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The Use of Market Research by Transport Professionals

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Abstract

Most transport decisions involve the public and their elected representatives, resulting in a complicated decision-making process which often requires complex trade-offs between different goals and difficult financial choices. Organisations, whether they are government bodies or private companies, have a responsibility to ensure that money is spent in the most cost-effective way. Market research and evaluation techniques are powerful tools which can provide valuable insights to assist decision-makers to improve the design and implementation of transport policies and projects. By having more comprehensive information, road authorities are able to plan and allocate resources more effectively.

This paper discusses some of the ways that transport professionals can use market research. Examples of the extensive market research conducted by The Royal Automobile Club of Victoria (RACV) are used to demonstrate possible applications and outcomes which can be achieved. Although sometimes perceived as the representative of motorists, RACV has a wider role representing its members' interests as road and transport users and members of the Victorian community. Examples of surveys conducted to determine member attitudes toward new transport developments include the use of focus groups, random telephone interviews, and the use of self-returning surveys in the club journal *Royalauto*.

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Introduction

Having witnessed a group of engineers arguing about whether a public transport service should go through a side street or be on the main road, it occurred to me that they were missing some important inputs - that of the public transport user and the people living along the affected streets. What may seem important to an engineer may be of little or no consequence to the general community, or may not be understood by them. It is important that decision makers take into consideration what is important to the affected people in addition to the technical solutions when making decisions.

The Royal Automobile Club of Victoria (RACV) is the Victorian motoring club. It has a membership of over 1.7 million representing over 1.4 million people, which means that RACV represents about 66 per cent of all Victorian drivers. Although perceived as representatives of motorists, RACV has a wider role representing its members' interests as road and transport users and members of the Victorian community.

RACV is also a constituent of the Australian Automobile Association (AAA), which is the Canberra-based national secretariat of the various motoring clubs throughout Australia. National issues, and representations to the Commonwealth Government tend to be channelled through AAA.

In order to serve our members' interests via representation and advice, it is necessary to take active steps to ascertain member views, and also member understanding on a range of issues. It is also valuable to ascertain, to the extent possible, how effective RACV's advocacy role is perceived by stakeholders, including those whom we are seeking to influence. To achieve these goals, RACV undertakes extensive market research programs.

The purpose of this paper is to raise awareness of the ways that market research can be utilised by transport professionals. It is not intended to be a comprehensive guide to market research.

What is market research?

Zikmund (1989) defined market research as: "The systematic and objective process of generating information for aid in making marketing decisions. This process includes specifying what information is required, designing the method for collecting information, managing and implementing the collection of data, analysing the results, and communicating the findings and their implications".

Market research helps decision makers shift from intuitive information gathering to systematic and objective investigating. It is not a replacement for intuitive thinking, but it adds a fact base to that thinking. Decision making without systematic investigation can be like betting on a long shot at the race track. Occasionally there are successes, but there are also many disappointments.

The importance of market research to transport professionals

Transport professionals have a wide range of customers who often have conflicting and/or competing needs. They may include pedestrians, cyclists, motorcyclists, car, bus and truck drivers, and residents whose properties abut a section of road. Most transport decisions involve the public and their elected representatives, resulting in a complicated decision-making process. These decisions often require complex trade-offs between different goals and difficult financial choices. Market research can provide valuable insights that can help improve the design and implementation of a wide range of transportation policies.

Organisations, whether they are government bodies or private companies, have a responsibility to ensure that money is spent in a way calculated to meet their objectives which may be economic, social or other objectives. To achieve this, the use of market research and evaluation is crucial.

Market research can provide the means of identifying customer (road user) needs and latent demand for new services. By having more comprehensive information, road authorities are able to plan and allocate resources more effectively.

Uses of market research

Market research can be used in the following ways:

- to examine what issues are most important to a targeted group
- to determine possible appropriate messages and ways to communicate them effectively (eg. what will be the most effective medium? - print, television or radio).
- testing comprehension of messages, whether they be campaign messages or simply understanding the meaning of a roadside sign.
- testing the effectiveness of a campaign pilot or a campaign itself to determine whether the campaign should be continued, expanded, or changed.
- to measure current behaviour.

The importance of objectivity when conducting market research cannot be stressed enough. Bias can enter surveys through the way questions are framed or through the method of sampling the population. For example, a group lobbying to prevent a road from being widened might decide to ask the opinion of only those people whose properties directly abutted the road. Given that the widening was likely to have a negative impact on these properties, the results of the survey would be a foregone conclusion. Results of this kind are misleading and the group would have lost credibility by conducting a survey in such a manner. This information may still have some value, but it is important that if there is bias in a survey, that the bias is understood by those using the resulting data. Without objectivity, the research is valueless.

Types of market research

We can obtain information from people in a number of ways. Questioning is a common, everyday approach to obtaining information. However, there are some types of information for which questioning is appropriate, and other types for which it is less appropriate. How we ask questions is critically important. Sometimes observation is the preferable way to obtain information.

Qualitative Research

Where people may be either unwilling or unable to give answers to questions, or where exploration of an issue is required, qualitative research is used. This type of research provides greater understanding of a concept or crystallises a problem, rather than providing precise measurement or quantification. It is subjective and open to interpretation, and is most often conducted through the use of focus groups.

A focus group interview is an interview with a small group of people. It is not a rigidly constructed question-and-answer session, but a flexible format discussion. The group usually meets at a central location at a predesignated time, and typically consists of 6 to 10 participants, although larger groups are sometimes used. It is important to remember that no matter how carefully the participants are selected, a small group of people will not be a representative sample. Therefore, focus group interviews cannot take the place of quantitative studies (Zikmund, 1989).

According to Zikmund (1989), some advantages of focus group interviews are as follows:

- The combined effort of the group will produce a wider range of information, insights and ideas than the sum of individual contributions;
- Comments by one participant often triggers a chain of responses from the other participants;

- Participants are more likely to be candid because the focus is on the group rather than on the individual;
- The individual's responses are likely to be more spontaneous and less conventional because no individual is required to answer any given question. People tend to speak only when they have definite feelings about a subject, not just because a question requires a response;
- Due to the economies of scale of interviewing a number of individuals simultaneously, the group interview allows the use of a more highly trained interviewer or moderator.

Shortcomings in the use of focus groups can be that without a sensitive and effective moderator, a self-appointed participant will dominate the session, and there are some unique sampling problems related to focus groups, where the group selected may not be representative of the entire target market (Zikmund, 1989).

Individual depth interviews have been found to generate more and higher quality ideas on a per respondent basis than focus groups. A depth interview is a one-on-one interview which is similar to a client interview with a clinical psychologist or psychiatrist. The researcher asks many questions and probes for additional elaboration after the respondent answers. The depth interview requires an extremely skilled interviewer and may last more than an hour. Hence it is expensive to conduct.

They are particularly appropriate when:

- detailed probing of an individual's behaviour, attitudes, or needs is required;
- the subject matter under discussion is likely to be of a highly confidential nature (eg. financial matters);
- the subject matter is of an embarrassing or emotional nature; or
- certain strong, socially acceptable norms exist and the need to conform in a group discussion may influence results.

Quantitative Research

The purpose of quantitative research is to determine the quantity or extent of an issue in the form of numbers. Quantitative research involves a researcher asking questions of respondents who form relatively large and representative samples, and is generally carried out through the use of telephone surveys. Questions should generally be as simple and straightforward as possible.

According to Tull and Hawkins (1990), a sound questionnaire requires applying applicable principles, common sense, concern for the respondent, a clear concept of the needed information, and thorough pretesting. Skill in designing questionnaires requires practice and is enhanced by experience in interviewing and editing completed questionnaires.

Consideration needs to be given to question content, question wording, response format, question sequence, and the physical characteristics of the questionnaire such as layout and length as detailed in Figure 1. The primary concern is that the respondents and the researcher assign exactly the same meaning to the question.

Questionnaires may be self-administered or self-selected, where people choose to complete the survey. People who feel strongly about the issue are more likely to respond to a self-selected questionnaire than those who are indifferent about the issue. This biases the survey because it allows extreme positions to be overrepresented while those who are indifferent are underrepresented. Additional effort is then required to obtain data from the underrepresented segments of the population.

RACV market research

Ongoing monitoring of member views is critical if RACV is to stay in touch with its members, and to advocate on their behalf with confidence that we represent the broad stream of member opinion. On specific issues, the results of member surveys can, and have, been used to very great effect in our advocacy work, since we are able to say to Government and decision makers that we speak not merely from opinion (no matter how well-informed), but we speak for a broad range of the community (ie the electorate)

That is not to say that market research necessarily determines RACV positions. These are determined using a combination of professional judgement and knowledge of the attitudes of our members and the wider community about issues

RACV has undertaken many different surveys over the years for differing reasons. The following summaries of a selection of these surveys illustrate possible applications and outcomes which can be achieved

Scoresby Transport Corridor

Purpose and Method: RACV commissioned a market research study in May 1998 (RACV, 1998) specifically in order to determine the attitudes of our members to developments within the Scoresby Transport Corridor, and to help frame our response to the Environmental Effects Statement (EES). The objectives of the research were to gauge the reaction of motorists and public transport users, and specifically RACV members, to the following options:

- a freeway between Ringwood and Frankston;
- integrated transport options, which include road and public transport infrastructure; and
- public transport options only, without a freeway.

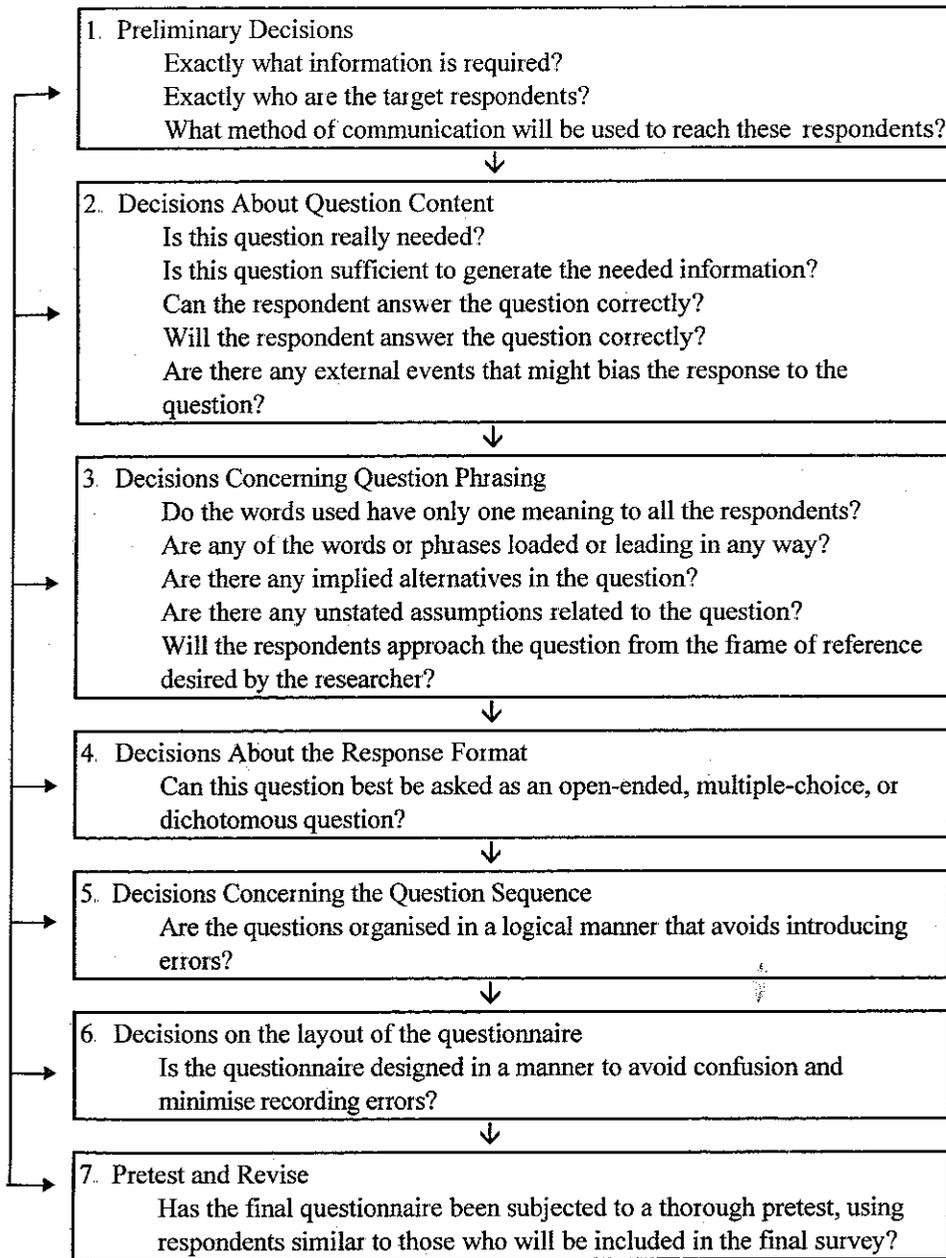


Figure 1. Questionnaire Considerations (Tull and Hawkins, 1990)

A two part methodology for the research was devised consisting of:

- Four group discussions with motorists and public transport users. Two of these were held with people residing in suburbs through which the Corridor runs, with the other two groups being motorists and public transport users who did not live or work in suburbs neighbouring the Corridor.
- 1200 telephone interviews were carried out divided evenly into three groups of 400 people each. The first group were people living within one kilometre either side of the proposed freeway route, the second group were residents of suburbs within the Corridor, but more than one kilometre from the proposed route, and the third group were residents of other Melbourne suburbs.

Member Attitudes: Overwhelmingly, 90 per cent of respondents thought that transport development should occur through the Scoresby Corridor. Importantly, 78 per cent of respondents believed that public transport should be provided in conjunction with a freeway. This could be in the form of train or tram lines, or bus lanes. Construction of a freeway only was supported by 12 per cent of respondents, with 5 per cent supporting the provision of public transport facilities only and no freeway.

Sixty three per cent of respondents thought that the proposed development should continue to Frankston, while 21 per cent thought that it should run between Ringwood and Dandenong only. 16 per cent of respondents were undecided.

Respondents were asked to predict their usage of public transport if it was provided along the proposed freeway route. The results revealed a significant potential use of public transport, albeit much less than the potential use of a freeway. Of particular interest was that a significant proportion of people who did not currently use public transport felt that they might use public transport on this route.

It was clear from the discussion groups that support from the community for transport development in the Scoresby Corridor would be strongest if the proposed route could be seen to have minimal environmental impact.

The results of this research showed that respondents overwhelmingly supported construction of a freeway in the Scoresby Corridor, with most of these supporting the development of integrated transport options which would include a freeway plus public transport developments.

These results strengthened RACV's support for construction of the Scoresby Freeway, and were presented to the panel hearing regarding the Scoresby Transport Corridor EES. The work was valuable as evidenced by the comments of one of the panel members who remarked that RACV's submission was the only one to present the opinions of the wider community on the proposals.

AirCare Victoria - "Stay tuned" Campaign

The AirCare campaign was launched in 1997, and is a joint environmental initiative sponsored by the RACV and the Victorian Environment Protection Authority (EPA). Using a mix of media and educational promotions, the ongoing campaign aims to raise awareness about the contribution of motor vehicles to urban air emissions, and in particular, seeks to encourage motorists to voluntarily tune the engines in their cars.

In order to shape the campaign for maximum effectiveness, qualitative research using 5 focus groups was undertaken. The group discussions were conducted with car owners in Melbourne spread across demographic and socio-economic groups who:

- Own and drive non-fleet vehicles;
- Are responsible for organising maintenance of their cars; and
- Own cars which are more than 3 years old.

The objectives of this research were to:

- Explore perceptions and gauge the extent to which motorists are informed about air quality and issues pertaining to air pollution in Melbourne.
- Understand behaviour patterns and attitudes to car servicing.
- Explore understanding of the relationship between motor vehicles and air pollution, including the perceived impact of regular maintenance on the level of pollution produced by cars.
- Test reactions to the concept of the joint EPA/RACV AirCare campaign to encourage people to regularly maintain their cars.
- Gather reactions to "arguments" which might be used in that campaign to convince motorists to have their cars regularly serviced.
- Determine the appeal of different incentives which might be offered to encourage regular maintenance.

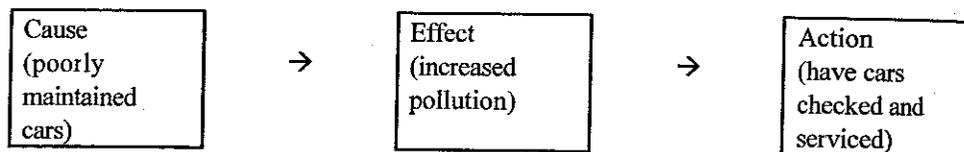
Results of this research showed that motor vehicles were acknowledged by respondents to be one of the major contributors to air pollution in Melbourne, with other notable sources considered to be factory emissions and trucks and buses. However, the majority of motorists do not understand exactly how cars contribute to air pollution. Rather, there is a tendency to qualify and to suggest that certain types of cars contribute more to pollution than others such as older cars, cars with exhaust problems, and cars running on leaded petrol. There was virtually no understanding of the role which car maintenance can play in the minimisation of polluting emissions.

Most respondents felt that there was little that they could personally do to affect the situation. The only strategies that they could imagine they could personally adopt - such as catching public transport or not driving their car as much - tended to be considered to be unacceptable. Lacking any feeling of personal empowerment,

respondents then deferred responsibility to others - to government, to industry, and to transport operators.

The idea of the EPA and RACV joining forces to encourage motorists to regularly maintain their cars and thus reduce air pollution was enthusiastically endorsed. However, the offer of a free emissions check was met with less than an enthusiastic response. Only a small segment of respondents felt that they would attend an RACV garage to have the emissions check carried out

As a result of this research, it was clear that the focus of the initial stages of the campaign must be to educate motorists about the functioning of their car engines, at least in simple terms. This was seen as the necessary base for a campaign because until there was some simplistic (and correct) understanding of the nature of the nexus between irregularly maintained cars and the generation of polluting emissions, it would be very difficult to convince motorists to take action to develop the following scenario:



This research shaped the campaign with the following outcomes being agreed as a measure of the campaign's success:

- An increase in the level of awareness and acceptance of the AirCare Victoria initiative and its key educational messages; and
- A measurable increase in the number of motorists regularly tuning their cars.

In order to measure the success of the campaign, the community awareness of AirCare Victoria has been tracked throughout the campaign from 1997 to the present in a series of four waves of subsequent quantitative research

The first wave, which was a baseline study of 600 motorists, was conducted prior to the launch of the campaign with three subsequent waves of research, each surveying 400 motorists. The second wave of research was undertaken six months into the campaign and showed the following results:

- The "Stay tuned" campaign, although low key, had been noticed by Melbourne's motorists;
- There was a small, but noticeable, shift in attitude with more motorists understanding the role of tune ups and their connection to reducing air pollution; and
- There was no significant change in behaviour yet. This was expected to follow attitudinal shift and was expected to be detected in Wave 3

The third wave was conducted one year into the campaign and led to the conclusions that the "Stay Tuned" campaign had stagnated, and that in order to keep the momentum going, the campaign was in need of revitalisation. While it had raised awareness, this had not translated into significant changes in behaviour. In fact, attitudes had stabilised and showed signs of shifting back towards those prevailing in the baseline survey. In response to these results, advice on revitalising the campaign was sought, and a structured radio program of intensive advertising was undertaken.

The fourth wave of research was conducted four months after the third wave and showed an increased awareness of the relationship between tuning cars and improved air quality. Attitudes towards the environment had improved slightly, with a greater level of concern and awareness about air pollution being displayed. Little change had occurred yet in behaviour, however the attitudinal shift was happening. It is expected that behavioural shifts will take time to follow, given the infrequent intervals between modern-day services to cars.

The ongoing research evaluating the impacts of the campaign enabled improvements to be implemented throughout the campaign, thereby increasing its effectiveness.

Road User Behaviour

A quantitative survey of 501 Victorian motorists was undertaken in July 1998 to ascertain driver awareness of, and attitudes towards a range of current issues including speeding behaviour, drink driving, the sale of alcohol at petrol stations and loading zones.

At the time of the research, there was a public debate about the merits of a proposal to permit the sale of alcohol at petrol stations. There was no available information on the actual effects of this proposal on road safety, and the argument tended to centre around emotive issues. The results of RACV's survey showed that an overwhelming 90 per cent of respondents opposed the sale of alcohol at petrol stations and 83 per cent opposed the sale of alcohol at convenience stores. The release of RACV results to the media was probably influential in effectively ending the debate, and the proposal has not proceeded.

Member Awareness and Approval Survey

This research was conducted in December 1998 and involved a two-part programme consisting of both qualitative and quantitative research. Six focus groups and a survey of 800 RACV members were used to research gaps in RACV's knowledge of member attitudes towards different issues, and their level of approval of RACV activities in those areas. The areas studied included privacy (particularly relating to CityLink), road safety, vehicle safety features, emission testing, integrated transport planning, and road funding.

Privacy: Information about individual movements around CityLink was of concern to 28 per cent of respondents. Of these, 73 per cent quoted invasion of privacy as the reason for their concern. When using CityLink, 11 per cent of respondents indicated that they wished to remain anonymous at all costs.

Provided that suitable safeguards are in place, 83 per cent of respondents supported police access to CityLink records.

Road Safety: Sixty six per cent of respondents were unaware of any RACV involvement in road safety programmes such as Traffic Safety Education and Years Ahead. When informed of RACV's involvement in road safety programmes in conjunction with the Department of Education, VicRoads, IAC and the Police, an overwhelming 94 per cent of respondents supported RACV participation.

Vehicle Safety: Fifty one per cent of respondents agreed that RACV should encourage motorists to buy cars with safety features, but a further 40 per cent indicated that they could not afford the technology.

Safety in vehicles has become a "given", but is a low factor in the purchase decision-making process.

Vehicle Emission Checks: Unprompted, 71 per cent of respondents believed that RACV should support annual emission checks in principle, but believed that RACV should take the stance of keeping cost and inconvenience as low as possible. A further 12 per cent believed that RACV should lend unconditional support, with 15 per cent believing that RACV should oppose the tests.

When told that targeting the worst offenders is more cost effective, 35 per cent continued to say that RACV should support annual emission tests while keeping inconvenience to a minimum, 9 per cent believed that RACV support should be unconditional, and 53 per cent supported the RACV stance of opposing tests and focusing on high polluters.

Integrated Transport. In developing new roads where there is an existing road reservation, 63 per cent of respondents said that all types of transport should be considered, 15 per cent said roads only, and another 15 per cent said roads and other means of transport should be considered.

Seventy per cent of respondents agreed that RACV had a role to play in pushing the best transport option, not necessarily the best road option. However, 26 per cent said that RACV should put road user interests first.

Road Funding: Seventy nine per cent of respondents said that the money collected in petrol taxes should be allocated back to road funding, dollar for dollar, with 83 per cent saying that Victoria should receive the same percentage of road funding as it puts in (25 per cent of available funds).

Thirty three per cent of respondents said RACV should aim to increase the total amount of Federal road funding, 32 per cent said RACV should argue for funds to be allocated on a national basis, and 24 per cent said RACV should push for an increased proportion of funding for Victorian roads.

The results obtained from this survey have been used in advocacy work and in planning for RACV activities in future years. In particular, the research provided some input to the recent "Driving the Issues" document which summarises RACV's policies and positions on a range of key current transport issues, and shows how we are serving members through our advocacy efforts.

Member Opinion Tracking

Member Opinion Tracking is an ongoing routine quantitative survey which allows information to be gathered on a low-cost basis. The surveys cover a diverse range of RACV related topics such as the level of membership, awareness of RACV products, image and perception of RACV, and other issues on an ad-hoc basis as the need arises. The questionnaire content is constantly evolving to focus on up-to-date issues and topics of interest to RACV. This tracking program has been running since February 1994.

Fifty Victorian motorists are surveyed each week (both RACV members and non-members). The sample is random, controlled for age, sex and region to be representative of the actual driving population of Victoria. The telephone interviews are carried out seven days a week, 50 weeks per year. Weekday interviews are conducted after business hours and weekend interviews are spread out between 9am and 5pm to ensure that all demographic groups (eg. income & employment) are proportionately represented in the samples.

The information obtained can be used to track demographic changes and monitor customer ratings of services on a continuing basis. Information on customer (member) reactions can be compared over time.

Members' Perceptions of Public Transport

Surveys in RACV's *Royalauto* magazine are the obvious way for RACV to consult with our members, and can provide valuable amplification of qualitative results that may be obtained from other types of surveys. RACV undertook a self selection survey about public transport in *Royalauto* in August 1995. The survey attracted some 6,000 responses, of which 20 per cent considered themselves to be regular public transport users. The survey found that:

- the main reasons for using public transport were the lack of parking, traffic congestion, and the convenience of public transport;
- the main reasons given for not using public transport were the lack of a direct route (35 per cent), followed by distance to a terminal (20 per cent), infrequent service and travel time (both 15 per cent); and
- improvements necessary to encourage use of public transport included reduced waiting time and increased security at terminals, both suggested by 70 per cent of respondents, followed by improved parking, improved reliability and personal safety suggested by 50 per cent of respondents.

Although not a random sample, the survey clearly identifies the requirements of people if they are to be encouraged to move from cars to public transport.

Market Testing

Unfortunately, sometimes the urgency of a situation or budget restrictions preclude the ability to undertake comprehensive market research. Research takes time and can be expensive, which needs to be weighed up against the benefits it will provide.

Depending on the requirements of the project, it may be possible to market test (rather than formally research) a product or issue on other office staff or your family. Whilst the results will obviously not be statistically sound, the process can still be worthwhile.

Sometimes people get too close to a project they are working on and can't see the wood for the trees. In this case, testing proposals on other people is a good idea, although some care must be used when selecting which people to ask for assistance. There is no point asking a whole group of engineers (or other professions) to assess your proposal, unless they happen to be your target market. Engineers would all be trained in a certain similar way, which is not necessarily representative of the wider population. If your proposal is aimed at the general public, it is best to test it on selected office staff who have no pre-conceived ideas or knowledge about the topic.

Conclusions

Market research is not always the answer when making decisions about issues, but it can be seen that it is an effective tool which can greatly assist decision-making.

In many instances, sufficient information is available to make a sound decision without the need for market research. However, when there is an absence of adequate information, research should be considered. When deciding whether to make a decision without using market research or to postpone a decision in order to conduct research, managers should determine whether the payoff will be worth the investment, and whether the information gained will improve the quality of the decision to an extent large enough to warrant the expenditure.

As policy-makers and experts, market research does not make the decision for you. However, it is an input to the decision-making process. In some cases, the decision being made may fly in the face of the majority opinion evidenced in the market research. But at least the decision maker is aware of what public opinion is likely to be and what action may need to be taken to "sell" the proposal if it is likely to be unpopular.

The use of market research in the transport field should be encouraged where appropriate. Transport professionals need to recognise who their customers are and focus on their needs rather than their own needs or the needs of the organisation they work for.

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