

ARTNeT Greater Mekong Sub-region (GMS) initiative

Session 6

Limitations of doing competitiveness analysis from primary

ARTNeT Consultant

Witada Anukoonwattaka, PhD

Thammasat University, Thailand

witada@econ.tu.ac.th



Asia-Pacific Research and Training Network on Trade

www.artnetontrade.org

Outline

- Problems of misinterpretation
- Sampling errors
- Non-sampling errors
- How to minimize errors

Common Problems

- Misinterpretation
- Sampling error
- Non-sampling error

Misinterpretation (1)

- Ignoring definitions can lead to misinterpretation of the data.

E.g. If you are examining competitiveness issues, you should familiarize yourself with the definition of

- price and cost competitiveness,
- international competitiveness,
- comparative and competitive advantage,
- total factor and labor productivity,
- value added per labor,
- price indices,
- real exchange rate (RER), etc.

Example: what is wrong with this statement?

- “Wages in Vietnam have been rising by 20 percent more rapidly than that of other GMS countries. The rapid rising in labor cost is going to deteriorate price competitiveness of Vietnamese export industries.”
 - Is the statement true if the labor productivity is rising faster in Vietnam than in other GMS countries?
 - How about if the value of the Dong (Vietnamese) currency also changed?
(appreciated/depreciated)

Misinterpretation (2)

- *Comparing statistics inappropriately.*

You should not compare statistics when the definitions, classifications or methods of collection underpinning them are *different*.

Example:

<u>Data Source</u>	<u>Underemployment in Thailand in 2000</u>	
	(persons)	
NSO	1,012,500	(< 35 hr/wk)
Paitoonpong (2002)	982,700	(< 20 hr/wk)

Misinterpretation (3)

- *Deliberate misrepresentation.* Information can sometimes be flawed by being subjective, inaccurate or fictional.

Is there a possible problem with this statement?

- “The unemployment rate of Thailand was very low, 1.8% in 2000.”

Sampling Error

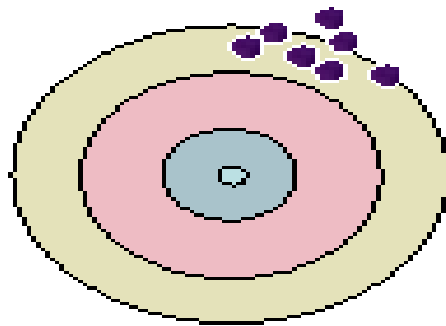
- Sampling error is the difference between the sample results (statistics) and the population parameters.

High

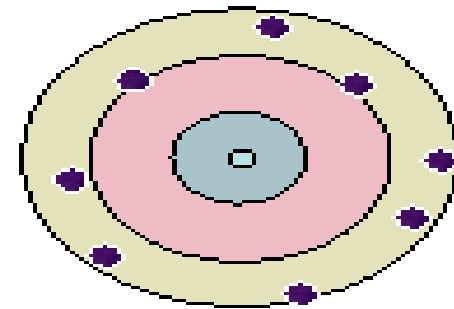
Sampling Errors

Low

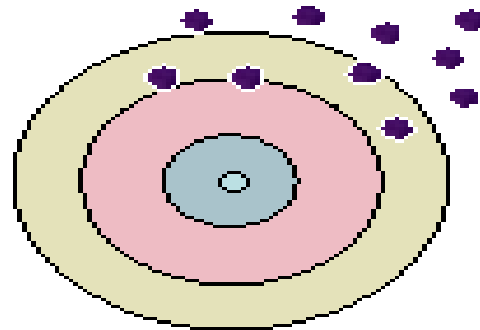
Sampling Errors



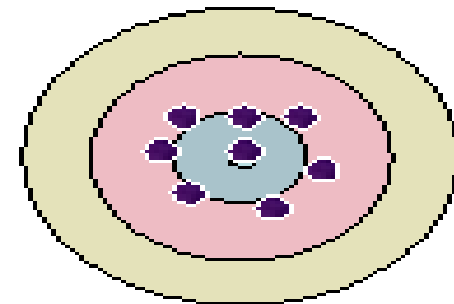
Bias is large
variation is small



Bias is small
variation is large



Bias is large
variation is large



Bias is small
variation is small

Accuracy versus Quality of an Estimator Using Bias and Variation as Measurable Quantities Respectively

Minimizing Sampling Errors

- If random sampling is used, sampling errors occur by chance, but are reduced as the sample size increases.
 - If a sample consists of the entire population, are there sampling errors?
- If samples are not randomly selected, will enlarging sample size help?

Non-sampling errors

- All errors, other than sampling errors, are non-sampling errors.
- Non-sampling errors *cannot be eliminated*.

Non-sampling errors

- Sources of non-sampling errors include the following:
 - **Researcher error** – unclear definitions; choosing wrong survey methods, bad questionnaires, data analysis problems such as missing data.
 - **Interviewer error** – flaws from interview techniques; recording responses.
 - **Respondent error** – inability to answer; unwilling; cheating; not available; a low response rate.

Quality of the Primary Data Research

- **Reliability**

- The extent to which the same finding will be obtained if the research was repeated at another time by another researcher.
- If the same finding can be obtained again, the instrument is **consistent** or **reliable**.

- **Validity**

- Has the researcher gained full access to the knowledge and meanings of informants?
- Would experienced researchers use the same questions or methods?

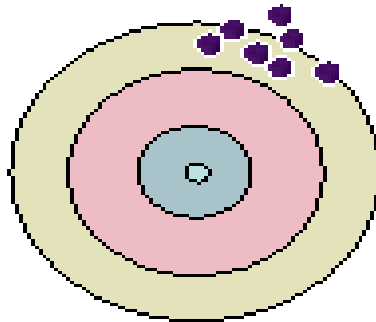
High

Low

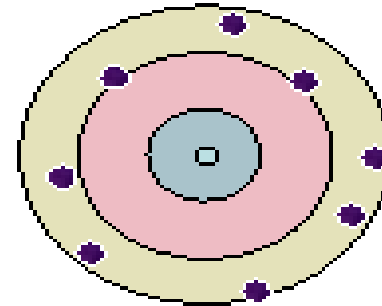
Sampling Errors

Sampling Errors

High Reliability



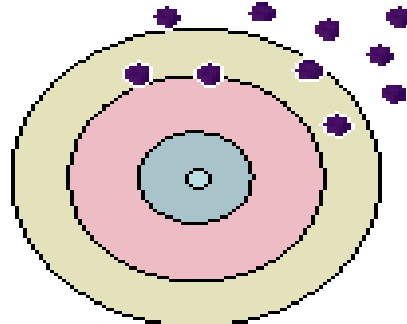
Bias is large
variation is small



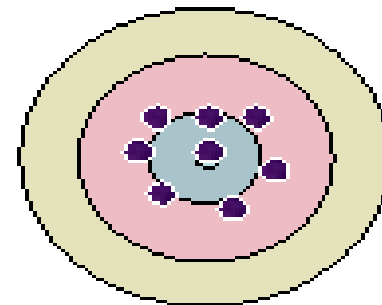
Bias is small
variation is large

Low Reliability

Low Reliability



Bias is large
variation is large



Bias is small
variation is small

High Reliability

Accuracy versus Quality of an Estimator Using Bias and Variation as Measurable Quantities Respectively

Ways to improve reliability and validity

- *Increase your sample size*
 - The larger the sample size is, the more sampling errors are eliminated.
- *Triangulation*
 - Crosschecking using multiple data sources or using two or more methods of data collection.
- *Revise question designs*
 - Questions must not be leading, misleading, ambiguous or difficult to understand.
- *Minimizing non-response rates (Why?)*
 - Care should be taken in the design and testing of questionnaires, and in following up with non-respondents to a survey.

(2)

- *Minimizing Interviewer bias.*
 - Interviewers need to be trained correctly so as not to influence the way a respondent answers questions.
- *Checking for processing errors.*
 - Processing errors can arise through miscoding, mistakes in data entry, incorrect computer programming and inadequate data checking .