Brief overview of survey methodology and its applications

Content

- Survey – what is it?
- Problem Specification & Population Definition
- Questionnaire/Questions
- Sampling
- Response rates
- Summary

Survey (I)

A <u>survey</u> is a system for collecting information to describe, compare, or explain knowledge, attitudes and behavior.

Surveys involve setting objectives for information collection, designing research, preparing a reliable and valid data collection instrument, administering and scoring the instrument, analyzing data, and reporting the results.

Surveys are taken of political and consumer choice, use of health services, cost of living, energy use, economic activities, and opinions on just about everything.
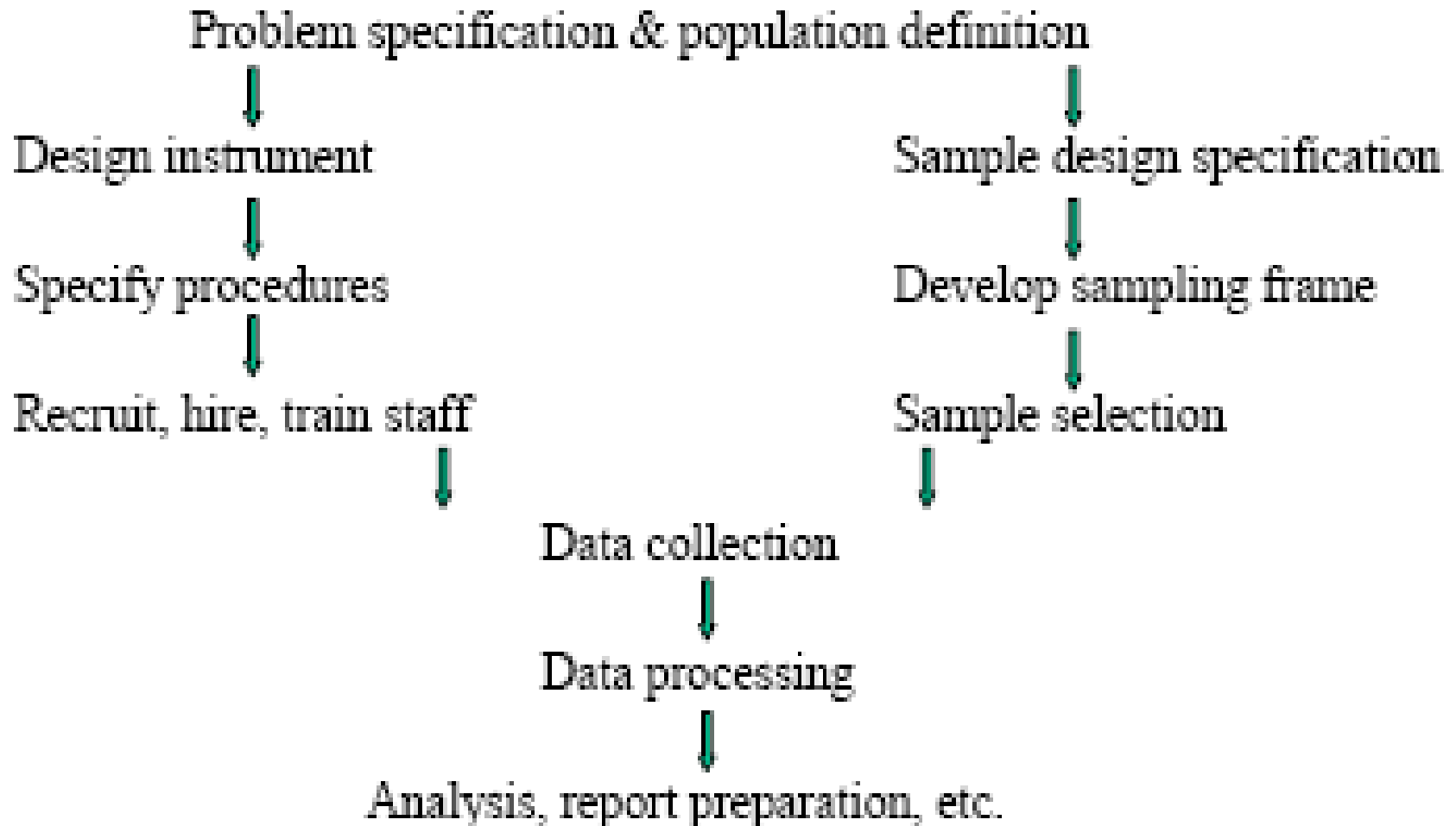
Surveys are used to find out information by asking *questions* arranged into questionnaires that can be administered to respondents through different mediums.

Survey (II)

Features of a Good Survey

- Specific objectives
- Straightforward questions
- Sound research design
- Sound choice of population or sample
- Reliable and valid survey instruments
- Appropriate analysis
- Accurate reporting of survey results
- Reasonable resources

Sample Surveys

Problem specification & population definition

Design instrument

Specify procedures

Recruit, hire, train staff

Sample design specification

Develop sampling frame

Sample selection

Data collection

Data processing

Analysis, report preparation, etc.

Problem Specification

<u>Very high level of aggregation</u>:

To evaluate the quality and usefulness of the PEMPAL meetings and whether participants have learned something they can use in their work to reform or streamline working flows in their institutions.

These are expected to include measures of:

Quality,
Usefulness,
Applicability,
Understanding.

Population(s) Definition

- Target population: Finite population that survey is attempting to characterize (or make inferences to), e.g. persons-members of PEMPAL as of X/YY/ZZZZ or population of all business establishments in Vietnam on June 19, 2007, etc.

- Frame population—population accessible via the frame elements (at least in principle), e.g. all participants of a PEMPAL event, establishments in the tax register, etc.

- More precisely: Frame is a composition of materials, procedures, and devices that identify, distinguish, and allow access to the elements of target population.

Questions (I)

- Two broad types of question
  - Open-ended
  - Closed
- Another division
  - Perceptional
  - Factual
- …and another division
  - Specific response
  - Interval response

Questions (II)

- **<u>Open-ended questions</u>**

Q: What did you like best about the workshop (please comment)?

- **<u>Closed questions</u>**

Q: *On the scale from 1 = low to 5 = high, please rate (1) quality of organization (pre-event administration and logistics, etc.) and (2) administration (staff responsiveness, etc.) of the workshop?*

    1. Quality of workshop organization

    2. Quality of workshop administration

Questions (III)

Perceptional

Q: *Please read the following statements, and tell us if you agree or disagree with each of them. (Please rate each item)*

a) *The workshop addressed issues important to my work*

b) *I learned from the experience of other participants in the workshop*

c) *The level of the workshop was appropriate for a person with my experience and knowledge*

Response options*:*
    1 (strongly disagree)
    2
    3
    4
    5 (strongly agree)

Factual

Q: *How long did it take SARS to process your last year VAT return (the form was completed correctly and submitted on time)?*

1. Less than 1 week
2. 1 week - less than 2 weeks
3. 2 weeks - less than 3 weeks
4. 3 weeks - less that 4 weeks (1 month)
5. 1 month - less than 2 months
6. 2 months - less than 3 months
7. 3 months - less than 6 months
8. 6 months or more (please specify)

Questions (IV)

Specific response

Q: Which of the following presentations have you attended? (check all relevant boxes)

1. *Day 1, presentation A* ☐
2. *Day 1, presentation B* ☐
3. *Day 1, presentation C* ☐

Interval response

Q: How long ago (from today) have you visited the PEMPAL website to find information that you then used in performing your duties at work?

1	Less than 1 week
2	1 week - less than 2 weeks
3	2 weeks - less than 3 weeks
4	3 weeks - less that 4 weeks (1 month)
5	1 month - less than 2 months
6	2 months - less than 3 months
7	3 months - less than 6 months
8	6 months or more (please specify)

Questions (V)
Level of details

- Level of details in questionnaire may vary dramatically, e.g.
  - Evaluation of satisfaction with the small group discussions at PEMPAL events – 1 question;
  - Event administration evaluation – 6 questions
- Level of details is a function of
  - Research agenda set by the client
  - Expected level of respondents' knowledge about details
  - Attention span and irritability of prospective respondents

Questions (VI)
Good and not so good questions

Few quotes from an old and wise book - ***The Art of Asking Questions*** by Stanley L. Pyne, first published in 1951.

- The more meaningless a question is, the more likely it is to produce consistent percentage when repeated.

- There is a need for a definite expression of alternatives

- One of the pre-tester's most useful devices is the follow-up question: "What do you mean by that?"

- Expert guidance can be helpful in acquainting the researcher with a subject, but his ideas may be harmful when he sets himself as a protagonist of opinions.

- International pollsters, who must translate questions from one language to another have particular difficulty …

- The most frequently mentioned criticism of commerical research – improperly worded questions (74%).

Sampling (I)

Confidence interval is the plus-or-minus figure usually reported in newspaper or television opinion poll results (e.g. 41% +/- 3%).

Confidence level tells how sure you can be. The 95% confidence level means you can be 95% certain; the 99% confidence level means you can be 99% certain. Most researchers use the 95% confidence level.

When you put the confidence level and the confidence interval together, you can say that you are 95% sure that the true percentage of the population is between 38% and 44%.

The wider the confidence interval you are willing to accept, the more certain you can be that the whole population would be within that range.

If you asked a sample of 1,000 member country representatives who have ever attended PEMPAL events if they would be ready to attend events in the future without being reimbursed for the travel cost and 40% said NO, you can be very certain that between 20 and 60% of all respondents actually would not come on their own, *but* you cannot be so sure that the percentage of those who would not come falls between 39 and 41%.

Sampling (II)

Sample size is *not* a linear function of the size of targeted population
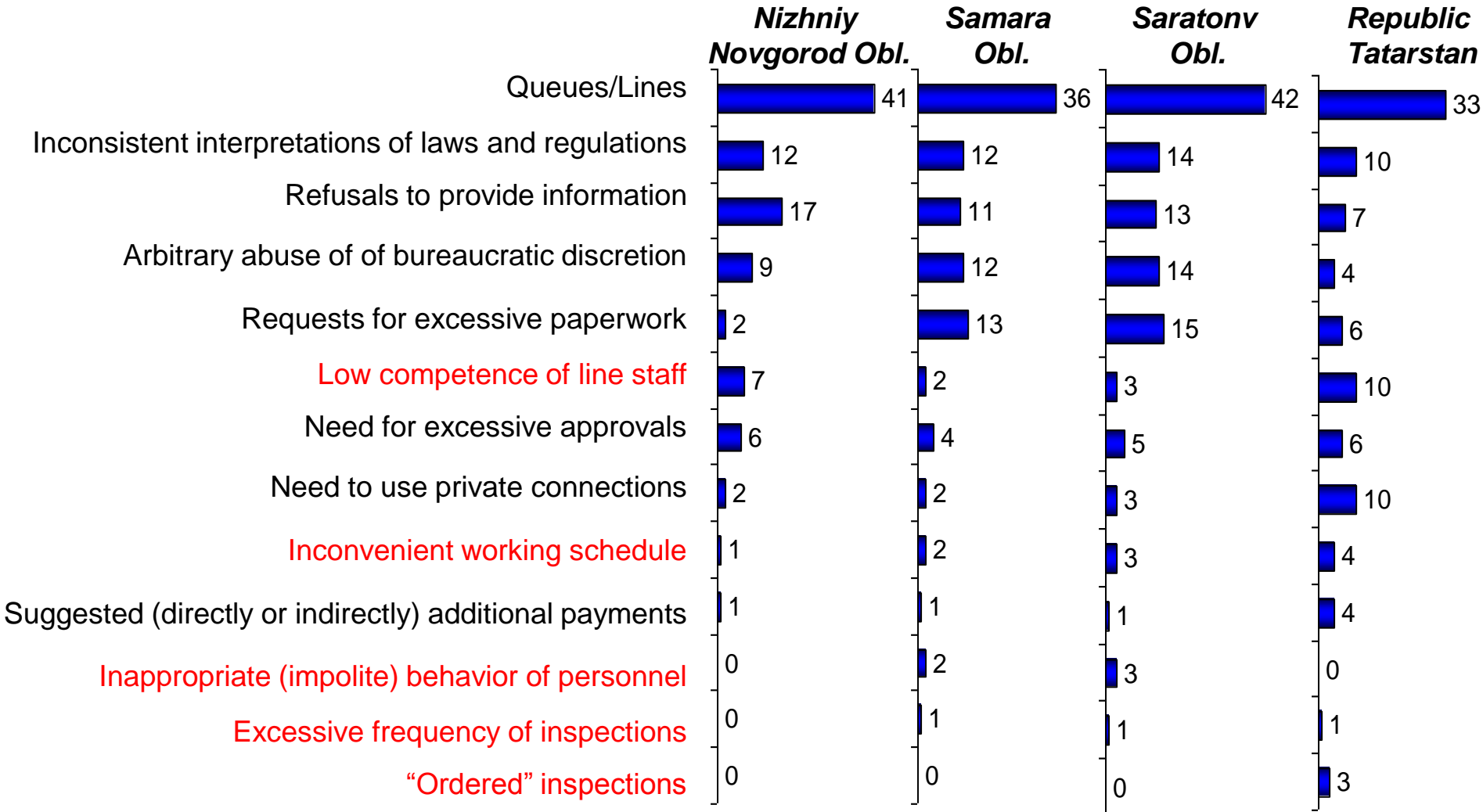
Pop. size	CI +/- 3%	CI +/- 4%	CI +/- 5%
30	29	29	28
100	92	86	80
673	413	318	240
40,000	1039	591	381
200,000	1061	598	383
1,500,000	1066	600	384

Response Rates

- <u>Survey response</u>: the ratio of the number of questionnaires that have minimum information required for analysis divided to a number of eligible units (respondents).

- <u>Item response</u>: The ratio of the number of eligible units responding to an item (question) to the number of responding units eligible to have responded to the item.
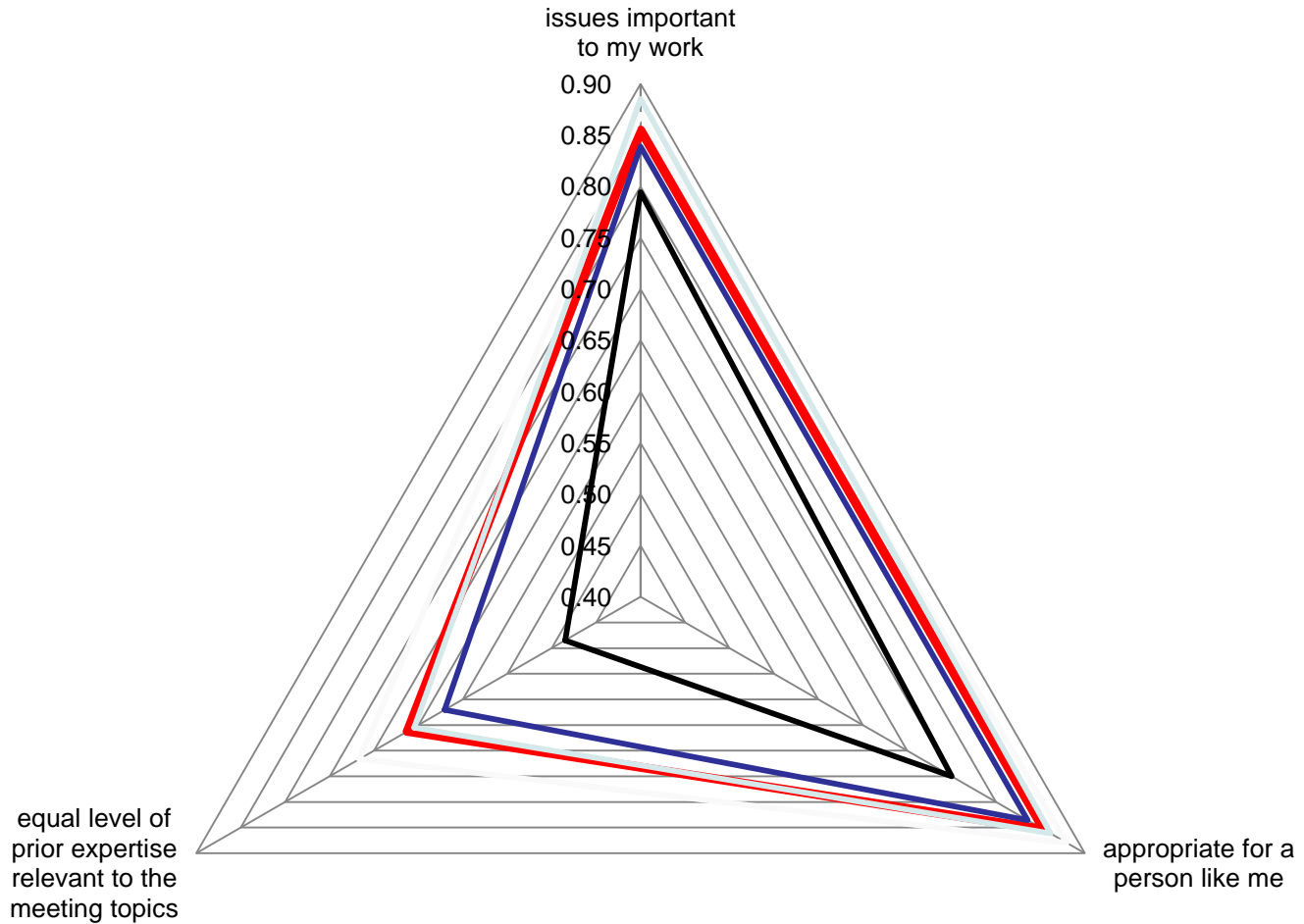
Analysis and reporting (I)

Percent of respondents reported various aspects of interactions with tax inspectorate as most problematic

	Nizhniy Novgorod Obl.	Samara Obl.	Saratonv Obl.	Republic Tatarstan
Queues/Lines	41	36	42	33
Inconsistent interpretations of laws and regulations	12	12	14	10
Refusals to provide information	17	11	13	7
Arbitrary abuse of of bureaucratic discretion	9	12	14	4
Requests for excessive paperwork	2	13	15	6
Low competence of line staff	7	2	3	10
Need for excessive approvals	6	4	5	6
Need to use private connections	2	2	3	10
Inconvenient working schedule	1	2	3	4
Suggested (directly or indirectly) additional payments	1	1	1	4
Inappropriate (impolite) behavior of personnel	0	2	3	0
Excessive frequency of inspections	0	1	1	1
"Ordered" inspections	0	0	0	3

Problems are ranked based on the average for four regions

18

Analysis and reporting (II)

issues important to my work

appropriate for a person like me

equal level of prior expertise relevant to the meeting topics
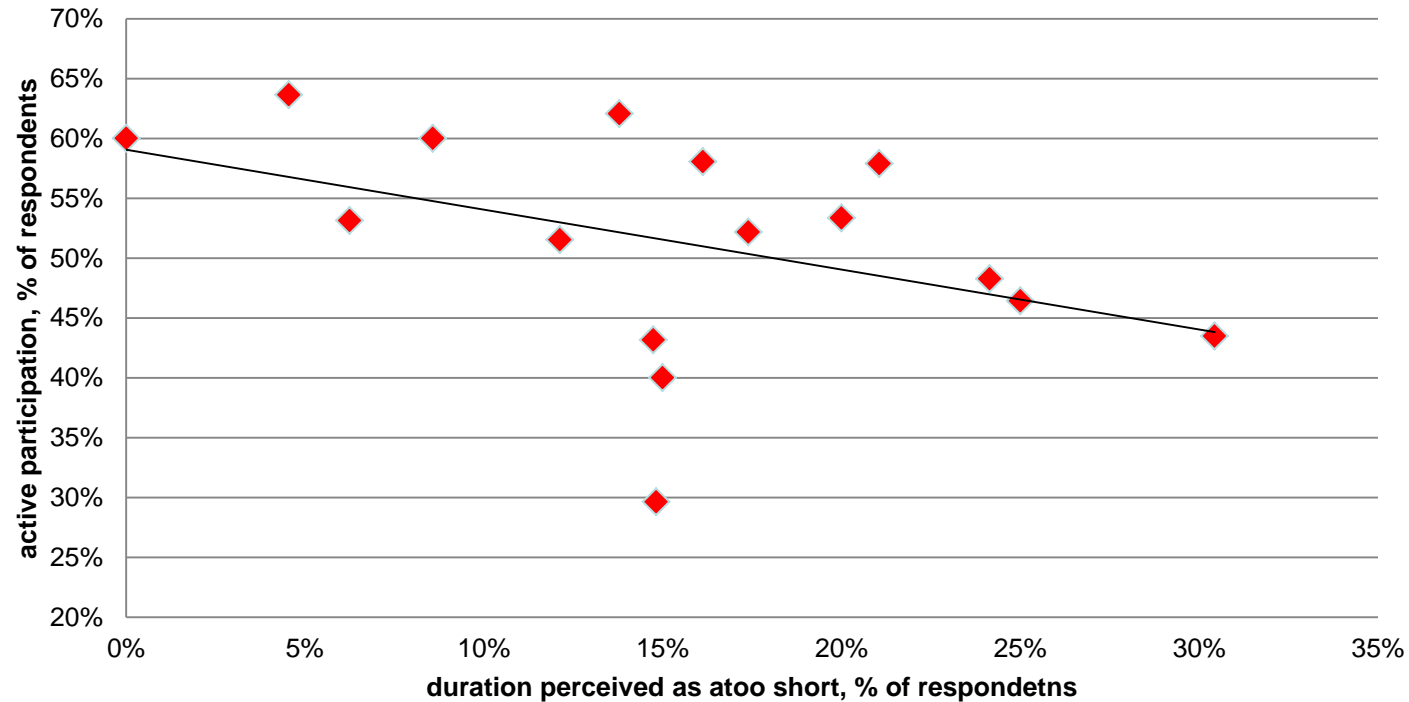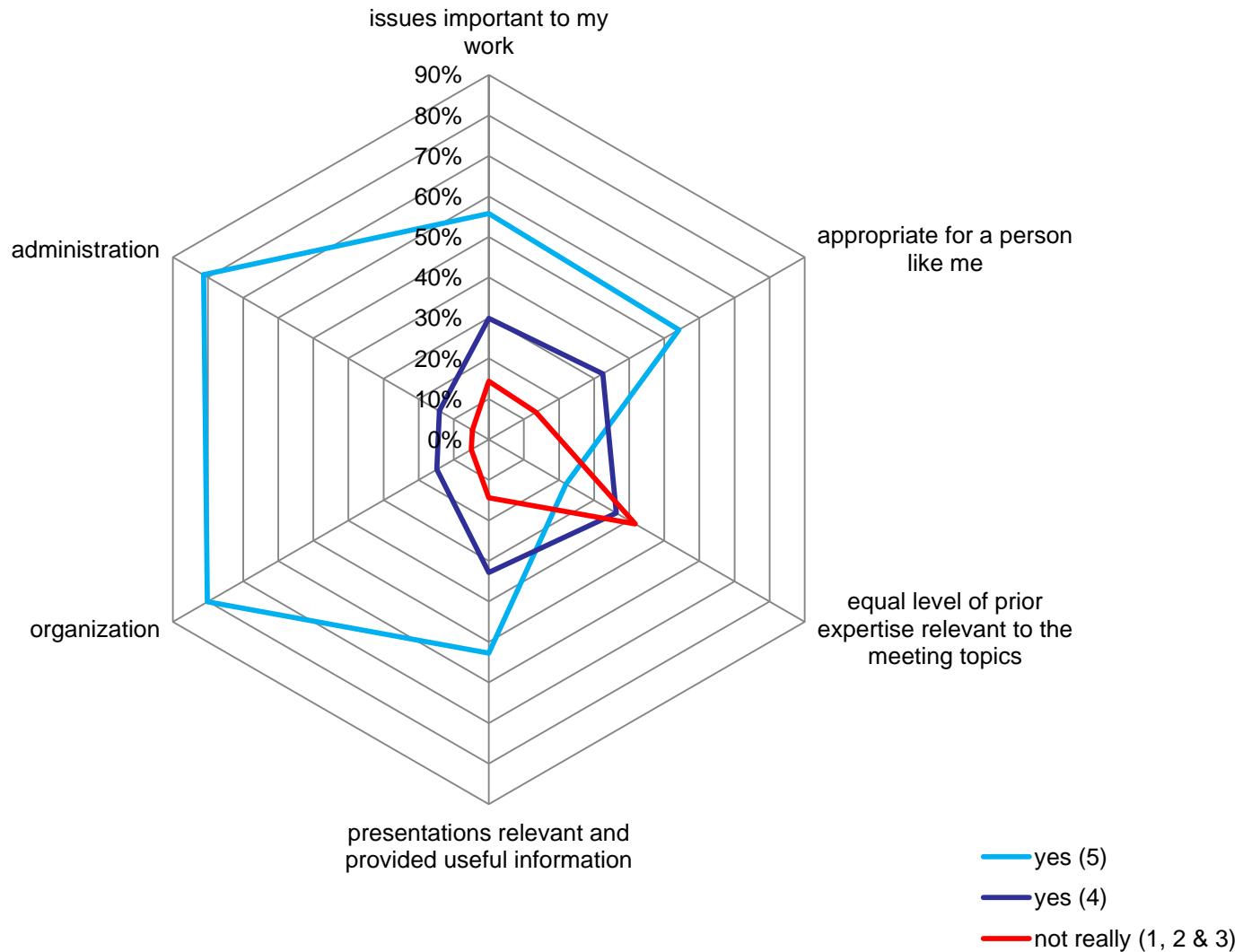
TOTAL   TCOP, average   Cross-COP, average   IACOP, average   BCOP, average

Analysis and reporting (III)

PEMPAL EES: Relation between perception of duration and activity of participants
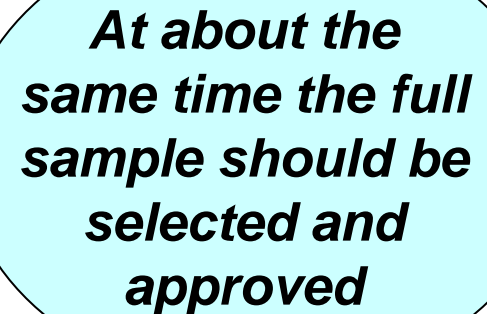
Analysis and reporting (IV)

issues important to my work

appropriate for a person like me

equal level of prior expertise relevant to the meeting topics

presentations relevant and provided useful information

organization

administration

90%
80%
70%
60%
50%
40%
30%
20%
10%
0%

yes (5)
yes (4)
not really (1, 2 & 3)

Thank you

Preparations (I)

- Instrument design
  - Identification of issues
  - Discussions with specialists
  - Input from the client
  - Approval of the first full draft
- First test of the full draft
  - "Friends and family"
  - Revisions
  - Approval from the client
- Field test(s)
  - Selection of a sample for the field test
  - Training of interviewers
  - Testing the instrument
  - Analysis if results and feedback from survey staff and interviewers
  - Revisions and …if revisions exceed a certain predetermined level
  - Second field test

At about the same time the full sample should be selected and approved

Preparations (II)

- Finalization of the questionnaire and approval by the client
- Sending out advanced letters if it seems necessary
- Preparation of the interviewers manual
- Training of interviewers on the final questionnaire
- Securing support letters
- Copying and distribution of the questionnaire
- Finalization of the data entry scheme and data analysis plan
  - Coding agreements
  - Layout of main tables.

Analysis and reporting (I)

- Report preparation
  - Preparation of descriptive statistics
  - Preparation of the "project execution" part of the report
  - Preparation of the "analytical part" of the report
  - Assembling client version of the report
  - Submit "Client Version" of the report for internal management clearance and secure the clearance

- Completion of the project
  - Submit the "Client Report" package to the client
  - Receive and incorporate Client's comments and suggestions
  - Submit final report to the client
  - Wrapping-up of the project