Quality assurance in the 6th EWCS – experiences and reflections

Sally Widdop (Ipsos)

Gijs van Houten (PEW Research Centre)

Mathijn Wilkens (Eurofound)

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Outline

- Context – how to measure quality
- Quality in the 6th wave of the EWCS
- Applying quality indicators in the 6th EWCS
- Benefits and shortcomings of the approach
- Possible improvements and lessons learned
- Questions

Context: Measuring quality

Measuring quality

- Several multi-dimensional approaches previously developed to measure quality of statistics
  - European Statistical System (for Eurostat)
  - Statistics Canada & Statistics Sweden
  - US Census Bureau, OECD and the International Monetary Fund
- All have focused on meeting data user requirements in terms of minimising error and ensuring fitness for use

Dimensions of quality

Dimension	Definition
Relevance	Extent statistics / survey data meet current and potential users needs
Accuracy	Extent statistics / data measure what they are intended to measure
Timeliness	Survey design and timeliness ensure data and meta data is available when needed
Punctuality	All stages of the survey life cycle carried out on time based on client's requirements
Accessibility	The set of conditions and modes by which users can obtain and analyse the data.
Clarity / interpretability	Extent comprehensible metadata and paradata are available to facilitate analysis
Coherence	Adequacy of the data to be organised or combined in different ways / for different reasons coherently
Comparability	Extent statistics / survey data are from different cultures / countries are comparable.

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Observations

- Quality dimensions not necessarily compatible or mutually exclusive – sometimes in conflict
  - ensuring quality on one dimension (e.g. comparability) may conflict with ensuring quality on another (e.g. timeliness);
  - tension between meeting user requirements and the associated cost of doing so on one or more dimensions

- BUT – when designing surveys and when faced with such trade-offs the dimensions can help to objectively define & assess quality

Quality in the 6th EWCS

European Working Conditions Survey

- Cross-national, face-to-face, random probability survey
- Measures the working conditions of employees and self-employed in 28 EU Member States & 7 neighbouring countries
- Funded by the European Foundation for the Improvement of Living and Working Conditions
- 6th wave fieldwork conducted in 2015 by Ipsos
- 43,850 workers interviewed
- Extensive quality assurance and control strategies

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Identifying quality dimensions

- Quality dimensions defined as part of the Quality Control plan
- Primary frame of reference is the European Statistical System quality framework
- But also tried to incorporate elements from other approaches:
  - the US Office of Management and Budget;
  - ISO standards;
  - the Cross-Cultural Survey Guidelines and
  - other survey process quality literature - including principles from the TSE framework

Quality dimensions - criteria

Dimension	Definition
Relevance & Timeliness	Relevance for users of the survey data and survey based reports, both in terms of substance and timing of publication
Accuracy	Validity and reliability of the survey data
Accessibility	Availability of outputs and transparency of processes
Coherence & Comparability	Consistency with other data sources
Punctuality	Adherence to timeline as set at start of project

Survey life cycle and quality dimensions

	Relevance & Timeliness	Accuracy	Accessibility	Coherence & Comparability	Punctuality
Sampling		X	X		X
Weighting & Translation		X	X	X	X
Q'aire	X	X	X	X	X
FW infrastructure		X			X
Data entry; INT training; FW; Data processing & Micro data		X	X		X

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Quality targets

Category	Definition	In initial plan	Agreed after kick-off meeting
Requirements	Targets that have to be reached	126	50
Real world targets	Targets that should be achieved, and for which arguments need to be provided if they are not.	20	87
Ideal world targets	Targets that cannot be expected to be reached. Regarded as ideal-world scenarios.	9	0 (all formulated as real world targets instead)

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	B	C	D	E	F	G	H	I	J	K	L	
	Theme	Sub-theme	Relevance & Timeliness			Accuracy			Accessibility			
			Indicator	Target	Responsible	Indicator	Target	Responsible	Indicator	Target	Responsible	Indic
	Sampling	Register vs. enumeration				Percentage of countries where a register is used	100%	CT				
		Sampling frame (country)				Percentage of the population covered by the sampling frame	100%	CT				
						Percentage of register entries for which all contact details (including telephone when telephone contacting is applied) are included	100%	CT				
						Percentage of register entries that refer to non-existent or non-eligible addresses	0%	CT				
						Percentage of register entries for which a wrong or non-working telephone number was included	0%	CT				
		Sampling frame (overall)				Percentage of countries, where a register is used for sampling, where the register was updated within a year preceding fieldwork	100%	CT	Percentage of countries for which the characteristics of the sampling frame and procedure are documented in complete accordance with the template	100%		
						Percentage of countries where specified information on stratification variables is included in the register	100%	CT				
						Percentage of countries where specified information on stratification variables is included in the register using the same categories (e.g. age brackets, occupatoinal classification etc.)	100%					
		Reference statistics (country level)				Percentage of the population (private households) covered by the reference statistics	100%	CT				
		Reference statistics (overall)				Percentage of countries where the reference statistics were updated within a year preceding fieldwork	100%	CT	Percentage of countries for which the characteristics of the reference statistics are documented in complete accordance with the template	100%	CT	

Applying quality indicators

What happened?

- 87 **Red requirements set**; 78 were achieved (90%)
- 50 **Orange real world requirements** set; 14 achieved (28%)

- At face value, results are unsatisfactory – may lead to interpretation that the overall quality of the 6th wave was low

- Need to explore the targets and indicators in much more detail to get a clearer picture and consider the positive results from the external quality assessment

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Red requirements

- 100% of the targets set for Questionnaire, Translation, CAPI data entry, Training, data processing and micro data were achieved

Survey stage	No. of targets set	No. of targets achieved
Weighting	13	12
Fieldwork	8	3
Sampling	16	13

Orange real world targets

Survey stage	No. of targets set	No. of targets achieved
Sampling	17	5
Weighting	7	1
Q'aire	5	3
Translation	8	3
F/W infrastructure	1	0
CAPI data entry	2	1
Training & micro data	2	0
Fieldwork	3	1
Data processing	3	0

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Benefits & shortcomings

Benefits

- Forced Eurofound to be explicit about expectations, priorities and trade-offs
- Created clarity for Ipsos in terms of the level of quality and rigor that was required and which targets to prioritise
- Created detailed, transparent documentation
- Results provide a baseline – can be used to set targets for indicators in the next wave

Shortcomings

- Not all criteria were sufficiently clearly defined
- Not all criteria could be measured as foreseen or assessed independently of each other
- The large number of criteria created a lot of administrative burden
- The quality control plan could not work as an ‘alert’ system to problems as intended

Improvements & lessons learned

Improvements

- Ensure that all indicators are well-defined, unambiguous and measurable = to avoid problems implementing them
- Reduce the number of targets per dimension = more manageable and useful during the process
- Use up-to-date / real-time information to enable the quality control indicators to work as an 'alert system' = allowing problems to be identified and solutions implemented earlier

Lessons learned

- Eurofound is currently using a modified version of the approach in the implementation of its 4th EQLS
- Ipsos has reviewed the procedures employed on the 6th EWCS and formalised its approach to defining, measuring and reporting on quality for other cross-national surveys
- The use of quality indicators is promising for other cross-national surveys
- Important to ensure: clear mutual understanding of the targets, define roles & responsibilities for monitoring those & balance the number of indicators with the ability to manage them

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Questions?

Contact:

Sally Widdop Sally.Widdop@ipsos.com

Gijs van Houten GvanHouten@PewResearch.org

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