MARKET DECISIONS

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Research Briefing

Policy and Communications Impact Modeling: A Method for Understanding the Strength of Initial and Informed Public Opinions

What is Policy and Communications Impact (PCI) Modeling?

PCI Modeling is a proprietary Market Decisions survey methodology that tests whether and how respondents change their initial position on an issue as they are given new information.

The methodology is comparable to the way a discussion in a cocktail party influences views. One might begin the night with an initial position and as one hears arguments for or against, one might change position, perhaps back and forth based on the merits of the points. Of course, one might also remain unchanged despite hearing new information. And the order of the points one hears, for or against, may differ from individual to individual.

PCI Modeling mimics the way information flows through a social network and then analyzes the changes in position to understand both the strength of initial positions and the effect of various messages on respondents' positions.

How does Policy and Communications Impact Modeling Work?

PCI Modeling works by establishing an initial position and then "stressing" that view with information that might change it.

1) The initial first question in the series determines whether a respondent supports or opposes an issue and measures support or opposition using an appropriate scale. Usually, an open ended question such as, "Why do you say that?" is also posed at this point to better understand the reasons for the position.

2) Depending on the initial position of the respondent, specific information that might affect his or her view is then read. These "information statements" are typically the most compelling points for or against an issue.

    a. If someone initially opposes an issue, a set of advantages is described and after each the respondent is asked, "Given this, would you now support or oppose?"
    b. If someone initially supports an issue, a set of disadvantages is read and after each the respondent is asked, "Given this, would you now support or oppose?"

3) The respondent is then routed to other questions based upon his or her response to the set of questions about advantages or disadvantages.

    a. If the views of the respondent do not change (that is, if the respondent still opposes an issue given a set of advantages, or still supports an issue given a set of disadvantages) then the viewpoint is considered "set." If a respondent sticks with his or her initial position, the respondent could be read three to five information statements.

b. If a respondent changes his or her initial position after hearing a statement, then the viewpoint is tested by evaluating the other side of the issue. This happens when a respondent:

    1. Initially opposes an issue but his or her opinion changes to one of support given one or more advantages. In this case, the respondent is then read a set of disadvantages and changes in his or her opinion is measured given these disadvantages.

    2. Initially supports an issue but his or her opinion changes to one of opposition given one or more disadvantages. In this case, the respondent is then read a set of advantages and his or her opinion is reassessed given these advantages.

c. A respondent may be read some or all of the information statements, depending on whether they are switched. Thus, depending on the respondent's movement from support to opposition or vice versa, an individual might be read from six to ten statements.

What Makes a Survey with Policy and Communications Impact Modeling Different than a Standard Survey?

The wording of questions in a survey with PCI Modeling is similar to those in more traditional surveys. The differences lie in:

- The complex survey programming that selects the appropriate information statement depending on the responses to a question and also randomizes the order of the information statements presented to avoid order bias.
- The statistical analysis that examines changes in responses.
- The presentation of new information during the course of the survey in order to measure its effect.

What are the Advantages of Policy and Communications Impact Modeling?

There are five primary advantages:

- The strength of information or potential messages in support or opposition of an issue is tested, and this testing mimics the way information may be received in the real world; a bit at a time and in a somewhat random fashion.
- The number of respondents who are unlikely to change their position, no matter what the message, are readily identified. The effect of messages among those

who may change their views can also be readily seen, and the messages that affect the movement are easily identified.

- The survey methodology does not result in a long survey and respondent fatigue is not an issue despite the depth of information collected. The complex switching of statements and questions is invisible to respondents. All the work is done by the survey programming and the statistical analysis.
- The cost of this method is comparable to the cost of a standard "issue" survey.
- The method can be integrated with standard "issue" survey topics and questions. For example, the level of awareness of issues can be measured and aided or unaided awareness of media can also be determined.

Case Study: Understanding Public Opinions on MERC

Background. MERC or Maine Energy Recovery Company is a refuse-to-energy facility that is located in Biddeford, Maine. The issues surrounding this facility center largely on its specific location, right in the downtown area of a traditional small New England city. This downtown, while potentially picturesque, has escaped much of the redevelopment that has occurred in southern Maine over the past several decades. Opinions are divided and passionate about the plant, as some value the taxes it provides while others primarily see truck traffic, smells and pollution.

Prior to beginning negotiations on the future of MERC with the plant owners, the elected leaders of the Cities of Biddeford and Saco wanted to better understand the views of their citizens. After initially considering a standard "issue " or opinion survey, they recognized the limitations of such a simple approach and elected to conduct a survey using PCI Modeling.

The Survey Instrument. In addition to PCI Modeling, the survey included many standard "issue" survey elements including: awareness and knowledge of MERC, unaided impressions of MERC, media awareness, specific knowledge of contract issues, and demographic information. Any survey that includes PCI Modeling normally also includes other commonly used survey questions.

To begin the PCI Modeling, positions were established with an initial question. Then advantages and disadvantages were read. Note: In this survey there were actually two sets of threshold questions each testing a likely position of the community leaders in the negotiations. To simplify this illustration, we will discuss just the first set of PCI Modeling questions.

Would you support or oppose an agreement that would allow the Maine Energy Recovery Company facility in Biddeford to continue operating through its useful life BUT under new environmental conditions? Under this option the odor, smog and ozone would be reduced and mercury testing would be conducted more frequently. The facility could continue to operate after 2013 if the company chose to invest in the facility. That is, no specific date would be set for the facility to close BUT the cities would still retain the option to close the facility with two years notice for a cash payment.

As discussed above, after being read the initial question, respondents would then be routed to either advantages or disadvantages. Each statement was preceded by *"Knowing this, would you now support or oppose this option?"*

Drawbacks	**Advantages**
If the facility remains in operation, businesses MAY not choose to invest in and develop the property surrounding the Maine Energy Recovery Company.	The Maine Energy Recovery Company pays 1.3 million dollars in taxes to the city of Biddeford each year. *(Asked of Biddeford residents only)*
If the facility remains in operation, while pollution will be reduced substantially, there will still be some smog and ozone emissions and odor.	The Maine Energy Recovery Company currently employs 85 people.
If the facility remains in operation, there will continue to be truck traffic in the downtown areas of Biddeford and Saco related to hauling waste to the Maine Energy Recovery Company facility in Biddeford.	Because of benefits that Biddeford and Saco have as host communities under the current agreement with the Maine Energy Recovery Company, less money is spent on the transfer and disposal of trash. That is, you pay about 45/30 dollars less per year for the pick-up and disposal of your household's trash.
If the facility remains in operation, there will continue to be an impact on infrastructure such as the roads, streets, and bridges in Biddeford and Saco.	Because the Maine Energy Recovery Company facility incinerates wastes, the volume of solid waste is reduced by 70%. This waste would otherwise require additional landfill space.
If the facility remains in operation, there will continue to be increased town expenses for public safety amounting to 50,000 to 150,000 dollars each year the facility is in operation.	

Results: Initially, 60% supported the agreement to allow MERC to continue to operate but under new environmental conditions as shown by Chart I below.

Chart I. Initial Support or Opposition

	All Respondents		
	% Support	**% Oppose**	**% Unsure**
Would you support or oppose an agreement that would allow the MERC facility in Biddeford to continue operating through its useful life BUT under new environmental conditions? Under this option the odor, smog and ozone would be reduced and mercury testing would be conducted more frequently. The facility could continue to operate after 2013 if the company chose to invest in the facility. That is, no specific date would be set for the facility to close BUT the cities would still retain the option to close the facility with two years notice for a cash payment.	60%	36%	4%

Note: response breakdowns are also provided by demographic group and other characteristics.

Those who supported this agreement were routed through a series of statements that described disadvantages of the agreement, while those that opposed the agreement were routed through a series of advantage statements. Chart II below summarizes the "stickiness" of opinions. As with most issues, there is a core of respondents that have their minds made up, whereas a great many respondents can and will change their opinions based on the information they were exposed to.

Chart II. Support or Opposition Given Advantages or Disadvantages

% Supporting Given all Disadvantages	31%
% Opposing Given all Advantages	27%
% Opinions Change Based on Advantages and Disadvantages	43%

Note: response breakdowns are also provided by demographic group and other characteristics.

As described in previous sections, those that initially supported the position were read disadvantages and those that opposed were read advantages.

Chart III shows the effect of various statements, all disadvantages, on those who initially supported the proposal. The most effective of these statements was able to move or change the opinion of 32% of supporters.

Chart III. Switching of Respondents who initially Supported (n= initially support)

DISADVANTAGE	% (still) Support	% (now) Oppose	% Unsure
If the facility remains in operation, businesses MAY not choose to invest in and develop the property surrounding the Maine Energy Recovery Company.	70%	**23%**	7%
If the facility remains in operation, while pollution will be reduced substantially, there will still be some smog and ozone emissions and odor.	71%	**25%**	4%
If the facility remains in operation, there will continue to be truck traffic in the downtown areas of Biddeford and Saco related to hauling waste to the MERC facility in Biddeford.	70%	**26%**	4%
If the facility remains in operation, there will continue to be an impact on infrastructure such as the roads, streets, and bridges in Biddeford and Saco.	68%	**28%**	4%
If the facility remains in operation, there will continue to be increased town expenses for public safety amounting to 50,000 to 150,000 dollars each year the facility is in operation.	61%	**32%**	7%

Note: response breakdowns are also provided by demographic group and other characteristics.

Those that opposed the proposal were read a series of advantage statements. Chart IV shows the effect of various statements, all advantages, on those who initially opposed the proposal. The chart shows that only a small percentage, from 10% -16%, switched to support the proposal by any particular statement.

Chart IV. Switching of Respondents who initially Opposed (n= initially opposed)

	Initially opposing		
ADVANTAGES	**% (now) Support**	**% (still) Oppose**	**% Unsure**
The MERC pays 1.3 million dollars in taxes to the city of Biddeford each year (asked of Biddeford residents only).	**16%**	76%	8%
The MERC currently employs 85 people.	**13%**	84%	4%
Because of benefits that Biddeford and Saco have as host communities under the current agreement with the Maine Energy Recovery Company, less money is spent on the transfer and disposal of trash. That is, you pay about 45/30 dollars less per year for the pick-up and disposal of your household's trash.	**10%**	89%	1%
Because the MERC facility incinerates wastes, the volume of solid waste is reduced by 70%. This waste would otherwise require additional landfill space.	**16%**	81%	3%

Note: response breakdowns are also provided by demographic group and other characteristics.

If respondents switched their position, they were then read a statement, either an advantage or disadvantage, which might switch them back.

The results of the survey can then be summarized for each specific advantage or disadvantage to evaluate the effect of each message on the population as a whole. This summary provides the impact of each specific message on the level of expected support or opposition for an issue given the specific piece of information. This allows one to identify the messages that have the most impact on support or opposition for an issue. Chart V summarizes the positions of all respondents.

Chart V. Position of all Respondents Given the Specific Disadvantage or Advantage

DISADVANTAGE	% Support	% Oppose	% Unsure
In order to insure that MERC would close the facility by 2013, Biddeford and Saco would have to pay the MERC an incentive to close. The cost may be as much as 10 million dollars for Biddeford/Saco to be paid for through a bond. This would mean about 100 dollars for every household each year for the 20 years of the bond.	39%	**56%**	6%
If the MERC facility were to close, Biddeford would lose the tax revenues now paid by MERC which amounted to 1.3 million dollars this year. This might result in higher taxes that would have to be paid by residents if not offset by taxes from new business. This might be as much as 165 dollars per household each year for a house that is assessed at 200,000 dollars (asked of Biddeford residents only).	41%	54%	5%
If the MERC facility were to close, the cost for transferring and disposing of trash may increase. This might increase the cost of disposing of your household's trash by 45/30 dollars per year.	49%	46%	5%
If the MERC facility were to close, 85 jobs would be eliminated at the facility.	46%	50%	4%
The MERC facility helps reduce the volume of trash that must be disposed of by 70%. If the facility were to close, Saco and Biddeford would have to find another means of disposing of trash, most likely requiring additional landfill space.	43%	53%	4%

ADVANTAGES	% Support	% Oppose	% Unsure
While the new environmental conditions would reduce smog and ozone, they would not be completely eliminated. It would also not completely eliminate odor associated with the facility. Closing the MERC facility would mean the facility would no longer produce these types of pollution and odor.	52%	42%	6%
Closing the MERC facility by 2013 may free up property for other uses in downtown Biddeford. This may help new development and help revitalize the downtown area.	58%	37%	5%
Closing the MERC facility by 2013 may help increase property values for the property in areas near the facility.	57%	38%	5%
Closing the MERC facility by 2013 may help to reduce truck traffic in the downtown areas of Biddeford and Saco since trucks will no longer be hauling waste to the facility.	**59%**	37%	4%

Note: response breakdowns are also provided by demographic group and other characteristics.

In this case, the information that led to the greatest increase in opposition to the issue was the cost of the bond (56% of respondents opposed the issue given this specific piece of information). The information that led to the greatest increase in support was the reduction of truck traffic (59% of respondents supported the issue given this specific piece of information).

Summary: Standard survey methods identify initial support or opposition and the potential effect of messages on support or opposition.

Policy and Communications Impact Modeling adds:

1. How many respondents stay with their initial positions regardless of the messages?
2. What messages move the most respondents after they have heard all the messages?
3. Which option (support or opposition) is most persuasive, based on the number of people who are likely to change positions?

Clients can then use this information to:

1. Influence public opinion to move toward a certain point of view.
2. Anticipate and disarm opposition to a certain point of view by showing in advance that the argument most likely to motivate opposition is untrue or invalid.

For More Information

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