

Workshop on the Methodology and Data Compilation of International Merchandise Trade Statistics (IMTS)

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Agenda item 13: Data compilation and data quality assurance at Customs and NSO



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Improvement at main data source

- All participants responded that Customs Declarations are the main source of data
- Data compilation and quality assurance at Customs will greatly improve quality of trade statistics
- Using computerized system to capture customs declarations will ensure basic data validation at data entry

What can be done at Customs?

- Full coverage of customs declarations
 - By consolidating data from automated and non-automated sites
- Partner country validation
 - Double check with shipping manifest, invoice, certificate of origin
 - Cross-checking on commodity level (e.g., not possible to import banana from Sweden)
- Ensure proper classification of goods
- Use price validation to identify possible incorrect values and/or quantity information
- Education programmes for customs officers and traders

Data Quality Assurance at NSO

- Ensure full coverage
 - Use non customs data source
 - Estimate missing values and/or quantities information
- Proper coding for commodity, partner country
 - Using standard code list
- Establish data cross-checking with common sense
 - Quantity unit for “electrical energy must be kwh
 - Oil imports probably via seaports / pipes not airports
 - Etc ...

Data Quality Assurance at NSO (cont.)

- Unit Value Validation
 - Against standard / historical unit
- Macro level checks
 - Growth rates and composition of aggregates (structure of trade)
 - Against non-customs statistics, e.g., domestic production
- Data Reconciliation and Exchange
 - Experience indicates that reconciliation of data and subsequent data exchange improve the quality
- Feedback from International Organizations
 - E.g., data processed by UNSD (UN Comtrade)

Human vs. Machine

- It is true that experienced customs officers or statisticians can be very effective in detecting errors, however:
 - They have limited time (only work days)
 - They can be overwhelmed by high work load, which lead to decrease in their effectiveness
 - They may not be available or replaced by less experienced person

Therefore, the needs of validation tools

- Validation tools are not intended to replace resource person
but
 - ✓ just like other tools, it served to increase effectiveness and productivity of resource person
 - ✓ Major errors, to be verified further (usually by experienced customs officers or statisticians), can be identified faster and more accurately
 - ✓ In addition, automatic data correction (for basic error) can help reducing workload of resource person

Use of IT

- IT improvement in past years has enabled the use of technology for validation of “very large” data can be done in relatively inexpensive system such as PC
- It is worth to mention that the main problem in the implementation is not availability of tools

but:

- ✓ How to reform/change established working culture?
- ✓ What is the right software for data validation?
- ✓ Has the software implemented best practices and national validation procedures?
- ✓ Do staffs have enough training?

What to do if errors are detected?

1. Categorize them into minor and major errors based on importance of trading partner/commodity and trade value
2. Ask clarification for major errors to data providing agencies, 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 providing agencies for more permanent solution**



Thank you for your attention!