

Inclusion of Alcohol and Tobacco Smuggling in the UK National Accounts

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Based on work by Margaret Dolling, ONS

Main points...

- Explanation of the UK case
- Effects on the National Accounts
- Estimation techniques
 - data requirements
 - methodology

Why?

- Both 1993 SNA and ESA95 regard hidden and illegal activities as being within their production boundaries - these activities include smuggling
- There appeared to be significant volumes of smuggled alcohol and tobacco entering the UK, since 1995
- This information was based on the work of Customs and Excise in trying combat the smuggling

What type of smuggling?

- UK rates of excise taxes (duties) on alcohol and tobacco are higher than in most other EU countries
- So, UK consumers bring back large quantities of alcohol and tobacco from other EU countries, legitimately for their **own consumption** = cross-border shopping
- If goods are imported into the UK for re-sale, not for own consumption, then the UK excise taxes must be paid
- But if goods are brought into the UK, but not declared, and then sold (usually at a price below the UK average retail price), this is smuggling

Types of smuggling into the UK

- Cross-Channel importation by individuals by sea, tunnel, and sometimes air
- Freight smuggling - very large consignments, e.g. container loads. From EU and other countries
- Diversion fraud - goods which are notionally in transit between excise warehouses in the EU are diverted onto the market (spirits in the mid-1990s)

How are National Accounts affected?

GDP is affected through :

- Production
- Expenditure
- Income
- Balancing

Effect on Production

- It is assumed that the smuggled goods are routed to the final consumer via a retail trader or a catering outlet
- The smuggler is classified as being in either industry:
 - retailing - covering sales to family, friends and other individuals
 - catering (restaurants) - sales by hotels, cafes, pubs, etc.
- This assumes there is no 'wholesale smuggler' - may not be the case
- Output of retailing and catering = trade margin
- Intermediate consumption of smuggling = petrol, travel tickets, car rental, etc.

Effect on Expenditure

Components affected:

- Household final consumption expenditure (HHFCE)
- Imports

Components assumed to be unaffected:

- Gross fixed capital formation - purchase of cars, etc. assumed to be recorded already as part of household final consumption expenditure or business GFCF
- Changes in inventories - no information available, but assumed to be small as risky for smugglers to hold stocks
- Exports - diversion fraud would not be recorded in the trade statistics
- So, HHFCE and imports need to be adjusted

Effect on Income

- Generation of mixed income affected
- It is assumed that smugglers have no employees
- Smugglers therefore classified to household sector
- No taxes paid

So, mixed income = GVA of smuggling
= output of 'retailing and catering'
less intermediate consumption of 'r and c'

Effect on GDP

Overall effect, in theory, is that GDP would be revised upwards by the GVA of the distribution services provided by the smugglers:

- Production
 - up by GVA of retailing and catering (distribution)
- Expenditure
 - up by HHFCE on distribution
 - upward revision to HHFCE on alcohol and tobacco offset by upward revision to imports
- Income
 - up by mixed income of smugglers
- So, all three approaches revised up by same amount
- i.e. adjustments are balanced

Estimation

- Data requirements
- Methodology

Data requirements

At product level, for each type of alcohol and tobacco:

- Import prices
 - legal retail prices in country of origin
 - available from National Statistical Institute
- Street prices
 - prices sold in the UK
 - different margins for different outlets - high for catering
 - must lie between import price and UK retail price
 - estimated with help from Customs and Excise
 - exchange rate effects must be considered

Data requirements (contd.)

At product level, for each type of alcohol and tobacco:

- Import prices
- Street prices
- Import quantities:
 - annual statistical exercises by Customs and Excise to estimate revenue evasion
 - published periodically, and can be converted into volume data
 - estimates made by product and by type of smuggling activity
 - exponential growth model used for years when no data
 - but...smuggling is dynamic market - reacts to enforcement policies, tax changes, consumer demand, etc.
 - assumptions need constant review

Methodology

- NA entries must be balanced at product level
- Need supply and use balance of
 - alcohol products
 - tobacco products
 - distribution services (smuggling)
- Need to calculate supply and use for all the above in
 - volumes (alcohol and tobacco only)
 - current prices
 - constant prices (now chained-volume measures in the UK)

Alcohol and Tobacco

Volumes:

- Supply = volume of imported goods
 - volume from Customs and Excise surveys
- Demand = volume of HHFCE
 - no independent data source, so equal to supply
 - i.e. = volume of imported goods

Alcohol and Tobacco

Current prices:

- Supply in basic prices = volume x import price
 - volume from Customs and Excise surveys
 - price from other NSIs
- Demand in basic prices = equal to supply

Constant prices:

- Supply in basic prices = volume x import price in base period
- Demand in basic prices = equal to supply

For demand in purchasers' prices substitute street prices for import prices

Distribution services

Output is measured as the sum of smugglers' margins, separately for retailing and for catering

- Trade margins are calculated as the difference between the basic price and the purchasers' price (assumes no wholesaling)
- Trade margin = volume x (street price - import price)

Intermediate consumption (IC) data for smugglers do not exist

- But assume lower than for legitimate retailers and caterers
- So use their ratios of IC : output, but adjusted downwards

So, can calculate output and IC (for each product type) in

- current prices using volume, street price, import price
- constant prices (CVMs) using volume; and prices in the base period

In summary

- Adjustments are made in the UK National Accounts to:
 - GVA for retailing and catering
 - HHFCE
 - imports
 - mixed income
- In 2000, smuggled tobacco accounted for around 18% of HHFCE on tobacco
- And, smuggled alcohol accounted for 2.5% of HHFCE on alcohol
- Customs and Excise cannot provide data on volumes for the current year, so assumptions are needed
- Smuggling of alcohol and tobacco into the UK was included for the first time in the UK National Accounts in 2001