



# Technology Marketing 09 Marketing Research



Prof. K. FUKUYO, MOT, Yamaguchi Univ.

# What is Marketing Research?

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- ▶ Gathering information on
  - ▶ finding new markets
  - ▶ evaluating public opinion
  - ▶ gaining insight into customers' decisions

# Two types of research

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## ▶ Primary research

- ▶ Research carried out in the field directly by the surveyor
- ▶ Methods include questionnaires and focus groups
- ▶ Expensive to collect, analyze and evaluate

## ▶ Secondary research

- ▶ Collecting research data that has already been published
- ▶ Sources include:
  - ▶ Government reports
  - ▶ Household Expenditure Survey
  - ▶ Magazine surveys
  - ▶ Other firms' research

# Literature survey

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- ▶ When a research topic is decided, conduct a literature survey
- ▶ Prior research (literature search / review) is essential
  - ▶ Whether the problem being studied has already been addressed
  - ▶ Whether it has already been dealt with and has not been fully studied
  - ▶ What research results, claims, and scientific knowledge have been obtained for the problem to be studied
- ▶ It is difficult to read all the literature, so do the following at the start
  - ▶ Carefully read standard textbooks in the field
  - ▶ Carefully read review articles (review)
  - ▶ After understanding the keywords and key persons in the above work, collect and carefully read the documents using the document database

# Hypothesis formation

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- ▶ Based on the results of a literature survey (review), make a hypothesis about the problem to be studied
- ▶ Hypothesis is also called working hypothesis
- ▶ It is a tentative assumption, and scientific knowledge is born by being affirmed or denied.
- ▶ An example:
  - ▶ One summer day, a clerk at a convenience store starts to observe the outside air temperature and sales of cold drinks
  - ▶ Several days later, he derives an empirical law from his observation:
    - ▶ The hotter the air temperature, the more beverages sell

# Correlation and causality

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- ▶ Correlation is easy to confirm but causal is difficult to clarify
  - ▶ “ice cream sales and forest fires are correlated because both occur more often in the summer heat. But there is no causation; you don’t light a patch of the Montana brush on fire when you buy a pint of Häagen-Dazs” [\*]
- ▶ However, we should not give up the explanation by causality, (or theory)
  - ▶ It may be denied sometime by new data for the time passing; it will be presented as an explanation (hypothesis) and will be verified  
Scientific knowledge is a hypothesis
  - ▶ It is also necessary to be careful not to confuse correlation with causality

[\*] Nate Silver ”The signal and the noise”

# Data collection

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- ▶ **Collect data to test hypotheses**
  - ▶ In the case of science and engineering,
    - ▶ collect data by experiment, simulation, etc.
  - ▶ In the case of humanities and social sciences,
    - ▶ collect data through questionnaires, interviews, observations, etc.
- ▶ **Conduct sampling design before collecting data**
  - ▶ If it is a questionnaire survey, it is necessary to make a plan about who the questionnaire will be distributed to
- ▶ **Quiz**
  - ▶ If you are going to do a survey “How many students do not have breakfast?”, What group should you ask?

# Closed questions and open questions

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- ▶ Closed questions have yes/no answers and are collated for graphs and statistics
  - ▶ These are carried out for **quantitative research**
  
- ▶ Open questions ask for opinions
  - ▶ These are **qualitative research**



# Which are the closed questions?

# Which are the open questions?

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1. What is your name?
2. Do you have a car?
3. How old are you?
4. What would you like to do in the future?
5. Which do you like better, eating out or at home?
6. Tell me why do you like to eat at home?

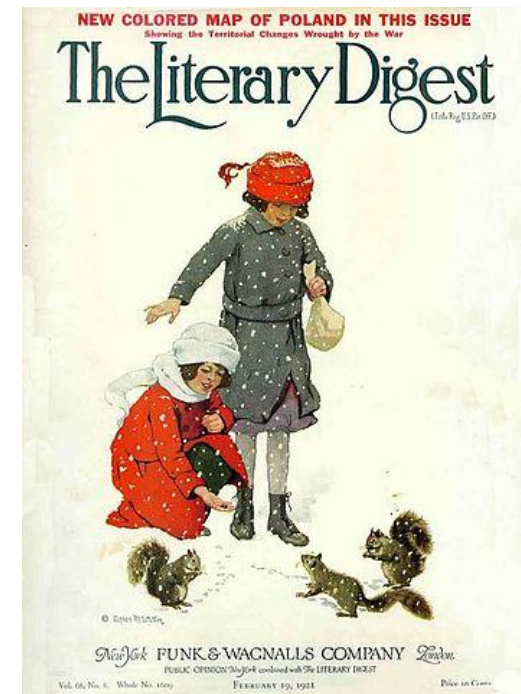
# Quantitative and Qualitative Information

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- ▶ Quantitative information
  - ▶ Based on numbers
  - ▶ E.g. 56% of 18 year olds drink alcohol at least four times a week
  - ▶ Doesn't tell you why, when, how
- ▶ Qualitative information
  - ▶ more detail
  - ▶ Tells you why, when and how!

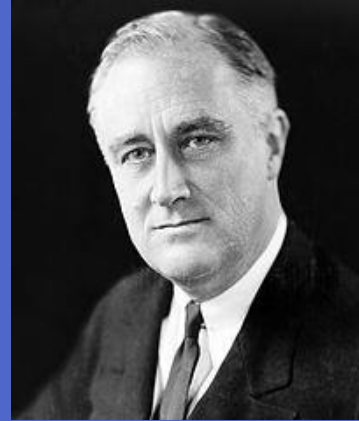
# Asking the right people the right questions

- ▶ A survey is only as good as its questions and the people it targets
- ▶ The questions and those who are asked them need to be relevant to the company's market and aims
- ▶ An example of failure:
  - ▶ The Literary Digest's failure of the 1936 poll



# The Literary Digest's failure of the 1936 poll

- ▶ The Literary Digest was an influential general interest weekly magazine
- ▶ It conducted opinion polls regarding the 1920, 1924, 1928, 1932, and 1936 presidential election
- ▶ Before 1936, it had always correctly predicted the winner
- ▶ The 1936 poll showed that the Republican candidate, Governor Alfred Landon of Kansas, was likely to be the winner



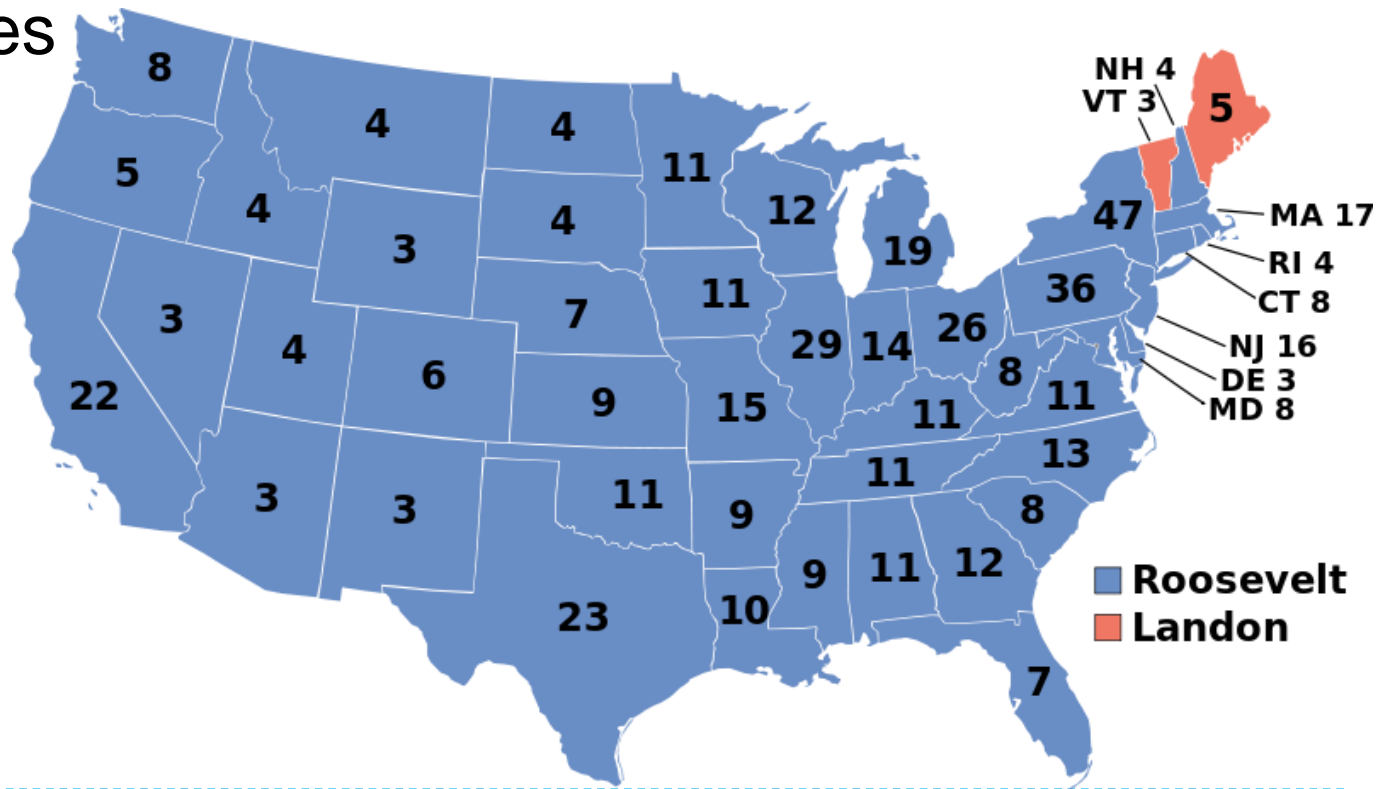
Democratic  
candidate:  
Franklin D.  
Roosevelt,  
The President



Republican  
candidate:  
Alfred Landon,  
The governor of  
Kansas

# The 1936 presidential election results

- ▶ In November, Landon carried only Vermont and Maine
- ▶ President Franklin Delano Roosevelt carried the 46 other states



# Why did the Literary Digest fail?

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- ▶ The polling techniques employed by the Literary Digest were no good
- ▶ The Literary Digest had polled ten million individuals and 2.4 million responded
- ▶ But the Literary Digest had surveyed its own readers, automobile owners, and telephone users; their incomes were higher than average income
- ▶ The Literary Digest asked the inadequate people
- ▶ How should the Literary Digest have conducted the poll?

# Sampling methods are important

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## ▶ Random Samples

- ▶ equal chance of anyone being picked
- ▶ May select those not in the target group indiscriminate
- ▶ Sample sizes may need to be large to be representative
- ▶ Can be very expensive

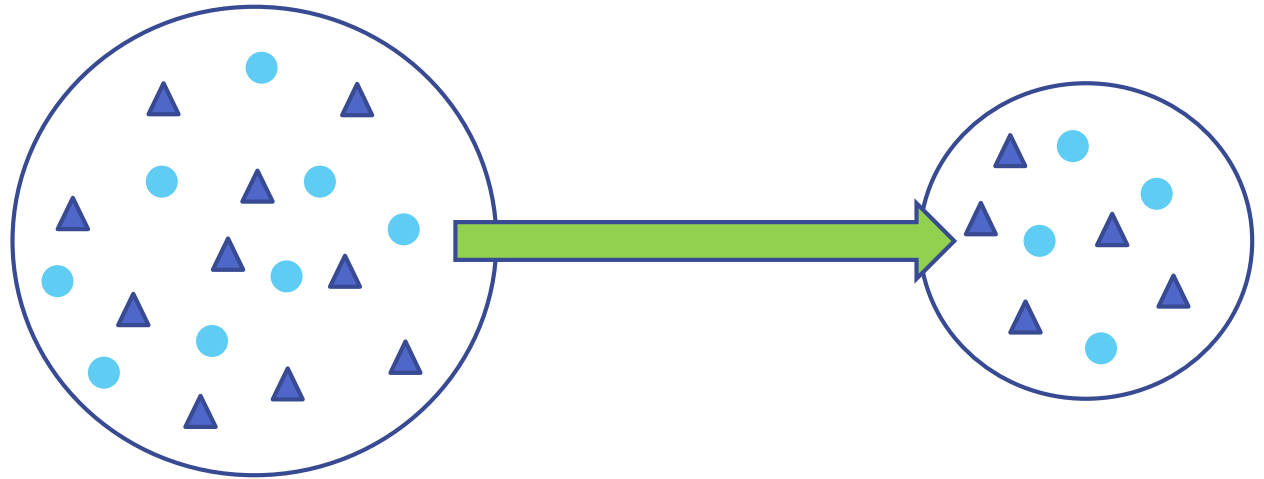
## ▶ Stratified or Segment Random Sampling

- ▶ Samples on the basis of a representative strata or segment
- ▶ Still random but more focused
- ▶ May give more relevant information
- ▶ May be more cost effective

# Random and stratified random sampling

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Random  
Sampling



Stratified/  
Segment

