

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

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Data Validation at NSO

Key Issues & Best Practices

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Problem areas

- Processing error in trade statistics involves errors in:
 - Coverage (what are included/exclude)
 - Time of recording (time of lodgment / time of release)
 - Trade System (general / relaxed special / strict special)
 - Commodity classification (original/converted classification – coding of commodity)
 - Valuation (CIF/FOB)
 - Quantity Measurement (registered unit/recommended unit)
 - Partner Country (country of origin/country of final destination)

Best Practices

- Full Coverage
- Code Validation
 - Using standard code list / cross-checking with common sense
- Unit Value Validation
 - Against standard / historical unit values
- Data Reconciliation and Exchange
- Macro level checks
- Feedback from International Organizations
 - Data processed by UNSD (UN Comtrade)
 - Various yearbook publications

Full Coverage

- Even though Customs Administration is the main data source, depending on national situation, other sources can be also important:
 - National Energy Agency
 - Aircraft and ship registers
 - Reports of commodity boards, etc
- NSO should make *an effort* to make sure that detailed trade data statistics are complete
 - Any missing values or quantities should be estimated
 - Estimation methodology should be available to public

Code Validation

- **Similar with reference tables** (see presentation on Data Validation at Customs)
 - Codes must be validated against a standard code list
 - The standard code list must be *maintained* and *revised* regularly
- In addition, code cross-checking with IT based / common sense can be done for the combination of
 - quantity units-commodities
 - Valid unit for 271600 (electricity) is always kwh
 - customs regime, partner country, port of entry
 - Oil Imports is probably via ports not airports

Unit Value Validation

- **Unit Value = trade value /quantity** (for a specific unit of measurement)
 - Unit Value should be valid for the combination of commodity, quantity unit, trade flow (and may be partner country)
- **Unit values in every transaction can be compared against**
 - acceptable standard unit values (min/max)
 - historical unit values
- **Any inconsistencies should be double checked**
 - If it is necessary, quantity should be estimated

Data reconciliation and exchange

- Experience indicates that reconciliation of data and subsequent data exchange improve the quality of trade statistics
 - reconciliation provides an explanation of the discrepancy between import and export statistics of trading partners
 - It can also provide information on under reporting trade to/from certain partner countries
- The success of reconciliation is dependent on the full cooperation of trading partners and clear objectives
- National Compilation and Dissemination Practices Questionnaire results can used be a starting point of data reconciliation studies

Macro level checks

- In addition of checks on elements of the transactions (micro level checks), macro level checks can also be done
- These involve:
 - Growth rates and composition of aggregates checks for reasonableness
 - Cross-checking against non-customs statistics for certain products, such as domestic production

Feedback from International Organizations

- Any data submitted to international organizations will be re-processed and standardized and finally disseminated
- Data dissemination can be done online via web sites or using year book publication
- Cross-checking and comparison should be done regularly
- UN Comtrade is available for data providers
 - Please send access request to comtrade@un.org

What to do if errors are detected?

1. Separate them into minor and major error based on importance of trading partner/commodity and trade value
2. Ask clarification for major errors to data providers, by explaining the reason (for an example, unit value is outside acceptable range)
3. If errors seem systematic (for an example, missing quantity from specific trader), coordinate with data provider for more permanent solution

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