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Original Paper

Exploring How Employed Market Research Experts Select Voice-of-Customer Methods

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Abstract

Successful product innovation is critically dependent on the identification of customer needs during new product development (NPD). Identifying customer needs is referred to as integrating the *voice of the customer* (VOC) and there is a wide range of methods available. VOC is often procured from market research agencies as specialized suppliers, but scholars have left the selection of VOC methods by these agencies unnoticed despite the magnitude of this industry and the origin of VOC as a practice from these suppliers.

To understand how market research methods are selected by these agencies, in-depth interviews were conducted using the *repertory grid technique*, which is an effective method for tapping experts' knowledge. As the research was exploratory, the data were analyzed using grounded theory and from the theoretical perspective of decision-making and knowledge management.

The results show that the selection of VOC methods is based not only on the attributes of the methods being considered but also the relationship between the agency and the client; the field in which the research will be conducted; and the required outcomes. The research makes several important contributions. First, it shows that market research experts do not always choose the most effective method for their clients; compromises are made in choosing a viable method for that client, which will derive a satisfactory result for the client.

The results contribute to literature by – for the first time - showing how an expert's tacit knowledge and the agency's interpretation of the client's comprehensibility influences the choice and use of VOC methods. Existing literature proposes firm and project contingencies, but the present study develops a theoretical model of the complex and granular satisficing choice-making by these suppliers in these inter-firm relationships. For managers, the findings indicate how VOC methods are chosen in practice and allow compromises to be identified and so consciously to be accepted or rejected.

Keywords: market research methods, Voice-of-Customer, VOC effectiveness, market research agencies, customer insights

Introduction

The importance of identifying customer needs during new product development (NPD) is widely recognized (e.g. Davis, 1993; Eliashberg et al., 1997; Mullins & Sutherland, 1998; Flint, 2002; Davila et al., 2006; Cooper & Edgett, 2008). This is because "successful product development demands profound knowledge of customers and their needs" (Kärkkäinen et al., 2001, p. 391). Studies have also indicated that NPD projects based on clearly identified customer needs are more likely to be successful (e.g. Cooper, 1993; Rothwell, 1992). Using market research methods to identify customer needs is often referred to as integrating the *voice of the customer* (VOC) into the front-end of NPD (Davis, 1993; Mullins & Sutherland, 1998; Cooper et al., 2004; Flint, 2002; Davilla et al., 2006; Cooper & Edgett, 2008; Goffin & Mitchell, 2017). Identifying hitherto unknown customer needs (also known as *hidden*

needs or *latent needs* (Kärkkäinen et al., 2001) is a crucial part of the front-end of NPD, particularly when the aim is to develop breakthrough products (Deszca et al., 1999). There is a wide range of VOC methods available, from traditional approaches such as interviews and focus groups, to less widely-applied techniques such as ethnography (Cooper & Dreher, 2010). Numerous researchers have criticized focus groups (e.g. Ulwick, 2002; Goffin et al, 2010; Sandberg, 2002), because they are "ill-suited to [the design of] breakthrough products" (Deszca et al., 2010, p. 613).

Creusen and Hultink (2013) show how the choice of different methods depends on company size, product type, and newness from a contingency and firm perspective. Van Kleef, van Trijp and Luning (2005) identify three performance dimensions influencing ignorance and execution in incorporating VOC into the product development process, including dimensions as the method's 'actionability' and the type of product as the intended outcome (incremental/radical). The Product Development Management Association (PDMA) has published handbooks discussing market research methods for the front-end of NPD. For example, Katz (2013) described the factors to be considered in choosing market research methods for front-end NPD. These cover the scope the of the VOC-project, including which customers to interview, plus how and where they will be interviewed. Yet, the timing and budget for the VOC-project, and the fit of the method with these are mentioned in another handbook (Whipple, Adler, & McCurdy, 2013).

There are many market research agencies that are employed by companies to conduct VOC market research and such agencies have extensive experience. Little previous work, however, has examined the issue of choosing VOC methods when procured from these in an inter-firm context. "Involving suppliers in product development is a knowledge-intensive process" (Lawson & Potter, 2012, p. 1229), but can be difficult to achieve due to the issue of transferring "sticky knowledge" (ibid.). Von Hippel (1994) ties stickiness to cost by arguing that knowledge is difficult to acquire, transfer, and use, whereas Szulanski (1996) proposed stickiness to be embedded in internal practices due to a tacit component and social arrangements. Johnsen (2011) investigates delegation vs. control of suppliers and proposes delegation of decision rights to suppliers as the most effective strategy. Therefore, a sample of 24 market research experts at top agencies in two countries was identified for this study. To enable the experts to articulate their knowledge on market research methods, *repertory grid technique* (e.g. Fransella et al., 2004) was chosen. This technique originates from psychology and is known for its effectiveness in helping interviewees articulate their knowledge. The technique has been used in numerous management studies including some published in this journal. Each one-to-one repertory grid interview explored the ways in which experts select a particular market research method for an NPD project with a client. Due to the exploratory nature of the interviews, it was appropriate to adopt a grounded theory approach to analyze the data (Corbin & Strauss, 2015).

Our study offers several contributions. First, a granular and complex decision-making model of how the supplier's tacit knowledge activates in choosing VOC market research methods is developed showing more decision-parameters than the different contingencies and project characteristics mentioned in the literature. Secondly, based on decision-making theory, the results show that the selection of VOC methods involves significant trade-offs. For example, an agency's most effective approach might not be selected if the method is considered difficult for client managers to comprehend. Thirdly, the selection of a VOC method was shown not to be a purely rational choice (optimal). Instead, the context in which the method will be used is as important as methods themselves' attributes. Fourthly, and although tacit knowledge was already known to be important in NPD, market research experts' knowledge of NPD's front-end has previously neither been identified nor tapped despite an origin of this industry in practice. The results also have substantial implications for companies. Firms outsourcing their front-end market research to agencies need to ensure that the most appropriate methods are employed, as customer insights are fundamental to successful innovation.

The rest of this article is presented in five sections. The first section reviews the innovation and marketing literatures on VOC methods and then introduces two relevant theoretical perspectives—*decision-making* and *knowledge management*. The next section presents the research questions and explains the choice of method. The fourth section presents the results and includes a sample interview and findings across all interviews. The final section covers the discussion and conclusions, with identification of the contribution, limitations and suggested areas for future research,

as well as drawing implications for managers.

Literature Review

A review of the market research and innovation literatures revealed that they both stress the importance of VOC and describe various methods. However, the literature does not provide guidance on how to choose a VOC research method, or identify a suitable theoretical perspective for advancing our understanding of VOC. Therefore, this section covers the following topics:

- The origin of VOC.
- VOC methods.
- Evaluating and selecting VOC methods.
- Two relevant theoretical perspectives.
- Conclusions from the literature.

The Origins of VOC

The discipline of market research is generally agreed to have emerged in the 1920s and, according to Chadwick (2006), the consultants Art Nielsen and Daniel Starch had a huge influence on the industry as they, "could 'read' the buying public and offer up strategy as to how to approach them" (p. 392). Initially, most market research was concerned with advertising but Nielsen was also interested in new product development. Since the 1920s the market research industry has grown to such an extent that agencies have a strong influence, as many OEMs use agencies to conduct market research (Vriens & Vrehulst, 2008). Market research agencies are estimated to generate $60 Billion revenues per year, based on research on customer needs, pricing, advertising, and planning product launches (ESOMAR, 2017).

Davis (1993) said that, "market research represents the *voice of the customer* in the company." (p.310). The term VOC originated in *Quality Function Deployment* (QFD), a Japanese method for matching customer needs with *engineering characteristics*—ways to design product features to address them. QFD became very popular in the 1980s (c.f. Hauser & Clausing, 1988). Cristiano et al. (2000) investigated QFD and concluded that it helps clarify customers' needs. However, QFD is a means of succinctly summarizing customer needs, rather than a method for identifying them. When customers' needs are embedded in the NPD process, it leads to clearer value propositions (Bharadwaj et al., 2012) and more successful new products (Barczak et al., 2009).

Griffin and Hauser (1993) defined VOC as, "the task of identifying customer needs, structuring customer needs, and providing priorities" (p. 1). Furthermore, they described a *customer need* as, "a description, in the customer's own words, of the benefit to be fulfilled by the product or service" (Griffin & Hauser, 1993, p. 4). More recently Kahn, Castellion and Griffin (2005) stated VOC is: "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). A widely-cited definition of VOC is "a complete set of customer wants and needs, expressed in the customer's own language, organized the way the customer thinks about, uses, and interacts with the product … and prioritized by the customer in terms of both importance and performance" (Katz, 2004, p. 170). It should be noted that VOC has been defined in terms of the process by which insights are achieved and in terms of the customer needs identified, rather than in terms of the different methods that can be used.

Interestingly, Akao (1990) pointed out that VoC methods were developed from "practice and experience, not from theory" (p. 3). More than two decades later, the understanding of VOC is also wholly grounded in practice and this led Bharadwaj et al. (2012) to criticize "the lack of an underlying conceptual foundation for the VOC concept" (p. 1012).

VOC Methods

Despite the widespread use of the term VOC, there is no definitive list of the methods it covers. In their seminal paper Griffin and Hauser (1993) considered only two methods: *focus groups* and *interviews*. Cooper and Dreher (2010) used the term VOC as a collective one, covering eight front-end methods: *ethnography*, *focus groups*, *lead users*, *customer visit teams*, *customer brainstorming*, *customer advisory board*, *community of enthusiasts* and *customer-designed products*. Van Kleef, van Trijp and Luning (2005) identified 10 specific methods for the front-end of NPD, including several not mentioned by Cooper and Dreher. A recent study by Markham and Lee (2013) provided a long list of "market research tools". Confusingly, however, their list included variations of the same method (e.g. 'focus groups' and 'online focus groups') and VOC itself was listed as a method, rather than as a collective name for various methods.

Popularity of VOC Methods

Several studies have investigated the usage of different methods by companies. In spite of the large range of methods available, one study found that most companies still opt for focus groups, surveys and the collection of demographic data (Van Kleef, van Trijp, & Luning, 2005). In a study of the automotive industry, Rese Sänn and Homfeldt (2015) found that *customer site visits*, *VOC* (again, confusingly treated as a method in itself), *lead users*, *focus groups*, *interviews*, *ethnography*, and *beta testing* were the most popular methods. Barczak, Griffin and Kahn (2009) had practitioners rank their degree of usage of different market research tools. It was found that *beta testing* was most used, *customers visits* was ranked second, while *VOC* was ranked third (here again the term was used to imply a specific method). *Ethnography* was perceived to be an expensive method to apply and so only used by 25% of companies.

Effectiveness of VOC Methods

Where the aim is to develop more radical products, non-traditional market research methods are more appropriate (Eliashberg et al., 1997), including *lead user technique* and *ethnography*. Similarly, Davila et al. (2006) differentiated between methods that lead to incremental innovation and those that can lead to radical innovation. Traditional market research methods, such as *focus groups*, *conjoint analysis*, *surveys* and *prototyping* tend to lead to incremental innovation, while *ethnography*, *observation*, and *experimentation* work well for radical innovation (Davila et al., 2006). In a survey, Markham and Lee (2013) identified that 58% of the 'best-performing' companies in their sample focused on identifying unarticulated needs, whereas only 40% of the poorer-performers did. This implies that better-performing companies are using more sophisticated methods of market research.

Cooper and Dreher (2010, p. 41) investigated "management's perception of the effectiveness of… [VOC methods] in generating excellent, high-value new product ideas.". *Ethnography* and *customer visits* scored highest in terms of perceived effectiveness but, "the majority of businesses today are not employing these extensively, or they are not using these them correctly or consistently" (ibid p. 48). Importantly, Cooper and Dreher's study showed that the most popular VOC methods are *not* the ones that are perceived as most effective. (Unfortunately, their study did not consider whether companies are applying the methods themselves or through market research agencies.)

Nijssen and Frambach (1998) suggested that the most appropriate VOC methods in the early stages of NPD 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 & Frambach, 1998, p. 312). Rese Sänn and Homfeldt (2015) found that VOC methods could be useful at all stages of NPD. Van Kleef et al (2005) focused on the attributes of methods, characterizing them by whether informants must be familiar with the products being investigated; whether needs are directly articulated by customers or have to be derived indirectly; and the 'actionability' of the results—whether a method leads directly to the identification of product attributes (specifications).

Goffin, Lemke and Koners (2010) proposed that market researchers need to use a combination of 'traditional' and 'modern' methods. This is because researchers need to identify different types of needs. The different types of need 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 at al., 2010, p. 8). However, no empirical evidence was provided that that combining techniques improves the effectiveness of VOC investigations.

The Product Development Management Association (PDMA) has published handbooks discussing market research methods for the front-end of NPD. For example, in one of these Katz (2013) described the factors to be considered in choosing market research methods for front-end NPD. These cover the scope the of the VOC-project, including which customers to interview, plus how and where they will be interviewed. In another PDMA Handbook, the timing and budget for the VOC-project, and the fit of the method with these are mentioned (Whipple, Adler, & McCurdy, 2013).

There is some evidence of situations in which certain methods are ineffective. Nijssen and Frambach (1998) identified shortcomings in some VOC methods, for example that they require long lead times, are expensive, and are not always accurate. Schirr (2012) argued that focus groups and brainstorming are ineffective at uncovering hidden needs and that individual interviews are effective at generating quality ideas from customers. The main criticisms of surveys and focus groups are that they lead mainly to incremental ideas and are conducted outside the customer's environment (Goffin et al., 2012).

Although the early Griffin and Hauser (1993) paper specifically compared focus groups and surveys, most of the VOC literature discusses methods in isolation (e.g. Rosenthal & Capper, 2006), rather than in comparison with each other. This means that the advantages and limitations of each method are not always clear.

Conclusions from the VOC Literature

The main conclusions from the literature are:

- The term Voice of the Customer (VOC) was coined in the 1980s. It refers to customer needs and is also used as a collective term for the range of methods that can give insights into customer needs at the front-end of NPD. However, there is no accepted or 'definitive' list of VOC methods.
- Based on their attributes, certain VOC methods are perceived to be more effective for radical innovation and for use during the front-end of NPD.
- A number of studies have looked at the frequency of use of different methods and their perceived effectiveness, but not at the way in which methods are selected for particular NPD projects.
- Market research agencies that investigate customer needs for clients have a significant influence on NPD. Surprisingly, scholars have not investigated the views and perceptions of market research experts at these agencies.
- Despite its widespread usage, the concept of VOC has been criticized for not having an adequate theoretical foundation.

Theoretical Perspectives

The lack of a theoretical perspective in the study of VOC has been bemoaned. So, for this study of how VOC methods are selected, two relevant perspectives were identified: *knowledge management* and *decision-making theory*.

Knowledge Management

Many authors have identified that knowledge management is highly relevant to the study of new product development (e.g. Howells, 1996; Thomke & Fujimoto, 2000; Mascitelli, 2000; and Richtner et al, 2014). Of particular interest are the two types of knowledge: *explicit* and *tacit*. Whereas explicit knowledge is easily and readily articulated and documented, tacit knowledge is difficult to articulate and share (Nonaka & Tackeuchi, 1995). Polanyi (1966) proposed that knowledge is personal and context dependent as exemplified in the seminal quote: "We can know more than we can tell" (p. 4). There is some controversy around the degree to which tacit knowledge can be converted into explicit

knowledge and shared (Connell, Klein, & Meyer, 2004; Cook & Brown, 1999). This is because tacit knowledge is difficult to communicate (Jimes & Lucardi, 2003; Leonard & Sensiper, 1998), other than by direct interaction (Hernandez-Serrano, Spiro, Lamartine, & Zoumas, 2002). "Information resides in media and networks. It is tangible. In contrast, knowledge… is intangible" (Nonaka & Konno, 1998, p. 41).

The concept of tacit knowledge helps explain why customers may struggle to articulate their tacit knowledge and thus their needs (Mascitelli, 2000; Kärkkäinen et al., 2001). This means that market research methods that can reveal customers' tacit knowledge are particularly important during the front-end of NPD (Deszca et al., 2010). Similarly, tacit knowledge is relevant to understanding market research experts' knowledge. They will have embedded tacit knowledge, gained from their experiences of different VOC methods, NPD projects, and client contexts. An *expert* is: "highly regarded by peers" and their "judgments are uncommonly accurate and reliable" (Hoffman, Shadbolt, Burton, & Klein, 1995, p. 132). However, Polyani (1966) recognized that it is challenging to elicit expert knowledge. Similarly, Cooke (2004) states that, "The elicitation of expert knowledge is associated with numerous difficulties... It can be especially hard for the expert to convey… [their] knowledge" (p. 30).

Decision-making Theory

The selection of a market research method for an NPD project involves *decision-making* and so it is important to understand this theoretical perspective. Some decisions are made *rationally*, where the available alternatives, decision-maker's preferences, and expected outcomes are all considered (March, 1991). However, the literature also recognizes that decisions are made from a *contingency perspective* (Burns & Stalker, 1961; Lawrence & Lorsch, 1967), where consideration of the context is paramount. In these situations, the decision is not purely rational and there might not be a 'right choice'.

So, certain decisions are made under conditions of *bounded rationality*, where "decision makers do not consider all consequences of their alternatives. They focus on some and ignore others" (March, 1991, pp. 8-9). Therefore, many decisions involve *satisficing*—a term based on a combination of the words '*satis*factory' and 'sacri*ficing*'. This suggests that the 'right choice' may not be possible in all circumstances. It is more a case of making a satisfactory selection and sacrificing some advantages, in order to make a fast decision, or to account for context. Decision-makers choose an alternative that is 'good enough' (March, 1991).

The differences between the rational choice model and bounded rationality is illustrated by Figure 1. On the left-hand-side rational decision-making is shown in which, to attain a certain goal G, the alternatives are known ($A_{1\text{-}4}$), the consequences of their usage are known ($C_{1\text{-}4}$) and so a decision can be made, choosing the alternative with the best consequences (outcome). Simon recognized that in many situations, the information and time are not available for a fully rational decision to be made. Therefore, trade-offs can be necessary. As shown on the right-hand-side of the diagram, when decisions are made under conditions of bounded rationality, a single goal is not considered. Rather a range of variations on the goal ($G_{1\text{-}4}$) are considered, each with a degree of compromise (sacrifice). The goals are considered in comparison with the alternatives (A_3 from $A_{1\text{-}4}$), leading to a set of consequences C_3 which adequately meets the goals $G_{2\text{-}3}$. Bounded rationality involves: varying the goal in conjunction with the alternative selected, and a clear element of compromise. It should also be noted that, from a knowledge management perspective, Nonaka and Takeuchi (1995) stressed that decision-making is not purely logical and tacit knowledge is involved in coming to a decision.

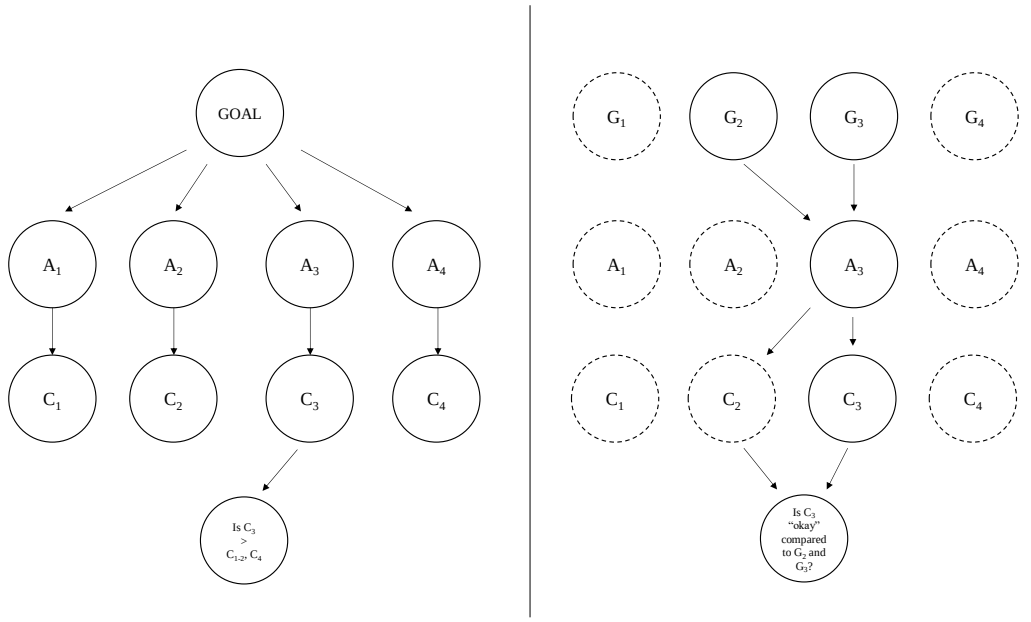

Figure 1. The differences between rational choice model and bounded rationality (from Enderud, 1976)

Research Design

Research Question

The first stage in the research design was defining the research question (RQ). As the literature review showed, previous research has not investigated how VOC methods are selected and so the research is exploratory. To investigate the phenomena of interest, the research focused on the opinions of market research experts (their expert knowledge). The research question is: *How do market research experts select VOC methods for clients' front-end NPD projects*?

Data Collection Method

To answer the research question, a suitable research technique was necessary to uncover experts' knowledge (based on their experience of using different methods), much of which was likely to be tacit in nature. It was also necessary to limit interviewer bias, by collecting the respondents' own words and explanations. Repertory grid technique was chosen as it stimulates interviewees to articulate their views on complex topics, using their own words (Fransella et al., 2004; Jankowicz, 2004) and without prompting or leading the interviewee. This technique has been used in many types of exploratory management research (see Fransella et al., 2004 for examples) and recently for innovation management studies (e.g. Micheli et al., 2012). Reviewing the results of these previous studies gave confidence that repertory grid technique could be used to identify how market research experts select VOC methods.

Interview Technique

Each interview followed the guidelines in the repertory grid methodology literature (e.g. Fransella et al., 2004). Respondents were asked to name six market research (VOC) methods with which they were familiar in the context of conducting market research for clients' NPD projects. 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 is termed a *construct*—in this study a characteristic of a VOC method, expressed in the interviewee's own language. (It should be noted that repertory grid technique always uses a broad question to stimulate interviewees' thinking, rather than more normative question, such as: what attributes do you consider in your selection?)

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 how they select 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 (three cards) was presented and the interviewee was asked the same question as before. This elicited a second construct, followed by a new set of ratings. Further triads were presented and each time the same question was used to elicit subsequent constructs. 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 important to note that the repertory grid technique elicits interviewees' personal constructs—it does not provide the interviewee with possible responses and therefore eliminates interviewer bias. In addition, repertory grid enabled interviewees to identify multiple factors (constructs) connected to the phenomena of interest.

Sample

An exploratory, purposive sample was used in the two countries in which the research was conducted: Denmark and the UK. The samples in each country were derived through a combination of approaches. Existing contacts at market research agencies were used to gain access for pilot interviews; a review of websites (e.g. Anonymous, 2018) was used to identify leading agencies which were then contacted; snowballing technique was also used as most interviewees could recommend experts at other organizations. In total, 24 market research experts were interviewed (see Table 2); all of them had years of experience and were regularly engaged in selecting VOC methods for their clients. A pilot was conducted in each country to prove the viability of the interview. All of the final interviews were conducted in English, recorded and transcribed.

Table 1. The Exploratory Sample

Country / Interview Designations	**Typical Interviewees**	**Companies**	**Total**
Denmark DK1 – DK 10	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 UK1 – UK14	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	

Analysis

To understand how VOC methods are selected by experts, an inductive approach was selected (Corbin & Strauss, 2015). Inductive studies of innovation management are especially appropriate for building theory about a new topic (Eisenhardt, 1989).

Corbin and Strauss (2015) developed an analysis framework based on grounded theory, which is shown in Figure 2. This was applied to give structure to the analysis and to ensure validity and reliability. It should be noted that, as indicated by the arrows on the diagram, that there was some iteration between Stages 1, 2 and 3.

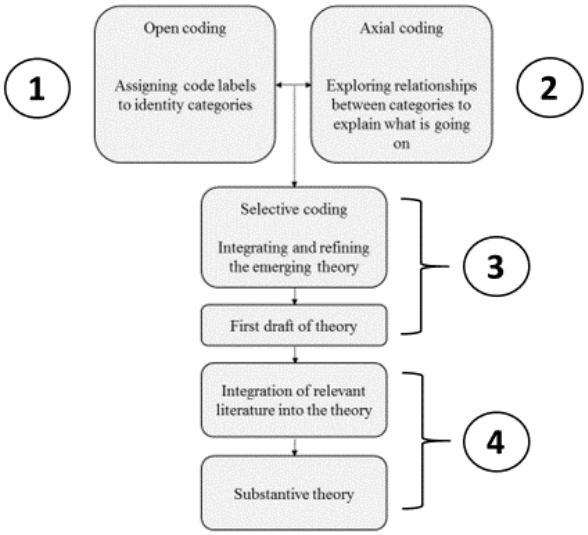

Figure 2. The Main Stages of Grounded Theory (slightly modified from Corbin & Strauss, 2015, p. 344)

Guided by the Corbin and Strauss Framework, there were four main stages to the analysis:

1) *Open coding* was used to identify categories of repertory grid constructs. The constructs from individual grids were first analyzed (Stage 1a). Next, they were compared across the interviews, and then grouped into categories (Stage 1b). At this stage a preliminary reliability check was made (c.f. Jankowicz 2004), thus enabling the identification of 13 construct categories.

2) *Axial coding* explored relationships between categories. This was done by identifying 4 meta-categories of constructs and the different categories of constructs were related to each other (Miles and Huberman, 1994).

3) *Selective coding* looked specifically for evidence in interview transcripts from the individual grids of the relationships between categories and led to the *first draft of theory*.

4) *Developing substantive theory* was achieved through comparing the first draft of theory to the extant literature on VOC, and the knowledge management and decision-making literature.

Table 2 details the actions taken at each stage to ensure validity and reliability, with details of the researchers involved, the time required, and the output.

Repertory Gird Analysis

Different variants of repertory grids can be used, depending on what is pre-defined and what is elicited from the interviewee. For exploratory research questions, repertory grid interviews focus on eliciting personal elements and constructs, therefore allowing interviewees to concentrate on methods they knew and constructs that occurred to them. At the end of the interview, supplied constructs were also discussed with interviewees, thus gathering their views on particular constructs but without biasing the interview. Two supplied constructs were discussed: whether methods were *effective for breakthrough product ideas;* and whether methods were *good value for money.* Where mainly personal elements and constructs are elicited, "the more qualitative the data analysis will need to be… [and the analysis] will typically focus around the identification of emergent themes using coding processes, in the manner of grounded theory" (Edwards et al., 2009, p. 790).

Results

The results will be presented according to the stages of analysis based on the Corbin and Strauss (2015) framework.

Stage 1a: Open Coding—Analysis of Individual Grids

Each of the 24 grids were first analyzed separately. An example is the interview with Interviewee DK1, the managing director of a well-known consultancy in Copenhagen, which elicited the grid shown in Figure 3. 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' and "*Innovation Journeys, which are built upon journeys, in-depth interviewing, and things like that. But again, these are methodologies that we have been developing internally in our company*".

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 was "description of the customers" with the pole "description of products". 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".

Table 2. Stages of Grounded Theory Analysis (based on Corbin & Strauss, 2015)

Stage	**1 - Open Coding**	**2 - Axial Coding**	**3 - Selective Coding and First Theory**	**4 - Relevant Literature and Substantive Theory**
Description	"Assigning code labels to identify categories"	"Exploring relationships between categories to explain what is going on"	"Integrating and refining the emerging theory. First draft of theory"	"Integration of relevant literature into the theory. Substantive theory"
Researchers involved[1] / Description of the stage	Researchers A&B and C&D; then A, B, C&D: ▪ First coding (identification of constructs from individual grids; comparison across interviews)	Researchers A, B, C&D: ▪ Realization that the categories of constructs did not only relate to characteristics of VOC methods but	Researchers A&D, then B&C: ▪ Analysis of evidence in interview transcripts of the relationships between meta	Researchers A&D, then A, B&D ▪ Comparison of the model with *VOC literature.* ▪ Comparison of the data to

[1] Note: Researchers A, B, C&D refer to the authors of this paper.

	▪ Reliability check ▪ Derivation of 13 improved construct categories	also the context. ▪ Identification of 4 'meta-categories' of constructs ('THE METHOD'; 'THE RESEARCHER'; and 'THE CLIENT / FIELD' & 'THE OUTCOMES')	categories and categories ▪ Creating the first draft of the model ▪ Determination that some construct categories 'bridged' meta-categories	*decision-making theory* (coding the data for evidence of *satisficing*).
Time required for this stage	▪ 28-person hours to prepare construct cards based on transcripts ▪ 12-person hours for coding for each pair of researchers ▪ 12-person hours for the reliability table (Figure 3) ▪ 10 hours to discuss discrepancies / identify and agree 13 new construct categories ▪ 5 hours per pair of researchers for re-coding into 13 construct categories (estimated)	▪ 16-person hours to identify the meta-categories ▪ 4-person hours to check which categories fitted into which of the 4 meta-categories	▪ 32-person hours to identify and evolve the model	▪ 30-person hours to refine the substantive model (Figure 6)
Output of this stage	▪ 13 categories of constructs (Table 4) ▪ 13 enhanced category definitions	▪ 4 meta-categories of constructs (2nd column of Table 4). ▪ Relationship of 13 categories to 4 meta-categories.	▪ First draft model of the 4 meta-categories and the 13 categories (Figure 4)	▪ Final substantive model of the 4 meta-categories and the 13 categories and the inter-relationships (Figure 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 *"You use data to make up your mind to produce results, to make consultancy recommendations to clients. But surveys do not produce recommendations."* During the interview, it became clear that the interviewee found it difficult to articulate all of the factors that he considered in choosing a particular method for a specific project. At several times he paused for long periods to collect his thoughts.

After approximately 45 minutes of interviewing, the last part of the interview switched to two provided constructs (S1 and S2: indicated by the darker shading on the grid). In rating the elements against the provided construct *effective for breakthrough product ideas* the interviewee said "*innovation journeys will do it, focus groups will do it less, conversion model not at all, conjoint analysis not*". In discussing the supplied construct *good value for money,* he said *"surveys can be really bad for the client if is not done properly, and really good value if it is done very good... The same thing with the focus group approach, if you have a bad moderator, or a bad client, it could really not add value for anybody. So, it depends on the market situation and what the client wants",* thus indicating that the decision on the method to be used needs to take account of the skills of the researcher involved and the client's preferences (this focus on the client was found in many interviews).

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
S1	Effective for breakthrough product ideas	4	1	1	5	2	2	Less effective for breakthrough product ideas
S2	Good value for money	4	1	3	1	3	3	Poor value for money

Figure 3. Repertory Grid from Respondent Number DK1

Stage 1b: Open Coding—Analysis of Multiple Grids

The 24 interviews elicited a total of 228 constructs related to market research methods; with each interview eliciting an average of 9.5 constructs. 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 written on a *construct card* which included the construct, the pole, any relevant quote from the interview transcripts and a unique reference number (e.g. 2.7 indicated the 2nd interview and the 7th construct).

Each pair of researchers had a set of 228 construct cards to allocate into categories that emerged from discussions. Each of the construct categories was then labelled. The researcher pairs worked independently over a period of approximately 6 hours. Researchers A & B came up with 27 categories and Researchers C & D 25. (It should be noted that because the literature did not contain clear categories, the construct categories were emergent.) These categories were entered into a *reliability table*, with the construct card numbers inserted at the intersections between categories provided by the 2 pairs of researchers (see Table 3).

Table 3. Extract from the 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, 20.3,20.7,21.7,23.7,24.8 [=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 were shaded and included 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 Row 3 in Columns 4 and 5 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.

Whether such reliability checks are applicable to qualitative (exploratory data) is controversial (Golafshani, 2003) but Richards (2009, p108) said, “do the tests but interpret them carefully… we will not be concerned when we find inconsistency. We do, however, need to know about it, discuss it, to place any coding-dependent analysis in that context, and document differences”. To understand the categories developed, the inter-coder reliability was calculated and found to be 51%. This is lower than previous studies (e.g. in Michele et al, 2012 it was 74%) and indicated that the categories of constructs derived by Researchers A&B were not easy to align with the categories from Researchers C&D. However, the reliability table allowed the specific categories to be identified where there was overlap, that is the categories were closely related to each other. The consideration of these issues was prominent in two days of discussions between the four researchers (A, B, C&D), in which 13 more granular and robust categories emerged and which could be robustly defined.

Table 4. Categories and Meta-categories of Constructs

	Meta-Category(ies) / Category	Explanation	Category Definitions	Category Excludes	Example Quotes
1	THE METHOD / Method Attrib	Attributes of the methods considered in selecting a method	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; *why* or *what?*	*"It has to do with the qualitative versus quantitative approach… whereas quantitative research is objective from the beginning"* (Construct 1.7) *"…in this case workshop is explorative and the rest is used when we have something to test…"* (Construct 5.5) *"…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…"* (Construct 8.6) *"…if you work with innovation there is no point in innovating something that has no buyer potential…"* (Construct 8.4)
2	THE METHOD / 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.	*"You don't work to a specific set of questions…"* (Construct 23.6) *"You can't plan what they are going to do so you always have to be prepared for the unexpected"* (Construct 2.5) *"In observation, you go out without any or very little preparation…"* (Construct 7.6) *"Improvisation and making new directions during the interview, compared with surveys which are all planned."* (Construct 3.4)

	Meta-Category(ies) / Category	Explanation	Category Definitions	Category Excludes	Example Quotes
3	THE METHOD / 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.	*"…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 …"* (Construct 5.3) *"… Observations and focus groups is first-hand information, and desk research is second hand …"* (Construct 2.6).
4	THE METHOD / 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)
5	THE CLINET-FIELD / THE RESEARCHER / Researcher-Respondent 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)
6	THE CLIENT-FIELD / THE RESEARCHER Agency-Client Relations	Relationship between agency and client.	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)
7	THE CLIENT-FIELD / Inter-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)

	Meta-Category(ies) / Category	Explanation	Category Definitions	Category Excludes	Example Quotes
8	THE RESEARCHER / THE METHO Researcher-Method	Researcher's feelings about the method	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)
9	THE CLIENT-FIELD / THE METHOD 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 expertize	*"…also involves the creativity level of the respondents, while surveys and observation studies do not."* (Construct 4.7) *"…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) *"…provide the possibility of respondents to interact with objects."* (Construct 7.1)
10	THE CLIENT-FIELD / Environ	Environment	The respondent's world; the environment; research context; real world versus lab; field versus clinical.	Data collection method; analysis method.	*"you use the elements of the environment to support your interview"* (Construct 4.1) *"…understanding people's attitudes and behaviour in real life contexts"* (Construct15.1)
11	THE RESEARCHER / Expertise	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.	*"To do a very good conjoint analysis, you need a high level of expertise"* (Construct 6.9) *"The ability of anybody to pick it up and do it"* (Construct 17.8)

	Meta-Category(ies) / Category	Explanation	Category Definitions	Category Excludes	Example Quotes
12	THE METHOD / Insights Generated	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.	*"you can see that people going around saying one thing and doing something else"* (Construct 3.1) *"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) *"…observation methods could give you an idea about the feelings..."* (Construct 7.8)
13	THE METHOD / Validity	Validity of data collection, analysis and outcomes	True responses; surroundings	Method of data collection; method selection;	*"…you believe in what your respondents tell you… that is the truth …"* (Construct 3.6) *"…questions is a very convenient way of collecting data, but it's a biased way of collecting data "* (Construct 24.09)

Stage 2: Axial Coding

Richards (2009) talked about developing categories of codes which simply describe the key themes in the data. The 13 categories in the current study developed can be considered as such a descriptive coding. *Axial coding* goes further, in that it looks for how the relationships between the codes can explain the phenomenon under consideration (ibid). To do this, the transcripts of all 24 interviews were re-reviewed, to identify how interviewees had talked about the relationships between different constructs.

Iterative reviews of the interview transcripts led to a deeper understanding of the meanings in the data. In particular, the data were checked for instances where quotes indicated that certain categories were related. For example, Interviewee 1 said "*Focus group is only valid if you have really, really good moderators… Is not the [just] method itself*", thus indicating that decisions about methods need to consider the researchers available. In a similar fashion, Interviewee 4 explained that only if a "*high level of involvement of the client*" could be achieved, were certain methods appropriate. Across the 24 interviews, numerous quotes indicating the interplay between different categories of constructs were found, thus indicating the complex nature of selecting market research methods.

The innovation literature largely focuses on the attributes of VOC methods and such attributes did emerge in the interviews (e.g. categories of constructs: *Method Attib*; *DataCollect*; *DataSources*). However, several other categories emerged that were not directly related to the attributes of the VOC methods. Exploring the data, it became clear that there were meta-categories (denoted by capitals) of constructs, of which 4 were identified: *THE METHOD*; *THE AGENCY / RESEARCHER*; *THE CLIENT-FIELD*; and *THE OUTCOMES*. So, the data showed that market research experts consider more that the attributes of VOC methods in selecting a specific method for a particular project.

Stage 3: Selective Coding

The next stage of the analysis was the grouping of the 13 categories of constructs under the 4 meta-categories. For example, *THE METHOD* included four categories: *Analysis*, *DataCollect*, *DataSources*, and *MethodAttrib*. All of these categories of construct were related to a particular method.

Similarly, *THE AGENCY / RESEARCHER* included *Expertise* but was found to have spanned other meta-categories (e.g. *Researcher-Method*). Table 4 indicates how the final 13 construct categories related to each of the meta-categories and this led to the tentative model shown in Figure 4. Here, again, analysis of the transcripts helped identify related and boundary-spanning categories.

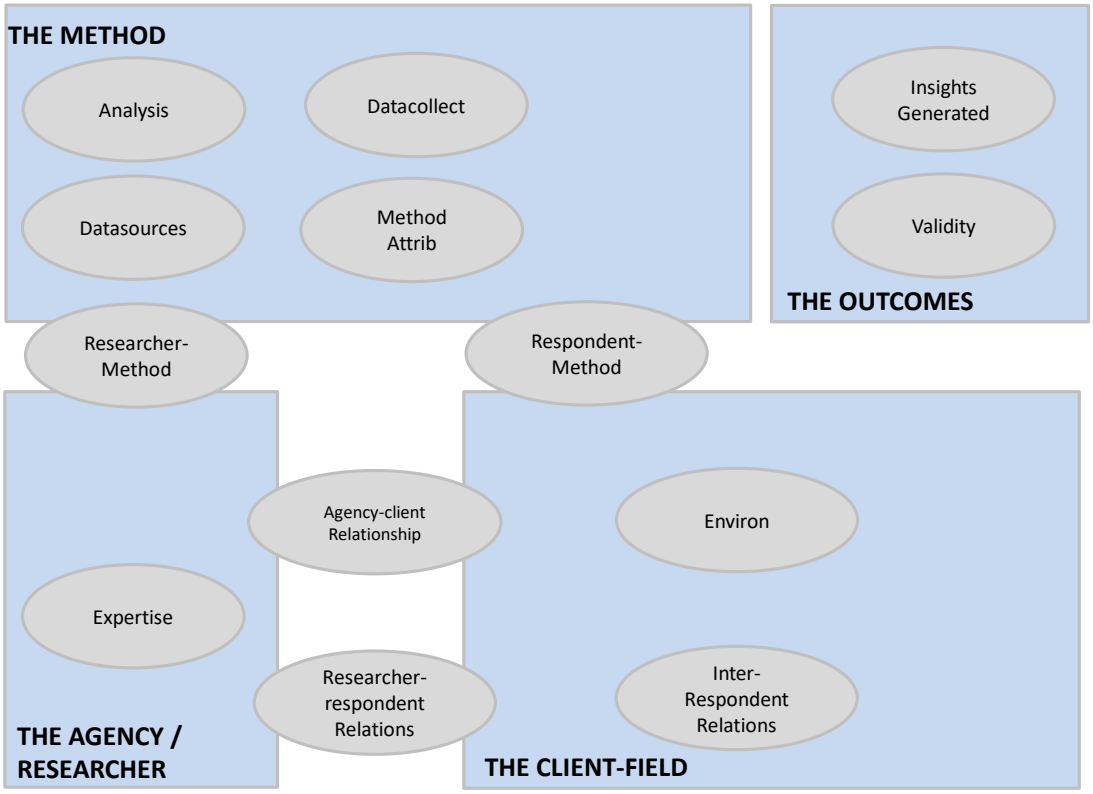

Figure 4. Model of How Market Research Experts Select a VOC Method (13 construct categories linked to 4 meta-categories)

Stage 4: Developing Substantive Theory

The model in Figure 4 next needed to be compared against the relevant literature to be integrated. This was done mainly by taking a decision-making theory perspective. The transcripts were reviewed for evidence that satisficing was present in selection decisions.

It was found that the data included numerous examples of satisficing, from which six examples will be given. Interviewee DK5 said that the decisions "*very much depending* [sic] *on how the clients are working and what their organizations are capable of... it really depends on the case, how much you know yourself, depending on the moderator, on the customer* [rather than just the most effective method]". Interview DK6 said "*the typical mistake clients do* [make] *is not engaging with consumers in the early stages… we try to convince clients to involve consumers much earlier…* [we have to consider] *something that is called "face value for the client." This regards how easy or difficult is for the client to get an overview of the results*". Similarly, Interviewee DK7 said "*the client is the one who makes the decision on what to buy, and it is obvious that they buy focus groups. They buy for reasons we are not told about…*" Interviewee DK8 even went as far as to say "*We work with innovation, but we are not innovator ourselves*" and "*it doesn't* [just] *depend on what kind of methodology used, but on the culture of the company*". Interviewee UK7 said to get ideas for breakthrough products he would choose "*qual*

[methods] *but from a business point of view it's probably more quant because there are people always asking for the numbers*" and "*conjoint analysis is far better. It involves numbers and top-managers love numbers*". And finally, "*One of the challenges is to do more advanced research… It can be difficult to communicate the results to the clients*" (Interview Ref KF). So, the data indicate that market research experts have to make sacrifices in order to achieve a satisfactory outcome. There were also several examples of experts' frustration with clients. A typical comment was, a "[This is a] *Client who will not spend money on it, they do not appreciate it because they do not understand it*" (Interview Ref AS).

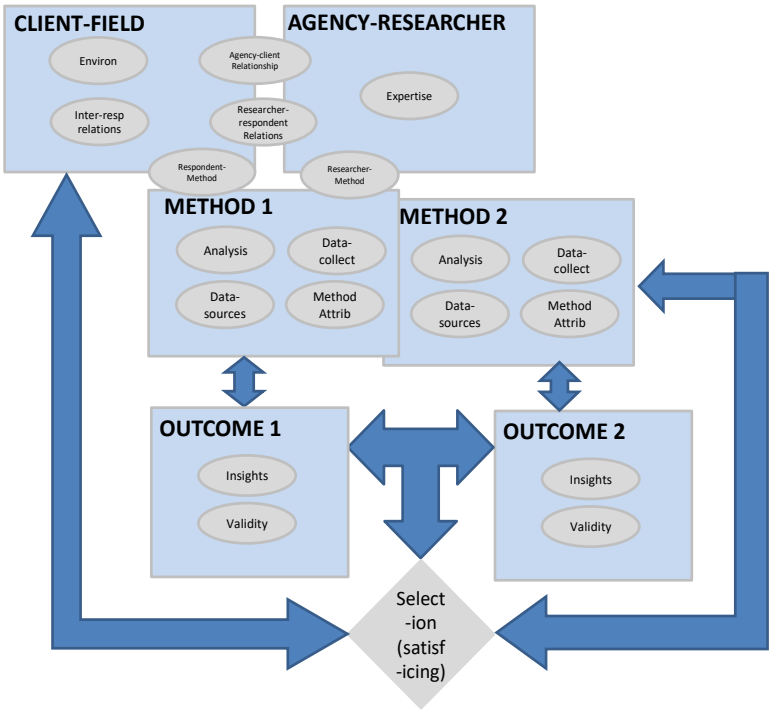

Figure 5. Final Model of Market Research Experts' Satisficing in Selecting a VOC Method

Based on the recognition that the selection of a VOC method by market research experts is subject to bounded rationality, the tentative model was modified to include this important aspect and, particularly, the way satisficing was evident in many of the interviewees' statements. Figure 5 shows the re-arranged model and it can be seen that different methods (METHOD 1 AND METHOD 2) will be considered in the context of the research (with the influence of the CLIENT-FIELD and AGENCY-RESEARCHER) in understanding the potential outcomes (OUTCOME 1 AND OUTCOME 2). The outcome is considered in terms of the 'Insights' that can be generated and their 'Validity'. However, at the point when the selction is to be made, the alternative methods and their potential outcomes are compared to the characteristics of the client and the field in which the project will take place. The decision itself is then subject to satisficing (based largely on comparing METHODS; OUTCOMES and CLIENT-FIELD, as indicted by the large arrows on Figure 5).

Discussion and Conclusions

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 impact of market research agencies on the

innovations produced by their clients is significant and has been overlooked in the past. So, understanding how market research experts from these agencies work—including how they select methods—is worthy of study.

The research showed that the respondents do not choose a method based solely on its characteristics. The results indicate that *THE METHOD*; *THE AGENCY / RESEARCHER*; *THE CLIENT-FIELD*; and *THE OUTCOMES* all are considered by experts, in the way they select a method. Particularly striking is the way that experts do not necessary select the most effective method, instead *satisficing*—choosing what they think is most 'appropriate' not most effective. Figure 5 shows the final model of this 'process'—this can be viewed as a cognitive map of how experts select a method.

Cooper and Dreher (2010) identified a discrepancy between what is perceived the most effective VOC approaches and the frequency of use. The study here offers an explanation to this incongruity in proposing that the choice is based on *bounded rationality* and that companies potentially can be a 'triple tacit knowledge management-problem': the companies possesses knowledge that is not easily made explicit on the job in question, the agency and its researchers similarly holds tacit knowledge, and finally knowledge about each user's individual practice of using a product or service.

Implications for Managers

This research has highlighted surprisingly that maybe the most effective market research methods are not always being utilized. So, client companies are well compromising the level of customer insights they are generating at the front-end of NPD and, consequently, the opportunity to develop more radical innovation. The ramification of this is that the VOC is not being heard as effectively as it could and should be. Client companies—organizations that are outsourcing a key part of their NPD—need to be willing to treat market research projects conducted with agencies as learning opportunities. The (over)-use of focus groups and surveys is berated in the innovation literature and the many of the 24 market research experts interviewed expressed the view that such methods are not effective in developing more radical ideas.

Limitations of the Research

The research was exploratory and addressed a gap in the literature. However, the limitations need to be recognized and they were:

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, have an excellent reputation for their NPD work, and so their perceptions of methods and how they are selected is useful.

2) Many of the respondents used proprietary methods in their work with clients, for example Respondent DK1 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. Such methods are not well understood and are being overlooked by scholars in discussions of VOC methods.

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.

4) Figure 5 is a tentative model based only on the explanations of 24 market research experts. It needs further investigation and testing.

5) The literature review showed that there is significant ambiguity around which methods can be considered to be VOC. For example, McQuarrie and McIntryre (1986) argued that focus groups should be excluded from any list of VOC methods as, in their opinion, the technique is not effective at the front-end of NPD. Another confusion is that some authors refer to VOC *a method.* A systematic review of the literature could help remove the ambiguity around VIC methods.

Recommendations for further research

The following issues warrant further investigation:

1) Much of the front-end market research work is outsourced by manufacturers. Consequently, there are many market research agencies working on NPD and their influence on product innovation needs to be better understood.

2) In the current study, market research experts talked about how they select methods for clients. There is a need for studies on how this operates in practice, from both the client's and the agency's perspective. Figure 5 is tentative and needs to be empirically tested. For this, longitudinal studies of agency-client projects are needed.

3) Agencies proprietary VOC methods warrant investigation. For example, what approaches are being used and how do they compare to other VOC methods?

4) Researchers need to study how NPD teams react to VOC data presented by agencies. How do NPD teams respond? And what levels of success in the final new products are attributable to customer insights?

5) There is ambiguity about which VOC methods are most effective in the different stages of the new product development. Griffin and Hauser (1993) compared focus groups and surveys; their comparative approach needs to be applied to the many different VOC methods, so that a better understanding of the utility of different VIC methods in different situations is available.

Summary

Product innovation is critically dependent on identifying customer needs during new product development (NPD), using market research methods to identify the *voice of the customer* (VOC). Many methods can be used but from the ubiquitous focus groups and surveys have been criticized by being ineffective. Much VOC work is outsourced to market research agencies by manufacturers. To understand how market research methods are selected, a sample of 24 market research experts were interviewed. The choice of a market research method is a complex one, that is not just dependent on the attributes of the methods being considered. Experts consider four factors: the attributes of the methods; the experience of the client to be served, their agency researchers' expertise, and the expected outcomes. Interestingly, the results show that market research experts do not necessarily choose the most effective method for their clients, instead they accept compromises. The results make a clear contribution to theory by showing that the choice of VOC methods is not a purely *rational* one (based on the attributes of methods) but rather a decision based on *bounded rationality* (where a satisfactory choice, rather than the 'right choice' is made). Therefore, this study provides an explanation for the discrepancy identified in the literature that what are perceived as the most the effective market research methods are not the most widely used. For practitioners, this has the implication that the VOC is not being heard as effectively as it could and should be.

References

Akao, Y. (1988). *Quality Function Deployment: Integrating Customer Requirements into Product Design*. English translation: Productivity Press, 1990 (originally published as 'Hinshitutenkai katsuyo no jissai', Japan Standards Association, 1988)

Anonymous. Retrieved March 1, 2018, from https://www.expertmarket.co.uk/market-research/best-market-research-companies-in-the-uk

Baines, P. R., Brennan, R., Gill, M., & Mortimore, R. (2009). Examining the academic/commercial divide in marketing research. *European Journal of Marketing*, *43*(11/12), 1289-1299.

Barczak, G., Griffin, A., & Kahn, K. B. (2009). PERSPECTIVE: Trends and Drivers of Success in NPD Practices: Results of the 2003 PDMA Best Practices Study. *Journal of Product Innovation Management*, *3*, 3-23.

Bharadwaj, Neeraj, Nevin, John R., & Wallman, Jeffrey P. (2012). Explicating Hearing the Voice of the Customer as a Manifestation of Customer Focus and Assessing its Consequences. *Journal of*

Product Innovation Management, *29*(6), 1012.

Burns, T., & Stalker, G. M. (1961). *The management of Innovation*. Tavistock London.

Chadwick, S. (2006). Client-driven change – the impact of changes in client needs on the research industry. *International Journal of Market Research*, *8*(4), 391-414.

Connell, N. A. D., Klein, J. H., & Meyer, E. (2004). Narrative approaches to the transfer of organizational knowledge. *Knowledge Management Research and Practice*, *2*(3), 184-193.

Cook, S. D. N., & Brown, J. S. (1999). Bridging Epistemologies: The Generative Dance Between Organizational Knowledge and Organizational Knowing. *Organization Science*, *10*(4), 381-400.

Cooke, N. J. (2004). *Modeling human expertise in Expert systems* in The Psychology of Expertise: Cognitive Research and Empirical Ai, Hoffman, RR. (Eds.). Psychology Press: New York.

Cooper, R. (1993). *Winning at New Products*. Persues Books, Cambridge, Mass.

Cooper, R. (1999). From Experience: The Invisible Success Factors in Product Innovation, *Journal of Product Innovation Management*, *16*, 115-133.

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., & Dreher, A. (2010). Voice-of-Customer Methods: What is the Best Source of New-Products Ideas? *Marketing Management*, *19*(4), 38-43.

Cooper, R., & Edgett, S. J. (2008). Maximizing Productivity in Product Innovation. *Research and Technology Management*, *51*(2), 47-58.

Cooper, R., Edgett, S. J., & Kleinschmidt, E. J. (2004). Benchmarking Best NPD Practices-III. *Research and Technology Management*, *47*(6), 43-55.

Corbin, J., & Strauss, A. (2015). *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (4th ed.). Sage: London.

Cristiano, J. J., Liker J. K., & White, III, C. C. (2000). Customer-Driven Product Development Through Quality Function Deployment in the U.S. and Japan. *Journal of Product Innovation Management*, *17*, 286-308.

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., & Noori, H. (1999). Developing Breakthrough Products: Challenges and Options for Market Assessment. *Journal of Operations Management*, *17*(6), 613.

Edwards, H. M., McDonald, S., & Young, S. M. (2009). The repertory grid technique: Its place in empirical software engineering research. *Information and Software Technology*, *51*, 785-798.

Eliashberg, J., Lilien, G. L., & Rao, V. R. (1997). Minimizing Technological Oversights: A Marketing Research Perspective. In R. Garud, P. R. Nayyar, & Z. B. Shapira (Eds.), *Technological Innovation* (pp. 214-232). Cambridge University Press.

ESOMAR. Retrieved March 1, 2018, from https://www.esomar.org/uploads/public/publications-store/reports/global-market-research-2014/ESOMAR-GMR2014_Preview.pdf

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.

Fransella, F., Bell, R., & Bannister, D. (2004). *A manual for repertory grid technique* (2nd ed.). Chichester, UK: John Wiley.

Goffin, K., & Mitchell, R. (2017). *Innovation Management – Effective Strategy and Implementation* (3rd ed.). 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.

Golafshani, N. (2003). Understanding Reliability and Validity in Qualitative Research. *The Qualitative Report*, *8*(4), 597-607.

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.

Hauser, J. R. & Clausing, D. P. (1988). The House of Quality. *Harvard Business Review*, May/June.

Hernandez-Serrano, J., Spiro, S., Lamartine, H., & Zoumas, B. L. (2002). Using experts' experiences through stories in teaching new product development. *Journal of Product Innovation Management*, *19*(1), 54-68.

Hoffman, R. R., Candall, B., & Shadbolt, N. (1988). Use of the Critical Decision Method to Elicit Expert Knowledge: A Case Study in the Methodology of Cognitive Task Analysis. *Human Factors: The Journal of the Human Factors and Ergonomics Society*, *40*(2), 254-276.

Hoffman, R. R., Shadbolt, N., Burton, M., & Klein, G. (1995).Eliciting knowledge from Experts: A Methodological analysis. *Organizational behavior and human decision process, 62*(2), 129-158.

Howells, J. (1996). Tacit Knowledge, Innovation and Technology Transfer. *Technology Analysis & Strategic Management*, *8*(2), 91-106.

Jankowicz, D. (2004). *The easy guide to repertory grids*. Chichester: Wiley.

Jimes, C., & Lucardi, L. (2003). Reconsidering the tacit-explicit distinction: A move toward functional (tacit) knowledge management. *Electronic Journal of Knowledge Management*, *1*(1), 23-32.

Johnson, B., Lorenz, E., & Lundvall, B.-Å. (2002). Why all this fuss about codified and tacit knowledge? *Industrial and Corporate Change*, *11*(2), 245-262.

Kahn, K. B., Castellion, G., & Griffin, A. (2005). *The PDMA Handbook of New Product Development* (2nd ed.). Hoboken: John Wiley & Sons, Inc.

Kärkkäinen, H., Piipo, P., Puumalainen, K., & Tuominen, M. (2001). Assessment of Hidden and Future Customer Needs in Finnish Business-to-Business Companies. *R&D Management*, *31*(4), 391-407.

Katz, G. M. (2004). The Voice of the Customer in *The PDMA Toolbook 2 for New Product Development* (Belliveau, P., Griffin, A., & Somermeyer, S. M., Eds.). John Wiley & Sons, Hobroken, New Jersey.

King, R. (1987). Listening to the Voice of the Customer: Using the Quality Function Deployment System. *National Productivity Review*, *6*(3), 277-281.

Koners, U., & Goffin, K. Learning from Post-Project Reviews: A Cross-Case Analysis. *Journal of Product Innovation Management*, *24*(3), 242-258.

Lawrence, P. R., & Lorsch, J. W. (1961). *Organization and Environment*. Harvard Business School, Harvard, Mass.

Leonard, D., & Sensiper, S. (1998). The role of tacit knowledge in group innovation. *California Management Review*, *40*(3), 112–32.

Mahajan, V., & Wind, J. (1992). New Product Models: Practice, Shortcomings and Desired Improvements. *Journal of Product Innovation Management*, *9*, 128-139.

March, J. G. (1991). *A primer on Decision Making: How decisions happen*. The Free Press (New York, N.Y).

Markham, S. K., & Lee, H. (2013). Product Development and Management Association's 2012 Comparative Performance Assessment Study. *Journal of Product Innovation Management, 30*(3), 408-429.

Mascitelli, R. (2000). From Experience: Harnessing Tacit Knowledge to Achieve Breakthrough Innovation. *Journal of Product Innovation Management, 17*(3), 179-193.

McQuarrie, E. F., & McIntyre. (1986). Focus Groups and the Development of New Products by Technologically Driven Companies: Some Guidelines. *Journal of Product Innovation Management, 3*(1), 40-47.

Micheli, P., Jaina, J., Goffin, K., Lemke, F., & Verganti, R. (2012). Perceptions of Industrial Design: The 'Means' and the 'Ends'. *Journal of Product Innovation Management, 29*(5), 687-704.

Miles, M. B., & Huberman, M. A. (1994). *Qualitative Data Analysis* (2nd ed.). SAGE Publications, Thousand Oaks.

Morton, B. Retrieved March 1, 2018, from https://managementmedotcom.wordpress.com/tag/choose/

Mullins, J. W., & Sutherland, D. J. (1998). New Product Development in Rapidly Changing Markets: An Exploratory Study. *Journal of Product Innovation Management, 15*(3), 224-236.

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.

Nonaka, I., & Konno, N. (1998). The Concept of 'Ba': Building a Foundation for Knowledge Creation. *California Management Review, 40*(3), 40-54.

Nonaka, I., & Tackeuchi, T. (1995). *The Knowledge creation company: how Japanese companies create dynamics of innovation*. New York: Oxford University Press.

O'Connor, G. C. (1998). Market Learning and Radical Innovation: A Cross Case Comparation of Eight Radical Innovation Projects. *Journal of Product Innovation Management, 15*, 151-166.

Polanyi, M. (1966). *The Tacit Dimension*. University of Chicago Press: Chicago.

Rese, A., Sänn, A., & Homfeldt, F. (2015). Customer Integration and voice-of-customer methods in the German automotive industry. *International Journal of Automotive Technology and Management, 15*(1), 1-19.

Richards, L. (2009). *Handling Qualitative Data: A Practical Guide* (2nd ed.). Sage: Los Angeles and London.

Richtnér, A., Åhlstrom, P., & Goffin, K. 'Squeezing R&D': A Study of Organizational Slack and Knowledge Creation in NPD, Using the SECI Model. *Journal of Product Innovation Management, 31*(6), 1268-1290.

Rosenthal, S. R., & Capper, M. (2006). Ethnographies in the front end: Designing for enhanced customer experiences. *Journal of Product Innovation Management, 23*, 215–237.

Rothwell, R. (1992). Successful industrial innovation: critical factors for the 1990s. *R&D Management, 22*(3), 221-239.

Sandberg, K. D. (2002). Focus on the benefits. *Harvard Management Communication Newsletter, 5*(4), 3-4.

Schirr, G. (2012). Flawed Tools: The Efficacy of Group Research Methods to Generate Customer Ideas. *Journal of Product Innovation Management, 29*(3), 473-488.

Searle, C. (2004). Quality in qualitative research. In C. Searle, G. Gobo, J. F. Gubrium, & D. Silverman (Eds.), *Qualitative Research Practice* (pp. 409-419). Sage.

Thomke, S. & Fujimoto, T. (2000). The Effect of "Front-Loading" Problem-Solving on Product Development Performance. *Journal of Product Innovation Management*, *17*, 128-142.

Ulwick, A. W. (2002). Turn Customer Input into Innovation. *Harvard Business Review*, *80*(1), 91-97.

Van Kleef, E., van Trijp, H. C. M., & Luning, P. (2005). Consumer research in the early stages of new product development: a critical review of methods and techniques. *Food Quality and Preference*, *16*(3), 181-201

Veryzer, R. W. (1998). Key Factors Affecting Customer Evaluation of Discontinuous New Products. *Journal of Product Innovation Management*, *15*, 136-150.

Vriens, M., & Vrehulst, R. (2008). Business insights need to be prepared and extracted to have impact. *Marketing Research*, *Winter*, 12-17.

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.

Appendix A

Google Searches

choosing "market research methods" 7 results

selecting "market research methods" 3 results

"voice of the customer" or "voice of customer" 18M

selecting "voice of customer" techniques (OR methods) 1330

EBSCO Searches

"selecting [or choosing] voice of customer methods" 0 results

ABI Searches

"voice of customer techniques" OR "voice of the customer techniques" AND select* 8 results