



Office for
National Statistics
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Measuring the Informal Economy

7th IMF Statistical Forum

Session II: Standard Estimation Practices - Determining the Level and
Growth of the Informal Economy

Discussant

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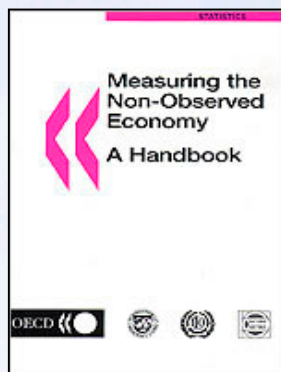
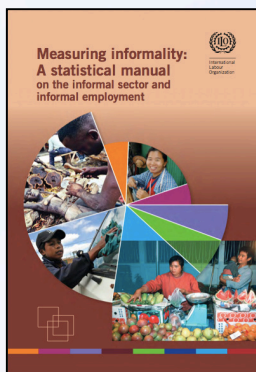
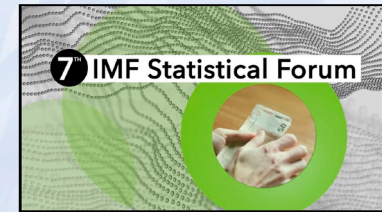
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Session II - Standard Estimation Practices - Determining the Level and Growth of the Informal Economy

An overview

- Six papers and presentations - content and feedback
- Frameworks - Concepts, definitions, methods and sources
- National Accounts
 - Links to source data and broad definitions
- Achieving comparability and exhaustiveness
- Ideas for the way forward
- Conclusions
- Any questions?



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Six papers and presentations - content and feedback

- **Measuring the Non-Observed Economy in Vietnam: A Focus on Informal Economy**
 - Mr. François Roubaud (French Research Institute for Sustainable Development, France) with Ms. Nghiêm Thị Vân
- **Detecting Under-Reporting of Value Added and VAT Fraud in National Accounts**
 - Mr. Federico Sallusti (Italian National Institute of Statistics)
- **Measuring Informal Economy in India**
 - Mr. Venkata Ramana Murthy Salapaka (India, National Statistical Office)
- **Shades of Grey: Measuring the Informal Economy Business Cycles**
 - Ms. Shu Yu (World Bank), with Mr. Ceyhun Elgin, Mr. Ayhan Kose, Ms. Franziska Ohnsorge
- **Measuring the Contribution of the Informal Sector to the Philippine Economy: Current Practices and Challenges**
 - Ms. Lisa Grace S. Bersales (University of the Philippines School of Statistics), with Ms. Vivian R. Ilarina
- **Measurement of the Informal Economy: From Basic to Derived Statistics**
 - Mr. Francisco Guillen (Mexico, INEGI)

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Six papers and presentations - content and feedback

(1) Measuring the Non-Observed Economy in Vietnam: A Focus on Informal Economy

- Overall comments
 - Overview of the issues.
 - Concepts, measures and data.
 - **Comparison of two methods** and available sources.
 - Mixed (household / enterprise) approach (1-2 surveys)
 - Extension 1-2-3 surveys (three phases)
 - **Micro and macro comparisons** of different variables.
 - Different dynamics.
 - Massive under-estimation and selection bias.
 - Significant under-estimation of GDP.
 - Clear policy recommendations
 - The **10 commandments** for policies towards Informal Economy need to be refined and could gather momentum.



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Six papers and presentations - content and feedback

(2) Detecting Under-Reporting of Value Added and VAT Fraud in National Accounts



- Overall comments
 - NOE - underground, illegal, informal, HH own final use and missed production.
 - Underground - under-reporting GVA (to avoid tax) and unregistered workers.
 - **New ROC-Is method** addresses under-reporting and improves various aspects:
 - Use of the Franz-Method.
 - Improves on the explicit estimate of VAT fraud at micro level.
 - Data sourced from SBS and applied to firms with less than 100 workers.
 - Indicators cover performance, profitability, cost and employment structures.
 - Identification procedure is key and has three steps.
 - Adjustment to GVA - **what about the components and how are they allocated?**
 - **Measuring VAT fraud** - VAT fraud without complicity should be captured.
 - Key assumptions:
 - VATF WOC likely to occur with B2C transactions.
 - VATF WC more likely with B2B transactions.
 - Distribution of B2B and B2C transactions for under-reported GVA is the same as recorded GVA.
 - Large improvements made to estimating VAT fraud separately.



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Six papers and presentations - content and feedback

(3) Measuring Informal Economy in India

- Overall comments
 - Significant presence:
 - **Informal sector** is over 50% of GVA.
 - **Informal employment** is over 90% of total employment.
 - Agriculture etc. 17.2% of total GVA, Manufacturing is 16.4% and Real estate is 15.6%.
 - HHs forms largest sector contributing to Informal Economy, except financial services.
 - Data sources
 - HH and enterprise surveys collecting a range of variables.
 - HH approach – type of residence, education qualifications, etc.
 - Population census and employment and unemployment surveys.
 - Estimation techniques
 - New GVA methodology in 2015.
 - **Effective labour input method** (ELIM) and GVA per worker.
 - Use of a base year, extrapolation techniques and other indicators.
 - Various limitations which impact on **quality of the results**
 - Lack of appropriate data, various assumptions, limited metadata, quality / suitability of indicators post benchmark, quality of surveys, no NOE adjustments, etc.
 - Major challenges to update data, ratios, indicators and methods.



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Six papers and presentations - content and feedback

(4) Shades of Grey: Measuring the Informal Economy Business Cycles

- Overall comments
 - Three questions:
 - Limitations and advantages of existing measures of informality?
 - Definitions and dimensions of informality.
 - Limitations and advantages of model (indicator, DGE) based estimates and survey (labour, perception) based estimates.
 - Variety of methods and aspects.
 - Results are broadly consistent across different dimensions.
 - Main features of the informal economy?
 - Declining trend, regularity burden, weak governance, large agricultural base.
 - Lower government revenue and less redistributive taxes.
 - Cyclical features of the informal economy?
 - Has similar cycles to the formal economy.
 - Has shallower recessions and recoveries in advanced economies.
 - Retains stable employment during recessions.
 - Specific country analyses within regions showing country variation?
 - Time series linked to regulation changes?
 - Cover more variables?



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Six papers and presentations - content and feedback

(5) Measuring the Contribution of the Informal Sector to the Philippine Economy: Current Practices and Challenges

- Overall comments
 - User demands.
 - Framework
 - Challenges in filling data gaps.
 - No complete set of accounts for household enterprises.
 - Some produce is mainly non-market.
 - Definition of **Unorganised Sector** and **Organised Sector** - creates a different challenge for coverage.
 - Data sources and methods
 - Censuses - business/industry, population/housing and agriculture/fisheries.
 - Surveys - annual, quarterly and triennial.
 - Administrative data.
 - Use of general and sector specific estimators.
 - Results
 - **Significant presence** - Unorganised Sector in 2016 formed 34.7% of nominal GDP.
 - New initiatives
 - 2018 list of establishments: 1,001,608 records.
 - Use of the LFS with new questions on Informal Employment.

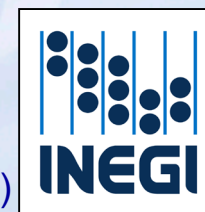


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Six papers and presentations - content and feedback

(6) Measurement of the Informal Economy: From Basic to Derived Statistics

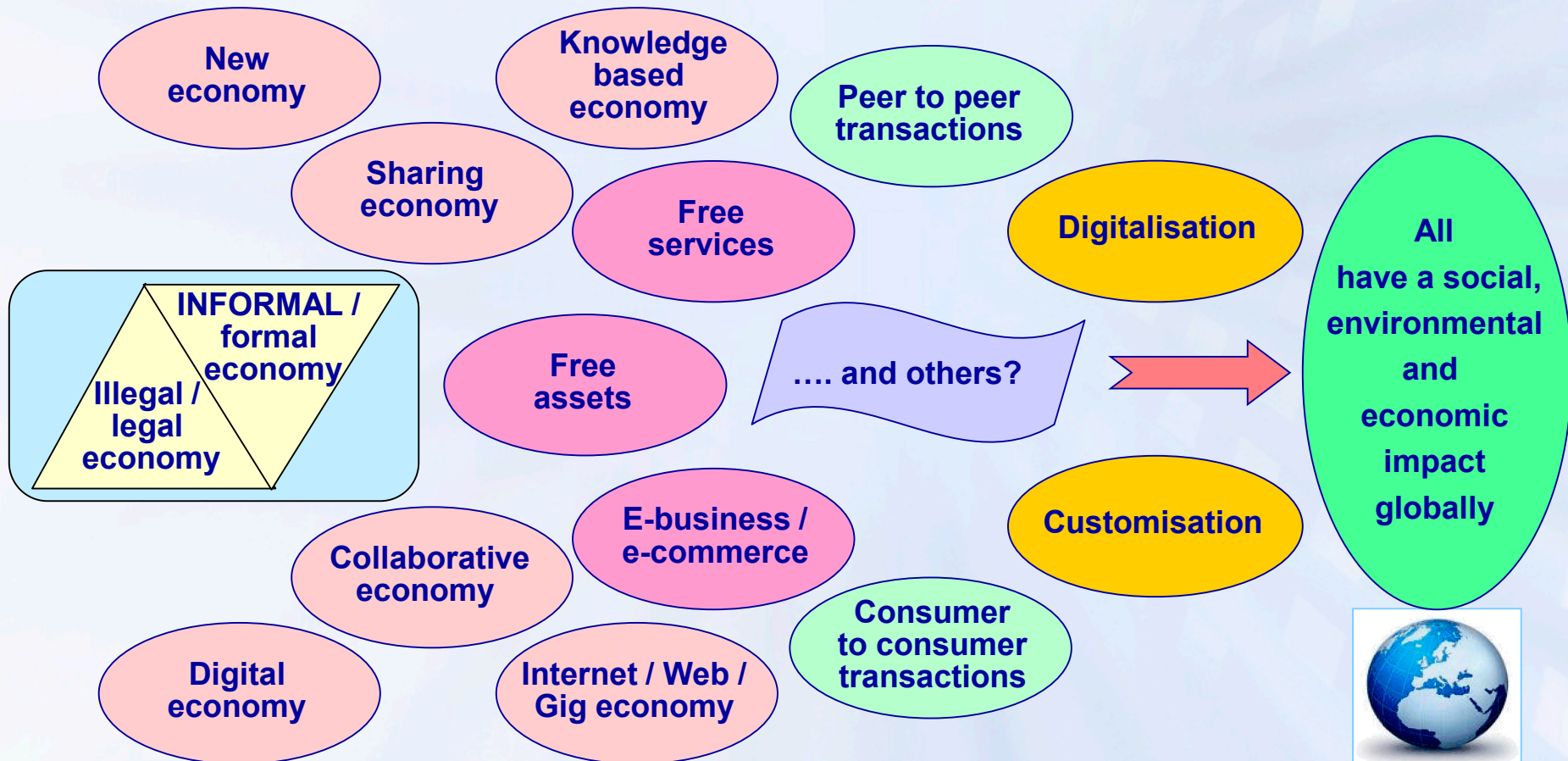
- Overall comments
 - ILO / SNA / OECD conceptual frames and guidelines evolve.
 - Measurement of Informal Economy in **regular production since 2014**.
 - Composed of Informal Sector (IS) and Other Modalities of Informality (OMI)
 - Complex challenge - focus mainly on GVA, GDP and labour.
 - Sources and methods linked to Economic Censuses and other surveys.
 - Informal sector - use of the basic questionnaire by sector with additional criteria.
 - Informal employment - use of sector specific questionnaires.
 - Surveys used to generate labour matrices - jobs, per capita income by occupation, etc.
 - SUTs cover type of production (Formal, Formal Craftsmanship, Informal Craftsmanship, Informal and Processing) and balancing to determine estimates for the Informal Sector for the base year. **How is the delineation established?**
 - GVA OMI represents contribution to the production process by employed population in **conditions of informality in the economic units that do not belong to the Informal Sector**, as well as those in the Informal Sector. **How identified?**
 - Results for 2017 - **GDP and jobs differential**.
 - IE was 22.7% of GDP - IS was 11.1% and OMI was 11.6%.
 - Informal occupation was 57.1% of job occupation - IS was 27.0% and OMI was 30.1%.
 - Further developments - e.g. 20th ICLS Resolution, 2019 Economic Census.



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Frameworks - Concepts, definitions, methods and sources

Need for internationally agreed terminology, definitions and improved understanding of specific issues



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Frameworks - Concepts, definitions, methods and sources

What is the non-observed economy (NOE)?

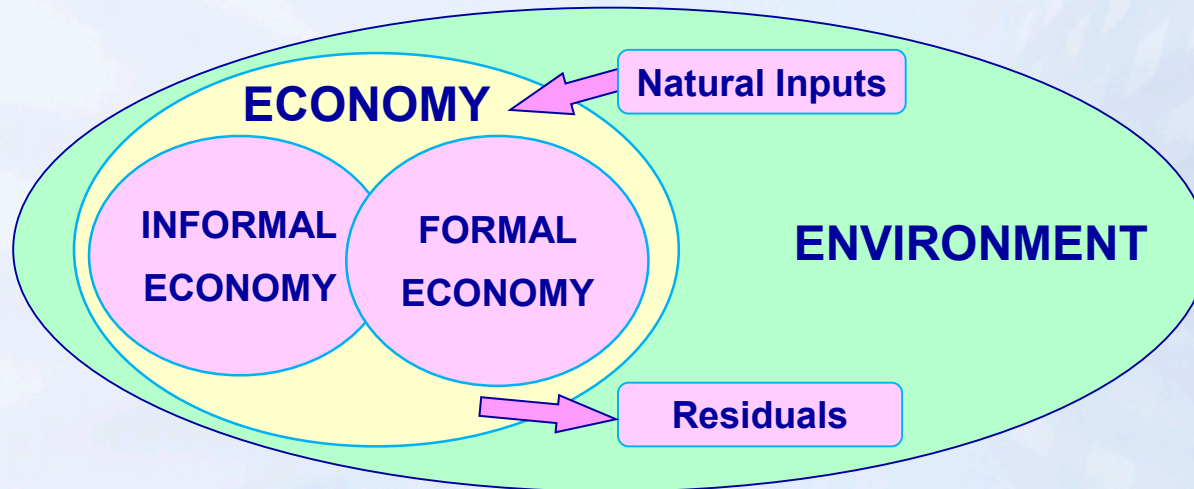
**Terminology
and
Definitions**

- Non-observed economy
 - Informal (including those undertaken by households for their own final use),
 - Legal production broadly characterised as those units engaged in small-scale production of goods and services with the primary objective of generating employment and incomes for persons involved. Also referred as the **grey economy**.
 - Informal sector corresponds to that of household unincorporated enterprises.
 - Definition of the informal economy covers **Informal sector and Informal employment**.
 - Underground
 - Production activities that are legal but deliberately concealed in order to avoid paying tax (e.g. VAT or income tax) etc.
 - Also referred to as **concealed activities, hidden economy or black economy**.
 - Illegal
 - Productive activities forbidden by law or illegal when carried out by unauthorised persons, for example, production/import/sale of drugs; prostitution; sale of stolen goods; and smuggling of goods.
 - Other activities omitted due to deficiencies in the data collection programme.

Countries will have different treatments dependent upon the legal and tax basis.
Various NOE activities **will** be captured in the main “observed” accounts.

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Frameworks - Concepts, definitions, methods and sources
Informal economy, formal economy and the environment



- Links between informal economy and formal economy and the **environment**.
 - Comparisons, coverage and estimates “vary considerably” across countries.
- Similar scenarios with the links between:
 - the underground economy and overground economy.
 - the illegal economy and legal economy.

Uniform treatment is not possible - case by case and country by country.
Informal economy poses significant measurement (not conceptual) challenge.

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Frameworks - Concepts, definitions, methods and sources

Sources used for measurement of the informal economy



- Registers (single statistical business register often not available)
 - Employment, unemployment and establishment frame for informal surveys.
- Censuses
 - Agricultural, enterprise and demographic data / population census.
 - Population census and links to informal production survey.
- Surveys
 - Businesses and households.
 - Labour Force Surveys and labour statistics are key.
- Administrative data and other government departments
 - Taxation, social security records and fiscal data.
 - Police records and statistics on policies reducing crime-related activities.
 - Foreign trade statistics and customs related activities (e.g. seizures).
- Other
 - Econometric models, simply derived ratios, etc.



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National Accounts - links to source data

Business Surveys / Administrative data / other data and National Accounts

All source data

- + coverage adjustments
 - + conceptual adjustments
 - + quality adjustments
 - + balancing / coherency adjustments

equals **National Accounts data on a SNA 2008 basis**

Business survey data (frequency)

- Monthly (limited detail, short-term indicators)
 - and / or quarterly
 - and / or annually (detailed structural information)
 - less regularly?

Each of the above steps **WILL** have to be applied to each data source and will be “different” for each data source

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National Accounts - Broad definitions

Total output (at basic prices)

equals **Total sales of goods and services**

- As invoiced, excluding VAT.
- Excludes sales of capital formation items and much of other operating income.

plus Change in inventories of work-in-progress and finished goods

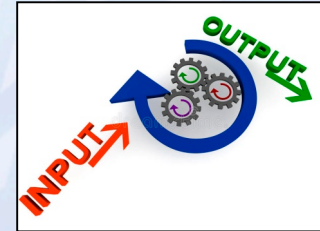
plus Output produced for own final use, for example computer software, R&D, and construction (also known as own account capital formation)

less Purchases of goods and services for resale without further processing (thereby only including the gross margin within output)

plus Income earned-in-kind

less Any taxes on products

plus Any subsidies on products



Sales is NOT equal to output - neither in concept nor data

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National Accounts - Broad definitions

Total intermediate consumption (at purchasers' prices)

equals **Total purchases of goods and services** for use as inputs to the production process

- Excludes employment costs, capital formation and depreciation.
- Excludes deductible VAT and includes non-deductible VAT.

less Change in inventories of materials and fuels

less Purchased / bought-in computer software and R&D (treated as GFCF)

plus Imputed insurance premium supplements

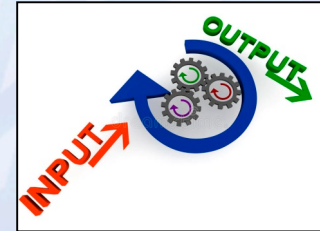
less FISIM

less Payments to employees such as income earned-in-kind

Gross value added (at basic prices)

equals Total output (at basic prices)

less Total intermediate consumption (at purchasers' prices)



Purchases is NOT equal to intermediate consumption - neither in concept nor data

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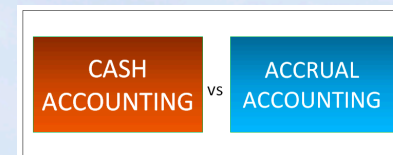
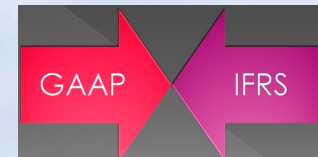
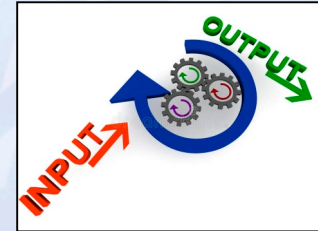
National Accounts - Broad definitions

Income based estimate of GVA from company accounts

“Approximate”

GVA

- equals* Operating profit
- plus* Depreciation
- plus* Total payroll costs (including employee profit sharing)
- plus* Own work capitalised
- plus* Business rates (local government rates)



Above derivation, say for a gas company, also needs to be adjusted for:

- Overseas activity (to be excluded)
- Restructuring costs (amounts set-aside, of which those amounts actually spent)
- Replacement expenditure that has been capitalised.
- Any cost of sales, monetary working capital adjustments and gearing adjustments.

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Achieving comparability and exhaustiveness

Eurostat tabular structure covering exhaustiveness



- Exhaustiveness framework
 - Aims and objectives
 - Main aim is not to provide a definitive classification of types of NOE but to ensure NOE is measured systematically.
 - All potential NOE areas are covered and no activities are double counted.
 - Sub-dividing producers according to their potential for non-exhaustiveness.
 - Allocation of activities to different types of non-exhaustiveness for some countries maybe subject to interpretation - as long fully covered.
 - Unduplicated coverage allows for accurate GDP estimates to be produced.
 - Used within the production and income approaches to measuring GDP.
 - Can be applied to expenditure approach as long as the basic data are obtained from producer surveys.

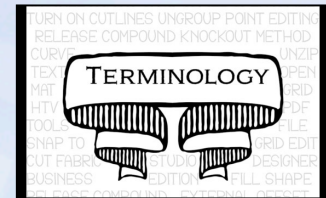


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Achieving comparability and exhaustiveness

Eurostat tabular structure covering exhaustiveness

- N1-N7 categories
 - Not registered
 - N1 - Producers deliberately not registering - underground.
 - N2 - Producers deliberately not registering - illegal.
 - N3 - Producers not required to register.
 - Not surveyed
 - N4 - Legal persons not surveyed.
 - N5 - Registered entrepreneurs not surveyed.
 - Mis-reporting
 - N6 - Producers deliberately mis-reporting.
 - Other
 - N7 - Other statistical deficiencies.



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Achieving comparability and exhaustiveness

Eurostat tabular structure covering exhaustiveness

- Examples of the types of inclusion in the UK accounts.
 - Missing income relating to the tax gap and tax evasion (N1, N6).
 - Smuggling of items like alcohol and tobacco (N1, N6).
 - Prostitution and production of illegal drugs, narcotics, etc. (N2).
 - Self-build residential dwellings (own account) (N3).
 - Activity below survey frame thresholds, e.g. business register (N4, N5).
 - Missing trader intra-community VAT fraud (MTIC VAT Fraud) (N6).
 - Agricultural produce (own account), income earned-in-kind, tips (N7).
- Exhaustiveness and balancing
 - Above compilation steps and reconciliations are before balancing.
 - Impact of balancing of direct interlinkages between SUTs and NOE.
- Confidentiality aspects.



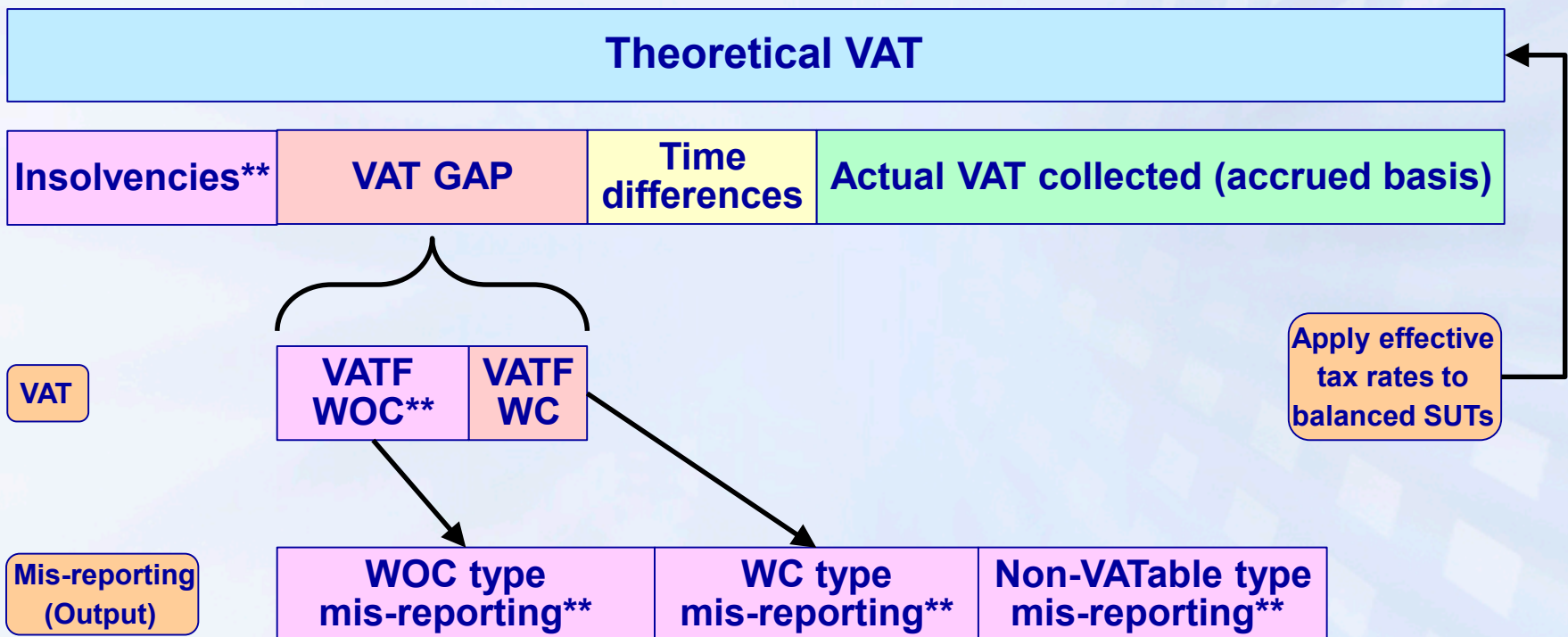
Estimates of exhaustiveness within the approaches to measuring UK GDP
For the year 2010, Production: 6.4%; Income: 4.4%; and Expenditure: 2.6%.

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Achieving comparability and exhaustiveness



N6 Mis-reporting and VAT fraud example

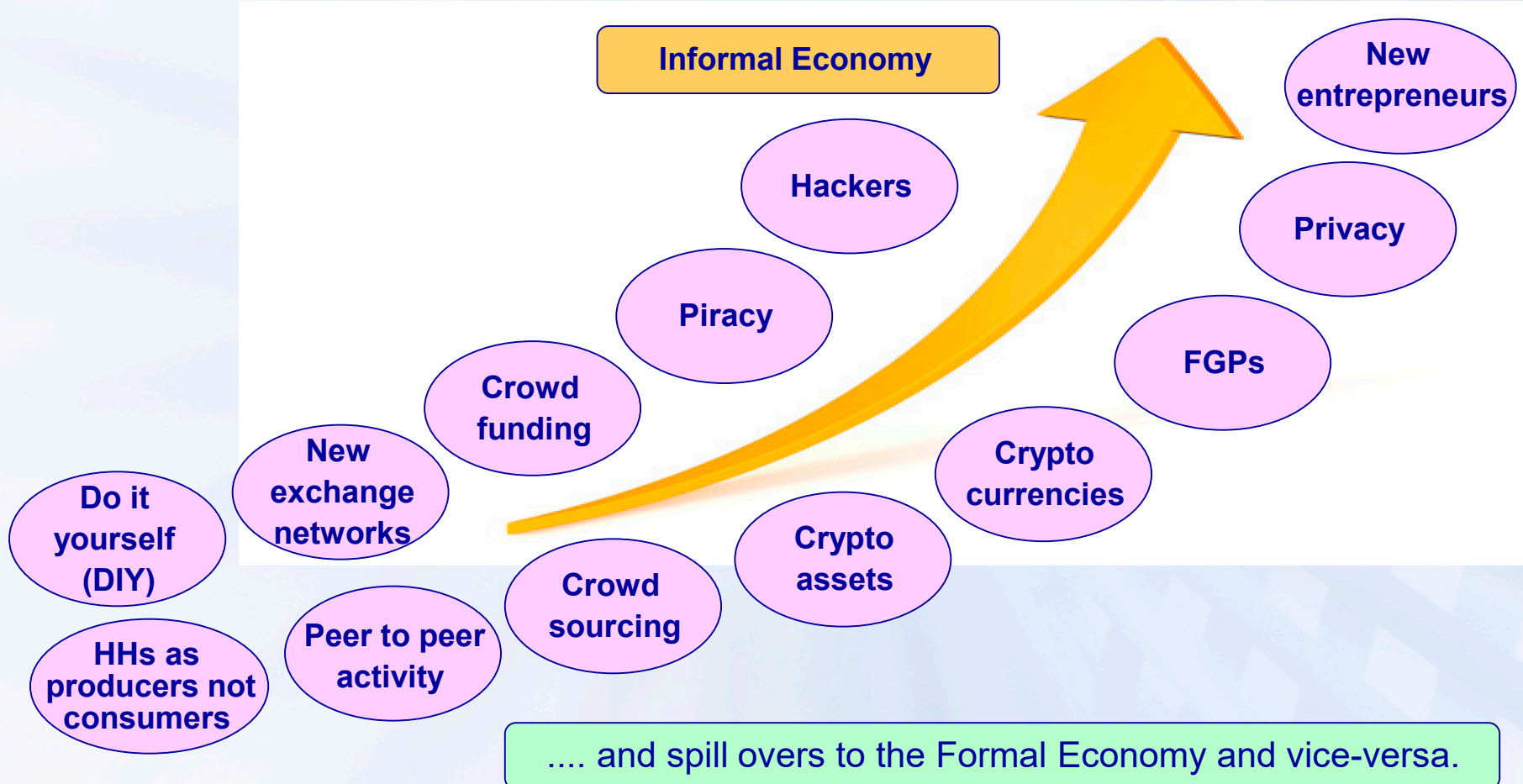


All boxes marked with ** are part of NOE and mainly N6. WOC is without complicity and WO is with complicity.

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Present and the future of the “global” Informal Economy

Is the “national” Informal Economy growing faster than we can measure?



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Ideas for the way forward

Improving the measurement of the Informal Economy

- Legislation - government supported and financed.
 - Focus on capturing key activities.
 - Develop registers of relevant actors based on type of activity.
- Regulation
 - Public and private.
- Framework for bringing the Informal Economy to the “core” SNA and SEEA
 - Improve the use of terminologies, definitions, methodologies and assumptions.
 - Develops SUTs to provide some degree of data confrontation and coherence.
 - High level, say 10-15 product / industry level, country specific.
 - Supplementary tables or a full satellite account.
- Lots of guidance on the formal economy
 - More needed on the informal economy with a practical focus.



Recognise these may take time and are not easy



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Ideas for the way forward

Improving the measurement of the Informal Economy

- Developing “traditional” sources in a modern manner
 - Electronic quarterly and annual questionnaires and diaries.
 - Regular (annual) time use survey with electronic data capture.
 - Company accounts data used as a proxy to validate NA data.
 - Improve the modelling using the above sources.
- Developing “new” data sources
 - Big data
 - Satellite imagery, traffic lights, heat sensors/maps, light sensors, shipping data.
 - Credit card transactions - shift from cash transactions.



Recognise these may take time and are not easy



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Conclusions

Improving the measurement of the Informal Economy



- Measuring the Informal Economy is already a massive challenge.
 - Maybe growing faster, and more innovatively, than we can measure?
 - Boundary between formal and informal is blurring.
 - More focus / analyses on well-being and sustainability.
- Legislation and regulation - need more but need to be effective and relevant.
- Need for better “use” of clearer and agreed terminology and definitions.
- Need flexible methodologies broadly meeting the concepts.
- Data sources
 - Strong labour links have to remain - develop better frames, business registers.
 - Better exploit existing sources - data collection using modern technology.
 - Develop innovative approaches utilising new sources - suite of indicators.
- Working together to develop better links to the “core” accounts (next SNA?).
 - Core accounts, supplementary tables, extended tables and satellite accounts.

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Any questions?

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