

# Conducting Market Research Using Primary Data



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# Overview

- Purpose of market research
- Primary vs. Secondary data
- Surveys
- Survey strategies
  - Question formats
  - Analysis tips
- Additional resources



# Market Research

- Market research often conducted to address one of the “4 Ps” of marketing:
  - Product
  - Price
  - Place
  - Promotion



# Purpose of Market Research

- Purpose of market research should be clearly defined prior to beginning research
- May use market research to answer the following types of questions:
  - Who are potential customers?
    - Demographic characteristics, etc.
  - What products appeal to these customers?
    - Product characteristics, niche opportunities
  - When are customers purchasing products?
    - Seasonal appeal, day of week or time of day
  - Where do customers purchase similar products?
    - Farmers' markets, CSAs, retail
  - Which promotional outlets should be used to reach these customers?
    - Radio advertising, newspaper, bulk mail, etc.



# Primary vs. Secondary Data

- Secondary data is data that has been previously collected by another researcher
- Can be used for market research, but because it has been collected for another purpose, its applicability may be limited
  - However, secondary data offers savings in both time and cost
- Primary data is collected by the researcher with a specific goal in mind
  - May be collected through surveys, focus groups, in-depth interviews, or through experiments



# Surveys

- Surveys are probably the most popular method for collecting primary data
- Variety of methods including:
  - Mail survey
  - Telephone survey
  - Face-to-face interviews (in-person survey)
  - Internet survey
  - Dot survey
  - Observation
  - Informal interview



# Survey choice

- Choice of survey method will depend on factors such as:
  - Number of responses surveyor wants
  - Time frame in which data must be collected
  - Characteristics of the population to be surveyed
  - Budget
- Note that regardless of survey type, all survey data is hypothetical
  - Respondents may say they value a certain product characteristic or are willing to pay more for certain attributes...
    - ...but their real-world behavior may not reflect what they say!



# Mail surveys

- Mail surveys are written surveys sent to potential respondents by mail, and typically include a postage-paid return envelope
- For surveyors with a large budget, the goal may be to have a mailing list made up of:
  - A random sampling of households in the region of interest (city, state, nation, etc.), or
  - A targeted population (for example, people who held a state fishing license in a given year, or members of an environmental organization)
- However, smaller firms with budget constraints can make a mailing list of households from the phone book or online yellow pages ([www.yellowpages.com](http://www.yellowpages.com)) for free



# Mail surveys

- Advantages of mail surveys
  - Can reach a large population fairly easily
  - Lower cost than some methods
- Disadvantages of mail surveys:
  - Response rates (number of people who return the survey) are typically low unless more than one form of communication is sent to the respondent
    - Advance notice of survey, reminder card, additional survey—all of which increase the cost of the study, in terms of money and time!
  - Lag time between when survey is mailed out and when it is returned
  - Returned surveys may be incomplete



# Telephone surveys

- Telephone surveys are conducted by calling individuals and having them answer questions over the phone
- Advantages of telephone surveys
  - Interviewer can encourage respondent to answer all the questions
  - Responses can be analyzed immediately
- Disadvantages of telephone surveys
  - Expensive to pay telephone interviewers
  - As with mail surveys, random sampling is best, but call list can be put together from phone book if necessary



# In-Person Interviews

- An in-person interview is a survey administered in a face-to-face fashion
- Advantages of in-person interviews
  - Interviewer can encourage respondents to finish survey
  - Results can be analyzed immediately
  - Specific populations can be targeted
    - Can interview at farmers' market, outside a certain grocery store, etc.
- Disadvantages of in-person interviews
  - Costly to pay interviewers
  - Some respondents may not be unwilling to reveal information about themselves to a stranger
  - Must have permission to conduct these interviews in a public place



# Internet Survey

- An Internet survey is a survey that is both posted and filled out online
  - Surveyors generally send out a letter or post card inviting respondents to take the survey
    - Some Web hosting companies will invite respondents via email
- Advantages of Internet surveys
  - May be completed faster than mail surveys
  - May be less expensive to conduct than other survey types
  - Some software allows the surveyor to ensure that respondents have to answer all the questions
  - Results can be analyzed immediately
    - Some Web survey hosts offer analysis services as well—may be beneficial for surveyors who do not have strong statistical skills



# Internet Survey, cont.

- Disadvantages of Internet surveys
  - Population of interest must have Internet access
    - Contacting the population of interest may be more difficult than with other methods
  - Surveyor must have some Internet skills
  - Some individuals may be uncomfortable providing sensitive information (such as household income) over the Internet



# Internet Survey, cont.

- Survey Monkey ([www.surveymonkey.com](http://www.surveymonkey.com))
  - Has services to host and analyze surveys
  - Has services to contact respondents via email
  - User-friendly interface
  - 3 pricing levels
    - Basic: Free service, allows 10 questions per survey and 100 responses per survey
    - Monthly Pro: \$19.95/mo, allows unlimited questions and 1000 responses per survey
    - Annual Pro: \$200/yr, allows unlimited questions and responses



# Dot Survey

- Dot surveys or posters are used to focus on just a few important questions
- Technique involves usually no more than four questions displayed on an easel in a public location (such as a farmers' market)
- Response categories are listed as well
- Respondents place stickers or “dots” in the proper category to indicate their response



# Dot Survey, cont.

- Advantages of dot surveys
  - Offer an alternative to written and oral surveys
  - Simple to complete-has been found to increase response rates over other survey types
- Disadvantages of dot surveys
  - Can only ask a few questions
  - Respondents can see responses from other respondents-may be swayed by what they see
    - However, there is an argument that this effect is similar to real-world activity, such as fad items and impulse purchasing



# Informal Interviews & Observation

- Informal interviews and observation may be slightly less scientific than other methods, but may be the best tool for some agribusinesses
- Informal interviews consist of asking the same simple but specific questions of many people to get an idea of what people are thinking
- Observation consists of observing consumers and taking note of their behavior



# Informal Interviews & Observation, cont.

- For example, an operation that already grows organic produce, but has not been certified due to costs:
  - Informal interviews could be used to ask current customers how they feel about organic produce, whether they would be willing to pay more for the assurance of third-party organic certification, etc.
  - In the observation sense, the operation could find out how much the same certified organic products are selling for
- Another example is that of an operation that is considering producing a new crop or product:
  - Interviews can be used to determine what products current customers would like to have access to
  - Observation can be used to determine which products are popular through other vendors



# Survey Strategies

- Focus groups and pilot surveys are often used to “test” a survey before it is distributed to potential respondents
- Allows surveyor to see in advance if questions are confusing or worded incorrectly, or if the survey structure is too complicated
  - All of which can decrease response rate and valid responses
- In the interest of time and money, a focus group can be assembled from your friends, family, neighbors, etc.
  - Make sure they understand that you need their honest opinion of the survey
  - Also keep in mind that people associated with agriculture may have more knowledge about the issues you address on your survey
    - This may have an effect on their responses or opinion of the survey



# Survey Strategies, cont.

- It can be tempting to take advantage of the opportunity to ask survey respondents as many questions as possible
  - But “respondent fatigue” occurs when too many or too complex questions are asked-so try to keep it short and simple
- Try to use definitive language
  - i.e. rather than asking respondents if they usually eat meat every day, ask them if they eat meat more than five times per week
  - Avoiding words like “generally” and “usually,” which are subject to interpretation, can help you get more accurate responses



# Question Formats

- Researchers have spent decades trying to determine the “best” question formats for surveys
  - Have found that the most suitable question depends on the information the surveyor wishes to obtain
- Common question formats include:
  - Multiple choice
  - Rating scales
  - Open-ended



# Multiple Choice

- The multiple choice format asks a question and provides a list of responses for the respondent to choose from
  - Three or more choices (multiple choice)
    - Surveyor can ask for one or more than one response, depending on the question
  - Two choices: *yes* or *no* (dichotomous choice)
    - Only one choice
- Crucial that the surveyor or interviewer include explicit instructions as to how many responses are allowed!



# Multiple Choice, cont.

- Advantages of multiple choice
  - Fairly simple to understand (dichotomous choice so simple that researchers have found it increases response rates)
- Disadvantages of multiple choice
  - Regardless of instructions, respondents may provide more than one response when only one response is asked for
  - Analysis may be a bit complicated for the inexperienced



# Examples of Multiple Choice

1. What is your primary motive for attending this farmers' market?  
(*choose only one*)
  - Purchase produce
  - Purchase packaged goods
  - Purchase ready-to-eat foods (vendors)
  - Social interaction
- 2. Which of the following types of foods do you purchase? (*select as many as apply*)
  - Organic
  - Natural
  - Local
  - Pesticide-free
- 3. Do you feel more inclined to purchase food products if samples are provided?
  - Yes
  - No
- 4. Is this your first time visiting this farmers' market?
  - Yes
  - No



# Analysis of Multiple Choice

- To analyze the results of multiple and dichotomous choice questions, it is necessary to assign a numeric value to each question response
  - This can be done fairly easily using Microsoft Excel or other spreadsheet software.
    - For example, with questions (3) and (4), the “yes” responses may be coded as “1” and the “no” responses as “2.”
    - For multiple choice questions, the responses are typically coded in the order they appear on the survey.
      - For example, in question (1), “Purchase produce” would be coded as “1,” “Purchase packaged goods” would be coded as “2,” and so on.
- Once the responses are coded, the “count” function in Excel can be used to analyze the responses, while a pie chart can be used to graphically show responses



# Analysis of Multiple Choice, cont.

- Below is an example of how the responses to question (1) may have turned out.
- Column A shows the identification numbers of the ten survey respondents (Survey ID).
- Column B contains the survey responses to the question (Q1).

	A	B
1	<b>Survey ID</b>	<b>Q1</b>
2	1	1
3	2	2
4	3	2
5	4	1
6	5	1
7	6	1
8	7	4
9	8	6
10	9	7
11	10	1

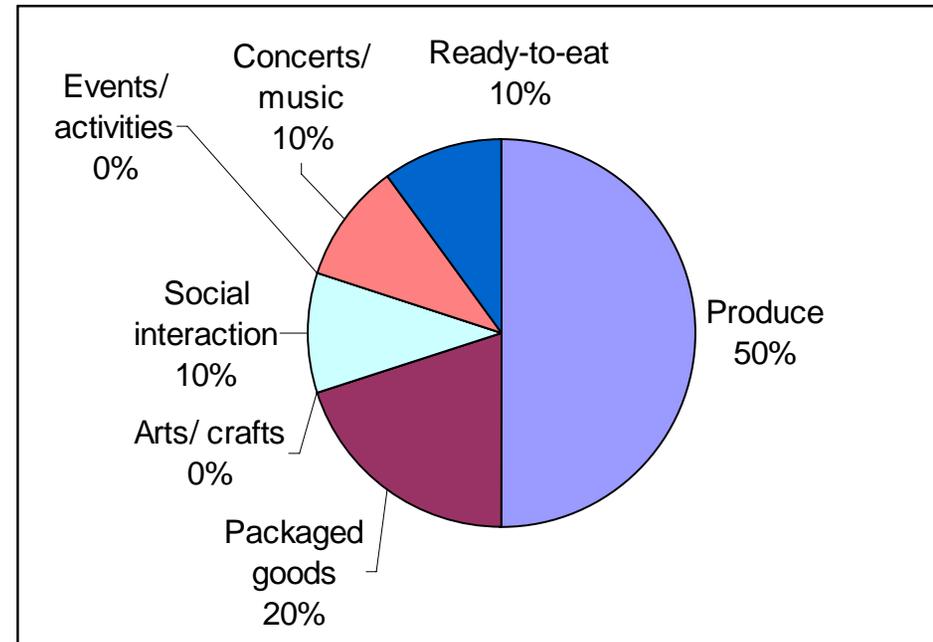
- Below is a potential next step in analysis
  - To count the number of responses for each category
- “Q1” shows each response category
- “Count” lists the number of responses for each category
- “Formula” shows the formula that was used in Excel to count the responses, based on the row and column locations of the responses shown at left

Q1	Count	Formula
Produce	5	=COUNTIF(B2:B11,1)
Packaged goods	2	=COUNTIF(B2:B11,2)
Arts/ crafts	0	=COUNTIF(B2:B11,3)
Social interaction	1	=COUNTIF(B2:B11,4)
Events/ activities	0	=COUNTIF(B2:B11,5)
Concerts/ music	1	=COUNTIF(B2:B11,6)
Ready-to-eat	1	=COUNTIF(B2:B11,7)



# Analysis of Multiple Choice, cont.

- Pie charts can be created in Excel fairly simply using the Chart Wizard (instructions on how to use the Chart Wizard can be found in Excel's help menu).
- The data in the pie chart is the same as in the previous slide
- Imagine a surveyor asked this question to determine whether or not to further process his/her greens to create a salad mix for sale
  - Results are mixed
  - On the one hand, half of the respondents specified that they come to the farmers' market for produce
    - However, 20% (2 respondents) said they come to the market for packaged goods.
  - In this case, it may be a good idea to try a small trial of salad mix before committing to the plan



# Rating Scales

- Rating scales allow survey respondents to indicate their level of agreement with a statement, or to rate the level of importance of a specific feature of a product or service.
- Advantages of rating scales
  - Relatively straightforward for respondents to understand
  - Less difficult to analyze than some of the other question formats
- Disadvantages of rating scales
  - Can only be used for certain types of questions



# Examples of Rating Scales

- 5. Please specify if your level of agreement or disagreement with each of the following statements.

Statement	Strongly				Strongly
	Disagree	Disagree	Unsure	Agree	
I am concerned about the safety of my food	1	2	3	4	5
I purchase foods that are already prepared (salad mixes, marinated meats, etc.)	1	2	3	4	5
I am concerned about the origin of my food	1	2	3	4	5
I prefer purchasing foods that have third-party certification (i.e. certified organic, certified pesticide-free)	1	2	3	4	5

- 6. When making purchases from a specific farmer/producer at a farmers' market, how important are the following farmer/producer features?

Farmer/Producer Features	Not	Somewhat	Very	Extremely
	important	important	important	important
Farmer/producer has a variety of products	1	2	3	5
Farmer/producer has low prices	1	2	3	5
Farmer/producer has organic products	1	2	3	5
Farmer/producer is present at market	1	2	3	5



# Analysis of Rating Scales

- Rating scales can be fairly simple to analyze
  - Because the responses are already in numeric form, it is not necessary to recode them
- Rating scales may be analyzed by taking the average response
  - This will show how respondents feel, on average, about the statement or question
- It may also be helpful to analyze the responses by count, using either a pie chart or bar chart to show the responses relative to one another



# Analysis of Rating Scales

- Here is an example of how the statement “Farmer/producer has organic products” may have turned out for question (6)
- Column A shows the survey ID number
- Column B lists each individual’s response to the question
  - Where 1 is “Not important” and 5 is “Extremely important,” as on the survey
- Here are the number of responses for each category (“Count”) and the formula used to obtain each count (“Formula”)
  - Formula based on the example at left
- Also shown is the average:
  - The average value of 4.3 shows that on average, respondents found this statement to be “Very important.”

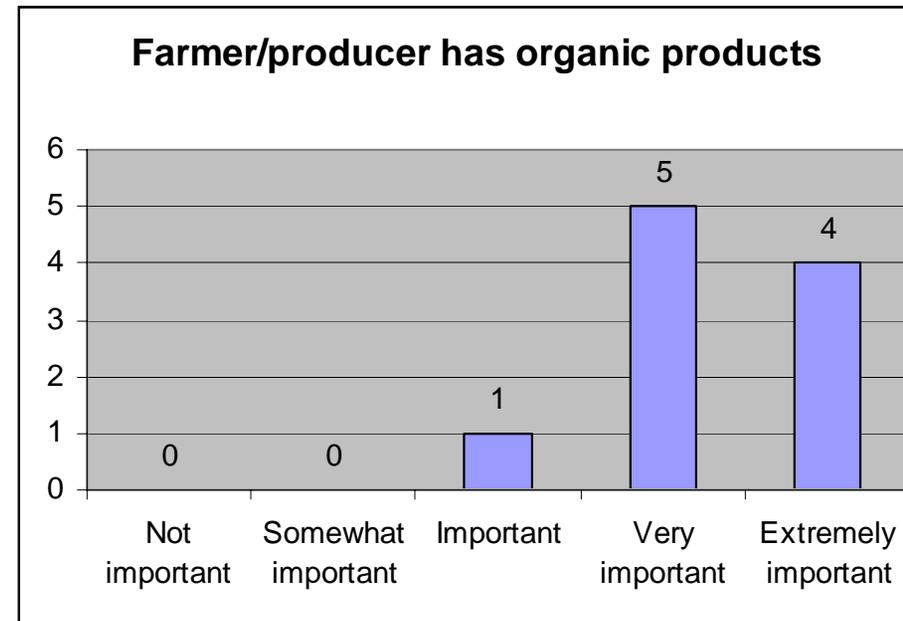
	A	B
1	Survey ID	Q6-Organic
2	1	3
3	2	4
4	3	4
5	4	5
6	5	5
7	6	5
8	7	4
9	8	4
10	9	4
11	10	5

Q6-Organic	Count	Formula
Not important	0	=COUNTIF(B2:B11,1)
Somewhat important	0	=COUNTIF(B2:B11,2)
Important	1	=COUNTIF(B2:B11,3)
Very important	5	=COUNTIF(B2:B11,4)
Extremely important	4	=COUNTIF(B2:B11,5)
Average	4.3	=AVERAGE(B2:B11)



# Analysis of Rating Scales, cont.

- Here is a bar chart of responses to the statement “Farmer/producer has organic products” from question (6).
- Like a pie chart, a bar chart is a way of comparing the number of responses between questions.
  - Bar chart instructions are also in Excel’s Chart Wizard
- As the bar chart shows, the majority of respondents found the statement to be “Very” and “Extremely” important.
- Imagine a producer asked this question to determine whether or not he or she should proceed with plans to obtain organic certification
  - Results may indicate that such a move would be attractive to customers.



# Open-Ended Questions

- An open-ended question poses a question to the respondent and asks him/her to write out his/her response
- While open-ended questions can provide a lot of information, they are problematic enough that many researchers try to avoid them
  - They require more effort on the part of the respondent
    - This effort may lead the respondent to skip the question or quit the survey entirely.
  - The open-ended nature also leaves the interpretation of the question up to the respondent
    - Responses may not be entirely what the surveyor was looking for
  - Because there are virtually infinite ways to respond, they can be difficult to analyze
    - Unless respondents tend to answer the question similarly
- However, open-ended questions can be useful in focus groups
  - The responses given by the focus group can be used to reformat the question into multiple choice.



# Examples of Open-Ended Questions

7. When making purchases from a specific farmer/producer at a farmers' market, what farmer/producer features do you find most appealing?

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8. What is your primary motive in attending this farmers' market?

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# Analysis of Open-Ended

- One of the difficulties in using open-ended questioning is analyzing the results
  - If the surveyor is not planning on surveying a large number of people and is looking for very general information, then open-ended questions can be helpful in a sort of “comment card” sense
  - However, if the survey is being given to a large number of people and the surveyor wishes to achieve specific responses, open-ended questions may not be the best format.
- If many open-ended questions need to be analyzed, it can be helpful to go through the responses looking for common “themes”
  - For example, in question (7), respondents may offer many similar responses, such as “price,” “quality,” and “reputation”
    - The person analyzing the data may wish to code all responses pertaining to “price” as “1,” “quality” as “2,” and so on
  - Once the data has been coded numerically, it can be analyzed using pie and bar charts to show how the responses stack up against one another.



# Conclusion

- Primary data can be costly and time-consuming to obtain, but can provide specific answers to specific market research questions
- Surveys are a common method of obtaining primary data
  - The survey method to use depends on the information the surveyor wants, and the population of interest
- Question formats have an impact on the information the survey provides
  - Choice of question format also depends on the information desired and the population of interest, as well as the strengths of the surveyor



# Additional Resources

- The USDA-ERS (Economic Research Service) collects data on sales and consumption of food and agricultural products in the U.S., including consumer survey data. ERS data can be found online at [www.ers.usda.gov/Data](http://www.ers.usda.gov/Data).
- The USDA-AMS (Agricultural Marketing Service) provides data and publications on marketing agricultural products and focuses on direct outlets. AMS data and publications can be found online at [www.ams.usda.gov](http://www.ams.usda.gov).
- Marketing research companies and economic consulting firms can be hired to conduct primary data collection and analysis. RTI international is just one example. Information on RTI can be found at [www.rti.org](http://www.rti.org).



Thank you!

