



المركز الإحصائي
لدول مجلس التعاون لدول الخليج العربية
GCC-STAT



Deriving Industry Turnover from Value Added Tax (VAT) Administrative Systems

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Outline

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- What is a VAT?
- Statistical Issues
- Business Registration
- Use of VAT Data for Statistical Purposes
- Accounting for VAT in Official Statistics
- Measuring the Impact of the VAT
- Economic Disturbance with the Introduction of the VAT

Background

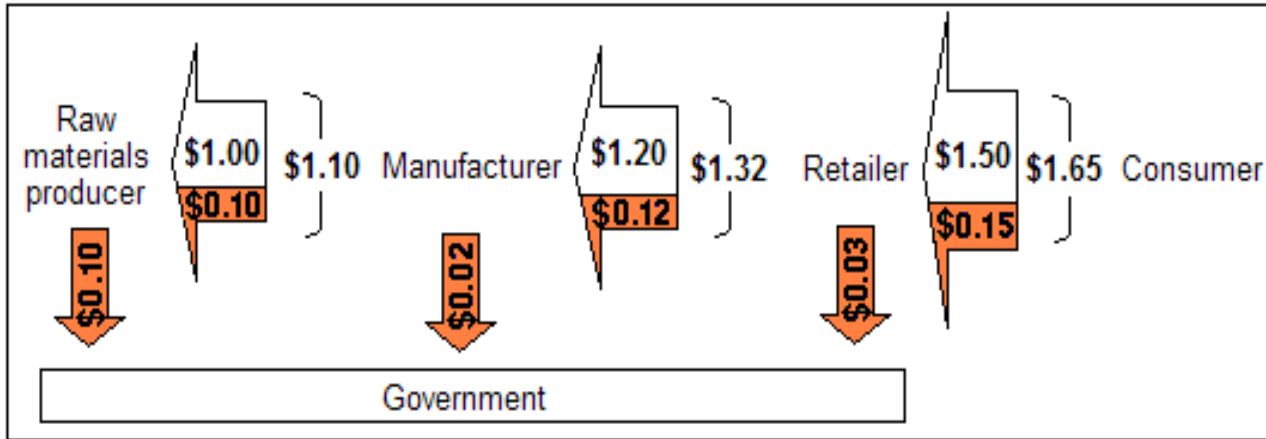
- The six GCC countries (UAE, Bahrain, Saudi Arabia, Oman, Qatar, Kuwait) have agreed to introduce a uniform Value Added Tax (VAT) from January 2018
- The exact details of the VAT are not yet known
- The introduction of the VAT offers both opportunities and challenges for official statisticians:
 - If set up in ways that are sympathetic to the needs of statisticians, the VAT administrative systems can provide valuable source data for compilation of official statistics
 - Statisticians must understand how the VAT should be treated in official statistics
- GCC-Stat has published a Methodological Paper to help the Region's statisticians correctly implement the VAT in official statistics

What is a VAT? (1)

- A **value-added tax (VAT)**, known in some countries as a **goods and services tax (GST)**, is a type of general consumption tax that is collected incrementally, based on the value added, at each stage of production
- It is usually implemented as a destination-based tax, where the tax rate is based on the country of the customer
- A simple example follows, assuming a 10% VAT



What is VAT? (2)



- The manufacturer spends $(\$1 + 10\%) = \mathbf{\$1.10}$ for the raw materials, and the seller of the raw materials pays the government $\mathbf{\$0.10}$
- The manufacturer charges the retailer $(\$1.20 + 10\%) = \mathbf{\$1.32}$ and pays the government $(\$0.12 \text{ minus } \$0.10) = \mathbf{\$0.02}$
- The retailer charges the consumer $(\$1.50 + 10\%) = \mathbf{\$1.65}$ and pays the government $(\$0.15 \text{ minus } \$0.12) = \mathbf{\$0.03}$
- Note that the taxes paid by the raw materials producer, the manufacturer and the retailer to the government are 10% of the *values added* by their respective business practices (e.g. the *value added* by the manufacturer is $\$1.20 \text{ minus } \1.00 , thus the tax payable by the manufacturer is $(\$1.20 - \$1.00) \times 10\% = \$0.02$).

What is a VAT? (3)

- In implementing a VAT, countries normally make exemptions from the tax. Some examples:
 - Fresh food
 - All exports
 - Medical/health treatments
 - Housing rent
- The rate of VAT also differs among countries
 - A uniform rate of 5% is being proposed in GCC countries
- ***We need to have a good understanding of what exactly is being proposed in GCC countries***

What is a VAT? (4)

There are two main methods of calculating VAT:

- ***the credit-invoice or invoice-based method***. Using this method, sales transactions are taxed, with the customer informed of the VAT on the transaction, and businesses may receive a credit for VAT paid on input materials and services.
 - ✓ The credit-invoice method is the most widely employed method in the world
- ***the subtraction or accounts-based method***. Using the subtraction method, at the end of a reporting period, a business calculates the value of all taxable sales then subtracts the sum of all taxable purchases and the VAT rate is applied to the difference.
 - ✓ The subtraction method VAT is currently only used in Japan
- The first method is far more desirable from a *statistical* perspective

Statistical Issues (1)

- VAT has profound implications from a statistical perspective
- Statisticians **must** be proactive in thinking through the issues
 - ***If set up in appropriate ways, VAT administrative data can be of enormous value for statistical purposes***
 - ***Statisticians must work closely with relevant government authorities as the VAT arrangements are put in place***
 - ✓ ***Statisticians can actually be helpful!!!***

- Matters for consideration include:
 - The business registration process
 - Use of VAT administrative data for official statistics
 - Accounting for VAT in official statistics
 - Measuring the impact of VAT
 - Economic disturbance and work program implications

Business Registration (1)

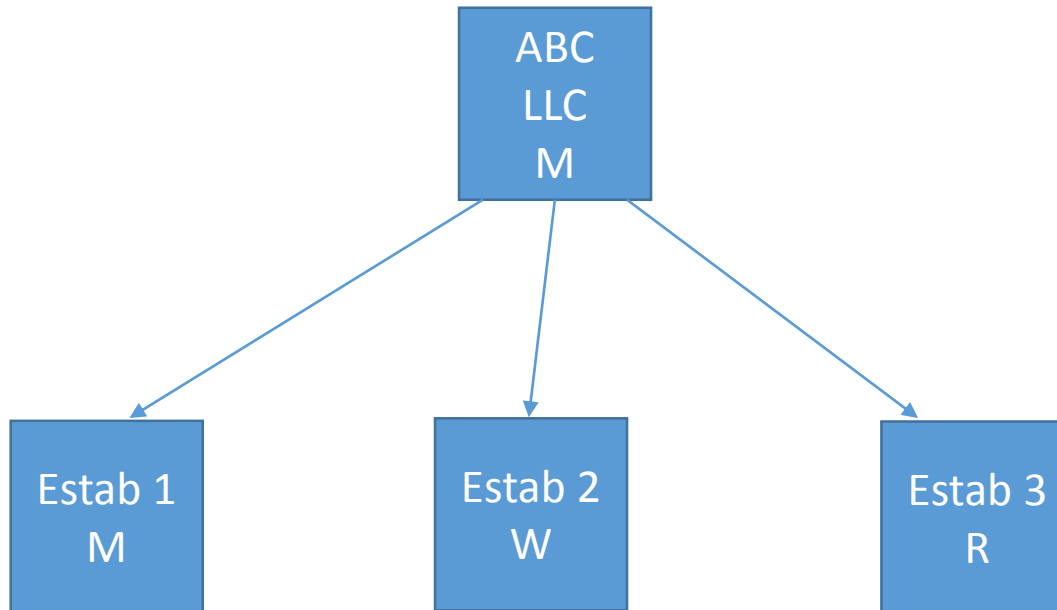
- Countries that have a VAT system require businesses to be registered for VAT purposes:
 - VAT registered businesses can be natural persons or legal entities, but countries have different thresholds or regulations specifying at which turnover levels registration becomes compulsory. ***We need to check this out for GCC countries***
 - Businesses that are VAT registered are obliged to include VAT on goods and services that they supply to others (with some exceptions, which vary by country) and account for the VAT to the taxing authority. VAT-registered businesses are entitled to a VAT deduction for the VAT they pay on the goods and services they acquire from other VAT-registered businesses
- It has been argued that the introduction of a VAT reduces the cash economy because businesses that wish to buy and sell with other VAT-registered businesses must themselves be VAT-registered
 - ***Will businesses in souqs be required to register for VAT purposes?***

Business Registration (2)

- ***We need to find out what is intended with business registration for VAT purposes:***
 - Will existing business registrations and business numbers be used?
 - Will a new registration process be required?
- ***What is the business unit that will be registered for VAT purposes:***
 - Will it be the “business”, i.e. the legal entity?
 - Will it be assigned an industry code and an institutional sector code?
 - Establishments versus legal entities
 - Which businesses will be exempt from registering? What will the coverage of VAT registered entities be?
 - How are multi-industry legal entities going to be registered?

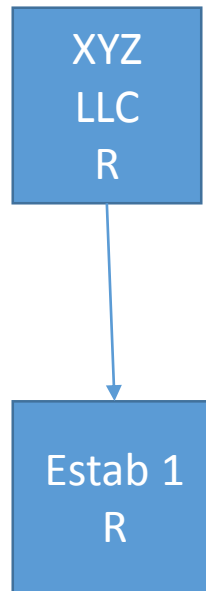


Business Registration (3)





Business Registration (4)



Business Registration (5)

- Potentially, and depending on how it is set up, the register of VAT businesses can be the basis for the statistical business register
 - This is the case in Australia and a number of other countries
 - But it has to be set up “right” from a statistical perspective!

Use of VAT Data for Statistical Purposes (1)

INDUSTRY STATISTICS:

- *Turnover*
- *Intermediate consumption*
- *Industry value added*
- *Capital expenditure*
- But for this purpose, we need:
 - **All** turnover reported, not just turnover on sales of goods and services subject to VAT:
 - ✓ Export sales separately reported (potentially a very useful source of information on exports of business services)
 - ✓ Other sales not subject to VAT
 - Operating expenses separately reported to expenditure on capital purchases (so that we have a “pure” measure of intermediate consumption)
 - We must know whether turnover and operating expenses are being reported gross or net of VAT
- ***Statisticians must work closely with the relevant authorities to ensure the VAT reporting forms are designed in a way that is helpful to compiling official statistics***

NATIONAL ACCOUNTS:

- GDP(Production-based)
- This is calculated as the sum of *Industry Value Added plus Taxes less subsidies on products*
 - ✓ “Value added” can come from the VAT source (with qualifications)
 - ✓ VAT is a tax on products (available from the VAT source)
 - ✓ Hence a “good” VAT system can be very helpful in compiling GDP(P)

Use of VAT Data for Statistical Purposes (3)

- GDP (Expenditure-based):
 - This is calculated as *Final Domestic Expenditures plus Exports less Imports of Goods and Services*
 - The VAT source, if set up appropriately from a statistical perspective, could provide useful source data on
 - ✓ Household final consumption expenditure (based on VAT-reported turnover of retail businesses)
 - ✓ Gross fixed capital formation of businesses
 - ✓ Exports of goods (a check against the Customs data)
 - ✓ Exports of services

Use of VAT Data for Statistical Purposes (4)

- To be useful for the purposes described above, the VAT system needs to be designed with statistical uses in mind
 - Interestingly, those uses are NOT inconsistent with the primary tax administration purposes
 - Quite the contrary, the integrity of the tax system will be enhanced if the statistical needs are taken on board
- ***But the statisticians need to be proactive in working with the authorities to ensure this happens***

Use of VAT Data for Statistical Purposes (5)

- The **frequency** of VAT reporting by businesses is also critical from a statistical perspective
- In some countries, reporting is as follows:
 - “Large” businesses – monthly
 - “Medium” businesses – quarterly
 - “Small” businesses – annually (but many choose for cash flow reasons to report quarterly)
- Ideally, we need “most” of the business population to report at least quarterly
 - For quarterly economic indicator statistics
 - For quarterly national accounts
 - *And we need to know what proportion of businesses has reported at least quarterly (so that we can estimate for the rest)*
- ***Statisticians should be seeking to influence the frequency and timeliness of business reporting for VAT purposes***

Accounting for VAT in Official Statistics

- Statisticians need to be aware of how the VAT should show up in official statistics and be prepared to quality check the statistics to ensure this happens:
 - *CPI prices* will increase. Ultimately the VAT is levied on the final consumer and should be *included* in the retail prices
 - *Producer price indices* must be compiled in accordance with the international standards, i.e. *excluding* the VAT
 - *GDP in current prices* will increase. GDP is calculated at market prices and, in particular, household final consumption expenditure should *include* the VAT
 - *GDP in constant prices* will not be *directly* affected by the VAT introduction, but there could be some “second round” effects. Need to ensure all relevant price indices used for deflation purposes are properly treating the VAT
 - *Government finance statistics* will be impacted
 - *Household expenditure statistics* will be impacted. There could be some substitution between goods and services subject to VAT and those that are not
 - *Real Household income* statistics will be impacted.
- ***The international statistical standards spell out how the VAT should be treated in official statistics. Statisticians must be familiar with the standards.***

Issues for Measuring Turnover

- Regardless of whether Turnover data are collected from business surveys or from administrative sources, it is critical for statisticians to know whether VAT has been included or excluded in the number
- Household final consumption expenditure in the national accounts must *include* VAT since VAT is ultimately a tax on consumers:
 - If Retail turnover is the source data for this item (such as in Australia) then turnover should *include* VAT
- Turnover (and intermediate consumption) in all other industries should *exclude* VAT. VAT is not a tax on businesses

Economic Disturbance with the Introduction of the VAT

- The introduction of the VAT will cause economic disturbance as consumers and businesses adjust to the new tax
 - Consumers will tend to adjust their spending patterns to spend relatively less on goods and services that are subject to the VAT
- This can affect time series of industry turnover data and statisticians should be aware of this likelihood in their quality control work



Thank you!