

Giving the Customer a Voice

A Study of Market Research Methods and Their Perceived Effectiveness in NPD

Van der Hoven, Christopher; Michea, Adela; Varnes, Claus; Goffin, Keith

Document Version

Final published version

Publication date:

2013

License

CC BY-NC-ND

Citation for published version (APA):

Van der Hoven, C., Michea, A., Varnes, C., & Goffin, K. (2013). *Giving the Customer a Voice: A Study of Market Research Methods and Their Perceived Effectiveness in NPD*. Paper presented at The 20th International Product Development Management Conference. IPDMC 2013, Paris, France.
<http://dspace.lib.cranfield.ac.uk/handle/1826/8004>

[Link to publication in CBS Research Portal](#)

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

If you believe that this document breaches copyright please contact us (research.lib@cbs.dk) providing details, and we will remove access to the work immediately and investigate your claim.

Download date: 03. Dec. 2021



**GIVING THE CUSTOMER A VOICE: A STUDY OF MARKET RESEARCH
METHODS AND THEIR PERCEIVED EFFECTIVENESS IN NPD**

Chris van der Hoven

Cranfield School of Management, Cranfield University
Cranfield Bedford MK43 0AL England
chris.vanderhoven@cranfield.ac.uk

Adela Michea

Copenhagen Business School
Solbjerg Plads 3, DK-2000 Frederiksberg
am.om@cbs.dk

Claus Juul Varnes

Copenhagen Business School
Solbjerg Plads 3, DK-2000 Frederiksberg
cv.om@cbs.dk

Keith Goffin

Cranfield School of Management, Cranfield University
Cranfield Bedford MK43 0AL England
k.goffin@cranfield.ac.uk

ABSTRACT

There is a widely held view that a lack of, "...customer understanding," is one of the main reasons for product failure (Eliashberg et al., 1997, p. 219). This is despite the fact that new product development (NPD) is a crucial business process for many companies. The importance of integrating the *voice of the customer* (VoC) through market research is well documented (Davis, 1993; Mullins and Sutherland, 1998; Cooper et al., 2002; Flint, 2002; Davilla et al., 2006; Cooper and Edgett, 2008; Cooper and Dreher, 2010; Goffin and Mitchell, 2010).

However, not all research methods are well received, for example there are studies that have strongly criticized focus groups, interviews and surveys (e.g. Ulwick, 2002; Goffin et al, 2010; Sandberg, 2002). In particular, a point is made that, "...traditional market research and development approaches proved to be particularly ill-suited to breakthrough products" (Deszca et al, 2010, p613). Therefore, in situations where traditional techniques—interviews and focus groups—are ineffective, the question is which market research techniques are appropriate, particularly for developing breakthrough products? To investigate this, an attempt was made to access the knowledge of market research practitioners from agencies with a reputation for their work on breakthrough NPD. We were surprised to find that this research had not been conducted previously.

In order to make it possible for the sample of 24 market research experts identified for this study to share their knowledge, *repertory grid technique* was used. This psychology based method particularly seeks out tacit knowledge by using in-depth interviews. In this case the interviews were conducted with professionals from leading market research agencies in two countries. The resulting data provided two unique insights: they highlighted the attributes of market research methods which made them effective at identifying customers' needs and they showed how different methods were perceived against these attributes.

This article starts with a review of the literature on different methods for conducting market research to identify customer needs. The conclusions from the literature are then used to define the research question. We explain our choice of methodology, including the data collection and analysis approach. Next the key results are presented. Finally, the discussion section identifies the key insights, clarifies the limitations of the research, suggests areas for future research, and draws implications for managers.

We conclude that existing research is not aligned with regard to which methods (or combination of methods) are best suited to the various stages of the NPD process. We have set out the challenges and our own intended work in this regard in our section on 'further research'. Also, the existing literature does not explicitly seek the perceptions of practitioner experts based in market research agencies. This we have started to address, and we acknowledge that further work is required.

Although our research is ongoing, it has already yielded the first view of a model of the perceptions of 24 expert market researchers in the UK and Denmark. Based on the explanation of these experts, the model situates a derived set of categories in a manner that reflects the way in which they are inter-linked. We believe that our model begins to deal with the gaps and anomalies in the existing research into VoC methods.

Key words: market research methods, voice of customer, VoC, effectiveness, market research agencies.

INTRODUCTION

There is a widely held view that a lack of, "...customer understanding," is one of the main reasons for product failure (Eliashberg et al., 1997, p. 219). This is despite the fact that new product development (NPD) is a crucial business process for many companies. The importance of integrating the *voice of the customer* (VoC) through market research is well documented (Davis, 1993; Mullins and Sutherland, 1998; Cooper et al., 2002; Flint, 2002; Davilla et al., 2006; Cooper and Edgett, 2008; Cooper and Dreher, 2010; Goffin and Mitchell, 2010). Studies show that new product development projects founded on clearly defined customer needs are more likely to be successful (e.g. Cooper, 1993; Rothwell, 1992).

However, not all research methods are well received, for example there are studies that have strongly criticized focus groups, interviews and surveys (e.g. Ulwick, 2002; Goffin et al, 2010; Sandberg, 2002). In particular, a point is made that, "...traditional market research and development approaches proved to be particularly ill-suited to breakthrough products" (Deszca et al, 2010, p613). Therefore, in situations where traditional techniques—interviews and focus groups—are ineffective, the question is which market research techniques are appropriate, particularly for developing breakthrough products? To investigate this, an attempt was made to access the knowledge of market research professionals from agencies with a reputation for their work on breakthrough NPD. We were surprised to find that this research had not been conducted previously.

In order to make it possible for the sample of 24 market research experts identified for this study to share their knowledge, *repertory grid technique* was used. This psychology based method particularly seeks out tacit knowledge by using in-depth interviews. In this case the interviews were conducted with professionals from leading market research agencies in two countries. The resulting data provided two unique insights: they highlighted the attributes of market research methods which made them effective at identifying customers' needs and they showed how different methods were perceived against these attributes.

This article starts with a review of the literature on different methods for conducting market research to identify customer needs. The conclusions from the literature are then used to define the research question. We explain our choice of methodology, including the data collection and analysis approach. Next the key results are presented. Finally, the discussion section identifies the key insights, clarifies the limitations of the research, suggests areas for future research, and draws implications for managers.

LITERATURE REVIEW

This review is presented in the following sections:

- The origin and scope of Voice-of-Customer (VoC) methods
- Choice of VoC method and performance
- Conclusions from the literature

The origin and scope of Voice-of-Customer (VoC) methods

Market research started to formalise more than 80 years ago according to Chadwick (2006), with Art Nielsen and Daniel Starch considered to be, "...people who could 'read' the buying public and offer up strategy as to how to approach them" (p.392). Since then the market research industry has grown and changed significantly. Originally the task was very specifically to conduct surveys. More recently, market

research agencies have been conducting a wide spectrum of activities ranging from guiding advertising, to test pricing and other interactions with customers. Over time, methodologies have also developed from being more descriptive to including more predictive research (Chadwick, 2006). In part this is driven by the internet revolution with its impact on speed and cost. As Sorrell (2002) puts it, “By the time we send out a questionnaire, have consumer responses, and analyse the data dump, the problem has changed”.

In order to define *market research* it is useful to take Davis’s (1993) view that market research brings together customer needs and the technical capabilities of a product: “...market research represents the *voice of the customer* in the company.” (p.310). The expression *voice of the customer* originates from Quality Function Deployment (QFD). Initially, QFD targeted the need for original products by allowing employees to participate in product design. Later, it became clear that QFD could be further improved by also integrating the VoC into the design (King, 1987). Cristiano et al (2000) investigated these QFD practices and concluded that the VoC was mainly used “to clarify customers’ requirements.” Katz (2004) seems to agree, but takes the more specific view that QFD used VoC inputs only for the early stages of NPD.

Griffin and Hauser (1993) have defined the *voice of the customer* as being, “...the task of identifying customer needs, structuring customer needs, and providing priorities for customer needs (p.1). They think of VoC inputs as providing a hierarchical set of needs ranked in order of importance to the customer. Furthermore, they describe a *customer need* as, “...a description, in the customer's own words, of the benefit to be fulfilled by the product or service” (Griffin and Hauser, 1993, p. 4). More recently Kahn, Castellion and Griffin, (2005) defined VoC research as, “...a process of eliciting needs from consumers that uses structured in-depth interviews to lead interviewees through a series of situations in which they have experienced and found solutions to the set of problems being investigated. Needs are obtained through indirect questioning by coming to understand how the consumers found ways to meet their needs, and more important, why they chose the particular solution they found.” (p. 614).

Interestingly, Akao (1990) has pointed out that VoC methods were developed from “practice and experience, not from theory” (p. 3). More than 2 decades on, this view seems to persist with Bharadwaj (2012) still able to state that the actual VoC methods lack a theoretical foundation. However, various related studies have been published in the literature. For example, Fuchs and Schreier (2010) have conducted empirical studies and suggest that NPD processes should, “...democratize innovation by empowering customers” (p. 17). Also, some authors have noted that practitioners recognized that when customers’ needs were embedded in the NPD process a product’s value increased significantly (Barczak et al, 2009). More recently, Bharadwaj et al (2012) reinforced this view when they studied the supplier-buyer relationship and demonstrated empirically that VoC helped companies to create better value propositions. It seems VoC research is particularly important where there is a need for more radical products in the portfolio (Eliashberg et al., 1997). On a similar theme, Cooper’s research (2011) has attempted to link certain methods with the likelihood that breakthrough ideas will be generated.

Studies like the one carried out by Sfir (2012), showing that individual methods for obtaining VoC for product innovation were more effective than group methods, are an exception. Even though the importance of VoC research is widely recognized (see for example: Davis, 1993; Mullins and Sutherland, 1998; Flint, 2002; Davilla et al., 2006; Cooper and Dreher, 2010; and Goffin et al., 2012), there does not

appear to be any research on practitioner perceptions of the effectiveness of VoC research methods. However, there is research setting out to compare the usefulness and perceived performance of various methods.

Choice of VoC method and performance

Studies show that product success is a function of the amount of market information a company possesses and how that information is used in NPD. Ottum and More (1997) state that successful developers recognized user needs, wants and preferences. They point out that where product failures occur, this often signals a lack of market information. Their definition of *product success* is a combination of, "...financial success, perceived customer observation, time to market, and adherence to budget." (Ottum and More, 1997, p. 263).

Nijssen and Frambach (1998) suggest that for NPD performance, it is most important to apply market research in the early stages of the NPD process, although various methods should be applied throughout the process. They suggest that the most recognized (*traditional*) tools are brainstorming, in-home-use testing, focus groups and conjoint analysis. They also note that, "...idea generation techniques have the highest adoption rates of all NPD tools under NPD managers in business-to-business companies." (Nijssen and Frambach, 1998, p. 312). The authors also set out notable shortcomings in some of these methods, for example that they require long lead times, are expensive and that inaccuracies in prediction might occur.

Where the target is to develop more radical products, success depends on the possibility of using *non-traditional* marketing research methods (Eliashberg et al., 1997). These so-called 'non-traditional' methods include lead user technique, information acceleration, and methods based on virtual reality. Additionally, where more radical products are required, O'Connor (1998) argues that the input needed from the customer is different. For more radical products, "...customer input (accessed via library sources, contact key users and focus groups) is used only in the prototype/pilot development stage, not in early stages" (O'Connor, 1998, p. 158). There seems thus to a difference between O'Connor (1998) and Nijssen and Frambach (1998) in terms of which stage of the NPD process most requires the customer's input.

Flint (2002) referring to Nijssen and Frambach (1998)'s view, agrees that a more formalized customer involvement in the front-end process increases the chances of product success. However, the challenge is that many companies do not know what type of customer information is needed, or which related methods are most appropriate in the front-end. The author defines product success in terms of a shorter time to market. Furthermore, he considers certain VoC methods to be vital for achieving this, including ethnography, participant observation, customer value change understanding, product analysis, technological breakthroughs and scenario exercises. Flint (2002) also points out that industrial firms generally do very little market research.

VoC research, along with other market information and a stable product definition, are generally not done well in companies that perform poorly in NPD (Cooper, Edgett and Kleinschmidt, 2004). Furthermore, where the customer is actively involved in the NPD process, business productivity increases. Cooper and Edgett (2008) define *productivity* as being, "...output (measured as new product sales or profits) over input (measured as R&D per NPD cost and time)." (p. 47).

Davila et al., (2006) distinguish between methods that result in incremental innovation and those that result in radical innovation. Traditional market research

methods, such as focus groups, conjoint analysis, surveys and prototyping tend to be applied for achieving incremental innovation, while anthropology, observation, and experimentation are applied for radical innovation (Daviala et al., 2010). This view is supported by Goffin and Michell (2010), who list modern tools as, repertory grid, emphatic design, leads user analysis, experimentation and rapid prototyping, virtual communities and conjoint analysis. These authors claim that, "...traditional methods are useful, but they need to be combined with techniques to identify hidden needs." (Goffin and Michell, 2010, p. 155)

Goffin, Lemke and Koners (2010) propose a combination of 'traditional' and 'modern' methods is necessary. This is because customer needs are changing constantly and also because researchers need to be aware of various types of needs. Need types include, "...known needs (basis features of products), unmet needs (meets not currently addressed), and hidden needs (customers are not able to articulate them in advance)" (Goffin et al., 2010, p. 8). Furthermore, the authors say that an important difference between traditional and modern tools, is that, "...modern tools take the problems identified (or an understanding of the tasks the customer has to complete) as the starting point and present these in a challenging way to new product development teams, who must then create solutions..." (Goffin et al., 2010, p. 7), whereas in traditional methods, researchers use the research findings as solutions.

In order to improve 'effectiveness' Cooper and Dreher (2010) identify eight VoC tools, ethnography, focus groups, lead user, customer visit teams, customer brainstorming, customer advisory board, community of enthusiasts and customer designed products. "*Effectiveness*" is seen as, "...management's perception of the effectiveness of the method in generating excellent, high-value new product ideas." (Cooper and Dreher, 2010, p. 41). According to this study, ethnography and customer visits score highest in terms of performance and usage.

There is also evidence of research into situations in which certain methods are ineffective. Schirr (2012) argues that group research methods, such as focus group and brainstorming, are ineffective in terms of uncovering hidden needs. Starting with Griffin and Hauser's 1993 article on VoC, Schirr reviews subsequent empirical studies and concludes that individual interviews are more effective in terms of the quantity of the ideas generated from customers. Schirr (2012) finds that in focus group sessions the time per participant to explain their opinions and concerns is more limited than in one-to-one interviews. Moreover, Schirr (2012, p. 478) agrees with McQuarrie and McIntyre (1986), who argue for excluding focus groups from the VoC category of methods. The main drawbacks for surveys and focus groups in comparison with ethnography are that they are not suited to finding hidden needs, are time-consuming and that the research is placed outside the customer's environment (Goffin et al., 2012).

Conclusions from the Literature

In summary, the need to better understand customer needs began within the quality debate. There is broad agreement as to the nature of 'traditional' and 'non-traditional' methods, but no detailed research on how these methods are perceived by practitioners. The literature seems to indicate the lack of a consistent view about what constitutes the effective use of market research methods, and the way in which the use and performance may be related. Table 1 presents a review of the key articles on Market Research and Performance.

Table 1: Market Research and Performance

Authors	Year	Method and Sample	Main Findings	Quotes & Comments
Goffin, Varnes, van der Hoven and Koners	2012	Multiple case studies: four companies where ethnographic market research was used.	<ul style="list-style-type: none"> The article focusses on the role of ethnography in accessing valuable customer insights. There are suggestions about the drawbacks of surveys and focus groups, i.e. that they are time-consuming, placed outside the customer's environment, and that hidden needs are difficult to find. 	<ul style="list-style-type: none"> The article does not specify where in the NPD process ethnography may be most effective.
Cooper and Dreher	2010	Survey of 150 firms.	<ul style="list-style-type: none"> Idea management is considered to be the most important driver for new product performance, in comparison with technology and resource management, strategic planning, the product development process and market intelligence. 	<ul style="list-style-type: none"> 8 VoC methods were compared with other ideation tools in terms of effectiveness and popularity. Ethnography and customer visits were ranked highest for both criteria.
Cooper, Edgett and Kleinschmidt	2002	Based on observations and experiences in working with multiple companies.	<ul style="list-style-type: none"> Practitioners have added a Discovery stage to the front end of the stage gate process in order to incorporate better mechanisms for capturing ideas. The authors recommend the inclusion of VoC research at this discovery stage, for discovering customers' hidden needs. Lead users or Innovative Customers are considered to be most valuable. 	<ul style="list-style-type: none"> The article does not mention whether VoC methods should be included in any other stages.
Gruner and Homburg	2000	Inductive field research with managers from German machinery industry; semi-structured interviews were used.	<ul style="list-style-type: none"> This article studies the impact of customer involvement on NPD performance. The results show that the intensity of customer interaction varies from one stage to another. Typically, customers are involved during the first and last stages of the NPD process, and to a lesser extent, the middle stages. 	<ul style="list-style-type: none"> Product success is defined as: quality of new product, financial success, quality of the NPD process, and the reduced cost of new product ownership.
Nijssen and Frambach	1998	Questionnaire applied to 132 market research companies out of which 35 responded.	<ul style="list-style-type: none"> This study focuses on market research for NPD conducted by external market research agencies. The article emphasizes the positive influence of applying market research in the early stages of the NPD process on overall NPD performance. 	<ul style="list-style-type: none"> The authors differentiate between market research conducted by external agencies, e.g. market research companies, and research by internal NPD managers. They find that internal research is more productive for the company.

Authors	Year	Method and Sample	Main Findings	Quotes & Comments
Veryzer	1998	The study of seven development projects using a multiple case comparison methodology and depth interviews with managers.	<ul style="list-style-type: none"> • The focus is on the link between customer research input and the key factors that influence the evaluation of a discontinuous product. • In the case of less discontinuous projects, quantitative methods were used, while for discontinuous projects qualitative projects were applied. 	<ul style="list-style-type: none"> • “Real opportunities to get customer input came during the prototype testing and commercialization phase of the NPD projects”. (p 138)
O’Connor	1998	A multiple case comparison method applied in large organizations. R&D Managers identified projects in the company that they believed represented radical innovation.	<ul style="list-style-type: none"> • The focus of the article is on the content of market learning for radical innovation. • The article differentiates between the nature of learning and the level of customer involvement needed for incremental versus radical innovation. 	<ul style="list-style-type: none"> • The article does not mention how different market learning mechanisms could be combined within needs research. Also, “...breakthrough innovations demand a greater technological input than market input...” whereas, “...Customers play a major role in providing input for incremental products”. (p.152)
Ottum and More	1997	Survey of 28 managers involved in NPD.	<ul style="list-style-type: none"> • The study considers the relations between the market information processing and product success. • One of the reasons which determines product failure is not incorporating the information gathered from customers in NPD. 	<ul style="list-style-type: none"> • Product success is determined by the usage of the market information gathered and the collaboration between marketing and R&D.
Mahajan and Wind	1992	338 questionnaires sent to 200 Fortune 500 firms.	<ul style="list-style-type: none"> • The article studies the role of new product methods in the NPD process. 	<ul style="list-style-type: none"> • The results show that the most frequently used method for new product research is the focus group (68%), followed by limited rollout, concept test, and then conjoint analysis.

RESEARCH DESIGN

As the literature review has shown, previous research has not found a consistent or detailed view of the effectiveness of different VoC methods. This study is still exploratory but is specifically focused on answering the research question:

What are the attributes of effective VoC market research methods?

Data Collection Approach

In order to address the research question, this study set out by trying to understand how different market research methods were perceived by market research experts. While a suitable technique was necessary to capture the interviewee perceptions and prompt them to discuss their experience of using different methods, it was also necessary to limit interviewee bias. Also, we wanted to identify experts' knowledge of market research including, if possible, some of their tacit knowledge about the methods. Repertory grid technique was selected as it stimulates interviewees to articulate their views on complex topics, using their own words (Fransella et al, 2004; Goffin, 2002; Jankowicz, 2004). This technique has been used in many types of management research (see Fransella et al., 2004 for examples) and recently directly for innovation management studies (Koners and Goffin, 2007; Micheli et al 2012). Reviewing the results of these previous studies gave confidence that repertory grid technique would also provide insights about perceptions of market research methods.

This work was funded by two business schools, from Denmark and the United Kingdom (UK). Both of these schools have a focus on innovation management research including VoC research.

Interview Technique

Each interview followed the guidelines in the repertory grid methodology literature (e.g. Goffin, 2002). Respondents were asked to name six market research (VoC) methods with which they were familiar in the context of seeking breakthrough products and services, including surveys and focus groups. The name of each method was written on a separate pre-numbered card (the methods named constitute the *elements* of the repertory grid technique). Next, random groups of three cards (so-called *triads*), were presented to the interviewee with the question: "*Looking at these three methods, how are two of them similar and different from the third in your experience?*" This question elicited what are termed *constructs*—in this study an attribute of market research methods, expressed in the interviewee's own language.

The interviewee was then asked to identify the *pole* for their construct, i.e., the counterpoint to the aspect they had raised. In discussing the pole and the construct in the triad, interviewees gave detailed explanations of the attributes of effective market research methods. The interviewee was then asked to rate all of the cards on a scale of 1-5, against their first construct. After the first construct had been elicited, discussed and rated, a second triad was presented and the interviewee was asked the same question as before, thus eliciting a second construct, followed by a new set of ratings. Further triads were selected randomly and each time the same question was used to elicit a further construct. The interviews lasted approximately one hour (including the semi-structured questions) during which typically 9 or more constructs were elicited and rated, giving a full repertory grid. It is very important to note that the repertory grid technique elicits interviewees' personal constructs—it does not provide the interviewee with a list of possible responses and therefore reduces interviewer bias.

Sample

The approach was to define an exploratory, purposive sample in the two countries in which the research was conducted: Denmark and the UK. The samples in each country were derived through various approaches. Existing contacts of market research agencies were used to gain access for pilot interviews; a review of websites was used to identify leading agencies which were then contacted; snowballing technique was also used as most interviewees could recommend experts at other organizations.

Table 2: Interviewees in the Exploratory Sample

Country	Typical Interviewees	Companies	Total
Denmark	CEO / Managing Director Director Business Development Manager & Partner Country manager Senior Team Manager of Quantitative Research Head of Qualitative Research	TNS Gallup A/S, Epinion A/S, Megafon A/S, Analyse Danmark A/S, YouGov Nordic A/S, Ipsos A/S, BrainFitness A/S, Wilke A/S, Millward Brown Dk, Nilsen Company A/S	10
United Kingdom	Director / Partner / Owner Head of Innovation Head of Qualitative Research Managing Director Managing Partner Senior Research Manager	2CV, Acacia Avenue, BrainJuicer, Campbell Keegan, Firefish, Gfk NOP UK, Prescient, Promise Corp, Quadrangle, The Langmaid Practice, Wardle Mclean.	14

TOTAL 24 Market research experts

In total, 24 market research experts were interviewed; all of them had many years of experience (see Table 3). All of the interviews were recorded and transcribed. In both countries the interviews were conducted in English. A pilot was conducted in each country to prove the viability of the interview.

RESULTS

Analysis of individual grids

The effectiveness of repertory grid technique, in helping respondents to articulate their perceptions, is demonstrated by the example that follows. This was from an

interview with a market researcher who is the managing director of a well-known consultancy in Copenhagen.

Example Grid

The completed repertory grid is shown in Figure 1. Across the top are the six elements: it can be seen that they not only include standard methods such as surveys and focus groups (which were *provided elements*) but also proprietary methods such as ‘defining market space’ and ‘conversion models’. The first triad (Elements 1-3 as indicated by the asterisks in Figure 1) was presented to the manager with the question: “*Looking at these three methods, how are two of them similar and different from the third in your experience?*” This elicited the first construct, based on the answer: “... *because these two are looking into how to measure different attributes of products, it is more models based, then the consumer market approach, which can be more segmentation. So here you have more consumer description, while here you have products.*” The first construct provided is a description of customers as the objective, while the pole is the evaluation of the products as the objective. Against this construct all of the six elements were rated on a scale of 1 to 5 and, for example, Element 1 (Conjoint analysis) was rated “5”. The second construct was elicited using Elements 4,5 & 6 as the triad and the respondent’s answer was: “...*Surveys and focus groups are methodologies, whereas CM is a model that actually uses data, you do some maths, put into a model, and you have some analysis coming out; whereas, the survey and focus group is empirical, just data, qualitative or quantitative*”. In total, 9 constructs were elicited from the interviewee with the ninth explanation being “*We can use now producing data and recommendations. You use data to make up your mind to produce results, to make consultancy recommendations to clients. But surveys do not produce recommendations.*”

At the bottom of the grid (Figure 1) are 5 supplied constructs such as “Effective for breakthrough needs”, which were rated against the elements as 4, 1, 1, 5, 1 & 2. These supplied constructs allowed the effectiveness of the different elements (methods) to be determined.

Figure 1: Repertory Grid from Respondent Number 1.

CONSTRUCTS		ELEMENTS – Market Research Methods						POLES
		CARD 1 Conjoint analysis	CARD 2 Innovation journey	CARD 3 Defining market space	CARD 4 Conversion model	CARD 5 Focus groups	CARD 6 Surveys	
1	Description of the customer	*5*	*5*	*1*	2	1	1	Evaluation of the product
2	Data (methodology / empirical approach)	5	5	5	*5*	*1*	*1*	Model that uses data
3	Aggregate approach	*1*	5	*5*	1	*5*	1	Non-aggregate approach
4	Testing ideas	5	*1*	3	*3*	*1*	5	Testing specific concepts
5	Concrete	*1*	*5*	3	*1*	4	3	Abstract ideas
6	Multivariate	*1*	5	1	*2*	5	*4*	Non-variate (simple)
7	Subjective approach (based on experience)	5	*1*	*4*	5	*2*	4	Objective approach
8	Changes	1	2	*5*	*1*	3	*3*	Picture of the situation (point analysis)
9	Producing recommendation for clients	*2*	2	3	2	*5*	*5*	Producing data

CONSTRUCTS		ELEMENTS – Market Research Methods						POLES
<i>P1</i>	<i>Effective for breakthrough needs</i>	<i>4</i>	<i>1</i>	<i>1</i>	<i>5</i>	<i>2</i>	<i>2</i>	<i>Limited effectiveness</i>
<i>P2</i>	<i>Value for money</i>	<i>4</i>	<i>1</i>	<i>3</i>	<i>1</i>	<i>3</i>	<i>3</i>	<i>Poor value for money</i>
<i>P3</i>	<i>Good at fuzzy front end</i>	<i>5</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>2</i>	<i>5</i>	<i>Poor at fuzzy front end</i>
<i>P4</i>	<i>Good for development phase</i>	<i>1</i>	<i>5</i>	<i>5</i>	<i>4</i>	<i>4</i>	<i>1</i>	<i>Poor for development phase</i>
<i>P5</i>	<i>Good for launch phase</i>	<i>5</i>	<i>5</i>	<i>2</i>	<i>5</i>	<i>1</i>	<i>1</i>	<i>Poor for launch phase</i>

Analysis of multiple grids

The 24 interviews resulted in a total of 228 attributes of market research methods (constructs); with each interview eliciting an average of 9.5 constructs.

The 1st pass categorization process

In order to conduct the categorization, 4 researchers worked in 2 pairs (Researchers A&B and Researchers C&D). Following a process set out by Jankowicz (2004), each construct was captured on a uniquely numbered index card which included the construct, the pole and an exemplary quote. Each pair of researchers thus had 228 cards to allocate into categories that emerged. Each category was then labelled. The researcher pairs worked completely independently over a period of approximately 6 hours. Researchers A & B came up with 27 categories and researchers C & D 24. These categories were captured onto a so-called ‘reliability matrix’ with the construct card numbers inserted at the intersections between categories provided by the 2 pairs of researchers. This is shown in Table 3 below.

Table 3: Extract from the initial reliability table

		RESEARCHERS A and B				
		1	2	3	4	5
RESEARCHERS C and D		Qual/quant	Collective/ Interacting respondents	Expertise needed	Researcher- respondents intimacy	Controlled/ Structured
1	Qual/ quant approach	'1.7, 4.9,5.2,6.1,10.2 ,13.2,18.7,20.2, 23.4,24.1,25.2 [=11]				
2	Respondents dynamics		'3.7, 5.9,7.3,10.6,15. 6,16.2,18.8,21. 6,22.6,24.4,25. 8 [=11]			
3	Researcher's relationship with methods (how they feel)			'6.9,14.7,17.8,2 0.3,20.7,21.7,2 3.7,24.8 [=8]	'4.5	'11.6,14.4,
4	Relationship with respondents				'3.2,9.8,11.1,12 .6,13.3,13.5,13. 9,17.2,22.4 [=9]	
5	Structured/ unstructured by researcher (activities)					'2.5, 9.3,9.5,14.3,21. 1,22.2,22.3,23. 6,26.8 [=9]

The intersections on Table 3 are shaded and include the construct numbers where both researcher pairs were in agreement about the allocation within particular categories.

However, in some instances mismatches occurred as is the case in columns 4 and 5 – row 3 of Table 3. These 3 constructs suggested differences of opinion between the researcher pairs and pointed towards the need for enhanced category definitions of what the category included and what it would exclude. Where there was agreement, this represented high reliability and over the entire table a level of reliability could be calculated. As should be expected, our 1st pass attempt provided a low reliability (so-called inter-rater reliability) figure of 41%, indicating the need to further define the categories used (Miles and Huberman, 1994).

Producing enhanced category definitions

In order to improve the reliability, a series of WebEx calls were used to methodically create definitions for the categories that set out clearly what was included and excluded in each category. The result was a set of enhanced categories (13 in all) from a process that took approximately 10 hours, involving all 4 researchers. Table 4 sets out the stages that are required in order to improve the reliability of the coding in successive iterations. At the time of writing, our research team had not gone beyond the 1st part of the re-coding stage – i.e. identifying and defining the set of enhanced categories. However, the time required to complete the additional stages has been estimated.

Table 4: Reliability checks on the coding (categorization) process

Measure	Stages of the Categorization / Reliability Checks		
	1st Pass Categorization (Researchers A&B vs Researchers C&D)	2nd Pass Categorization (Researchers A&B versus Researchers C&D)	Independent Reliability Check (Researcher E vs Researchers A&B)
Time required for this stage	<ul style="list-style-type: none"> ▪ 28 person hours to prepare construct cards ▪ 12 person hours for coding for each pair of researchers ▪ 12 person hours for the reliability table (Figure 3) 	<ul style="list-style-type: none"> ▪ 10 hours to prepare the enhanced coding definitions for 13 agreed attributes ▪ 5 hours per pair of researchers for re-coding (estimated) ▪ 3 hours for the reliability table (estimated) 	<ul style="list-style-type: none"> ▪ 6 hours for Researcher E for coding (estimated) ▪ 4 hours for the reliability table (estimated)
Number of categories	<ul style="list-style-type: none"> ▪ A&B: 27 categories ▪ C&D: 24 categories 	<ul style="list-style-type: none"> ▪ 13 enhanced category definitions 	<ul style="list-style-type: none"> ▪ Y final category definitions (to follow)
Inter-coder reliability (ICR)	41%	X% (to follow)	Y% (to follow)

2nd Pass categorization of constructs

Jankowicz (2004) recommended that two pairs of researchers should re-code all constructs using the enhanced category definitions. This process needed to be conducted in parallel and in silence. As indicated in Table 4, it was estimated that this would take approximately 5 hours. A 2nd reliability table was then created, with a view to achieving a reliability that was in excess of 70% before everything was prepared to ask an independent researcher to do the final pass. Table 5 (below) is explained in the next section – “Independent reliability check”.

Table 5: Categories of Constructs (Attributes of Market Research Methods)

Code	Category	Category Definitions (i.e. the topics this category includes)	Topics this category does not include	Exemplary Quotes
METHOD SELECT	Factors considered in method selection	Characteristics of the method that influences the selection process; whether the method is good for discovery or filtering; exploratory or evaluation; future or status quo; NPD phases; idea versus concept testing; seeking market versus product characteristics; market demand; the nature of the method; more subjective versus objective; qual/quant; level of creativity required.	Depth and type of insights generated; excludes client specific issues; costs; excludes relationship with the client; client motivation; the level of expertise needed to use the method; researcher’s feelings about the method; level of interaction with the respondent; design of data collection; type of analysis required; <i>why</i> or <i>what</i> ?	<p><i>“It has to do with the qualitative versus quantitative approach... whereas quantitative research is objective from the beginning”</i> (Construct 1.7)</p> <p><i>“...in this case workshop is explorative and the rest is used when we have something to test...”</i> (Construct 5.5)</p> <p><i>“...most often you need to fine tune the idea before you go to the market and fine tuning that means which are the main drivers for demand...”</i> (Construct 8.6)</p> <p><i>“...if you work with innovation there is no point in innovating something that has no buyer potential...”</i> (Construct 8.4)</p>
DATA COLLECT	Characteristics of data collection approach	Amount of structure to data collection by researcher (activities); role of researcher in data collection; planned versus spontaneous; formality; standard actions for researcher; level of control by researcher; degree of openness; logical or intuitive; editing stimulus materials; creativity; improvisation in data collection; longitudinal versus real time; time required.	Relationship of researcher to respondent; dynamics of respondents; type of analysis; structure of analysis; type of insights gathered; feelings of the researcher; learning process / improvisation in the analysis; sources of data; new knowledge sources versus building on existing; emergent and evolving information versus static; primary sources versus secondary.	<p><i>“You don’t work to a specific set of questions...”</i> (Construct 23.6)</p> <p><i>“You can’t plan what they are going to do so you always have to be prepared for the unexpected”</i> (Construct 2.5)</p> <p><i>“In observation, you go out without any or very little preparation...”</i> (Construct 7.6)</p> <p><i>“Improvisation and making new directions during the interview, compared with surveys which are all planned.”</i> (Construct 3.4)</p>
DATA SOURCES	Sources of data	New knowledge versus building on existing; emergent and evolving information versus static; primary versus secondary.	Data collection method; data analysis; depth of respondent insight.	<p><i>“...Co-creation and launch monitoring are different from desk research because they are primary research; we go out and get some new knowledge which does not exist, while desk research we look for information in existing sources ...”</i> (Construct 5.3)</p> <p><i>“... Observations and focus groups is first-hand information, and desk research is second hand ...”</i> (Construct 2.6).</p>

Code	Category	Category Definitions (i.e. the topics this category includes)	Topics this category does not include	Exemplary Quotes
ANALYSIS	Analytical type	Standard data analysis or improvisation; well-defined; academic underpinning; interpretation by researcher; level of difficulty.	Data collection; the overall nature of the method, the design of the data collection approach; improvisation in the data collection.	“... they demand the scientific solution, so more algorithmic kind of solution, whereas this is more about human intuition...” (Construct 16.7) “Multivariate approach is multivariate statistics analysis, but again it is based on assumptions and models, a mathematical approach, where surveys is just providing data.” (Construct 1.6)
RESEARCHER RELATIONS	Interaction between researcher and respondents	Relationship / interaction between researcher and respondent; degree of rapport (intimacy); role of researcher/facilitator.	Interaction between different respondents.	“No loudmouth halo influencing” (Construct 25.8) “... Maybe it is something about feelings actually. I don't feel so close to my target group in online as I do in other methods, and I don't remember them.” (Construct 4.5)
CLIENT RELATIONS	Relationship between client and agency.	Level of client involvement; comfort of client; client likes method; easy for client to understand; costs; cost and time; ease of costing; popularity; client motivation; internal client dynamics / politics; traditional or new method.	Other method selection criteria; expertise with the method; client motivation, relationship between respondent and methods	“...how easy or difficult it is for the client to get an overview of the results (Construct 6.6) “...for this purpose conjoint analysis is far better. It involves numbers and top managers love numbers ...” (Construct 8.9) “...blog interviews is a new method and clients are still having a lot of doubt and they don't know how to use it, how to manage it...” (Construct 9.4)
RESPONDENT RELATIONS	Dynamics between different respondents	Whether different respondents interact; peer pressure; development of shared ideas (group dynamics); collective views-	Interaction between the researcher and the respondents;	“They're about an individual opinion or viewpoint, focus group is more group generated” (Construct 16.2)
RESEARCHER METHOD	Researcher's feelings	Researcher's feelings about method; impact of researcher's emotions; level of control; level of security; level of creativity possible-	Expertise; relationship / feelings towards the respondents; respondents feelings/emotions.	(Construct) “... I feel very secure with these, I'm less secure with either of these” “Familiarity, so security” “... Being out of control feels a bit scary ...” (Construct 11.6) “...it's more fun and more interesting for me if surprises emerge. But I wouldn't necessarily hope for that always...” (Construct 14.6)

Code	Category	Category Definitions (i.e. the topics this category includes)	Topics this category does not include	Exemplary Quotes
RESPONDENT METHOD	Dynamics between respondents and method	Relationship between respondent and method; matching method to respondent type	Researcher's feelings to the method; impact of researcher's emotions; researcher's expertise	<p>"...also involves the creativity level of the respondents, while surveys and observation studies do not." (Construct 4.7)</p> <p>"...not particularly fond of being followed around by someone, that can't be very convenient, in fact very inconvenient for the subject..." (Construct 21.8)</p> <p>"...provide the possibility of respondents to interact with objects." (Construct 7.1)</p>
ENVIRON	Environment	The respondent's world; the environment; research context; real world versus lab; field versus clinical.	Data collection method; analysis method.	<p>"you use the elements of the environment to support your interview" (Construct 4.1)</p> <p>"...understanding people's attitudes and behaviour in real life contexts" (Construct 15.1)</p>
EXPERT	Expertise of researcher required.	Level of knowledge required; resources needed; difficult or simplistic; level of expertise; easy to pick-up; barriers to entry; familiarity with the method.	Researcher's feelings; level of control; analytical approach.	<p>"To do a very good conjoint analysis, you need a high level of expertise" (Construct 6.9)</p> <p>"The ability of anybody to pick it up and do it" (Construct 17.8)</p>
DEEP INSIGHTS	Depth of respondent insights provided.	Type and depth of insight provided by respondents; uncovering unspoken and hidden needs; why and what; verbal AND non-verbal; unspoken; respondents' emotions; measuring respondents' arousal.	Other characteristics that influence the choice of method; the analytical approach; excludes the research environment / context; sources of data.	<p>"you can see that people going around saying one thing and doing something else" (Construct 3.1)</p> <p>"Face-to-face... you can pick up... body language" (Construct 12.9) "...bio feedback makes measurement from the internal system, like if you're embarrassed you might sweat" (Construct 7.2)</p> <p>"...observation methods could give you an idea about the feelings..." (Construct 7.8)</p>
VALIDITY	Validity of data collection, analysis and outcomes	True responses; surroundings	Method of data collection; method selection;	<p>"...you believe in what your respondents tell you... that is the truth ..." (Construct 3.6)</p> <p>"...questions is a very convenient way of collecting data, but it's a biased way of collecting data" (Construct 24.09)</p>

Independent reliability check

The final stage required the input of an independent researcher to ensure that the definitions were clear enough to be understood by 3rd parties. In Table 4 this researcher was designated “E” and it was estimated that they would take approximately 6 hours to allocate the constructs to the categories using the enhanced definitions. Once this allocation was complete a further reliability table would be set up and the reliability tested. It was preferable for the final reliability number to be within a reasonable tolerance + or – 10% of the number achieved after the re-coding.

Table 5 shows the enhanced category definitions as at the start of the 2nd pass of categorization set out above. In order to address convergent validity, the table sets out what is included in each category and for divergent validity, what is excluded. Also, exemplary quotes are included to assist with the definition process. These quotes would not be visible on the table when it is being used during the 2nd pass of categorization.

DISCUSSION

In the previous section, Table 5 summarized the key categories of constructs that emerged from the analysis process. These categories represent the key attributes of different market research methods, from the perspective of professionals working at market research agencies.

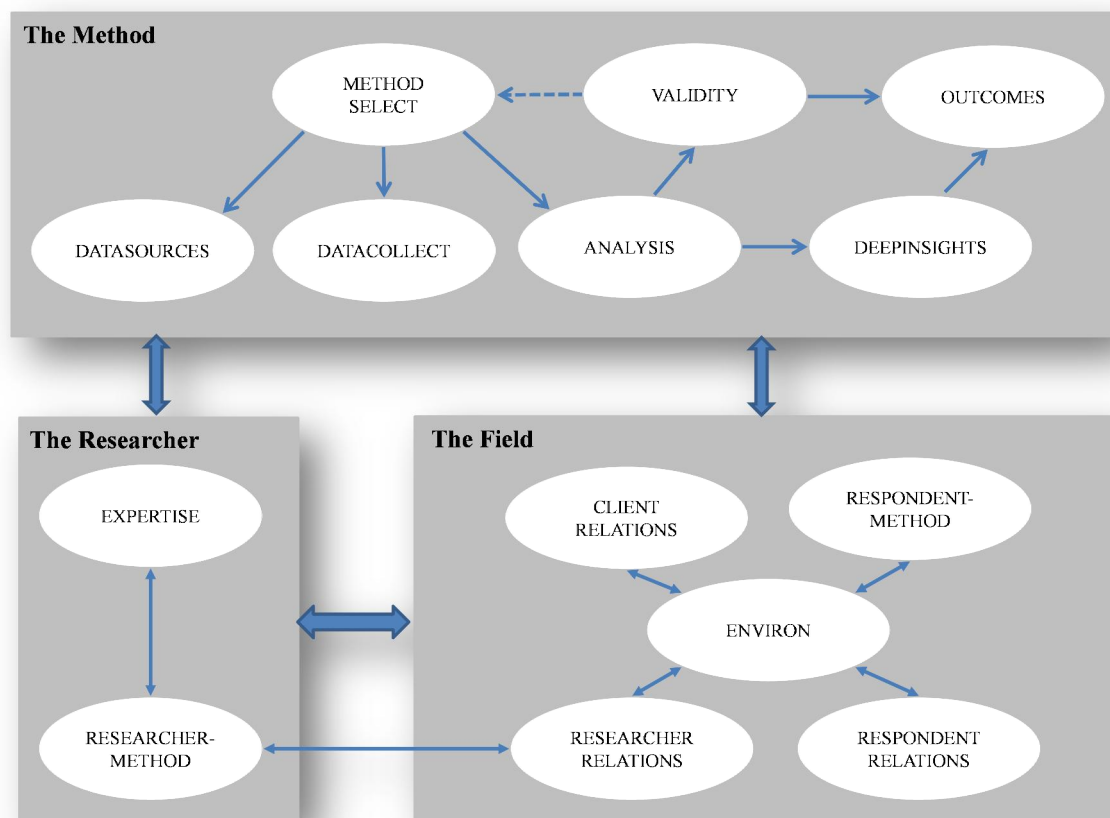


Figure 2: Model of the perceptions of market research experts

During the repertory grid interviews, the respondents provided not only explanations of the individual constructs, but also of how these constructs were inter-related. For

example, in discussing the ways a method was selected (METHODSELECT) respondents mentioned the importance of their own experience “... *I feel very secure with these, I’m less secure with either of these*”. By using these sorts of explanations, the research team created a model (Figure 2) of how market research professionals perceived the effectiveness of different methods. The perspectives in the model have been broadly gathered into 3 interrelated areas: namely, the Method, the Researcher and the Field. These are discussed sequentially starting with the Method.

The Method

Within this area of the data, interviewees’ thinking was dominated by factors to do with method selection. They discussed the characteristics of the methods in terms of how they influenced the selection process. These included whether the method was intended to discover new ideas or filter existing, was future or status quo orientated, and the research was targeting market versus product related insights. The effectiveness of the selection was impacted by yet other factors such as the relationship between the agency and their client. This is discussed further under the heading “The Field” below.

Method selection was also closely associated with the characteristics of the data collection approach. In the model this has been called DATA COLLECT and included the role of the researcher, the extent to which the process was spontaneous or planned, whether the collection required improvisation, was logical or intuitive. Also, the approach would differ depending on whether the research needed to take place longitudinally or in real time. Allied to this were the factors associated with DATA SOURCES and ANALYSIS. Choices of data sources were influenced by whether there was a need to create new knowledge or build on existing, whether the information was evolving or static, and whether it was primary or secondary data. When practitioners talked about the type of analysis, they reflected on whether there was appropriate academic underpinning, the level of difficulty involved and the extent to which the analysis required an improvised or standard approach.

Relatively little emphasis was placed on the validity of the data collection approach, and none specifically on the validity of either the data sources or the analysis. The interviewees tended to focus on whether the responses they were surfacing from their respondents were truthful. References were found to the validity of both the method selection and the link to desired outcomes.

One of the key aspects of this research was to try to understand the effectiveness of these methods in terms of DEEP INSIGHTS. The interviews were deliberately framed in terms of how these methods were similar or different in terms of how they surfaced breakthrough opportunities. Responses were given regarding both the type and the depth of insights, and whether these reflected unspoken and hidden needs. Interviewees emphasized the use of physical and emotional stimuli, and were clear about the need to identify both verbal and non-verbal data.

The Researcher

The focus on the researcher could be split into 2 distinct thought processes. The first was to do with the level of knowledge required by the researcher, whether the researcher needed to be an EXPERT. Here the interviewees talked about whether a method was easy to ‘pick up’ or because it was difficult, whether there were significant barriers to entry to less skilled researchers. The second related thought process revolved around the relationship between the researcher and the method. This was particularly about how the researcher ‘felt’ regarding the method, called

RESEARCHER METHOD in our model. In part, this captured the awareness of the need to manage the impact of a researcher's emotions on outcomes, but the 'feelings' were also about familiarity with the method and the associated levels of comfort and security. There is a clear link between this and what was called RESEARCHER RELATIONS, which is discussed as part of the "The Field" below.

The Field

The Field captured the connection between the work being done (The Method), the person conducting the work (The Researcher) and the context within which the work happened (The Field). The central category was called ENVIRON (The Environment) in our model and referred to the research context. The 4 categories that linked to this were CLIENT RELATIONS, RESPONDENT RELATIONS, RESEARCHER RELATIONS and RESPONDENT METHOD. More specifically, CLIENT RELATIONS referred to the relationship between the agency conducting the research and their client. This covered the extent to which the client was involved in the research, how comfortable they were with dealing with the inputs and outcomes, how easy or difficult the approach was to understand, their motivation and whether the approach used was popular with clients. There were also issues of cost and time and related to that the politics and dynamics within the client business.

The dynamics between different respondents in the research process were captured in the category called RESPONDENT RELATIONS in our model. This referred to the impact of the interaction between respondents, peer pressure or development of shared ideas. By contrast, RESEARCHER RELATIONS referred to the relationship between the researcher and the respondent. Here the intimacy and rapport between the researcher and the respondent was considered, and related to this, the role of researcher.

The final category within The Field was called the RESPONDENT METHOD and covered the dynamics between the respondent and the method, and the way in which the method was matched to the type of respondent.

Contribution to theory

The research was the first empirical attempt to understand how market research professionals working on new product development view different methods. This insight is important as such agencies have a major influence over new product development, in that they are often hired by companies to identify customer needs, as a key input for NPD projects.

The research showed that the respondents did not choose a method based solely on its characteristics. The results show (see Figure 1) that the experience of the researchers themselves played a key role. Their EXPERTISE and the way they needed to interact with the method were also important, as was the FIELD in which the research needed to be conducted. In considering this, for example, the relationship between the researcher's agency and the client had an influence on the method selected... (use quote). Some methods were less suitable for certain clients as they could be too expensive, too complex, etc.

Limitations of the research

An interesting aspect of this work was that the format required academic researchers to interview professional (agency based) researchers with vast experience in the market research process. Most interviewees were aware of the Repertory Grid Techniques and the Theory of Personal Constructs (Kelly, 1955), but very few had

used the approach. In some instances interviewees disliked and (even) resisted the requirement to contrast the elements in the triads. They felt that each contrast needed to be framed within a particular declared context. Experienced Repertory Grid practitioners would recognise the primacy of surfacing the construct and the pole regardless of whether the separation of the elements was artificial or contrived. The weakness was thus the lack of preparation in advance of the interviews, and the lack of a suitable explanation during the interviews. More general limitations included:

1. The sample used was exploratory and relatively small and therefore was unlikely to be representative of the whole market research agency sector. However, the respondents in both the UK and Copenhagen were all very experienced and so their perception of methods is insightful.
2. Many of the respondents used proprietary methods in their work with clients, for example Respondent 1 used “Defining Market Spaces”. Such proprietary methods are sometimes themselves a mix of other methods and so a better understanding of the way these are applied is needed.
3. Market research agencies often conduct ‘customer insights’ research during the fuzzy front end of NPD and report their findings to client companies. However, the degree to which NPD teams respond effectively to this input was not investigated.

Recommendations for further research

In our view the following issues warrant further investigation:

1. Researchers need to study the process by which NPD teams receive data on customer needs. How do market research agencies present their findings? How do NPD teams respond? And what levels of success in the final new products are attributable to customer insights;
2. There are many market research agencies working on NPD and surveys need to be conducted to identify how many companies rely on agencies for their customer insights and how many companies conduct their own market research;
3. There is still ambiguity about which methods are most effective in the different stages of the development of a product or service? We have included so-called ‘provided constructs’ in our interview grids (see Figure 1), so have in fact collected this data already. However, we have yet to analyse this particular aspect;
4. Which methods provide the best value for money? Again, we have collected this data but not had a chance to properly analyse it yet;
5. Finally, we would like to find out whether there is a desire amongst practitioners to explore the ‘client’ perspective in detail. We have conducted 2 interviews with clients as part of this research so far, and found their inputs very interesting. A complete study might need both the agency AND client perspectives to be modelled.

Implications for managers

So far this research has highlighted the way in which the research agency behaves regarding method selection and method execution. Although the work is on-going, we feel that it would be helpful to reflect these behaviours back to the practitioner community. In the first instance, we noted the aspiration to have sophisticated

(difficult) methods that may deliver better results for clients, but essentially provide a unique selling proposition for the agency (and a barrier to entry to less skilled researchers and agencies). This is traded off against the need to keep the client ‘on board’ however, with the implication that ‘more sophisticated’ can mean ‘less comfort’ for the client. We suggest that managers at client companies need to understand how market research agencies select the methods that they offer. And finally, our view is that market research agencies can use the model (Figure 2) to structure the way they respond to client enquiries about NPD research.

CONCLUSION

Existing research is not aligned with regard to the effectiveness of different methods. Originating from a quality debate by improving ‘precision’ on customer needs, we have started to address that quality in customer need understanding is mediated by market research agencies and hence must be understood as a process. The existing literature does not explicitly seek the perceptions of practitioner experts based in market research agencies.

Although our research is ongoing, it has already yielded the first view of a model of the perceptions of 24 expert market researchers in the UK and Denmark. Based on the explanation of these experts, the model (Figure 2) situates a derived set of categories (see Table 4) in a manner that reflects the way in which they are inter-linked. We believe that our model begins to deal with the gaps and anomalies in the existing research into VoC methods.

In our view, this model will help company based managers to understand the way in which they could better brief and procure the services of expert agency based market researchers. Also, agencies will be able to use the model to design sales pitches and proposals in a way will improve their success rate with future clients. For these reasons, we intend to continue the research collaboration in order to improve the utility and efficacy of the preliminary model set out in this paper.

REFERENCES

- Alam, J., Interacting with Customers in the New Product Development Process. In: Kahn, K., Castellion G., Griffin, A., ed. 2005. *PDMA Handbook of New Product Development*, second edition. John Wiley & Sons: New Jersey. pp. 249-262.
- Cooper, R., Dreher, A., (2010) Voice-of-Customer Methods: What is the Best Source of New-Products Ideas? *Marketing Management* 19 (4): 38-43.
- Cooper, R., (2008) Perspective: The Stage-Gate Idea-to-Launch Process- Update, What's New, and NexGen Systems. *Journal of Product Innovation Management* 25:213-232.
- Cooper, R., Edgett, S.J., (2008) Maximizing Productivity in Product Innovation. *Research and Technology Management*, 47-58.
- Cooper, R., Edgett, S.J., Kleinschmidt, E.J., (2004) Benchmarking Best NPD Practices-III. *Research and Technology Management*, 43-55.
- Cooper, R., (1999) From Experience: The Invisible Success Factors in Product Innovation, *Journal of Product Innovation Management*, 16:115-133.
- Davila, T., Epstein, M. J., Shelton, R.D. (2006). *Making Innovation Work, How To Manage It, Measure It, And Profit From It*. Upper Saddle River, N.J., Wharton School.
- Davis, R.E., (1993). From Experience: The Role of Market Research in the Development of New Consumer Products. *Journal of Product Innovation Management* 10: 309-317.
- Deszca, G., Munro, H. and Noori, H. 'Developing Breakthrough Products: Challenges and Options for Market Assessment'. *Journal of Operations Management*, Vol. 17, No. 6, 1999, p613.
- Eliashberg, J., Lilien, G.L., Rao, V.R., Minimizing Technological Oversights: A Marketing Research Perspective. In: Garud, R., Nayyar, P.R., Shapira, Z.B., ed. 1997. *Technological Innovation*. Cambridge University Press. pp. 214-232.
- Flint, D.J., (2002). Compressing New Product Success-to- Success cycle time. Deep Customer Value Understanding and Idea Generation. *Industrial Marketing Management* 31:305-315.
- Goffin, K. (2002). Repertory Grid Techniques. In Partington, D. (ed.) *Essentials Skills for Management Research*. London: Sage Publications.
- Goffin, K., Mitchell, R., (2010). *Innovation Management: Strategy and Implementation Using the Pentathlon Framework*. London: Palgrave Macmillan.
- Goffin, K., Lemke, F., Koners, U., (2010). *Identifying Hidden Needs: Creating Breakthrough Products*. London: Palgrave Macmillan.
- Goffin, K., Varnes, J.C., van der Hoven, C., Koners U., (2012). Beyond the Voice of the Customer. Ethnographic Market Research. *Research Technology Management*, July-August,
- Griffin, A., Hauser, J.R. (1993). The Voice of the Customer. *Marketing Science* 12 (1): 1-27.
- Gruner, K.E., Homburg, C., (2000). Does Customer Interaction Enhance New Product Success? *Journal of Business Research* 49:1-14.
- Kelly, George A. (1955). *The Psychology of Personal Constructs: Vol 1 and 2*. New York: WW Norton.
- King, R. (1987). Listening to the Voice of the Customer: Using the Quality Function Deployment System. *National Productivity Review*.
- Mahajan, V., Wind, J., (1992). New Product Models: Practice, Shortcomings and Desired Improvements. *Journal of Product Innovation Management* 9:128-139.
- Nijssen, E.J., Frambach, R.T., (1998). Market Research Companies and New Product Development Tools. *Journal of Product & Brand Management* 7 (4):305-318.

- Nijssen, E.J., Frambach, R.T., (2000). Determinants of the Adoption of New Product Development Tools by Industrial Firms. *Industrial Marketing Management* 29:121-131.
- O'Connor, G. C., (1998). Market Learning and Radical Innovation: A Cross Case Comparison of Eight Radical Innovation Projects. *Journal of Product Innovation Management* 15:151-166.
- Ottum, B.D., Moore, W.L., (1997) The Role of Market Information in New Product Success/Failure. *Journal of Product Innovation Management* 14:258-273.
- Schirr, G., (2012). Flawed Tools: The Efficacy of Group Research Methods to Generate Customer Ideas. *Journal of Product Innovation Management* 29 (3):473-488.
- Ulwick, A.W. 'Turn Customer Input into Innovation', *Harvard Business Review*, Vol. 80, No. 1, January 2002, pp91-97.
- Veryzer, R.W., (1998). Key Factors Affecting Customer Evaluation of Discontinuous New Products. *Journal of Product Innovation Management* 15:136-150.
- Zahay, D., Griffin, A., Frederiks, E., (2004). Sources, Uses, and Forms of Data in the New Product Development Process. *Industrial Marketing Management* 33: 657-666.