



# Linking ISIC to other classifications

United Nations Statistics Division



# What links are possible?

- ❑ ISIC is used for statistics grouped by activities and most commonly statistics based on units (e.g. establishments) classified according to their main activity
- ❑ Theoretically, any classification that can establish a connection to these concepts can be linked to ISIC



# What links are possible?

- ❑ Some classifications may link to the complete range of ISIC activities, while others can establish a meaningful link only to a subset of ISIC categories
- ❑ Sometimes, categories in both classifications may look alike, but their context restricts the link
  - Example: ICATUS



# How is the link defined?

☐ The important question is:

What criteria/concepts are used to link the two classifications?



# How is the link defined?

- ☐ Very common links
  - Other activity classifications
  - Product classifications
- Criteria are typically clear in these cases
  - ☐ options for products still exist
- We will look at the ISIC-CPC link later on



# What links are possible?

- ❑ Considering the criteria to be used for the linking of different concepts, an additional question should be:
  - What links actually do make sense when data sets are compared?
  - Example: ISIC - HS



# Example: ISCED

- ISCED classifies programmes into levels according to set criteria
- ISIC classifies units providing education services



## Example: ISCED

- A link between ISIC and ISCED can be established by linking units providing programmes at educational level n with educational programmes at level n in ISCED
- Problem: the programmes are not defined at unit level (e.g. schools) and a unit can carry out multiple programmes
  - Keep in mind when comparing data





## Example: ICNPO

- ❑ ICNPO also classifies activities
- ❑ Categories of ICNPO and ISIC often line up or can be aggregated to matching levels
  - Discussed in Part 4 of the ISIC Rev.4 publication
- ❑ Data conversion issue:
  - While definitions of activity categories are comparable, the ISIC classes cover non-profit and for-profit institutions



# Example: ICATUS

- ICATUS covers activities carried out by individuals
  - ISIC covers activities by statistical units, such as establishments
  - One-person establishments are possible (for many activities)
- Covers also non-productive activities
  - Scope is different from ISIC
  - Links for the matching scope part could be established



## Example: ICATUS

- Some individual categories seem identical to ISIC
  - E.g. farming of animals, quarrying of stone, processing of meat, cleaning services
- However, ICATUS also considers the context in which the work is carried out
  - The above examples could be performed for corporations (formal work), households or for own use



# Example: ICATUS

- ❑ All formal work (in main job) is classified in one category in ICATUS - 011110
  - Makes link to ISIC not very useful in this case
- ❑ Other activities can be linked according to their type
- ❑ Overall link needs context information to be applied correctly



## Example: ISCO

- ❑ ISCO classifies jobs, while ISIC classifies activities (units)
- ❑ In many cases a link could be established
- ❑ However, the concept of the link needs to be clarified



## Example: ISCO

- In some cases an apparent match between ISIC and ISCO exists
  - E.g. Lawyers are recognized in ISCO
    - They could be linked to legal activities in ISIC (6910)
    - However, lawyers can work in companies engaged in many different activities
- In other cases the links don't work at reasonable levels
  - Machine operators in ISCO could be linked to many classes in ISIC
  - Managers, supervisors



## Example: ISCO

☐ Should an ISIC-ISCO link reflect the industry in which a certain job is actually performed?

or

☐ Should an ISIC-ISCO link reflect the industry in which a person carrying out a given job would be classified if he/she had been an independent goods or service provider?

☐ To what kind of data is the link applied?



## Example: COFOG

- COFOG classifies expenditures by government units according to purpose
  - Should a link between ISIC and COFOG be based on which units have expenditures for the purposes shown in ISIC?
- or
- Should a link between ISIC and COFOG be based on which units provide the goods and services for the purposes shown in ISIC?





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# **CPC Ver.2 - ISIC Rev.4**



## CPC-ISIC link

- ☐ CPC classifies products, ISIC classifies activities/units
- ☐ What concept is used for the link?
- ☐ Most common: Link CPC products to the ISIC activities that produce them
  - Other options: link to activities that use them; link to ISIC industries that produce these products
    - ☐ Problem with latter: secondary production



## CPC-ISC link

- ❑ In most cases, a product can be attributed to a single activity that produces it
- ❑ There are exceptions, which complicate the link:
  - Products assigned to multiple activities
  - Products assigned to many/all activities/industries
  - Products assigned to no activity (not outputs of production)
- ❑ Note: although the link is to “activity” the above exceptions may go beyond that for practical reasons
  - E.g. trademarks, leasing of rights to use patents



# CPC – ISIC link

- Products with multiple activity/industry links
  - Examples:
    - Mushrooms (output of growing or gathering)
    - Oysters (output of aquaculture or fishing)
    - Glycerol (output of different chemical processes)
    - Electrical capacitors (electric vs. electronic)
    - Sale of advertising space in print media (different media)
    - Internet access services (different providers)



# CPC – ISIC link

- Reasons for multiple links:
  - Insufficient product detail
    - (could be fixed)
  - One product (with unique characteristics) can be produced by different industries
    - Subdividing these would create “artificial products”; goods not compatible with HS
- Forcing a single link may result in loss of data
  - Depends on application of this link for data collection and display



# CPC – ISIC link

- Total number of CPC products with multiple ISIC links:
  - 66 (out of 2730) = 2.5%
- For most products, a regrouping by industry is possible
- No ISIC link shown for waste products
  - Could be produced by many industries, regardless of waste type
  - Some are not output of production



# Summary

- ❑ Links can be established between ISIC and many other classifications
- ❑ It is important to agree on the concept that defines the link
  - This will depend on the type of data that is being considered