

Project 06/07K: Strengthening the Development of International Merchandise Trade Statistics (IMTS) and the compilation of e-commerce in Member Countries of the Economic and Social Commission for Western Asia (ESCWA)

## **Workshop on the compilation of IMTS and the application of methodological concepts**

**28 October – 2 November 2007, Amman, Jordan**

### **Commodity Classification, Classification Conversion, Quantity Recommended Unit and Quantity Estimation**

## **Introduction & Key Issues**

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# Commodity Classification

- HS (Harmonized System) is recommended commodity classification for data compilation and processing
  - Compilers of trade statistics should cooperate with customs administrations for revisions and updates
- SITC (Standard International Trade Classification) and BEC (Broad Economic Categories) are also widely used for dissemination

# Classification Conversion

- It is possible to convert HS commodity classification to another (SITC/BEC) with the use of correlation tables
- Use of commodity conversion:
  - Maintenance of comparable data series
  - Reconciliation of data obtained from various sources
  - Re-aggregation for another analytical purpose

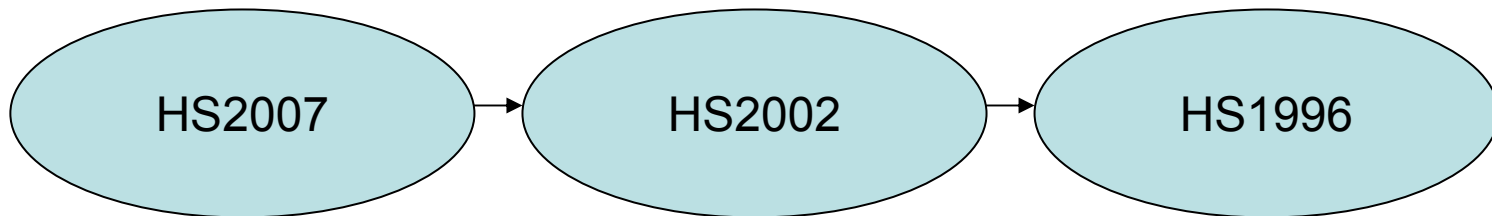
# Correlation Tables

- To save resources and promote standardized correlations, use WCO or UNSD correlation tables
- Correlation between different revisions of HS, between HS, SITC and BEC is included in reference materials
- Compilers should do correlations using the most detailed level

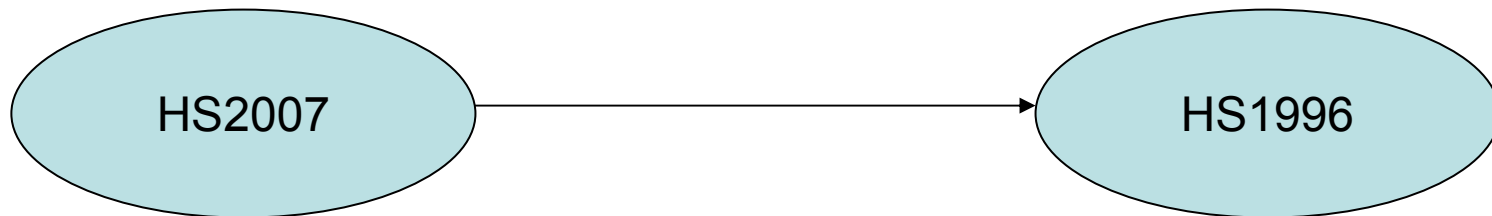
Correlation tables are included in reference materials

# Direct & Cascade Conversion

- Cascade Conversion: (not recommended)
  - To convert HS2007 into HS1996 via HS2002



- Direct Conversion
  - To convert HS2007 into HS1996 directly



# Example HS2007 & HS2002

## Converting HS2007 to HS2002

- 1-to-1

	H3	H2	fl
1	0101.10	0101.10	
2	0101.90	0101.90	
3	0102.10	0102.10	
4	0102.90	0102.90	

- 1-to-many

	H3	H2	flag
1	0301.94	0301.99	ex
2	0301.95	0301.99	ex
3	0301.99	0301.99	ex
4	0302.67	0302.69	ex
5	0302.68	0302.69	ex
6	0302.69	0302.69	ex

- Many-to-1

	H3	H2	flag
1	0105.94	0105.92	
2	0105.94	0105.93	

1-to-1 and 1-to-many do not pose processing problem.

Just replace HS07 codes with HS02 codes and re-aggregate

HS07 010594 is chicken (new code)  
HS02 010592 is chicken < 2kg and HS02 010593 is chicken > 2kg

How to convert HS07 010594?

1. Based on country experience, for an example in country A there is no chicken < 2kg traded, so in this case it is converted to 010593
2. On world level, total trade for 010592 and 010594 is compared, if one of them is 75% of trade value, it will be assigned to that code
3. Or, it can be converted into code 010599 (chicken, weight unknown)

# Example HS2007 to HS2002(cont)

Period	Trade Flow	Reporter	Partner	Code	Trade Value	NetWeight (kg)	Quantity Unit	Trade Quantity
2006	Import	World with All	World	<u>010592</u>	\$262,912,115	151,374,061	<u>99</u>	N/A
2006	Import	World with All	World	<u>010593</u>	\$274,082,844	12,932,393	<u>99</u>	N/A
2006	Import	World with All	World	<u>010599</u>	\$124,038,010	54,012,051	<u>99</u>	N/A

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- In 2006, trade value of HS2002 010592/93 is similar, so in the conversion table, HS07 010594 will be probably converted into HS02 010599

# Quantity Recommended Unit

- WCO recommended a single standard unit of quantity for each HS six-digit heading
  - To facilitate the collection, comparison and analysis
- Quantity obtained by UNSD, if it is possible, will be converted/estimated to WCO Recommended Unit
- UN Comtrade disseminates data with WCO recommended quantity unit



# HS 2002 Recommended Unit

Unit Description	Total Commodities	% Share	Note
Weight in kilograms	3901	74.7%	
Number of items	1168	22.4%	
Area in square metres	53	1.0%	
Volume in cubic meters	28	0.5%	
Number of pairs	27	0.5%	
Volume in liters	22	0.4%	
Length in metres	12	0.2%	film rolls
Weight in carats	8	0.2%	diamond
Thousands of items	1	0.0%	
Number of packages	1	0.0%	playing cards
Kwh	1	0.0%	electricity

# Quantity Unit Conversion

- There are two kinds:
  - Mathematical conversion, such as inch to meter
  - Specific gravity of the commodity involved
    - Best done on national level
    - FAO example: 1000 coconuts = 1 metric ton (broad-based conversions at international level)
    - FAO conversion factors used in UN Comtrade data processing is included in reference materials
  - For UN Comtrade, please provide us with national conversion factor to WCO recommended unit

# FAO Conversion Factors

HS2002	Description	From	Conv.Factor	To
040110	Milk & cream, not concentrated/sweetened, fat content by wt. not >1%	Volume in liters	0.970873786407767	kg
040120	Milk & cream, not concentrated/sweetened, fat content by wt. >1% but not >6 ...	Volume in liters	0.99009900990099009	kg
040130	Milk & cream, not concentrated/sweetened, fat content by wt. >6%	Volume in liters	1.0101010101010102	kg
040291	Milk & cream, concentrated (excl. in powder), unsweetened	Volume in liters	1.0101010101010102	kg
040299	Milk & cream, concentrated (excl. in powder), sweetened	Volume in liters	1.0309278350515465	kg
040310	Yogurt	Volume in liters	1.0309278350515465	kg
040390	Buttermilk/curdled milk & cream/kephir & oth. fermented/acidified milk & cr ...	Volume in liters	0.98039215686274506	kg
040410	Whey & modified whey, whether or not concentrated/sweetened	Volume in liters	1.0	kg
040490	Milk prods. of nat. milk constituents, whether or not sweetened, n.e.s.	Volume in liters	1.0	kg
040700	Birds' eggs, in shell, fresh/presvd./cooked	Number of items	17241.379310344826	kg
040811	Egg yolks, dried, whether or not cont. added sugar/oth. sweetening matter	Number of items	4098.3606557377052	kg
040819	Egg yolks (excl. dried), whether or not cont. added sugar/oth. sweetening m ...	Number of items	13698.630136986301	kg
040891	Birds' eggs, not in shell (excl. yolks), dried, whether or not cont. added ...	Number of items	4098.3606557377052	kg
040899	Birds' eggs, not in shell (excl. yolks), other than dried, whether or not c ...	Number of items	13698.630136986301	kg
200911	Orange juice, frozen, unfermented & not cont. added spirit, whether or not ...	Volume in liters	1.0	kg
200919	Orange juice, not frozen (excl. of 2009.19), unfermented & not cont. added ...	Volume in liters	1.0	kg
200950	Tomato juice, unfermented & not cont. added spirit, whether or not cont. ad ...	Volume in liters	1.0	kg
200980	Juice of any single fruit/veg. (excl. of 2009.11-2009.79), unfermented & no ...	Volume in liters	1.0	kg
200990	Mixtures of juices, unfermented & not cont. added spirit, whether or not co ...	Volume in liters	1.0	kg
210500	Ice cream & oth. edible ice, whether or not cont. cocoa	Volume in liters	1.4285714285714286	kg
220110	Mineral waters (nat./art.) & aerated waters, not cont. added sugar/oth. swe ...	Volume in liters	1.0	kg
220190	Ice & snow	Volume in liters	1.0	kg
220210	Waters, incl. min. waters & aerated waters, cont. added sugar/oth. sweeteni ...	Volume in liters	1.0	kg

# Quantity Unit Estimation

- A specific quantity unit can be estimated from other quantity units in the same commodity
  - For an example:
    - Commodity 240220 (Cigarettes) reported in two units: number and kg. The recommended unit is kg.
    - Unit Value for each unit can be calculated: \$/item, \$/kg.
    - Then, records with quantity unit number can be estimated using unit value \$/kg
    - *Note: FAO conversion factor for cigarettes is available (number to kg) so it precedes quantity estimation with unit value from other units*

# Standard Unit Value

- Quantity can also be estimated using standard unit values (SUV)
- SUV is created from trade data reported by countries
  - there are several statistical criteria used to make reliable standard unit value such as removing outliers
- Then, SUV can be used to estimate quantity or to be used in *data validation*
- For data processing purpose, UNSD generated SUV by commodity by flow and by recommended unit every year
  - UNSD SUV is included in reference materials

# Problems with SUV

- Requires adequate data
  - Not every commodity has weight (by definition)
  - In one HS heading, commodity is heterogeneous (in term of value and/or quantity), therefore not possible to established one unit value (passenger car can have extreme price range)
- Requires enough records
- Possible differences by export/import, region and partner country

# Non available quantity in UN Comtrade

- Current practices:
  - Very limited quantity conversion (only FAO Conversion Factors)
  - SUV not available for many commodities
  - SUV methodology is under on going review
  - Quantity is only available on 4 / 6 digit

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