit flows and, for them IFFs describe financial assets that cross borders, with a particular focus on money leaving developing countries. closely linked to concerns about capital flight and pushed by Global Financial Integrity(GFI) using the definition: "funds crossing borders [that] are illegally earned, transferred, and/or utilized."

- 2.Law enforcement agencies and regulators are concerned with financial crime and so operational agencies such as the police, financial intelligence units, and regulators with anti–money laundering (AML) responsibilities tend to think of illicit finance in terms of financial crimes that relate to their jurisdiction, whether or not there is an international dimension.

- 3.The tax justice movement advocates a broader normative definition. Civil society organizations in the tax justice movement tend to argue that *illicit* relates to the dictionary definition of immoral or contrary to social norms rather than being limited to unlawful behaviors.

- For TJN , tax avoidance by multinational corporations (also called base erosion and profit shifting [BEPS]) should be included under the definition of IFFs.

- For example, the Tax Justice Network argues: "IFF is by its nature hidden, whether it is illegal or simply unacceptable to the public—this makes clear that the source of funds may be perfectly legal, while the avoidance of tax, for example, may be technically legal but illicit according to societal norms."

Approaches to Defining Illicit Financial Flows

Organizations Using Working Concept: ● Global Financial Integrity, OECD, World Bank
● Law Enforcement, FIUs, AML Regulators, FATF ● Tax Justice Network, Global Alliance for Tax Justice

Domestic | Cross-Border

Illegal

Financial crime | Transnational illicit flows

"Legal but immoral"

Tax avoidance by multinational companies

Broad normative definition of IFFs

Forstater(??)
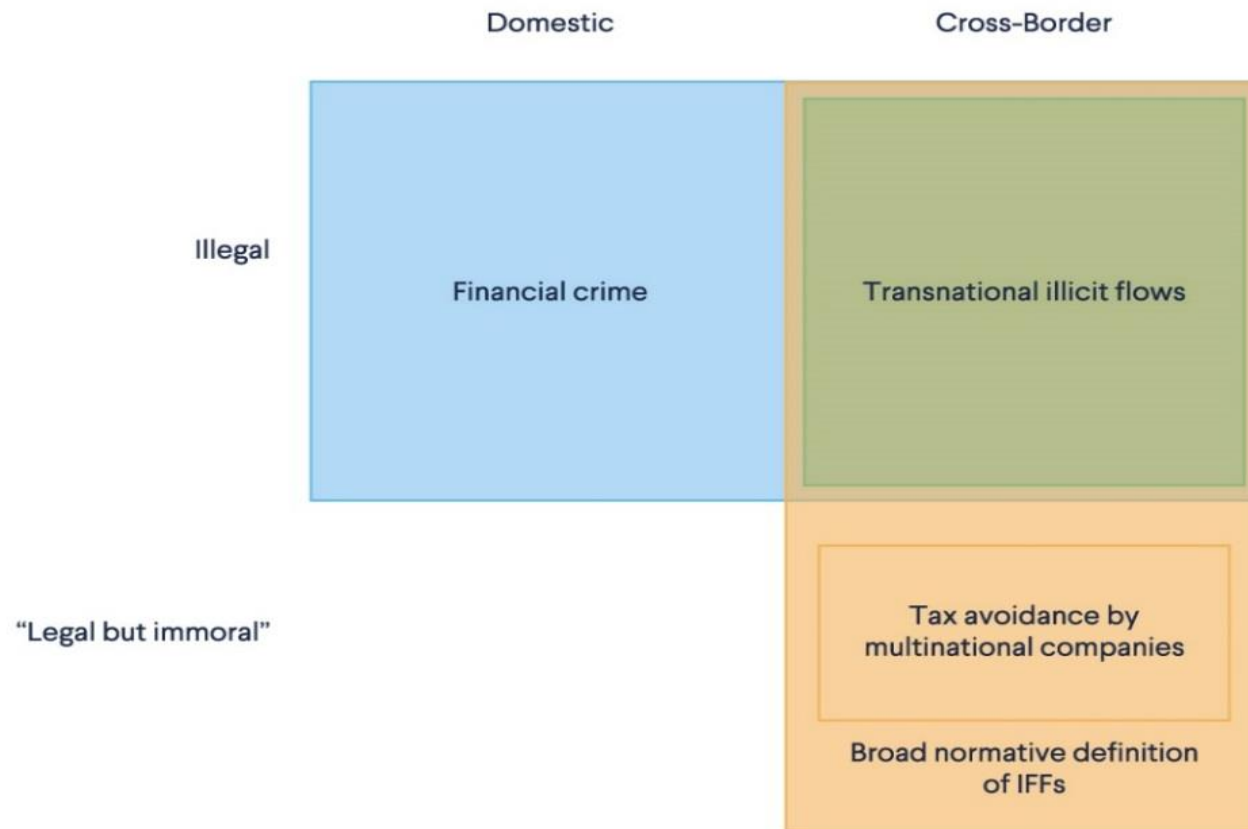
Domains of Concern of Competent Authorities
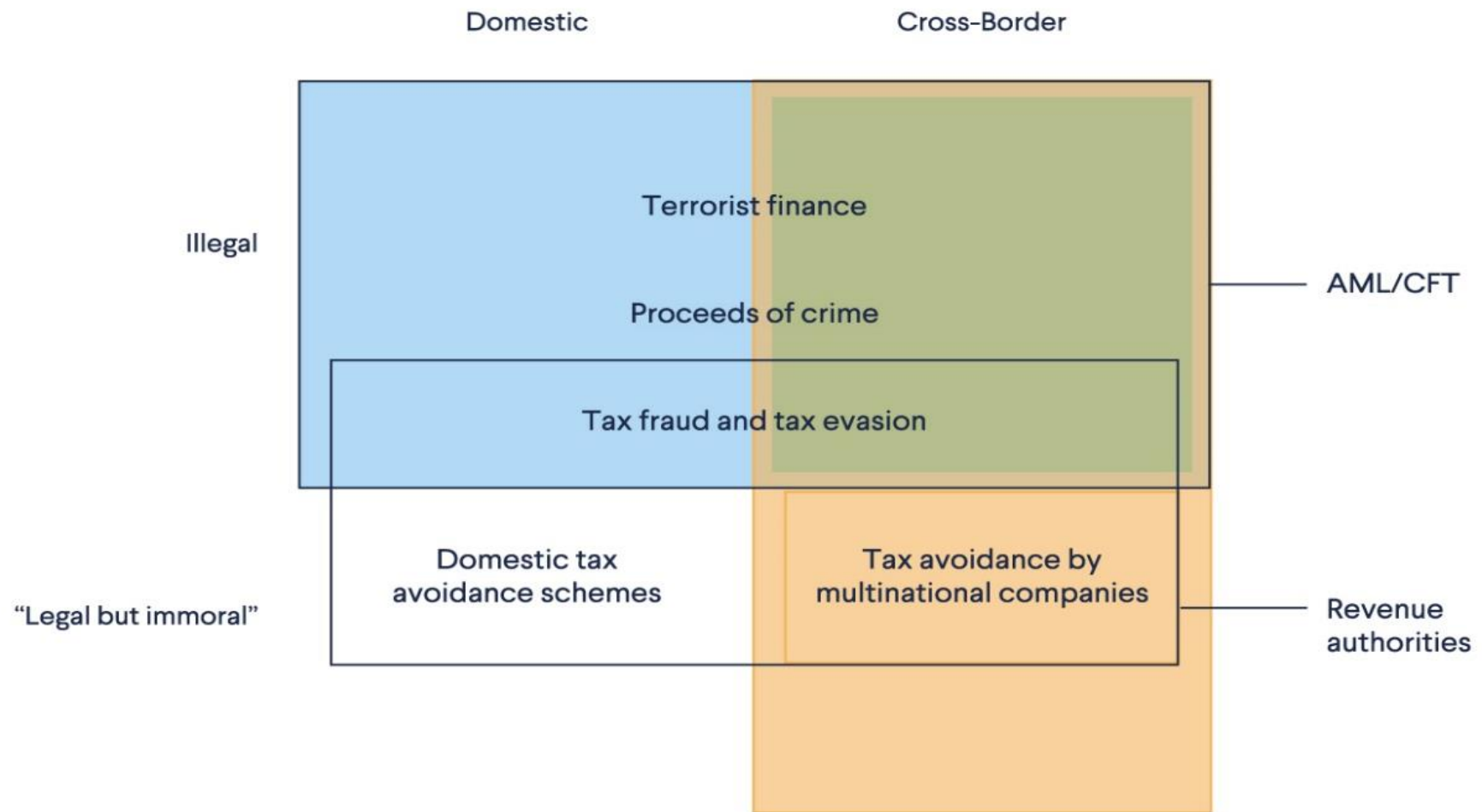
Mapping Different Approaches to Measurements Against Definitions and Concepts
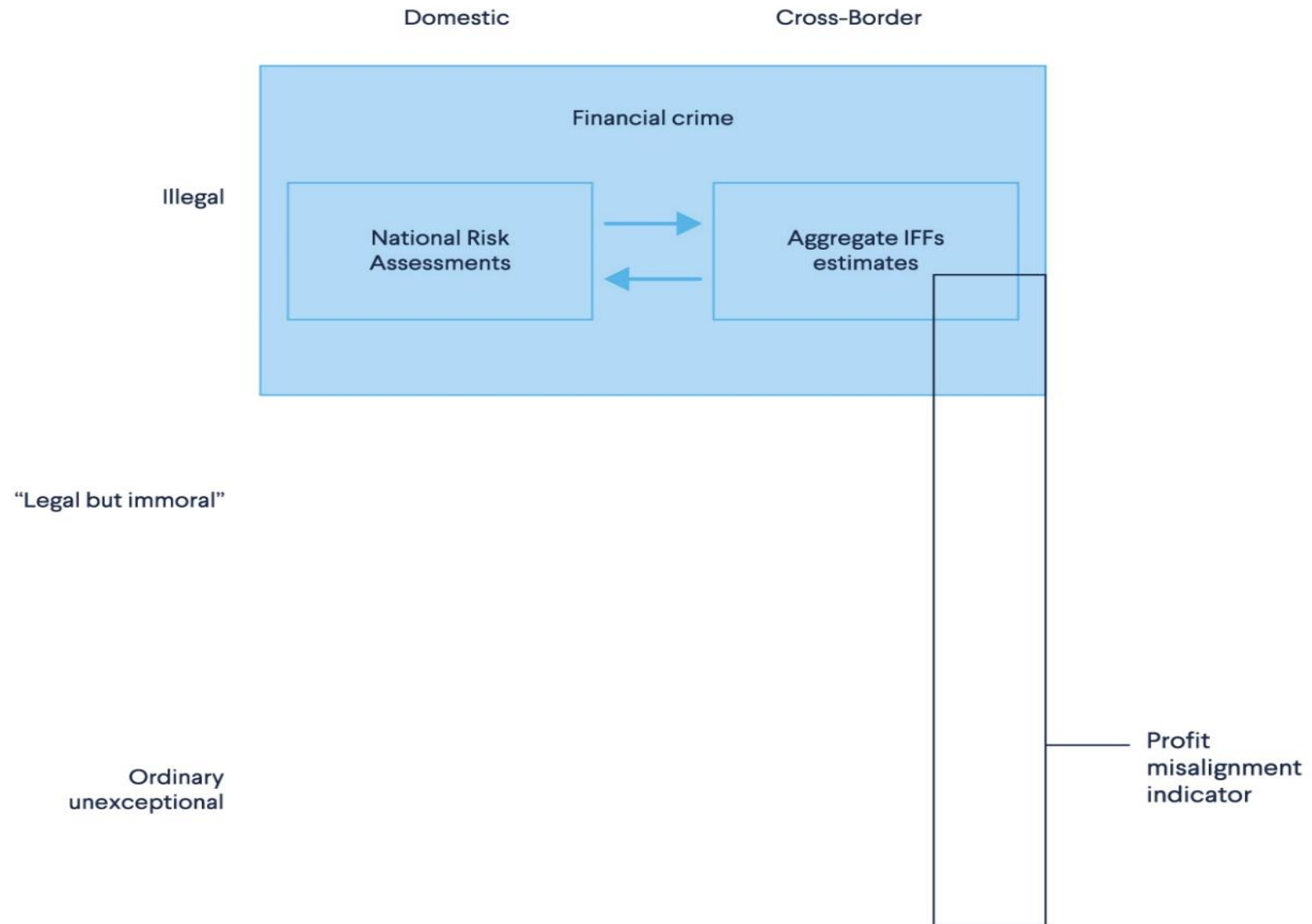
TRANSFER-PRICING

- Transfer-pricing per say is not a problem as firms must price goods and services between and among its subsidiaries

- It is Transfer Mispricing where the problem is Transfer mispricing, also known as transfer pricing manipulation or fraudulent transfer pricing, refers to **trade between related parties at prices meant to manipulate markets or to deceive tax authorities**.

- The legality of the process varies between tax jurisdictions; most regard it as a type of fraud or tax evasion.

- **Here are three main types of transfer pricing models:**

- **Market-based transfer price**. Market-based transfer pricing mimics market conditions. ...

- **Cost-based transfer price**. ...

- **Negotiated transfer prices**.

- **Here are five widely used transfer pricing methods**

- Comparable Uncontrolled Price. ...

- Cost-Plus. ...

- Resale-Minus. ...

- Transactional Net Margin (TNMM) ...

- Profit Split.

BASE EROSION AND PROFIT-SHIFTING-BEPS

- Base erosion and profit shifting' (BEPS) refers to 'tax avoidance'by multinational enterprises (MNEs) that use gaps in the interaction between different tax systems to reduce taxable income artificially, or shift profits to low-tax jurisdictions in which little or no economic activity is performed.

- The (OECD) issued a report in 2013 in which it was noted that: 'BEPS constitutes a serious risk to tax revenues, tax sovereignty and tax fairness for OECD member countries and non-members alike.

- This prompted it to come up with a 'Fifteen Point BEPS Action Plan' which is intended to ensure that profits are taxed where the economic activities generating those profits are performed and where value is created.

Asset And Intellectual Property Shifting

What is Asset And Intellectual Property Shifting?

- Multinational enterprises (MNEs) may shift assets and intellectual property (IP) from one country to another for various reasons, including tax planning, regulatory requirements, and market access

- It's worth noting that not all asset and IP shifting by MNEs is illegal or improper. Many MNEs engage in legitimate tax planning activities that are within the bounds of the law.

- However, some MNEs may engage in abusive tax practices that are designed to evade taxes or take advantage of loopholes in the law.

- It's important for countries to monitor the financial activities of MNEs to ensure that they are paying their fair share of taxes and not engaging in abusive practices.

- Here are some common methods that MNEs may use to shift assets and intellectual property:

1. **Transfer pricing**: MNEs may manipulate the prices at which they transfer goods or services between related companies in different countries to shift profits from high-tax to low-tax jurisdictions.

2. **Debt financing**: MNEs may use debt financing to shift profits to low-tax jurisdictions by paying interest on loans to related companies in those jurisdictions.

3. **Royalty payments**: MNEs may shift profits to low-tax jurisdictions by paying royalties on IP to related companies in those jurisdictions.

4. **Licensing**: MNEs may transfer IP ownership to subsidiaries in low-tax jurisdictions and then license the IP back to subsidiaries in higher-tax jurisdictions to shift profits.

5. **Intangible asset transfers**: MNEs may transfer ownership of intangible assets, such as patents or trademarks, to subsidiaries in low-tax jurisdictions to shift profits.

What Methods Do MNEs Use?

- Here are some common methods that MNEs may use to shift assets and intellectual property:

1. **Transfer pricing**: MNEs may manipulate the prices at which they transfer goods or services between related companies in different countries to shift profits from high-tax to low-tax jurisdictions.

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WHICH ARE CURRENT TAX HEAVENS?

- Following this latest revision in February 2023, the EU blacklist includes the following sixteen jurisdictions: American Samoa, Anguilla, Bahamas, British Virgin Islands, Costa Rica, Fiji, Guam, Marshall Islands, Palau, Panama, Russia, Samoa, Trinidad and Tobago, Turks and Caicos Islands, US Virgin Islands, Vanuatu.

- Is Ghana tax haven?

- In other words, **corporations and other individuals use Ghana to avoid paying taxes to other countries**. Ghana ranks 117 out of 133 countries on the Financial Secrecy Index by the Tax Justice Network.

MONEY LAUNDERING AND TERRORISM FINANCING

- Anti-money laundering (AML) and counter terrorism financing (CTF)
- **Different Types of Money Laundering Schemes**
- Bank laundering., Cash business laundering. ... Casino laundering. ... Layering. ... Real-estate laundering. ... Structuring. ... Trade-based laundering.

- four stages of laundering: **Collecting, Storing, Moving, and Using**.
- Techniques of money laundering-Smurfing. ... Money muling. ... Bulk Cash smuggling. ... Blending funds. ... Trade-based money laundering. ... Shell companies. ... Round Tripping. ... Bank Capture.

TAX HEAVEN, OFFSHORE

- A tax haven, or offshore financial center, is **any country or jurisdiction that offers minimal tax liability to foreign individuals and businesses**.

- Tax havens do not require businesses to operate out of their country or the individuals to reside in their country to receive tax benefits. Leading ones are:

- British Virgin Islands. Considered by many to be the world's leading tax haven, this British Colony's economy holds more than 5,000 times its worth in foreign investments. ...

- Luxembourg. ...

- Cayman Islands. ...

- Bermuda. ...

- Netherlands. ...

- Switzerland. ...

- United States.

POLITICALLY EXPOSED PERSONS

a Politically Exposed Person is **someone who, through their prominent position or influence, is more susceptible to being involved in bribery or corruption**.

- PEPs in Government Roles-Legislative Bodies: An example is a Member of Parliament, Executive Bodies: APEP could range from the head of state down to the assistant ministers

- Diplomatic Roles: Ambassadors or chargé d'affaires would be considered PEPs

- Judiciary Bodies: Key people working within supreme courts, constitutional courts or high-level judicial bodies

- State-Owned Enterprises: APEP would typically be anyone from a senior executive upwards. However, even former members of the board of directors no longer associated with an organization may retain influence and still be flagged as PEPs

- PEPs in Organizations and Institutions

- Central Financial Institutions: Examples here would be the Court of Auditors and members on the boards of central banks

- Armed Forces: In this situation a PEP rating would typically only apply to a high-ranking officer

- International Sports Committees: Members of these committees may be influenced to vote on the location of major sporting events/contracts for building venues, etc., so have recently been included by FATF under their definition of a PEP

- Known 'Close Associates' who are Considered PEPs- Anyone with a close business relationship or joint beneficial ownership of legal entities or legal arrangements with a PEP, Anyone who has the sole beneficial ownership of a legal entity which is known to have been set up for the benefit de facto of the PEP, Immediate Family Members who are Considered PEPs,-Parents and children of PEPs, Spouse or partner, Siblings, Uncles and aunts, Even slightly indirect family members (such as in-laws) will be considered as politically exposed persons

-

Executive Body
Heads of state, heads of government, ministers, deputy ministers and assistant ministers

Legislative Body
Members of Congress, parliament or similar legislative bodies and members of the governing bodies of political parties

Immediate Family Members
Spouses or spouse-equivalent, children and their spouses, parents and siblings of PEP

Known Close Associates
Close business relations or joint beneficial owners of legal entities or legal arrangements, sole beneficial owners of legal entities which are set up for benefits de facto of PEP

Judicial Body
Members of supreme courts, constitutional courts or other high-level judiciaries

Central Banks and Audit Courts
Members of courts of auditors or of the boards of central banks

International Organizations
Directors, deputy directors and members of the board, or equivalent function, of an international organization

State Owned Enterprises
Members of the administrative, management or supervisory bodies

Armed Forces
High-ranking officers

Diplomatic Body
Ambassadors and chargés d'affaires

Managing PEP[1] screening requirements is more complex in today's accelerated, always-connected global economy

Multiple, and often overlapping, international compliance mandates cover politically exposed persons

- FinCEN regulations
- Bank Secrecy Act
- USA PATRIOT ACT
- EU 6th Anti-Money Laundering Directive
- Foreign Corrupt Practices Act
- UK Bribery Act
- OFAC sanctions regulations
- Global sanctions regulations (UN, HMT and EU)[2]
- FATF[3] Guidance

The U.S. Department of the Treasury updated its sanctions list over

140 times
in 2021[4]

Conducting business with a PEP can have costly consequences

- Significant, multi-jurisdictional regulatory enforcements
- Exorbitant fines
- Long-term reputational damage
- Diminished shareholder value
- Lost market opportunities and erosion of existing client relationships
- Added operational cost impacts
- Potential personal liability

Global penalties for non-compliance exceeded

$10 billion
in 2020[5]

How Africa loses to illicit financial flows (IFF)

lack of financial transparency gives rise to IFF

outflows due to:

Laundering criminal proceeds
> Drug trafficking
> Human Trafficking

Corruption
> Bribery of officials
> Theft of state assests

Tax abuse
> Corporate
> Individual

Market abuse
> Conflicts of interest
> Regulatory abuse
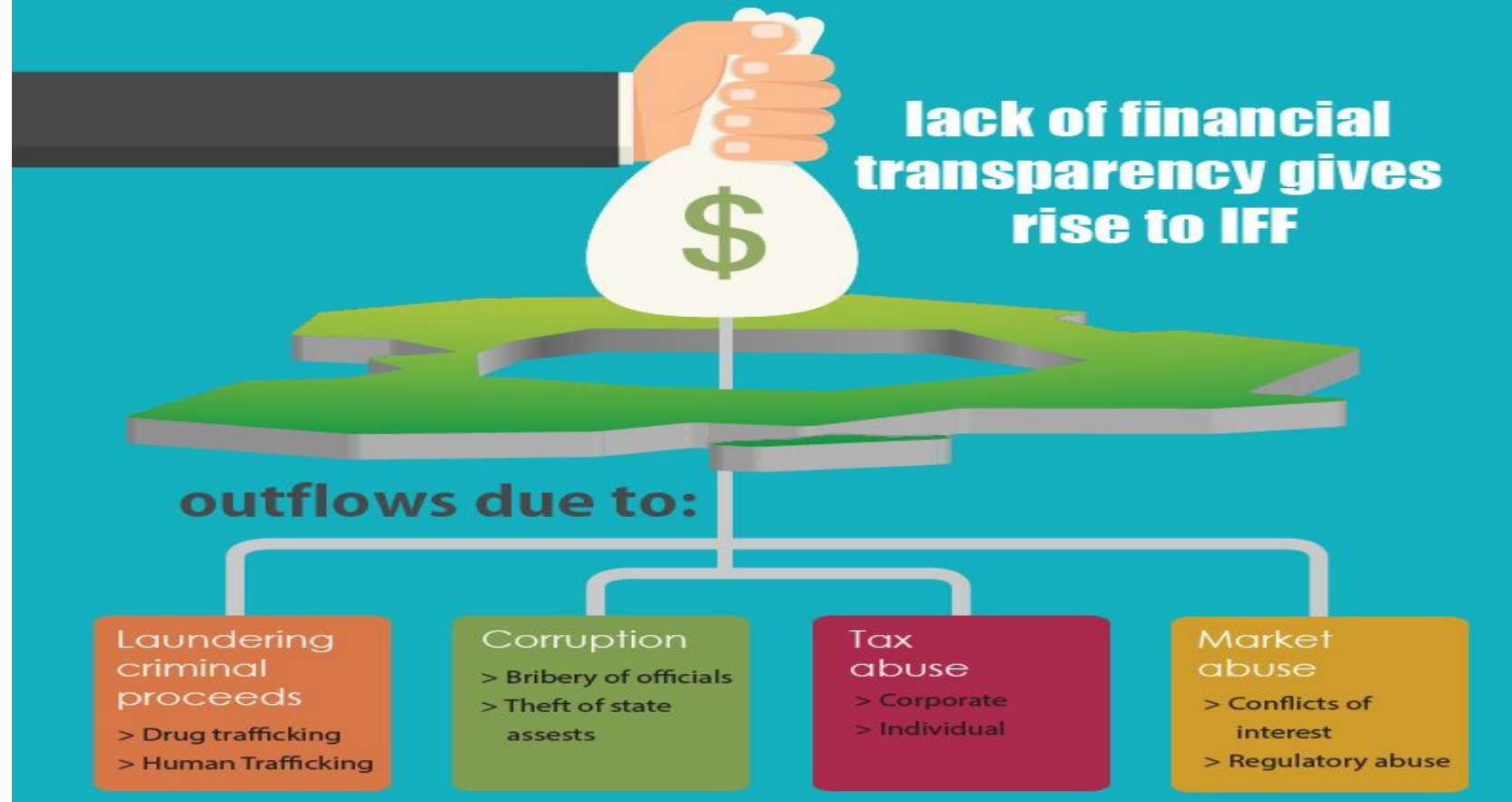
Retaining Illicit Financial Flows (IFF) would alleviate Africa's infrastructure, education, health and agriculture deficit.

Africa needs to develop its capacity to fill the gaps that allow IFF to cripple the continent.

THE AFRICAN CAPACITY BUILDING FOUNDATION | FONDATION POUR LE RENFORCEMENT DES CAPACITIES EN AFRIQUE

"Natural Resources Taxation And Risks Of Illicit Flows
GIZ TRAINING FOR INVESTIGATIVE JOURNALISTS
(By Bishop IFFS Consultant)

The ISODEC Economic Literacy Series for
CSOs-Bishop Akolgo

WHAT IS TP AND WHY IMPORTANT

- *"Chase was the oil companies' preferred bank, and it had asked Hudson to study the petroleum industry's impact on the U.S. balance of payments to provide ammunition that would help the oil companies claim they were "good for America" and help them lobby for special government perks.*
- *One of his tasks on this project was to find out where the oil companies made their profits.*
- *At the producing end? At the refineries? In the gas stations?*
- *David Rockefeller, Chase's president, arranged for Hudson to meet Jack Bennett, Treasurer of Standard Oil of New Jersey, now part of the ExxonMobil empire.*
- *Bennett gave him his answer.*
- *"The profits are made right here in my office," the oilman said. "Wherever I decide."* --from *Treasure Islands*, by Nicholas Shaxson

RELATIONS WITH INVESTORS

MULTI-NATIONAL COMPANIES-Earthworms or Eggplants

Earthworms
take what they need from the soil, but put back in the form of rich humus. Thus they enrich the soil and leave it better than they found it. In so doing they co-operate with one another and work together

Eggplants
take all the goodness out of the soil and leave it totally denuded. They put nothing of value back and each eggplant operates alone, with only its own interests at heart and is dependent on the soil for sustenance

THE NECESSARY BALANCE OF INTERESTS

COMPANY FOCUS

- HIGH EARLY PRODUCTION
- PROJECT PROFITABILITY
- PROFIT TO SHAREHOLDERS

GOVERNMENT FOCUS

- HIGH RECOVERY
- REVENUE. COMPETENCE. EMPLOYMENT. WELFARE
- LONG TERM BENEFIT TO THE PEOPLE

OPENNESS   FAIRNESS   PROFESSIONALISM

Source:PETRAD, 2008
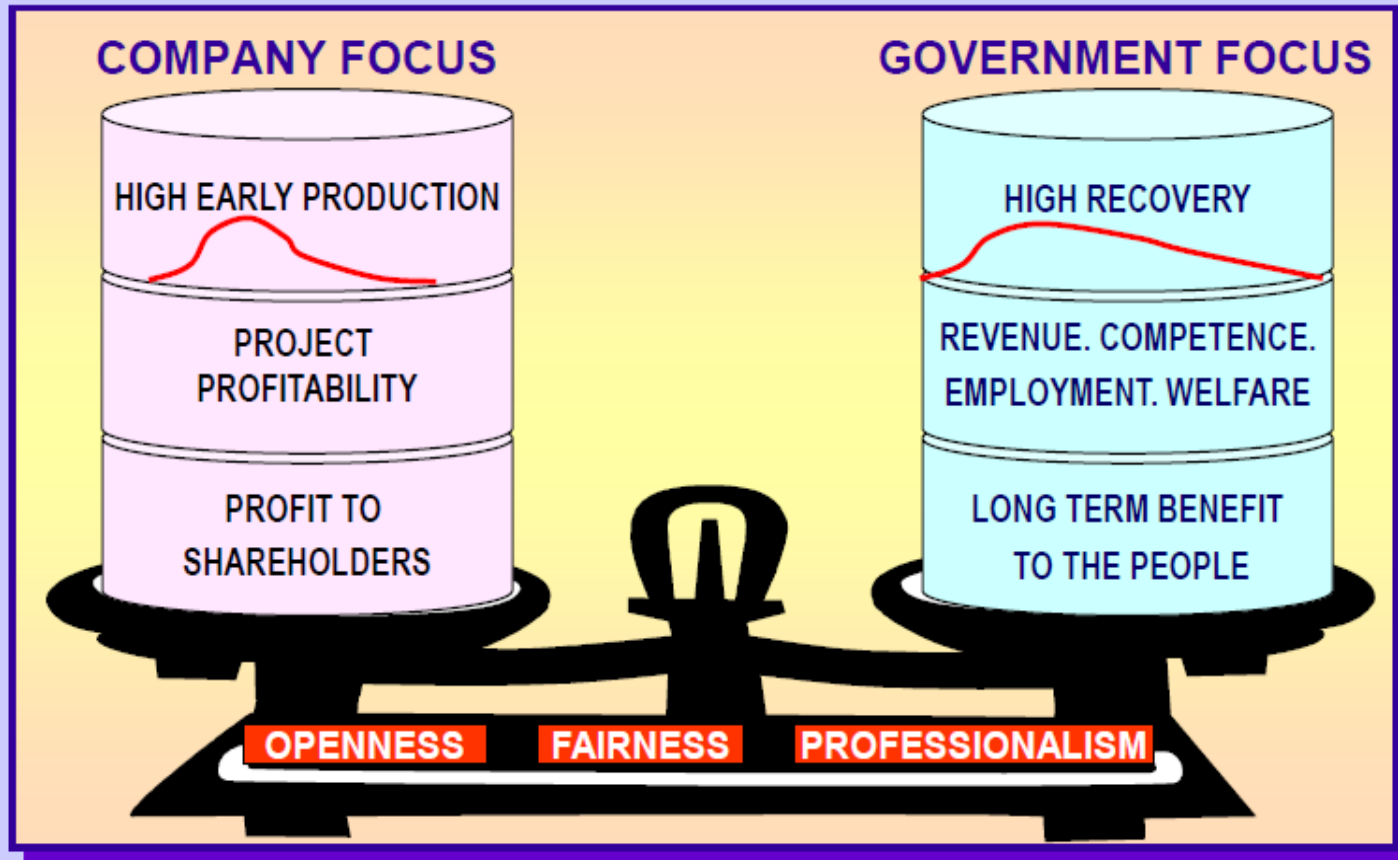
PICKING YOUR PRIORITIES

Prioritization of policies
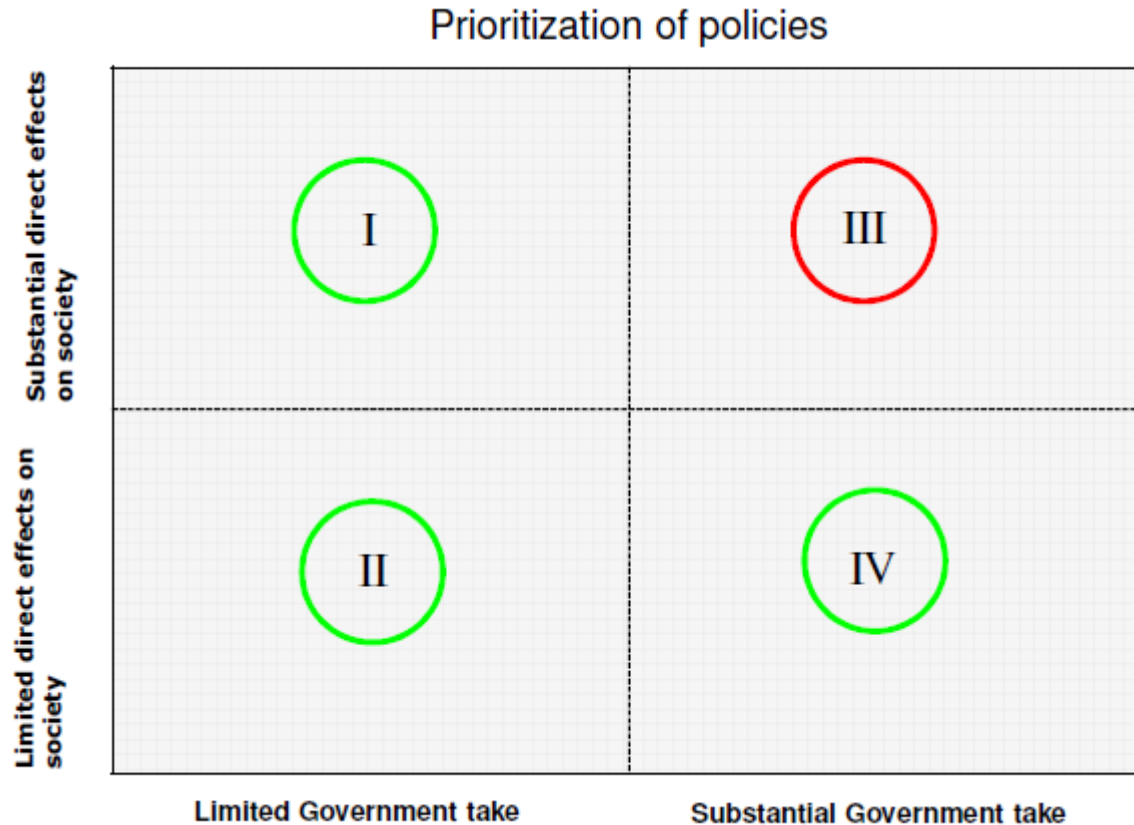
NATIONAL SITUATION

- Ghana is the 22nd country in Africa and 117th in the world of countries involved in illicit financial outflows between 2000 and 2009, in a report by Global Financial Integrity (GFI).

- The report, Illicit Financial Flows and the Problem of Net Resource Transfers from Africa: 1980–2009, found that cumulative illicit outflows from the continent over the 30-year period ranged from $1.2 trillion to $1.4 trillion.

- The Guardian, a British daily, notes that even these estimates—large as they are—are likely to understate the problem as they do not capture money lost through drug trafficking and smuggling.

The politics of taxation in poor countries

➤ Taxation generally not high on the domestic political agenda in these countries, neither part of strategic instrument for long-run growth/Dev

➤ The politics of taxation tend to take place in non-public arenas

➤ Typically, small lobby groups pressure for exemptions, for rate reductions on imports, or bargain with officials or ministers about tax liabilities

➤ Major debates in Parliament about tax issues or about tax reforms are rare as are statements by political parties about their tax policies

➤ Central government taxation is shaped by technical staff (from MoFinance, RAs, IFI and donor advisors) rather than by Parliament

➤ Local government taxation is a major exception to this:

● Around election time, local government taxation often high on the political agenda of both national and local politicians

● The politicisation of local government taxes undermines tax collection efforts

Taxation and Governance
Propositions

➤ Bargaining over taxes is central to building relations of accountability between state and citizens based on mutual rights and obligations

➤ The emergence of a representative government is more likely when the state faces incentives to increase income through bargaining with citizens than through foreign aid and natural resource rents

➤ For taxation to have a positive effect on accountability taxes must be 'felt' by a majority of citizens

The most common sources of IFFs and the patterns of circulation of illicit and licit funds

Licit Sources

Tax Avoidance & Tax Evasion

Methods through which licit funds are circulated & become illicit

Illicit Income Generating Activities

(e.g., drug trafficking, corruption, smuggling, domestic tax evasion)

Money laundering conducted by the criminals involved in the illicit activities

Methods through which illicit funds are circulated to be hidden/used by criminals

Source (adapted): Fontana & Hansen-Shino, 2012.

MINING VALUE-CHAIN
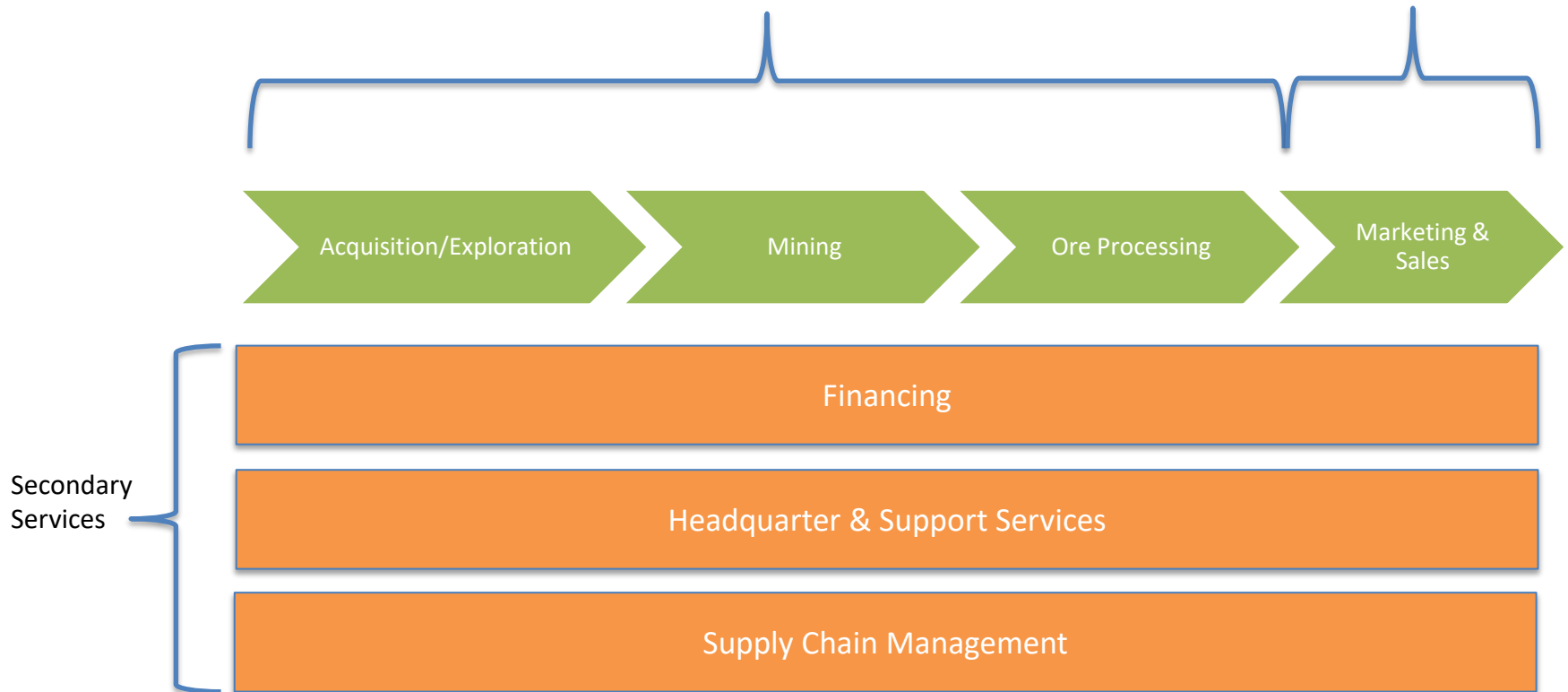
Exploration

- Funding the investment (and associated risk) and the rights to access any losses
- Ownership and entitlement of profits from mining rights / licenses and other IP
- Location of IP for tax purposes
- Remuneration for use of centralized services, engineering expertise, people, and technology Examples include arm's length compensation of geological exploration studies, management services dealing with the feasibility of the project, R&D services, etc.
- Ownership of exploration equipment and proper compensation for rental or leased equipment
- Responsibility of insurance and associated liability risks – compensation and deduction of payments
- Legal structure of acquisition contracts – allocation of profits

Mining

- Financing and related arm's length payment of costs
- Relationship with ore processing companies
- Management and design of production infrastructure
- Ownership of mining equipment and proper compensation for rental or leased equipment
- Reward structure for design and manufacture of equipment, if any
- Payment of royalties / leasing / service fees (people, technology, equipment)
- Remuneration of support services
- Attribution of liabilities, regulatory and environmental risks, insurances, and indemnities
- Design and ownership of facilities and infrastructure
- Investment in relation to the mine and rights to reward
- Ownership and management of logistics aspects and relationships
- Characterization of process activities and attributable value at each step
- Arm's length compensation for transportation and logistics services
- Margin on sale of intermediary products
- Reward structure for supply-demand management performed by Trade House

Ore Processing

- R&D and IP ownership in relation to smelting/refining processes and protocols etc.

- Plant property and equipment – design, investment / funding, ownership, characterization, location

- Characterization of processing activities (low-risk contract processor/smelter, fully fledged risk-bearing processor/smelter)

- Remuneration of support services

- Reward structure for supply chain management and logistics

- Arm's length compensation to bearer of environmental, regulatory, and insurance risks

Marketing & Sales

- Characterization – fully fledged marketer, limited risk sales functions, commission agent
- Margin on sale of final products
- Remuneration of support services
- Ownership of transportation assets and right to remuneration
- Ownership of marketing intangibles
- Allocation of profits from sale of final product
- Arm's length compensation for product liability risks, warranties, and associated risks
- Reward structure for supply-demand management performed by Trade House

Transfer Pricing?

- **Transfer prices** are the prices charged for sale of physical goods and intangible property and/or provision of services.

- **Transfer pricing** refers to establishing arm's length prices charged or paid upon the transfer of physical goods and intangible property or supply of services in transactions undertaken between associated enterprises located in the same or different tax jurisdictions.

- **Transfer prices and Transfer Pricing** are neutral terms. To regard them as describing solely mal-practices is inappropriate / unhelpful. The assumption that the 'transfer prices' charged in the intra-group transactions are necessarily a device to divert profits to non-resident affiliates to avoid taxation in purchaser's country is a biased/inaccurate view of the matter

- **Transfer prices** in case of intra-group transactions, include payments for intra-group services and intra-Group transfers of technology e.g. in the pharmaceutical industry, such payments are largely subsumed into the transfer prices for drugs

.

Transfer Pricing?

- **For a multinational Group,** transfer pricing is a means whereby the receipts from end-sales of Group products are directed to provide a contribution to the constituent members of the Group in compensation for the contributions made by their activities to the sale value of the product to independent third parties.

- **Group center** funding the Group's R and D; bearing the ultimate risk of failure to discover, make or sell a profitable product; and carrying out several support functions for the Group illustrate some of the contributions requiring compensation by affiliates

- **Tax Consequences**
  - In case the two entities transacting business with each other are located in the same country or they are independent enterprises, the tax consequences of the transaction value are mostly neutral to the government.

  - On the contrary, if these entities are in separate countries and are members of a group, in that case, the tax administration may attempt to correct the adverse effects of these transactions if it considers the 'transfer price' as unreasonable

Transfer Pricing in Intra-group Transactions

- A large share of world trade consists of transfers of goods, intangibles and services within the multinational enterprises.

- Therefore, by considering Transfer Pricing practices carefully, multinational businesses can manage risk while improving operational and financial performance based on a long term view of sustainable growth.

- The Transfer Pricing policies are, therefore, determined by the business needs and must be defensible and consistent with the overall corporate strategy.

- For a multinational Group, transfer pricing is a major tax planning opportunity as well as an important consideration when streamlining and remodeling business structures

Transfer Pricing in Intra-group Transactions

- **Commercial transactions between different parts of a multinational group may not be subject to the same market forces shaping relations between independent firms.**

- **Transfer prices may diverge from market prices for reasons of marketing or financial policy, or to minimize tax.**

- **To ensure that the tax base of a multinational enterprise is divided fairly, it is important that transfers within a group are approximate to those which would be negotiated between independent firms i.e. the arm's length price.**

- **Cross-border intra-group transactions may lend to economic double taxation unless 'right price' (the arm's length price) has been put on them.**

Arm's Length Principle?

- **The international standard for determining transfer prices for tax purposes i.e. using the prices which would be paid if the transactions were between independent persons acting at arm's length.**

- **Arm's length standard is set forth in Article 9 of the OECD/UN Model Tax Convention.**

- **Arm's length principle works effectively in vast majority of cases e.g. sale/purchase of commodities and lending of money. It may be difficult to apply in MNE groups dealing in integrated production of highly specialized goods, in unique intangibles, and/or in provision of specialized services.**

- **Arm's length principle is also viewed as inherently flawed because 'separate entity' approach may not always account for the economies of scale and inter-relation of diverse activities created by integrated businesses.**

Arm's Length Principle?

- Arm's length principle may be difficult to apply to associated enterprises engage in transactions that independent enterprises would not undertake.

- Arm's length principle, in some cases, may result in an administrative burden for taxpayers./tax admin. of evaluating significant number / type of cross border transactions

- There are difficulties in finding and interpreting evidence from which arm's length prices can be deduced.

- There may be no, or very little, evidence on which to base a determination of an arm's length price, and what evidence there is may be difficult to interpret or may indicate only that the arm's length price is within a certain range of prices. A flexible approach is, thus the requirement.

- Notwithstanding the above, this is superior to any other approach because it is essentially simple, aligns the comparatively exceptional kind of transaction with the normal kind, is equitable between taxpayers of different kinds, and, unlike other approaches, is widely accepted.

EVIDENCE?-NOT POOR COUNTRIES ALONE

- Over 110 billion USD have disappeared through mispricing of crude oil in the US and the EU between 2000 and 2010.

- In December 2000, the Netherlands imported crude oil for the price of 1,69 Euro per bbl. while the spot market prices were no lower than 26 Euro, resulting in an underevaluation of around 40 million Euro to the source country(Pak, 2010).

Goods imports (2012) by leading partner				Goods exports (2012) by leading partner			
			Percent				Percent
1	CHN	China	20.11%	1	ZAF	South Africa	27.00%
2	USA	United States	9.63%	2	ARE	United Arab Emirates	9.95%
3	BLX	Belgium-Luxembourg	5.18%	3	CHE	Switzerland	7.88%
4	GBR	United Kingdom	5.04%	4	FRA	France	7.31%
5	NLD	Netherlands	5.01%	5	ITA	Italy	6.67%
6	IND	India	4.13%	6	NLD	Netherlands	4.95%
7	ZAF	South Africa	3.53%	7	CHN	China	3.82%
8	DEU	Germany	2.98%	8	DEU	Germany	2.85%
9	NGA	Nigeria	2.50%	9	GBR	United Kingdom	2.52%
10	FRA	France	2.36%	10	TGO	Togo	2.49%
11	CIV	Cote d'Ivoire	2.32%	11	BFA	Burkina Faso	2.23%
12	ARE	United Arab Emirates	2.24%	12	USA	United States	2.17%
13	ESP	Spain	2.14%	13	MYS	Malaysia	1.84%
14	BRA	Brazil	2.04%	14	TUR	Turkey	1.79%
15	KOR	South Korea	2.03%	15	IND	India	1.73%

Table 1: Ghana goods trade
Source: UN Comtrade, via Observatory of Economic Complexity.

Product related intangibles	Process related intangibles	Market and Marketing intangibles	Hybrids
• Patent • Invention • Pattern • Methods • Copyright • Design / Model • Formulae/Recipes • Software • Literary, musical, or artistic composition / film • Technical data / documentation • Library • Natural resources • Database • Permit • Regulatory license e.g. from central bank • Trade secrets	• Know-how • Software • Method • Procedure • System • Supplier relationships • Procedural manuals • Technical data / documentation • Training manuals • Managerial skills and core competencies • Airport gates and slots • Financial instruments • Embedded work force • Supply chain intelligence	• Logo • Trade mark • Trade name • Brand • Campaign • Survey • Customer list • Import quota • Customer relationships • Distribution network & agreements • Retail shelf space • Subscription lists • Publications/thought leadership • Reputation • Book of business	• Franchise • Permit / right / license (air, water, land, drilling, emission, broadcasting) • Domain name • Unique location

Table 1-Mining intangible assets
Source: TPA's representation to OECD on intangibles project 2010

Country	Export Value (EUR/USD millions)	Amount Undervalued (EUR/USD millions) 13-year total (2000-2012)			
		EU/US-World Price Filter		EU/US-Ghana Price Filter	
US	$2,985	$633	21%	$290	10%
EU Total	€ 19,033	€ 2,668	14.0%	€ 1,357	7.1%
Spain	€ 955	€ 630	66.0%	€ 436	45.6%
Netherl	€ 4,678	€ 454	9.7%	€ 394	8.4%
UK	€ 3,656	€ 359	9.8%	€ 187	5.1%
Germany	€ 1,448	€ 311	21.5%	€ 22	1.5%
Belgium	€ 1,473	€ 274	18.6%	€ 35	2.4%
Greece	€ 137	€ 198	144.7%	€ 26	19.3%
France	€ 3,713	€ 93	2.5%	€ 56	1.5%
CzechRep	€ 23	€ 85	372.9%	€ 76	332.8%
Ireland	€ 215	€ 52	24.4%	€ 25	11.5%
Denmark	€ 49	€ 46	93.0%	€ 20	40.0%
Portugal	€ 72	€ 44	60.4%	€ 41	56.5%
Italy	€ 2,167	€ 43	2.0%	€ 17	0.8%
Sweden	€ 59	€ 24	40.4%	€ 4	6.1%
Poland	€ 165	€ 19	11.7%	€ 12	7.2%
Finland	€ 21	€ 17	81.4%	€ 0	0.1%

Table 1X: Ghana's Export to US and Top 15 EU Countries
Export Value and Undervalued Amount during the 13-year period, 2000-2012

Source: ghana_x2eu_shft.xlsx

Examples of Undervalued Ghana's Export to EU as reported in the EU Import Data, 2010-2012

NC8	Description	Period	Partner	Amount (in €1,000)	Quantity	Unit	PRICE (€/unit)	Lower Quatile Price		Amount Undervalued	
								EU-World	EU-Ghana	EU-World filter	EU-Ghana filter
15159059	Crude Fixed Vegetable Fats And Oils, In Immediate Packings Of A Content Of > 1 Kg	201110	Netherl	€ 4,195	4,236	TON	€ 990.34	€ 2,728.57	€ 987.82	€ 7,364	€ 0
15159059	Crude Fixed Vegetable Fats And Oils, In Immediate Packings Of A Content Of > 1 Kg	201207	Netherl	€ 2,575	2,216	TON	€ 1,162.07	€ 3,600.00	€ 1,162.07	€ 5,402	€ 0
15159059	Crude Fixed Vegetable Fats And Oils, In Immediate Packings Of A Content Of > 1 Kg	201101	Netherl	€ 2,406	2,417	TON	€ 995.29	€ 2,728.57	€ 987.82	€ 4,189	€ 0
15159059	Crude Fixed Vegetable Fats And Oils, In Immediate Packings Of A Content Of > 1 Kg	201106	Denmark	€ 2,353	2,382	TON	€ 987.82	€ 2,728.57	€ 987.82	€ 4,146	€ 0
15159059	Crude Fixed Vegetable Fats And Oils, In Immediate Packings Of A Content Of > 1 Kg	201003	Netherl	€ 2,482	2,703	TON	€ 918.06	€ 2,400.58	€ 985.45	€ 4,008	€ 182
18010000	Cocoa Beans, Whole Or Broken, Raw Or Roasted	201001	Netherl	€ 47,806	21,827	TON	€ 2,190.22	€ 2,340.97	€ 2,370.53	€ 3,290	€ 3,936
26060000	Aluminium Ores And Concentrates	201005	Germany	€ 2,509	85,011	TON	€ 29.52	€ 210.87	€ 29.52	€ 15,417	€ 0
26060000	Aluminium Ores And Concentrates	201212	Greece	€ 3,948	84,156	TON	€ 46.91	€ 201.23	€ 27.65	€ 12,987	€ 0
26060000	Aluminium Ores And Concentrates	201104	Germany	€ 1,238	44,950	TON	€ 27.54	€ 208.87	€ 26.58	€ 8,151	€ 0
26060000	Aluminium Ores And Concentrates	201211	Germany	€ 1,161	42,000	TON	€ 27.65	€ 201.23	€ 27.65	€ 7,290	€ 0
26060000	Aluminium Ores And Concentrates	200905	Germany	€ 1,770	44,800	TON	€ 39.52	€ 201.91	€ 35.77	€ 7,275	€ 0
44072899	Iroko, Sawn Or Chipped Lengthwise, Sliced Or Peeled, Of A Thickness Of > 6 Mm (Excl. Planed, Sanded Or End-Jointed)	201003	Spain	€ 27	33,504	M3	€ 0.82	€ 601.92	€ 610.96	€ 20,139	€ 20,442
44072995	Abura, Afrormosia, Ako, Andiroba, Etc	201005	France	€ 332	45,711	M3	€ 7.27	€ 547.06	€ 452.00	€ 24,674	€ 20,329
44083931	Veneer Sheets And Sheets For Plywood, Whether Or Not Spliced, And Other Wood, Etc., Of A Thickness Of <= 1 Mm	201109	Belgium	€ 1,053	10,034	M3	€ 104.91	€ 813.57	€ 842.82	€ 7,111	€ 7,404
44083995	Sheets For Veneering, Incl. Those Obtained By Slicing Laminated Wood, Etc. Of A Thickness Of > 1 Mm But <= 6 M	201109	Spain	€ 15	42,971	M3	€ 0.34	€ 379.93	€ 352.32	€ 16,311	€ 15,125
44089085	Sheets For Veneering, Incl. Those Obtained By Slicing Laminated Wood, Etc., Of A Thickness Of <= 1 Mm	201101	UK	€ 11	16,209	M3	€ 0.66	€ 1,007.86	€ 794.76	€ 16,326	€ 12,872
71023100	Non-Industrial Diamonds Unworked Or Simply Sawn, Cleaved Or Bruted (Excl. Industrial Diamonds)	201203	Belgium	€ 826	20,120	CARATS	€ 41.06	€ 95.30	€ 37.92	€ 1,091	€ 0

Low Priced Aluminum Ore Export to E.U.

Photo: Bauxite Mining in Ghana
Source: http://stonecrushermachine.org/d/file/Mobile-Crushing-Plant/2012-12-21/3da39a6e5cbf4fcf2e0f8f16bea82b05.jpg

- An example of *Trade Mispricing* (or *Abnormal pricing*)
- In September 2011, Germany imported from Ghana **26,300 tons** of aluminum ores for **€657,640 (CIF).**

Import Value declared	Value based on EU's Lower Quartile Import Price from World
€0.66 million (€25/ton)	**€5.49** million (€209/ton)

- **Undervalued** by **€4.8 million**
- → If the exporter in Ghana declared the same amount as the importer in Germany, **€4.8 million wealth outflow from Ghana, less taxable income in Ghana**

Diamonds – Ghana's Low Priced Export

- In Feb 2000, US imported **664,680 carat** of non industrial diamonds at **$10,723,165** from Ghana*:
    - Equivalent to a unit value of **$16.13**/carat
    - The 2000 U.S./World **lower quartile** price: **$485.14**/car
    - An **arm's length value** (ALV) may be at least **$321.7** million at an arm's length price of $485.14/car
    - Amount **undervalued**: **$311** million, deviation from an arm's length value

* de Boyrie, M.E., Nelson, J.A. , and Pak, S (2007). "Capital Movement through Trade Misinvoicing: The Case of Africa," *Journal of Financial Crime*, Vol 14, No. 4: 474 – 489.

CONCLUSION

- Trade mispricing in EU-Ghana and US-Ghana trade

  - Undervaluation of Import from Ghana (Ghana's

- Export): €2.7bn (EU), $0.63bn (US)

  - Overvaluation of Export to Ghana (Ghana's Import):

- €2.8bn (EU), $0.57bn (US)

Trade underpricing trend

- ▪ EU: Annually between €100m to €300m
- ▪ US: $328m in 2000 is an exception: mostly due to
- non-industrial diamonds. After 2000: ranges
- between $10m and $62m
- ▪ Spain - the largest underpricing partner for the 13-
- year period
- ▪ Netherlands, UK, Germany, Belgium, Greece: Each
- at least €100m for the 13-year period
- ▪ Identified export sectors/commodities with
- significant underpricing, including wood and wood
- product, ores, cocoa

Trade overpricing trend

- ▪ Annual Import overpricing trends upward (Both US
- and EU)
- ▪ EU: Over €300m in 2012
- ▪ US: Over $100m in 2012
- ▪ US, France, and UK among the largest overpricing
- in 2012, and trending upward
- ▪ Identified import sectors/commodities with
- significant overpricing, including machinery,
- vehicles, electrical machinery and equipment, articles of iron and steel, textile articles, and aluminum articles

- Recent GFI Study on trade misinvoicing in 5
- African nations, including Ghana: "Hiding in
- Plain Sight" [http://www.gfintegrity.org/report/report-trade-misinvoicing-inghana-
- kenya-mozambique-tanzania-and-uganda/]
  - Based on the Country-Partner method
  - Ghana's Export Underinvoicing (2002-2011): $5.1bn
- (P-F study $3.1bn, same period, EU+US only)
  - Ghana's Import Overinvoicing (2002-2011): $2.2bn
- (P-F study $3.2bn, same period, EU+US only)
  - Does not identify suspicious transactions
  - **Critical assumption**: The values declared in
- **Advanced Economies** reflect the market
- value correctly, i.e., no mispricing

Bhagwati's Country-Partner method

- ## Country-Partner Method
- Assuming the trade data from trade partners reflect
- true market value (i.e., no mispricing)
  - ■ Export Undervalued amount is calculated as:
- (Matching partner's import value) minus (country's export
- value), both FOB basis
  - ■ Import Overvalued amount is calculated as:
- (Country's import value) minus (Matching partner's export
- value), both FOB basis
  - ■ Valid at transaction level
  - ■ Grouped records: the Country-Partner method
- yields **net mispricing**, not gross mispricing.

WHAT NEXT?

- An on-going program of focused examination and
- investigation of Ghana's export documents
  - Reduce capital flight through trade mispricing
  - Deter abusive transfer pricing
  - Real time detection is possible
  - Reduce tax losses and capital flights based on trade
- mispricing
  - Transaction Level Data from **major trading partners**
  - Improves accuracy of price filter estimation
  - Finds Identities of importers and exporters
  - Enables comparison of values reported in Ghana
- against values of matching trades reported in partner countries

ISSUE OF POLITICAL SETTLEMENT
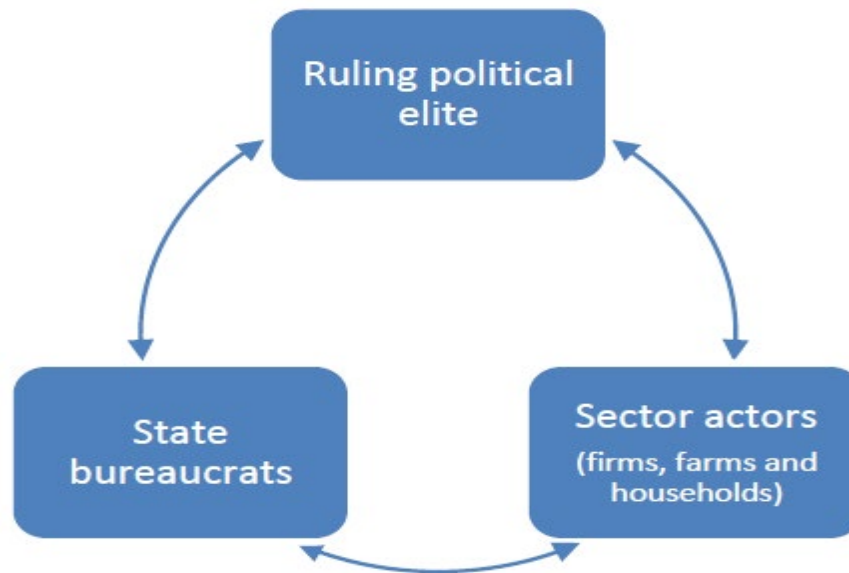
Source: African Power and politics Programme el al (2012)

Political Organizations and the Ruling Coalition

	HORIZONTAL DISTRIBUTION OF POWER: EXCLUDED FACTIONS	
	WEAK (INTERESTS OF RULING COALITION STRONGLY ALIGNED WITH GROWTH) →	(INTERESTS OF RULING COALITION WEAKLY ALIGNED WITH GROWTH) **STRONG**
VERTICAL DISTRIBUTION OF POWER: LOWER LEVEL FACTIONS — **WEAK** (RULING COALITION HAS STRONG IMPLEMENTATION CAPABILITIES)	**POTENTIAL DEVELOPMENTAL COALITION** Low opposition from excluded factions gives ruling coalition stability and long time horizon. Limited power of lower level factional supporters ensures high enforcement capability. Construction of developmental state possible: South Korea 1960s	**(VULNERABLE) AUTHORITARIAN COALITION** Initial enforcement capabilities likely to be strong but strong excluded factions mean force or legal restrictions have to be used making coalition vulnerable to violent overthrow. Military governance in Pakistan 1960s, Bangladesh 1980s and 1990s
(RULING COALITION HAS WEAK IMPLEMENTATION CAPABILITIES) **STRONG**	**(WEAK) DOMINANT PARTY** Enforcement capabilities become weaker as lower-level factions get stronger or more fragmented. Excluded factions also become stronger if dissatisfied supporters start leaving. India under Congress 1950s and 1960s, Thailand under Thaksin 2000s, Tanzania under CCM 1992-, West Bengal under CPM 1977-	**COMPETITIVE CLIENTELISM** Characterized by competition between multiple strong factions. Stability can be achieved only with credible mechanisms for cycling of factions in power. Low enforcement capabilities in most cases and short time horizons. India and Bangladesh after the 1980s, Thailand in the 1980s and 1990s

Accountability and transparency in the Extractive Sector

By Courtesy of Tsegaye Lemma, BDP/UNDP in presentation of

(14 Nov 2012), at Guyana

Natural Resources key for Sustainable Development

- "Protecting and managing the natural resource base of economic and social development is the overarching objectives of and essential requirements for sustainable development"

   Rio+20 Outcome Document, 2012

- Corruption remains as one of the main governance bottlenecks to realizing the full potential of NR

The statistics remain staggering…

- US$2.6 trillion: annual cost of corruption (more than 5% of global GDP)
- $148 bn or 25% of national income: cost of corruption in Africa
- US$3.5 trillion in annual gross revenue from the extractive sectors
- $1 trillion: annual illicit money flowing out of developing countries
- $10/$1: The ratio of illicit money flowing out of poor nations to the amount of foreign aid

Figure 1: Trends in Governance among Extractive and Non-Extractive Intensive Countries, 2002-2011: Control of Corruption
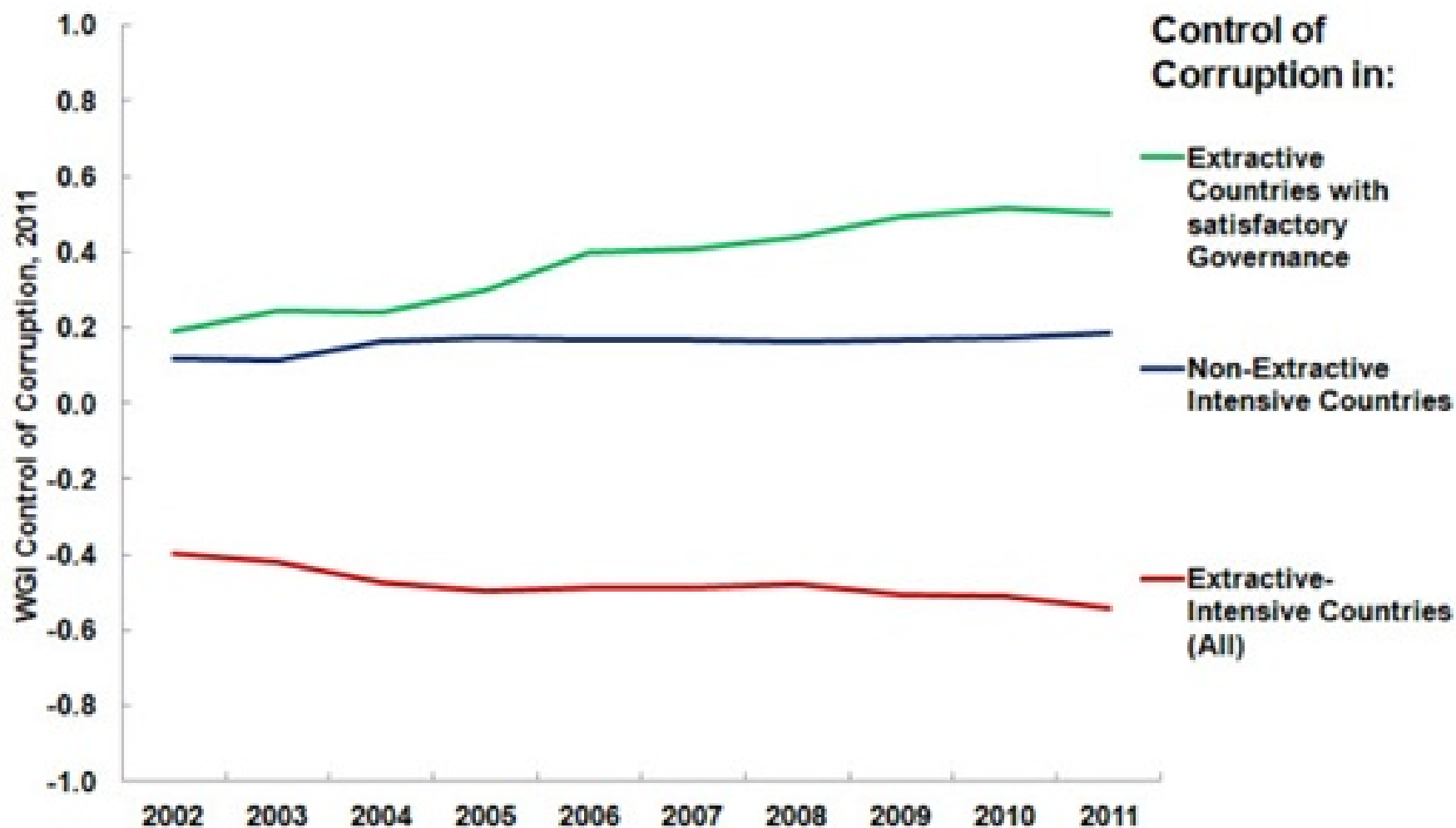
Source: Worldwide Governance Indicators, 2012. The extractive countries with satisfactory control of corruption trend line (atop) includes a dozen countries.

Why the extractive sector is prone to corruption?

Corruption = (Monopoly + Discretion) – (Accountability + Integrity + Transparency)
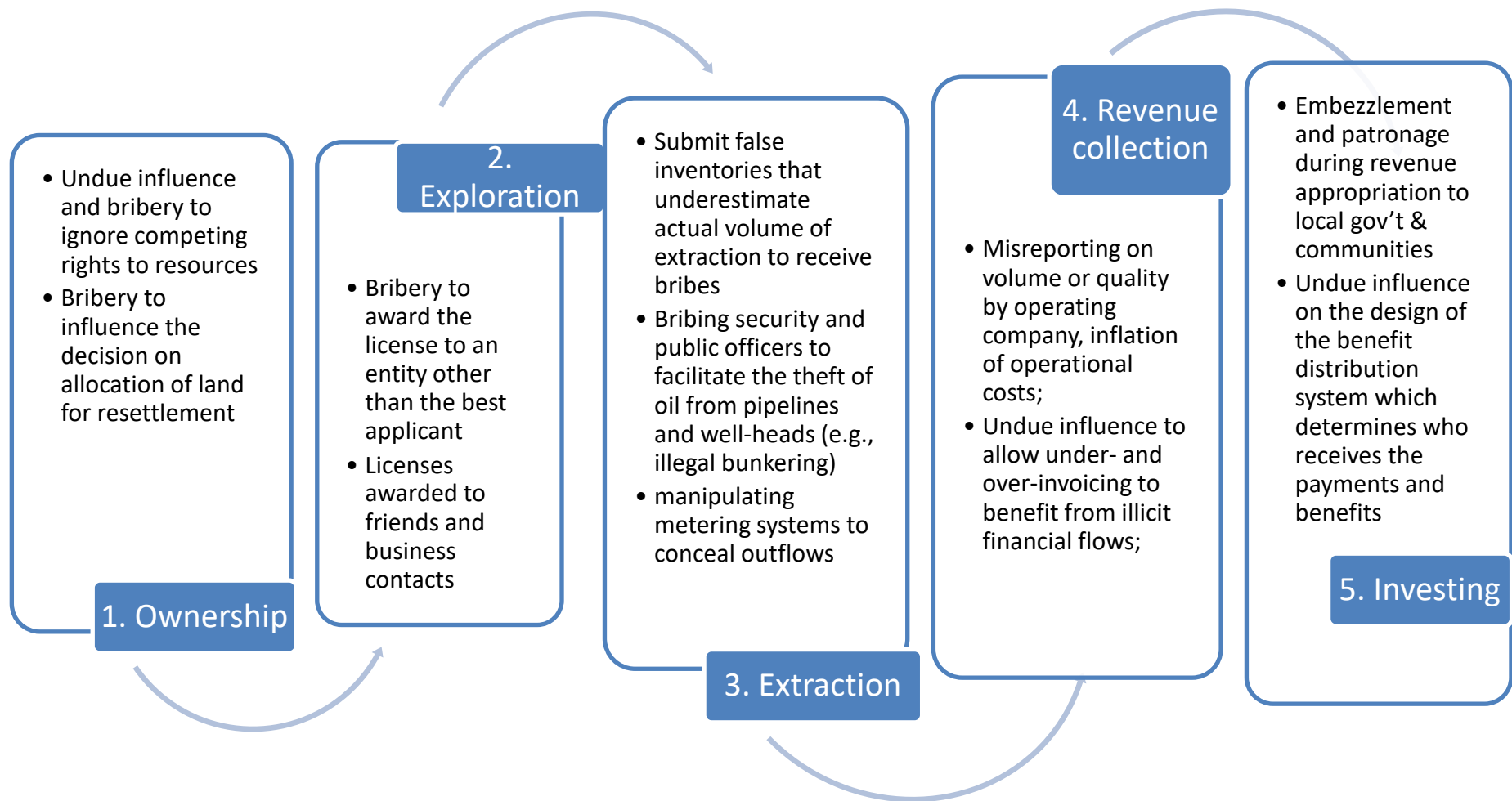
- high-level discretionary political control
  - High concentration of resources in one area
- blurring of public, shareholder, and personal interests with regard to extractive sectors
  - State-owned companies and political influence
- limited competition and fewer checks and balances
- complex technical and financial processes
  - open for manipulation of data (cost inflation)

Impacts of corruption in NR sector

i.   the elite capturing those rents and instability, as competing groups fight for control over resources;

ii.   undermine democracy and the rights of communities including indigenous peoples

iii.   less accountability to citizens due to overreliance on extractive revenues rather than taxes, and

iv.   negative externalities as environmental and social safeguards can be ignored or bypassed

Risks in the Extraction Process

1. Ownership
- Undue influence and bribery to ignore competing rights to resources
- Bribery to influence the decision on allocation of land for resettlement

2. Exploration
- Bribery to award the license to an entity other than the best applicant
- Licenses awarded to friends and business contacts

3. Extraction
- Submit false inventories that underestimate actual volume of extraction to receive bribes
- Bribing security and public officers to facilitate the theft of oil from pipelines and well-heads (e.g., illegal bunkering)
- manipulating metering systems to conceal outflows

4. Revenue collection
- Misreporting on volume or quality by operating company, inflation of operational costs;
- Undue influence to allow under- and over-invoicing to benefit from illicit financial flows;

5. Investing
- Embezzlement and patronage during revenue appropriation to local gov't & communities
- Undue influence on the design of the benefit distribution system which determines who receives the payments and benefits

Risks in Revenue Collection

- Issue: illicit flows from the extractive sector through transfer pricing, base erosion and profit-shifting

- Options: Establish clear and specific rules for calculating cost and prices

- Example: Bolivian law requires companies to calculate royalties based on official price quotes from the London Metal Exchange. This is easier to enforce than laws that rely on "arm's-length prices," which can be difficult to determine with certainty (*Revenue Watch Institute)*

Risks in Revenue Collection

- Issue: undue influence to allow under-or over-invoicing to benefit from illicit financial flows
- Options: Promoting revenue transparency
- Example: EITI

Companies publish what they pay and governments publish what they receive in an EITI Report.

COMPANIES
disclose payments

EITI REPORT
where the tax and royalty payments are independently verified and reconciled

GOVERNMENTS
disclose receipt of payments

  - In Peru, since the introduction of EITI (2006) corruption has reportedly declined by as much as 14% (no such effect was seen in Mali after EITI)
    - In 2012 Peru has been declared EITI compliant
    - having a functioning civil society is in place prior to EITI implementation

Risks in investing & benefit sharing

- Issue: Embezzlement and patronage during appropriation of revenues to local governments and communities
- Options: promoting transparency portal
- Example: Transparency Portal & Public Spending Observatory in Brazil
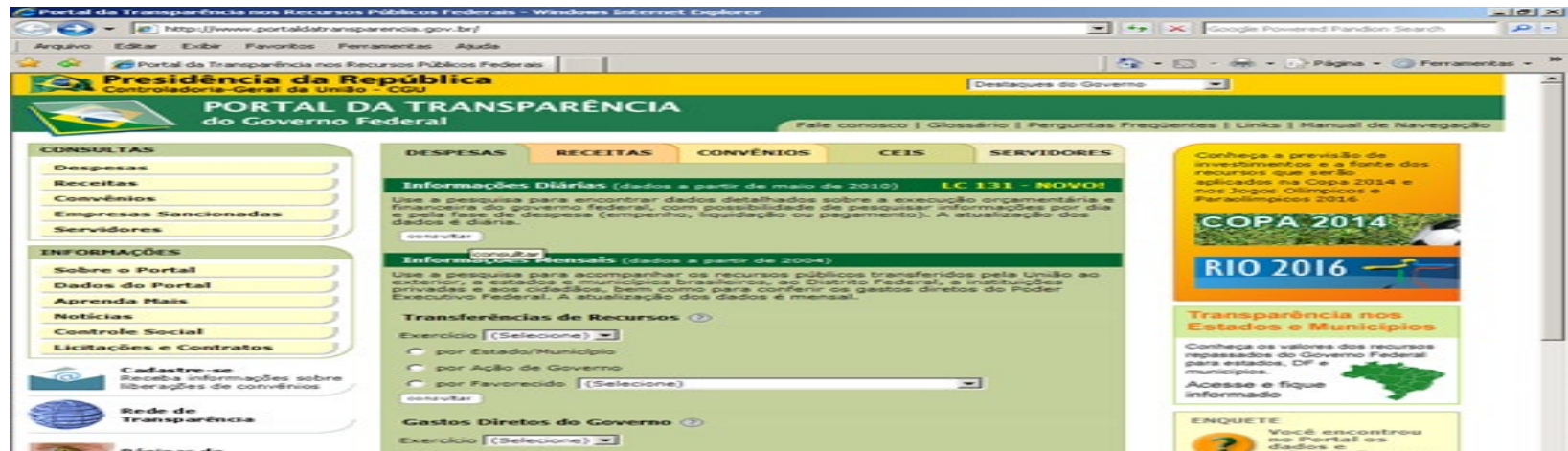
Global initiatives

- Contract and revenue transparency instruments ("publish what you pay"; "EITI")
- Certification instruments (Kimberly Process)
- Broader governance standards ("Natural Resource Charter")

- LESSONS:
  - Extend transparency and accountability along the value chain;
  - Move from voluntary to mandatory transparency
  - Connect anti-corruption, illegal exploitation and tax agenda

How can Donors/UNDP contribute?

- Knowledge capture and policy advocacy
  - educate policy makers & practitioners on challenges and policy options to prevent corruption in NR sector
- Strategy design and legal reform
  - Corruption vulnerability/risk assessments
  - Improve the governance of NR revenue management
  - Design inclusive and efficient benefit sharing systems,
- Capacity development
  - Public finance, Procurement, Contract monitoring and oversight
  - Specialized trainings for investigating corruption, e.g., forensic audit, financial intelligence, etc.
- South-South Knowledge Exchange
  - Facilitate south-south cooperation and peer learning on how best to manage NR
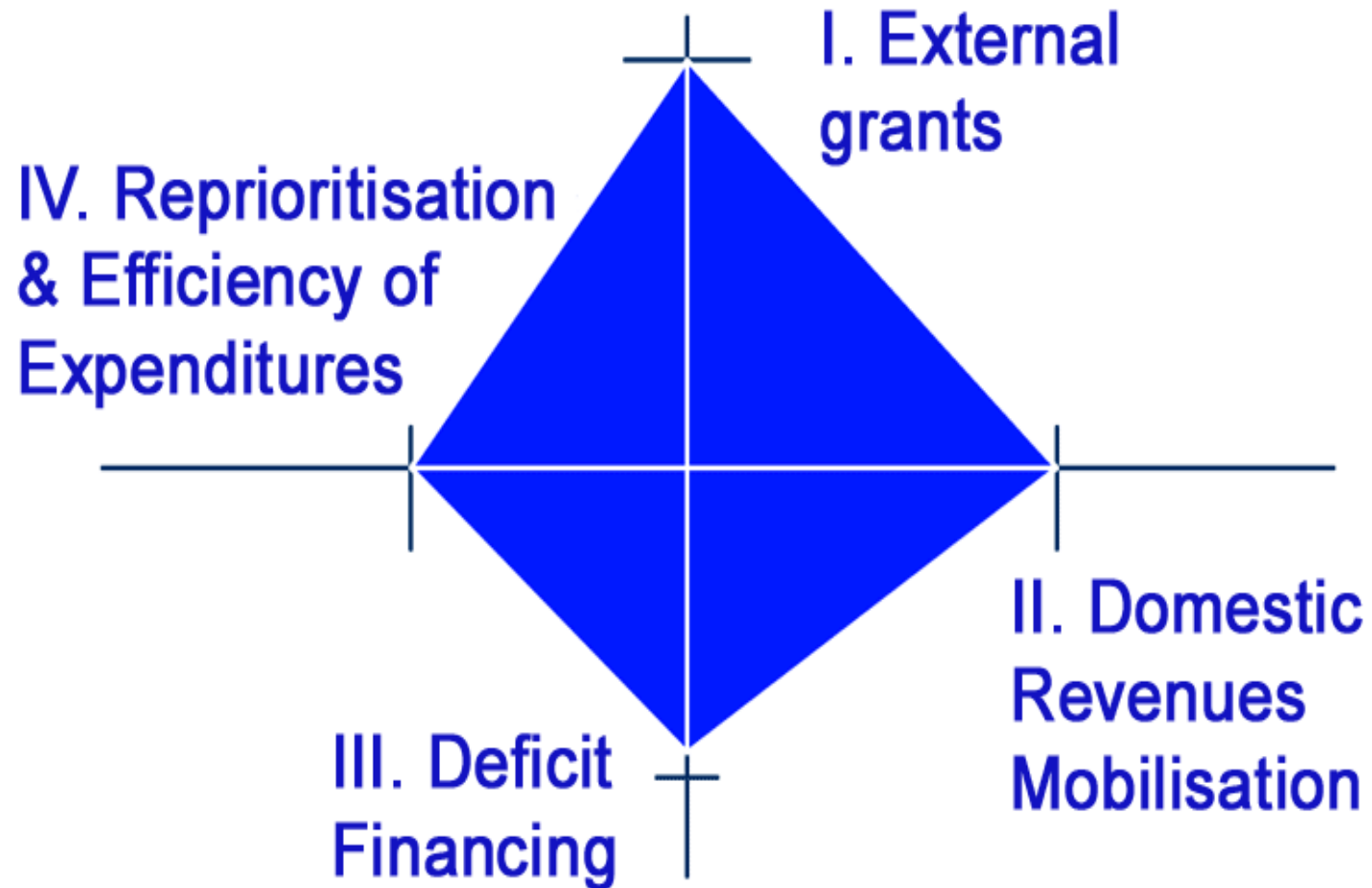
RECCOMMENDATIONS

- Right to information and Whistle Blower laws to help re-configure the "political settlement"
- Governments should significantly boost their customs enforcement, by equipping and training officers to better detect intentional misinvoicing of trade transactions;

- Trade transactions involving tax haven jurisdictions should be treated with the highest level of scrutiny by customs, tax, and law enforcement officials;

- Authorities should create central, public registries of meaningful beneficial ownership information for all companies formed in their country to combat the abuse of anonymous shell companies;

- Financial regulators should require that all banks in their country know the true beneficial owner of any account opened in their financial institution;

- Ghana should actively participate in the worldwide movement towards the automatic exchange of tax information as endorsed by the G20 and the OECD;

- Authorities should adopt and fully implement all of the Financial Action Task Force's anti-money laundering recommendations.

- Ghana should consider building the capacity of the Ministry of Finance, Ghana Revenue Authority and the natural resource commissions who regulate international corporations and service contractors, to better monitor trade-mispricing and cost escalations by mining companies.

- National authorities should build capacity to monitor trade Mis-pricing in real time

- Government should revive, modify and apply a people-centred form of Associational Taxation system in the informal sector to better capture professionals and so called informal sector.

GSS/ISODEC TRAINING FOR GHANA, LIBERIA, NIGERIA AND SIERRA
BUILDING THE POLICT LINKAGE

IFFS, ITS POLICY RELEVANCE AND THE NATIONAL BUDGET

(Bishop Akolgo-IFFs Consultant)

Fiscal space instruments (as % of GDP)

I. External grants

IV. Reprioritisation & Efficiency of Expenditures

II. Domestic Revenues Mobilisation

III. Deficit Financing

QUADRANT 1-EXTERNAL GRANTS

- Should be between 1-5% of total annual budget
- Currently about ????

QUADRANT 2-DOMESTIC RESOURCE MOBILISATION-TAXATION

- Currently 13-16% of GDP

- Should be not less than 25% of GDP in immedtate but 35% long-term

  - Total Revenue and Grants amounted to GH¢65,399 million (11.0 percent of GDP), compared with the target of GH¢67,307 (11.4 percent of GDP) and the GH¢49,108 million (10.7 percent of GDP) recorded in the corresponding period in 2021.

  - In 2023, Government intends to collect Total Revenue and Grants of GH¢143,956 million (18.0% of GDP)

  - Based on the estimates for Total Revenue & Grants and Total Expenditure (including arrears clearance), the overall Budget balance is a fiscal deficit of GH¢61,475 million, equivalent to 7.7 percent of GDP

QUADRANT 3-DEFICIT FINANCING OR LOANS

- According to MOF(2023):

- Provisional data as at end September 2022 indicate that total gross public debt stood at GH¢467,371.32 million (US$48,871.34 million), representing 75.9 percent of GDP. This made up of domestic debt of GH¢195,657.61 million, equivalent to 31.8 percent of GDP, whilst external debt was GH¢271,713.71 million, representing 44.1 percent of GDP.

- Gross International Reserves stood at US$6,591.8 million, equivalent to 2.9 months of imports cover at the end of September 2022, down from a stock position of US$9,695.2 million (equivalent to 4.3 months imports cover) at the end of December 2021

- Government's fiscal operations for the period resulted in an overall budget deficit of GH¢44,022 million (7.4% of GDP), against a target of GH¢36,684 million (6.2% of GDP)

- The deficit is expected to be financed from a number of sources including foreign and domestic sources. Other sources of financing from multilateral and bilateral partners are expected in the context of the IMF programme being negotiated and the implementation of a debt management strategy.

QUADRANT 4-EXPEND REPRIOTISATION/EFFICIENCY

- Budget efficiency is not more than 30%

- Should be not less than 80%

- Gap due to corruption, mismanaement and waste

- Total Expenditure (including clearance of Arrears) is projected at GH¢205,431 million (25.6% of GDP)

LINKS TO NATURAL RESOURCE G'NANCE