

## ISIC Rev.4 – Application rules

Top-down method  
Vertical integration  
Outsourcing

United Nations Statistics Division

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## ISIC – concepts

- Reviewed concepts in this version of ISIC:
  - Top-down method
  - Vertical integration
  - Outsourcing
- Application and impact depends strongly on the selection of units
  - ISIC does not define units, but provides information
  - Int. Recommendations for Industrial Statistics gives guidance
  - Choice of unit depends on statistics collected and on organizational settings
  - ISIC can theoretically be applied to all units

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## Top-down method

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### Top-down method

- Method has not changed from previous versions of ISIC
    - Exception for trade activities has been made explicit
  - Applies to units carrying out multiple activities
- > selection of unit is important ! (but this is not an ISIC issue)

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### Top-down method

- The top-down method follows a hierarchical principle:
  - the classification of a unit at the lowest level of the classification must be consistent with the classification of the unit at the higher levels of the structure.
- To satisfy this condition the process starts with the identification of the relevant position at the highest level and progresses down through the levels of the classification in the following way:

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### Top-down method

1. Identify the section which has the highest share of the value added.
  2. Within this section identify the division which has the highest share of the value added within this section.
  3. Within this division identify the group which has the highest share of the value added within this division.
  4. Within this group identify the class which has the highest share of value added within this group.
- (Box 1)

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## Top-down method

- For wholesale and retail trade, step 3 has to be refined
- Why?
  - Additional levels exist that are not part of the ISIC structure itself, e.g.
    - Own-account vs. fee-based
    - Specialized vs. non-specialized
    - In-store vs. not-in-store
  - Similar distinctions do not exist for other activities, such as manufacturing.

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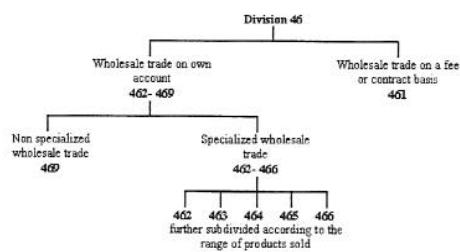
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## Top-down method Wholesale



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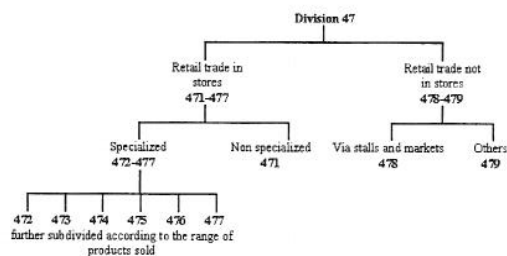
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## Top-down method Retail sale



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### Top-down method

- If the distinctions at the 3-digit level were built into the regular ISIC structure, Retail trade would look like this:

47            Retail trade, except of motor vehicles and motorcycles  
471           Retail trade in stores  
4711 Retail sale in non-specialized stores  
...  
4712 Retail sale in specialized stores  
47121        Retail sale of food, beverages and tobacco in specialized stores  
471211      Retail sale of food in specialized stores  
471212      Retail sale of beverages in specialized stores  
471213      Retail sale of tobacco products in specialized stores  
47123        Retail sale of automotive fuel in specialized stores  
471230      Retail sale of automotive fuel in specialized stores  
...  
472           Retail trade not in stores  
...

- Result: a 6-digit ISIC structure (used only for a few activities)
- In this structure, top-down would not need an exception for trade

10

### Top-down method

The rules may sound complicated, but:

- Reflect more complex composition of trade activities in ISIC
  - Driven by the desire for more detail in this area
- Provide necessary definitions for specialized vs. non-specialized trade activities

11

### Top-down method

- Criteria for specialized vs. non-specialized trade
- Idea:
  1. "Non-specialized" should involve a significant number of different product lines
  2. "Noise items" should be ignored
- Implementation:
  - Fixed rules

(Box 2)

12

## Vertical integration

### Treatment of vertically integrated activities

- Vertical integration of activities occurs where the different stages of production are carried out in succession by the same unit and where the output of one process serves as input to the next.
- Examples of common vertical integration:
  - tree felling and subsequent sawmilling
  - production of wearing apparel in a textile mill

14

### Treatment of vertically integrated activities

- Vertical integration should be treated like any other form of multiple activities, i.e. the principal activity of the unit is the activity accounting for the largest share of value added, as determined by the top-down method.
- This treatment has changed from previous versions of ISIC.
- If value added or substitutes cannot be determined for the individual steps in a vertically integrated process directly from accounts compiled by the unit itself, comparisons with similar units could be used. Alternatively, valuation of intermediate or final products could be based on market prices.

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### **Treatment of vertically integrated activities**

- Impact of the changed rule should be minimal, since in many cases units will be broken up statistically if portions are substantial

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### **Outsourcing**

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### **Outsourcing**

Can take many forms:

- Outsourcing of labour
- Outsourcing of support functions
- Outsourcing of parts of a production process
- Outsourcing of the complete production process

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### Outsourcing - Terminology:

- Principal = unit that enters in a contractual relationship with another unit (here called contractor) to carry out some part of the whole production process. Sometimes, the terms "converter" or "contractor" had also been used.
- Contractor = unit that carries out a specific production process based on a contractual relationship with a Principal. The term "subcontractor" had been used too. The activities performed by the contractor are denominated "on a fee or contract basis".
- Outsourcing = contractual agreement according to which the principal requires the contractor to carry out a specific production process. Sometimes, the term "subcontracting" is used as well.

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### Outsourcing - Terminology

- Other terminology is sometimes used (e.g. in recent OECD documents), where in this context:
  - "insourcing" and "outsourcing" refers to relationship between units involved
  - "offshoring" refers to transactions between economic territories
- This terminology is not used here.

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### Outsourcing

- The principal and the contractor may be located in the same economic territory or in different economic territories: the actual location does not affect the classification of either one of these units.

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## Outsourcing

- Contractors, i.e. units carrying out an activity on a fee or contract basis, are usually classified with units producing the same goods or services for their own account
- Exceptions:
  - Trade
  - Construction

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## Outsourcing - manufacturing

- In manufacturing, the principal provides the contractor the technical specifications of the manufacturing activity to be carried out on the input material.
- The input material (raw or intermediate good) can either be provided (owned) by the principal or not.

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## Outsourcing - manufacturing

- A principal who outsources only part of the transformation process is to be classified into manufacturing.
- The activity of a principal who completely outsources the transformation process should be classified into manufacturing **only** if he owns the raw material used as input to the production process (and therefore owns the final output).

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## Outsourcing - manufacturing

- In all other cases, the activity of the principal should be classified in Section G "Wholesale and retail trade" (according to the type of operation and the specific good sold).
- In this case the principal buys the good from the contractor and re-sells it without transformation

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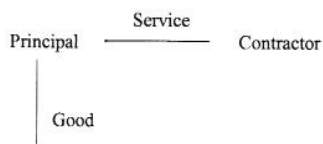
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## Outsourcing - manufacturing

- Output of outsourced activities:
  - If principal owns the input materials:



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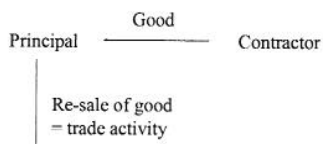
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## Outsourcing - manufacturing

- Output of outsourced activities:
  - If principal does not own the input materials:



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## Outsourcing – manufacturing

- Some remarks:
  - A unit classified in Manufacturing can have two types of outputs:
    - a manufactured good
    - a manufacturing service
  - Both are identified in the product classification
  - Manufacturing is defined as a (mechanical or chemical) transformation process
    - This implies that the “manufacturer” has to have ownership of the good before and after the transformation process

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## Outsourcing – manufacturing

- Some remarks:
  - Proposals for classification (in this case) are often driven by a reference to “risk”
    - To take the risk of manufacturing, you need to have a liability in this process
    - Owning the concept is not sufficient
    - Owning the concept does not imply ownership of the produced good
  - Sale of goods
    - Wholesale/retail sale is defined as “buying and reselling without transformation”
    - Simply selling the goods that you produce does not make you a wholesaler/retailer

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## Outsourcing – services

- For services, the concept of a “service retailer” does not exist
- If the whole process (service provision) is outsourced, both the principal and the contractor are classified to the same ISIC class
- If only a portion of the process is outsourced, the principal remains classified as if it were carrying out the complete process
- If a separate class exist for the outsourced portion, the contractor is classified to that portion, otherwise to the same class as the principal

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### Outsourcing – support functions

- This applies to the outsourcing of functions like accounting, computer services etc.
- In this case, the principal is classified as if it were carrying out the complete core process. (In other words, support functions do not influence the classification of a unit.)
- The contractor is classified to the specific support function it is carrying out.

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### Outsourcing – employment

- Increasingly, companies emerge that provide only the labour force to their clients.
- In turn, producers (e.g. manufacturers) may have little or no employment
- In this case the principal is classified as if it were operating with own employees.
- The contractor is classified to ISIC 7820 or 7830, depending on the type of contract.

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### Stability

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### Stability rule

- Units may change their principal activity, either at once or gradually over a period of time, either because of seasonal factors or because of a management decision to vary the pattern of output. While all these cases call for the classification of the unit to be changed, too frequent changes could result in inconsistencies between short term (monthly and quarterly) and longer term statistics, making their interpretation extremely difficult.

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### Stability rule

- Whenever a unit performs two activities both contributing to around 50% of the value added, a stability rule has been established in order to avoid frequent changes not reflecting a substantial change in the economic reality. According to this rule, the change of the principal activity should be made when the current one had been accounting less than 50% of the value added for at least two years.

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