

9 Questions

The form and wording of questions is very important as they have an effect on type and quality of obtained information. The wording and structure of questions should be appropriate, clear, relevant and free from any bias and ambiguity (Kumar, 2011, p. 151).

9.1 Types of questions

The most common questions used in the research are:

- Open-ended questions
- Closed questions
- Attitudinal and measurement scales

9.1.1 Open-ended questions

Open-ended questions are questions where respondents have absolute freedom to say anything they like to a question. One can thus assume a big variety of answers. It is complicated to analyse open-ended questions. The researcher usually has to go through the process of content analysis to classify the data. This is why the use of open-ended questions is limited.

The open-ended questions can be classified as follows:

- **Open questions**, e.g. Why have you bought a new car?
- **Associated questions**, e.g. What do you imagine first when you hear “Philips”?
- **Questions with a sentence, story, topic or picture to be finished**, e.g. When buying a car, the most important attributes in my decision making process will be.....

Advantages and disadvantages of open-ended questions

- Open-ended questions provide in-depth information and a wealth of information provided respondents are willing to express their opinions.
- Open-ended questions give an opportunity to respondents to express their opinion freely. However, some respondents may not be able to express themselves, so the information can be lost.
- Respondent is not forced to choose one of the offered answers

- Open-ended question can be used to generate and identify important factors, characteristic or attributes.
- Complicated way of recording and analysing the data – it is time consuming.
- These questions are useful for seeking opinions, attitudes and perceptions (Simova, 2010; Kumar, 2011, p. 153-154) .

9.1.2 Closed questions

Closed questions offer possible answers to respondents and he/she chooses the one that represents his/her opinion the best. Closed questions can be classified as follows:

- **Simple closed questions** offering the answer “Yes” or “No”. It is easy to formulate the questions and to analyse them.

For example, “*Do you own a car?* ☐ *YES* ☐ *NO*

- **Multichoice questions** – respondent can tick one or more answers from the list of answers. It is important that the list of answers contains all possible answers, which is sometime difficult to do. This is why it is recommended to provide a category “Other, please specify”.

e.g. Where do you usually get information about...?

Types of multichoice question:

- **Based on selection** – allow only one answer from the offered alternatives

Example:

Location of the shop:

1. Main street
2. Secondary street
3. Out of the town centre
4. Out of the town centre – housing (block of flats) area
5. In town shopping centre
6. Edge of town shopping centre

- **Based on specification** – allow multiple responses

Example:

Where do you search information on employee's further education?

Please mark all sources of information you use.

| | Source of information on possibilities of employee education | |
|------------|---|--|
| 2.1 | Internet (web pages of schools and institutions offering education) | |
| 2.2 | Postal offer | |
| 2.3 | Specialized portals of education with offers of various institutions | |
| 2.4 | References | |
| 2.5 | Personal experience | |
| 2.6 | We do not search | |
| 2.7 | Other, please specify: | |

Advantages and disadvantages of closed questions:

- Information obtained by closed questions lacks depth and variety. Respondents are forced to choose the answer that represents their opinion the best.
- The list of answers may not cover all possible and/or important answers
- Answers may not truly reflect respondents' opinions.
- It is easy to answer these questions and to analyse the answers (Simova, 2010).

9.1.3 Attitudinal scales

Methods that are often used to collect attitude data are scale and rating questions (Saunders et al., 1997). By measuring attitudes in quantitative research, it is possible to explore, measure, determine the intensity and combine attitudes to different aspects of an issue to arrive at one indicator that is reflective of the overall attitudes. The attitude can be measured either by open-ended question, or by a scale. For example, What is your attitude towards your lecturer? If the question is open-ended, a respondent is asked to describe his/her attitude towards the lecturer. If the question is formed as a closed question with categories such as "extremely positive", "positive", "uncertain", "negative" and "extremely negative", the respondent is asked to select a category that best describes his/her attitude. The scale can be used to

ascertain the overall attitude (if sufficient) or can be used to eliciting attitudes on various aspects of the issue under a research study. In this case, aspects of negative attitudes can be identify and improved (Kumar, 2011, p. 197-168).

A scale can be designed as:

- Categorical (strongly agree strongly disagree; very good ... very bad)
- Numerical (1... excellent..... 5 very bad)
- Graphical



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There are three types of attitudinal scales:

- Summated rating scale known as the Likert scale
- Differential scale known as the Thurstone scale
- Cumulative scale known as the Guttman scale

It is impossible to say which scaling method is the best. Each scale has important desirable features, but each is also open to criticism (Oppenheim, 1992). Semantic differential and the Likert scale are among the commonly used attitudinal scales. They offer considerable flexibility in anchoring the scales to suit the specific purposes of the research when tapping a concept. The itemised rating scale is also popular because of its adaptability to many situations where variables are to be measured (Moser and Kalton, 1971). To measure the concept of consumer store perception of selected store attributes, rating and ranking scales were used in the questionnaire.

Summated rating scale (Likert scale)

The scale is based on the assumption that each statement (item) on the scale has equal attitudinal value, importance or weight in terms of reflecting an attitude towards the issue in question. It does not measure attitude per se. It shows the strength of one respondent's view in relation to that of another and the absolute attitude. It is an ordinal scale. It show who has a more positive attitude towards the explored issue.

An example of categorical Likert scale:

| | Strongly agree | Agree | Uncertain | Disagree | Strongly disagree |
|---|----------------|-------|-----------|----------|-------------------|
| Positive statements: <i>Tesco has a wide assortment of goods.</i> | 5 | 4 | 3 | 2 | 1 |
| <i>Tesco offers good services.</i> | 5 | 4 | 3 | 2 | 1 |
| Negative statement: <i>Parking facilities of Tesco are poor.</i> | 1 | 2 | 3 | 4 | 5 |

An example of a seven-point numerical scale:

| | | | | | | | |
|---------------------------------------|---|---|---|---|---|---|---|
| Tesco has a wide assortment of goods. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Tesco offers good services. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Parking facilities of Tesco are poor. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

Thurstone differential scale – can be adopted to measure attitudes towards any type of object. The scale calculates a weight or attitudinal value for each statement. The weight for each statement is calculated on the basis of rating assigned by judges. It reflects the absolute rather than relative attitudes of respondents. The scale can be designed by using the following procedure:

- A large number of statements (favourable and unfavourable) relating to the subject of interest is collected by researcher.
- The statements are independently assessed (rated) by a large number of judges who classify them from the most favourable to the least favourable using an 11-point scale. The median values of ratings of each statement are calculated.
- If the ratings of any statement are scattered over the scale indicates that there is not agreement among the judges on importance of the statement in relation to the issue. Discard such statements.
- From the remaining statements, the ones that best reflect attitudes towards the various aspects of the issue are selected and used to construct a questionnaire.

Gutman cumulative scale – is one of the most difficult scales to construct and therefore is rarely used.

Semantic differential (Osgood, 1957) – it is a bipolar scale that allows to indicate the direction and intensity of evaluation of certain characteristics of a subject or subjects.

Example:

Please evaluate the interior of the store by the following criteria:

| | | | | | | | | |
|-------------------|-----------|-----------|-----------|----------|-----------|-----------|-----------|---------------------|
| <i>Attractive</i> | <i>+3</i> | <i>+2</i> | <i>+1</i> | <i>0</i> | <i>-1</i> | <i>-2</i> | <i>-3</i> | <i>Unattractive</i> |
| <i>Pleasant</i> | <i>+3</i> | <i>+2</i> | <i>+1</i> | <i>0</i> | <i>-1</i> | <i>-2</i> | <i>-3</i> | <i>Unpleasant</i> |
| <i>Modern</i> | <i>+3</i> | <i>+2</i> | <i>+1</i> | <i>0</i> | <i>-1</i> | <i>-2</i> | <i>-3</i> | <i>Old-fashion</i> |
| <i>Spacious</i> | <i>+3</i> | <i>+2</i> | <i>+1</i> | <i>0</i> | <i>-1</i> | <i>-2</i> | <i>-3</i> | <i>Overloaded</i> |

Characteristics to be evaluated should be selected in a way that corresponds with the objectives of the research. In some cases, an exploratory research can be used to identify the characteristics. Semantic differential can be used to explore image of a product or a company or to compare products.

Measurement scales can be classified as:

- **Nominal (classificatory) scales** – involve classification by certain attributes which are then quantified, e.g. by population characteristics based on gender (male and female), age or status. Each subgroup has a characteristic/property, which is common to all classified within that subgroups.
- **Ordinal (ranking) scales** – rank the objects according to certain characteristics. Ranking is widely used in grading people, products or events. The “distance” between two ranks can be substantial and between other two ranks may be small. Statistical techniques applied to ranked data are limited to positional measures, e.g. median, quartile etc. Ranking scales are therefore limited to the quality of information, which they can provide. Examples of ordinal scales: Income (above average, average, below average), socio-economic status (upper, middle, low), attitudes (strongly favourable, uncertain, unfavourable), attitudinal Likert scales. Ordinal scale has the characteristics of a nominal scale and subgroups have a relationship to one another. They are arranged in ascending or descending order.

- **Scale of importance** – evaluates the intensity of importance of something (some attributes)

Example: Is price an important factor for you when shopping for clothes?

| | | | | |
|-----------------------|------------------|------------------|--------------------|-----------------------------|
| <i>Very important</i> | <i>Important</i> | <i>Uncertain</i> | <i>Unimportant</i> | <i>Not important at all</i> |
| <i>1</i> | <i>2</i> | <i>3</i> | <i>4</i> | <i>5</i> |

- **Evaluation scale** used to evaluate characteristics of a subject

Example:

I evaluate the assortment of the store as follows:

| | | | | |
|------------------|------------------|-------------|------------|-----------------|
| <i>Excellent</i> | <i>Very good</i> | <i>Good</i> | <i>Bad</i> | <i>Very bad</i> |
| <i>1</i> | <i>2</i> | <i>3</i> | <i>4</i> | <i>5</i> |

Ranking scale – respondent ranks (characteristics of a) subject(s) by certain criteria or preferences

Example:

What is for you regardless a store important when buying clothing? Please rank the following attributes in the following way: 1 – the most important, 2 – the second the most important ... 8 – the least important.

- ☐ *Good selection, wide assortment*
- ☐ *Price*
- ☐ *Quality and fashion*
- ☐ *Always something new*
- ☐ *Good range of sizes*
- ☐ *Personnal*
- ☐ *In-store ambience*
- ☐ *Services*

- **Interval scales** – use equal units of measurement. This allows to state not only the order of scale scores but also the distance between individual scores. There is zero point fixed arbitrarily and measurements are taken from it (e.g. temperature). The differences between pairs of scale position, e.g. two and three and seven and eight are identical, the score of eight does not have four times strength of score two. Statistical measures such as arithmetic mean, standard deviation, correlation coefficient and tests of significance can be used. It has all the characteristics of an ordinal scale (including

a nominal scale) plus it has a unit of measurement with an arbitrary starting and terminating point. For example: temperature, attitudinal Thurstone scale.

- **Ratio scales** – have fixed origin or zero points, e.g. length or weight. It allows all arithmetic operations to be used. For example: income, age, attitudinal Gutman scale

Summary

The form and wording of questions is very important as they have an effect on type and quality of obtained information. The wording and structure of questions should be appropriate, clear, relevant and free from any bias and ambiguity.

The most common questions used in the research are open-ended questions, closed questions and attitudinal and measurement scales. Open-ended questions are questions where respondents have absolute freedom to say anything they like to a question. Closed questions offer possible answers to respondents and he/she chooses the one (or more alternatives) that represents his/her opinion the best. Scales and rating questions are often used to collect attitude data. It is impossible to say which scaling method is the best. Each scale has important desirable features, but each is also open to criticism.

References:

1. KUMAR, R. *Research Methodology. A step-by-step guide for beginners*. 3rd ed. SAGE Publication. 2011. ISBN 978-1-84920-300-5.
2. MOSER, C.A., KALTON, G. *Survey Methods in Social Investigation*, Aldershot: Gower, 1971.
3. OPPENHEIM, A.N. *Questionnaire Design, Interviewing and Attitude Measurement*, Pinter Publishers, London. 1992.
4. SAUNDERS, M., LEWIS, P., THORNHILL, A. *Research Methods for Business Students*. 2nd Ed. Harlow: Pearson Education, 2000. ISBN 0-273-63977-3.
5. SIMOVÁ, J.: *Marketingový výzkum*, 2nd ed. Technická univerzita v Liberci, 2010. ISBN 978-80-7372-662-1.