



Partner selection in B2B information service markets[☆]

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ABSTRACT

This study investigates the impact of selection criteria associated with interpersonal interaction (such as good personal relationships) on supplier consideration. More specifically, it examines how the importance of these criteria depends upon service-related dimensions. This is an experimental study among client firms in the market research industry, which combines a conjoint and between-subjects design to lead to several new insights. First, while good personal relationships play an important role in the selection of a service provider, their impact increases if the service offering is subjective in nature, but it decreases if it is strategically important. Second, enriching the service offering with interpretation and advice is more important for subjective as well as for strategically important service offerings. Third, as to other selection criteria, the study results show some interesting differences between consideration and choice. Price has a substantive impact on choice alone, while a strong brand name is helpful for the service provider only in the consideration stage.

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1. Introduction

Researchers in business-to-business (B2B) marketing have extensively studied relationship continuance and expansion issues (e.g., Ganesan, 1994; Moorman, Deshpandé, & Zaltman, 1993; Morgan & Hunt, 1994; Palmatier, Scheer, Houston, Evans, & Gopalakrishna, 2007; Sheng, Brown, Nicholson, & Poppo, 2006). This contrasts sharply with the paucity of empirical research on one of the core aspects of exchange: the selection of an exchange partner. Dwyer, Schurr, and Oh (1987) describe the initial stage of awareness of potential exchange partners and the subsequent selection practices. Insight into how such selection practices take place would benefit many B2B supplier firms. Despite descriptive models on the supplier choice processes in the early B2B literature (e.g., Choffray & Lilien, 1978; Webster & Wind, 1972), empirical research on supplier consideration and choice is limited (for an exception, see Heide & Weiss, 1995). In particular, the selection of a B2B service provider is far from straightforward due to recurring challenges, such as the difficulty in evaluating providers and the value of their service offerings and the problems associated with implementing service solutions.¹ This study

focuses on the selection of information service providers (in particular, of market research agencies). The findings can be generalized to any industry where client-tailored information is the object of exchange (e.g., financial analysis, auditing services, legal assistance, consulting).

We pursue three objectives. Our main objective is to better understand the role of two selection criteria associated with interpersonal interactions and that facilitate information transfer. On the one hand, a client's preexisting good relationships with individual employees of a provider firm is a form of 'social capital', which may influence the probability that the provider will be considered for a new service offering. Prior marketing studies concur that such personal attachments influence partner selection (Heide & Wathne, 2006; Heide & Weiss, 1995; Tenbrunsel, Wade-Benzoni, Moag, & Bazerman, 1999; Wathne, Biong, & Heide, 2001). However, we know little about their precise role. Insight into the role of good personal relationships is valuable for both incumbent service providers wishing to maintain their existing clients and for newcomers wishing to land new clients.² On the other hand, service providers in information service markets can deepen their client relationships by enriching the service offering with interpretation and advice. Such enrichment is associated with intensified interpersonal interaction in order to fine-

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¹ We henceforth refer to the buyer firm as *client* and to the supplier firm as (*service*) *provider*.

² There need not be a perfect isomorphic relationship between the presence of good personal relationships and a prior history of collaboration. Client firms may have good personal relationships with employees of provider firms, even if the client firm and provider firm never worked together. While this situation does not conflict with the theory developed in this paper (which is fundamentally based on the presence or absence of good personal relationships), it will be taken into account when interpreting results and deriving managerial implications.

tune the service offering to the client firm and improve information transfer. The criteria are distinct, as clients can share good personal relationships with market research agencies that provide research results with only minimal attention to interpretation and advice, while enriching service offerings with interpretation and advice often occurs in the absence of good personal relationships. Nonetheless, both facilitate information transfer, which is important in information service markets.

Second, we examine whether the influence of good personal relationships and interpretation and advice in the selection of an information service provider is contingent on the service solution sought. On the one hand, studies on information transfer suggest that the nature of information determines the need for interpersonal interaction (e.g., DiMaggio & Louch, 1998; Hansen, 1999). In particular, interpersonal interaction is a pre-condition for the effective transfer of subjective information. On the other hand, prior studies in (marketing) strategy explain that successful absorption of externally developed strategic information is crucial to firm performance (e.g., Levitt, 1986). We will argue that the objective/subjective nature and strategic/tactical importance of the service offering moderate the impact of good personal relationships and interpretation and advice. The study of the contingency effects of partner selection extends prior marketing literature where such effects have been largely ignored (e.g., Heide & Weiss, 1995; Wathne et al., 2001; Wuyts, Stremersch, Van den Bulte, & Franses, 2004).

Third, we explore the differential impacts of these and other selection criteria (price, expert image, recommendations, brand name) on consideration versus choice. Consideration consists of screening and simplifying the decision environment for a given service (e.g., Roberts & Lattin, 1991). Choice consists of selecting the optimal service provider from the considered alternatives. Prior marketing literature is inconclusive regarding the different roles of selection criteria, such as price, in the consideration and choice stages in B2B markets (Dawes, Dowling, & Patterson, 1992; Dorsch, Swanson, & Kelley, 1998; Levin & Jasper, 1995).

We present an empirical test that combines a conjoint experiment with a between-subjects design, where respondents consider alternative market research agencies (within subjects) for service offerings that differ in their degrees of objectivity and strategic importance (between subjects). Several of our findings indicate that a nuanced view of the selection of B2B information service providers is warranted. Good personal relationships are more important for subjective services but less important for strategically important services. Interpretation and advice is more important for both subjective and strategically important services. Price and strong brand name have different effects on consideration versus choice.

2. Conceptual background

The marketing literature related to partner selection criteria is limited. Interviews with practitioners and scant prior research (Tenbrunsel et al., 1999) tell us that, in addition to economic factors, social factors play a role when considering an exchange partner. In a different domain of study—new economic sociology—much attention has been devoted to the complex character of exchange and the economic and social factors influencing it. New economic sociology and the associated ‘embeddedness theory’ resulted from dissatisfaction with two classic conceptions of the individual actor: the economic and the sociological conception. The first conception corresponds to the utilitarian tradition including both classical and neo-classical economics, in which actors are atomized individuals driven by their pursuit of self-interest. Granovetter (1985) labels this conception ‘undersocialized’. The second conception corresponds to the sociological approach, where actors are obedient to their social context—the system of norms and values of which individual actors are part. This conception has been criticized for being ‘oversocialized’ (Wright,

1961). New economic sociology is grounded in the idea that at all times, exchange is both economic and social (Braudel, 1985; Granovetter & Swedberg, 1992; Macaulay, 1963).

In recent years, marketing scholars have begun to implement some of these insights in the study of commercial exchanges (e.g., Frenzen & Davis, 1990; Heide & Wathne, 2006; Price & Arnould, 1999). Frenzen and Davis (1990), for example, assert that purchasing behavior is socially embedded when customers derive utility from two sources simultaneously, namely, “from attributes of the product and from social capital found in preexisting ties between buyers and sellers” (p.1). In line with this emerging field of research, we examine the influence of good personal relationships between client and provider on the selection of an information service provider. In addition, we examine the influence of a second selection criterion associated with intensified interpersonal interaction and improved information transfer, namely, the service provider’s attention to interpretation and advice. A focus on interpretation and advice requires fine-tuning the service offering to the client-specific context and makes the information more actionable and accessible for the client firm.

We primarily investigate the consideration stage, the decision stage that precedes the final choice in which clients screen and simplify their decision environment and reduce the number of alternatives to a limited subset (e.g., Roberts & Lattin, 1991). We examine the role of good personal relationships as well as interpretation and advice in this simplification process. We hypothesize that their impact is moderated by service-related dimensions. While we will also explore subsequent choice, which entails a detailed comparison of the considered providers, we do not expect the service-related dimensions to further moderate the impact of selection criteria on final choice, as choice is by definition conditional upon the composition of the short-list.

3. Hypotheses

A search of the prior literature on partner selection, B2B marketing, and new economic sociology, complemented by talks with industry experts, resulted in the following six selection criteria. Good personal relationships facilitate information transfer and serve as direct information sources for assessing a provider’s value as an exchange partner (e.g., Heide & Weiss, 1995). In addition, a strong brand name and other clients’ recommendations serve as indirect signals of reliability (e.g., Anderson & Narus, 1998) and do not involve direct personal interaction between client and provider firm. The general expectation is that these three exert a positive effect on provider selection (e.g., Granovetter, 1985). The other three selection criteria belong to the provider’s tactical repertoire, namely, enriching the service offering with interpretation and advice, expert image, and price. The general expectation is that the first two positively influence provider selection, whereas price, if influential, has a negative impact. However, this study focuses on contingency effects, and not on the (often rather straightforward) main effects of these selection criteria. To further delineate the study, we single out the two selection criteria associated with interpersonal interaction, namely, good personal relationships and interpretation and advice. Interpersonal interaction facilitates information transfer, a core concern in information service markets.

We derive two distinct motivations from the prior literature for firms to facilitate information transfer: the subjective nature of the service solution and its strategic importance. On the one hand, the relational exchange literature suggests that, as information becomes less objective, difficulties arise with regard to both accessing and evaluating it. This motivates firms to look for mechanisms that facilitate information transfer (e.g., Hansen, 1999; Wuyts & Geyskens, 2005). On the other hand, facilitating information transfer can be motivated by strategic interests because, as the prior (marketing) strategy literature has amply demonstrated (e.g., Levitt, 1986),

successful absorption of external strategic information is crucial for long-term firm performance.

Objectivity. Service solutions vary in terms of how well clients can monitor and evaluate whether tasks have been conducted adequately (Lovelock & Wirtz, 2007). Objectivity refers to the extent to which the service solution can be represented by bits of information free from personal evaluation, prejudices, or sentiments. Service solutions low in objectivity are more difficult to evaluate and, as they involve subjective judgment, more prone to opportunistic exploitation. In market research services, objective services produce results that are reliable, stable, and reproducible as well as independent of the researcher or the research instruments used (Madill, Jordan, & Shirley, 2000). These elements are mostly found in quantitative research (Bryman, 1984). Qualitative market research reports (based on group discussions or in-depth interviews) are usually less objectifiable than are quantitative market research reports (based on surveys and statistical analysis) and are more often subject to the researcher's personal (biased) interpretation and evaluation (e.g., Kotler, Armstrong, Saunders, & Wong, 2001).

Strategic importance. The second important service-related dimension relates to the importance of the purchase. Strategic importance is considered an important issue in the general purchasing literature (Kraljic, 1983; Stremersch, Weiss, Dellaert, & Frambach, 2003). What distinguishes strategic services from more tactical ones is their help in setting long-term firm strategy. In other words, they are important for the total organization and have long-term consequences. For example, research projects or consulting projects, which are intended to aid the focal firm in shaping its competitive strategy are considered strategically important.

3.1. Good personal relationships and the moderating effect of service-related dimensions

Objectivity. Good personal relationships improve the transfer of subjective information. Objective information (e.g., the degree of association between constructs in quantitative market research) can more easily be made explicit (e.g., in a correlation table) and hence, can more easily be shared with another party. Subjective information (e.g., insights from in-depth interviews) is more tacit in nature, making it more difficult to share. Shared mental models and the relationship-specific heuristics that emerge when employees of two firms share good personal relationships enable the transfer of tacit knowledge (Hansen, 1999; Uzzi, 1997).

In addition, good personal relationships with a service provider increase perceived trustworthiness, an important factor if there is risk for opportunism. DiMaggio and Louch (1998) found that, when buyers perceive a higher risk that sellers will exploit informational advantages, buyers are more likely to transact with sellers with whom they already share a personal tie. Socially embedding a transaction is a response to such risk. Similarly, prior channel governance studies have shown that buyer firms are more likely to select a partner with whom they have worked before when confronted with behavioral uncertainty (e.g., Wuyts & Geyskens, 2005). As argued above, the subjective nature of a service offering creates monitoring and evaluation problems. The enhanced trustworthiness and reduced need for monitoring resulting from good personal relationships are thus likely more valuable for subjective service offerings. Both arguments point to the following hypothesis:

H₁. *The positive effect of good personal relationships on the likelihood of including a service provider in the consideration set is stronger when the service is subjective in nature.*

Strategic importance. Even though opportunistic exploitation may be particularly harmful if the service solution is strategically important, strategic services are not necessarily subjective in nature

(and thus do not necessarily pose the evaluation and monitoring problems described above). In fact, the prior literature points to an important dark side of good personal relationships that manifests itself more strongly when the service offering is strategically important.

As strategically important services should help set long-term firm strategy, they need to contribute to novel insights and creative ideas required for strategic decision-making. Levitt (1986) pointed out that creative ideas are often found beyond the boundaries of the firm and that a strong internal focus locks firms into established routines and procedures. Interestingly, firms often go a step further and look not only beyond firm boundaries but also beyond their preexisting set of contacts (Heide & Weiss, 1995), as selecting known partners is also associated with reduced novelty and creativity (for examples in marketing services industries, see Grayson & Ambler, 1999; Moorman, Zaltman, & Deshpandé, 1992). The reason that firms attain less creative solutions if they are too focused internally or on their preexisting contacts can be found in the literature on selective perception and dissonance (e.g., Festinger, 1957). The interpretation of new information occurs through association with prior experiences and accumulated knowledge, which can result in cognitive biases. Information that contradicts previous experience is more easily dismissed as being wrong. Looking for new information beyond the set of preexisting contacts reduces the risk of such biases and enhances the creativity and novelty of solutions. As strategically important services should help in attaining novelty and creativity, we expect:

H₂. *The positive effect of good personal relationships on the likelihood of including a service provider in the consideration set is lower when the service is of strategic importance.*

3.2. Interpretation and advice and the moderating effect of service-related dimensions

Objectivity. Subjective information services involve uncertainty and ambiguity with respect to the content of the delivered service. In contrast, the content of objective information services is more clear and verifiable. For example, understanding the meaning of an average satisfaction score or the percentage of customers intending to buy a newly developed product is rather straightforward. However, deriving implications for new product development from qualitative interviews with customers aimed at uncovering their motivations and needs can be challenging (Ulwick, 2002). There may be several ways of interpreting the study results, and it is hard to verify the appropriateness of a given interpretation. When the service provider devotes more attention to interpretation and advice, subjective information can become more actionable, and the service provider can suggest directions for implementation. Hence:

H₃. *The positive effect of interpretation and advice on the likelihood of including a service provider in the consideration set is stronger when the service is subjective in nature.*

Strategic importance. Ceteris paribus (controlling for preexisting good personal relationships), interpretation and advice provide the customer firm with an outsider's insights and ideas on issues that are of managerial relevance. The firm is more likely to welcome such insights and ideas when the issues are strategically important as creativity and idea generation play a more important role for strategic than for tactical issues. As argued before, internally focused firms are less likely to come up with creative solutions than firms that look beyond firm boundaries as a way to break with established mental frames and procedural heuristics. One complication is that when service solutions and the associated analyses and reports contain an element of surprise, in that they do not confirm prior beliefs, they are less likely to be used by the client firm (Deshpandé & Zaltman, 1982).

Selecting a service provider that provides its own interpretation and advice can reduce such cognitive biases and enable the customer to base decisions on more objective grounds and independent interpretation. Endowing the service solution with interpretation and advice moves the service from mere information to knowledge in context and can strengthen the legitimacy of novel, creative, and perhaps surprising study results and hence reinforce their acceptability within the customer firm. While this may be of less importance for everyday tactical decisions, it may be very important for shaping the client's strategic direction. We expect:

H₄. *The positive effect of interpretation and advice on the likelihood of including a service provider in the consideration set is stronger when the service is of strategic importance.*

3.3. Exploring the differences between consideration and choice

While it is important for firms to end up in the shortlist of potential customers, the next step of being selected from the shortlist is at least as important. Even though, as noted above, prior literature quite uniformly ascribes fundamentally different purposes to consideration versus choice (Hauser & Wernerfelt, 1990; Kardes, Kalyanaram, Chandrashekar, & Dornoff, 1993), little is known about the different roles of selection criteria in the two selection stages.

There are some indications in the literature that certain selection criteria have differential effects on consideration versus choice (e.g., Heide & Weiss, 1995). However, the papers that discuss such differences diverge in their expectations and findings. For example, some researchers have suggested that price is especially important in the consideration stage, while criteria pertaining to the relationship are more important in the choice stage (Dawes et al., 1992; Dorsch et al., 1998). However, Levin and Jasper (1995) find that, for the purchase of automobiles, price becomes more important in the later stages of the choice process. Furthermore, as the consideration stage consists of simplifying the decision environment (Hauser & Wernerfelt, 1990; Kardes et al., 1993), firms that are more prominently visible in that environment are more likely to be taken into consideration. In line with the satisficing principle (Simon, 1959), clients are more likely to include well-known agencies and to stop searching once they arrive at a satisfactory shortlist, pointing to the likely importance of signaling criteria such as a strong brand name in the consideration stage. As the choice stage entails a detailed comparison of a select number of considered alternatives, brand name is likely to be less influential. Regarding other selection criteria, such as good personal relationships and interpretation and advice, there is no clear theory to guide us in terms of ex ante expectations, and we consider their differential impact on consideration versus choice as an empirical issue.

4. Empirical test

Our application area is the selection of a market research agency, described before as a difficult and challenging undertaking (Churchill, 1999). The market research industry has been studied in prior research (e.g., Moorman et al., 1993). It is representative of B2B information service markets with substantial variation along the dimensions of objectivity and importance. Further, good personal relationships serve as an important selection criterion. Finally, there is variation in terms of how much attention the service provider devotes to interpretation and advice, with some market research agencies focusing on data collection and reporting results and others focusing more explicitly on how the reported results can be interpreted and used in the specific context of the client firm.³ Qualitative interviews

with client firms confirmed that clients take such differences between market research agencies into account in their selection process.

4.1. Research setup

A conjoint study combined with a between-subjects design was conducted among firms in the Netherlands. A conjoint design enables us to isolate specific causal effects and obtain multiple observations per respondent (which enriches the data and allows the researcher to account for unobserved heterogeneity). Although conjoint analysis is increasingly used in academic studies in B2B settings (Stremersch et al., 2003; Wathne et al., 2001; Wuyts et al., 2004), to the best of our knowledge ours is the first to combine it with a between-subjects experimental design to test the effect of contingency factors. While a comparison of hypothetical service providers that vary on a number of supplier-specific factors mirrors the real-life situation of supplier consideration, it is harder for a respondent to imagine subsequent purchase situations that differ in terms of the required service solution. We hence opted for a between-subjects manipulation of objectivity and strategic importance. The data gathering effort for this study consisted of three stages.

The first phase was qualitative in nature. Frequent interactions with a panel of 5 experts in the market research industry, interviews at 4 client firms, and a qualitative group discussion with another 8 market research clients provided us with useful information related to selection criteria and their levels as conjoint attributes. For example, the interviews indicated that a 10% price reduction was considered a reasonable representation of typical price variation. The interviews also revealed that a number of market research agencies have a strong brand name and are known among most if not all client firms, while others are less well-known in the market at large. On another dimension, some of the market research agencies explicitly position themselves as experts in specific knowledge domains (e.g., they try to create an expert image in the domain of conjoint analysis), whereas others position themselves as having more general expertise (i.e., do not have a specific reputation regarding a given type of research).

The second phase consisted of the conjoint experiment. With the help of an industry association, we identified firms that regularly contract market research agencies. We identified 300 firms that fulfilled our criteria and that were willing to cooperate in an Internet panel for research on the market research industry. After setting up this panel, we sent out an online conjoint survey, leading to 150 responses. We excluded 17 respondents that did not select a market research agency in the last two years or were not involved in the decision process. The final sample for analysis hence consisted of 133 respondents (a 44% response rate).⁴

A third phase in the data gathering process consisted of detailed feedback from industry experts. In our view, this third phase is crucial when testing theory on the basis of a conjoint experiment. We presented our research to a group of 70 industry experts and held a 2-hour panel discussion on the assumptions and findings of the research project. This led to a vivid discussion with the audience and valuable insights for interpreting some of our study results. We also gathered additional input to verify our interpretation of the study findings from 28 respondents who had participated in the conjoint experiment and indicated that they were open for additional participation. The resulting insights are incorporated in the discussion and implications sections.

4.2. Conjoint experiment

The between-subjects design enables us to test our hypotheses on the moderating role of objectivity and strategic importance.

³ For example, Research International states: "We give clients the knowledge to anticipate the future, to develop effective strategies, to take the right decisions with confidence, and to gain competitive advantage."

⁴ The conjoint design provided us with 16 observations per respondent, leading to 2128 consideration observations (see next section).

Table 1
Between-subjects manipulations of objectivity and strategic importance

General scenario	
Your organization aims to hire a market research agency for a new market research project to collect information on needs and motivations of your customers. It concerns a specific project (ad hoc) (i.e., this research is not executed on a yearly or more regular basis) within the Netherlands (no international research). Below, we describe some specific characteristics of the research project:	
<i>Condition 1: Qualitative (subjective) – strategically important</i> This research is mainly qualitative in nature. New insights are being collected using group discussions and in-depth interviews. This research is of strategic importance for your organization. It has long-term consequences and is important for the total organization.	
<i>Condition 2: Qualitative (subjective) – tactically important</i> This research is mainly qualitative in nature. New insights are being collected using group discussions and in-depth interviews. This research is tactically important for your organization. It has short-term consequences and is not important for the total organization.	
<i>Condition 3: Quantitative (objective) – strategically important</i> This research is mainly quantitative in nature. It concerns research using questionnaires and statistical data analysis. This research is of strategic importance for your organization. It has long-term consequences and is important for the total organization.	
<i>Condition 4: Quantitative (objective) – tactically important</i> This research is mainly quantitative in nature. It concerns research using questionnaires and statistical data analysis. This research is tactically important for your organization. It has short-term consequences and is not important for the total organization.	

Respondents were randomly assigned to four conditions, defined by objective versus subjective service offering and tactical versus strategic importance. Based on the qualitative pre-stage and the understanding of the market research industry, we operationalize a subjective service offering by describing a qualitative research project (using in-depth interviews, focus groups, etc.) and an objective service offering by describing a quantitative research project (using surveys and statistical analysis). Qualitative research is more intensive, requires a more flexible relationship with the respondent, and the resulting data have more depth and richness of context (Aaker, Kumar, & Day, 2004), implying a stronger need for subjective evaluation and personal judgment. The subset of respondents ($n=28$) that were willing to answer an additional set of questions after the conjoint survey was conducted rated qualitative research as significantly more subjective than quantitative research ($p<.05$). Even though qualitative and quantitative research may arguably differ on other dimensions, prior literature (e.g., Bryman, 1984) and interviews with industry experts singled out the degree of objectivity as a primary difference. We manipulated the importance of the market research project by distinguishing between strategic projects (long-term consequences, important to total organization) versus tactical projects (short-term consequences, unimportant to total organization). Table 1 presents the introductory text, along with a description of between-subject manipulations.

Our qualitative pre-stage confirmed the importance of good personal relationships and interpretation and advice, as well as price, expert image, recommendations, and strong brand name as selection criteria. Other criteria were mentioned only occasionally and given less weight by the respondents, which led us to include these 6 selection criteria as conjoint attributes. To avoid the problems that are associated with using different numbers of levels for different attributes (for a discussion of the number of levels problem, see Verlegh, Schifferstein, & Wittink, 2002), we specified two levels for all attributes (which is restrictive, as some attributes may be more continuous in nature).

With six attributes of two levels each, the number of possible scenarios equals $2^6=64$. In view of our objectives, we opted for full profiles and for a fractional factorial design. More precisely, we designed an orthogonal and balanced quarter fraction of a 2^6 factorial design (see Table 2). As any fractional design, a quarter fraction of a 2^6 factorial design comes with a confoundment structure. Specifically, the

Table 2
Design matrix: orthogonal and balanced quarter fraction of 2^6 full factorial design

Scenario	Price	Expert image	Strong brand name	Interpretation and advice	Good personal relationships	Recommendations
	x1	x2	x3	x4	x5=-123	X6=-234
1	-1	-1	-1	-1	1	1
2	1	-1	-1	-1	-1	1
3	-1	1	-1	-1	-1	-1
4	1	1	-1	-1	1	-1
5	-1	-1	1	-1	-1	-1
6	1	-1	1	-1	1	-1
7	-1	1	1	-1	1	1
8	1	1	1	-1	-1	1
9	-1	-1	-1	1	1	-1
10	1	-1	-1	1	-1	-1
11	-1	1	-1	1	-1	1
12	1	1	-1	1	1	1
13	-1	-1	1	1	-1	1
14	1	-1	1	1	1	1
15	-1	1	1	1	1	-1
16	1	1	1	1	-1	-1

design does not allow for unconfounded estimation (and thus unambiguous interpretation) of two-way interactions between selection criteria, as some of these interactions are confounded with one another by construction (for an introductory text which covers fractional designs and confoundment, see Louviere, 1988). Interactions between selection criteria are beyond the scope of this study. It is important to note that the fractional design was chosen to ensure that the main effects of the selection criteria be unconfounded with one another as well as unconfounded with any of the two-way interaction effects.

The conjoint task was conducted through a web-survey consisting of a consideration and a choice task, respectively. To obtain rich information on consideration and realizing that consideration sets are fuzzy in practice, we asked respondents to indicate the probability that the 16 hypothetical market research agencies would be selected on the shortlist on an 11-point scale (0 = absolutely not consider, 10 = absolutely consider, Juster, 1966). The attributes and their levels are provided in Table 3. The first qualitative research phase indicated that client firms considered all “-1 levels” (except price, which is inversely coded) as neutral default values (e.g., an agency not having a specific

Table 3
Conjoint attributes and corresponding levels

Attribute	Levels
Price (PRICE)	+1 The costs of this agency equal the market level
	-1 The costs of this agency are 10% below the market level
Expert image (EXPERT)	+1 This agency has a reputation to have much expertise for this type of research
	-1 This agency does not have a specific reputation regarding expertise for this type of research
Interpretation and advice (ADV)	+1 Next to reporting research results, this agency pays much attention to the interpretation of these results and advice
	-1 This agency mainly reports the research results and pays less attention to the interpretation of these results and advice
Good personal relationships (PERS)	+1 Your company has good personal relationships with employees of this agency
	-1 Your company has no personal relationships with employees of this agency
Recommendations (RECOMM)	+1 Other clients of this agency have recommended this agency to your firm
	-1 There are no other clients of this agency that have recommended this agency to your firm
Strong brand name (BRAND)	+1 This agency is one of the well-known agencies in the market
	-1 This agency is not one of the well-known agencies in the market

Table 4
Example of contingency condition and scenario

Your organization aims to hire a market research agency for a new market research project to collect information on needs and motivations of your customers. It concerns a specific project (ad hoc) (i.e., this research is not executed on a yearly or more regular basis) within the Netherlands (no international research). Below, we describe some specific characteristics of the research project:

This research is mainly qualitative in nature. New insights are being collected using group discussions and in-depth interviews
This research is of strategic importance for your organization. It has long-term consequences and is important for the total organization

Reminder: The market research project is qualitative in nature and of strategic importance for your organization.

Description market research agency i^* :

1. The costs of this agency equal the market level.
2. This agency does not have a specific reputation regarding expertise for this type of research.
3. This agency is not one of the well-known agencies in the market.
4. Your company has good personal relationships with employees of this agency.
5. There are no other clients of this agency that have recommended this agency to your firm.
6. Next to reporting research results, this agency pays much attention to the interpretation of these results and advice.

Indicate the probability that your company would invite an offer by this market research agency (0 = absolutely not consider; 10 = absolutely consider):

0 1 2 3 4 5 6 7 8 9 10

* i ranges from 1 to 16.

reputation regarding expertise for a given type of research). All attributes were operationalized such that the respondents in the qualitative phase converged in their interpretation of the levels. For example, there was a common understanding among respondents regarding good personal relationships, which can develop either through business exchanges or through the many forums and meetings at the industry level. All respondents evaluated the same 16 scenarios, presented randomly to overcome order effects. With each new scenario, respondents were reminded of their treatment condition. Table 4 shows a representative combination of contingency condition and scenario.

We then included a second phase for final choice. Our qualitative pre-stage indicated that, across different types of market research services, the size for a typical consideration set in this industry is four. In the choice stage, we thus presented the four scenarios with the highest probability of being considered (based on the respondent's own responses in the consideration stage) and asked the respondents to select the final market research agency from among these four. To verify the sensitivity of our findings to alternative measures of choice, we also asked respondents to rate their choice likelihood for each scenario on an 11-point scale (0 = absolutely not choose, 10 = absolutely choose) (Juster, 1966). We conducted a number of robustness tests to examine the sensitivity of our estimation results for our choice for a consideration set of 4. First, we reduced the consideration set size to 3 for all respondents, which gave similar results. Second, we re-estimated the model using 3 as consideration set size, excluding all respondents who indicated they would use a larger consideration set. Again, the results were very similar to those reported below. Finally, as a validation, we asked respondents to indicate their typical shortlist size; the average response was 4.2.

4.3. Model and sample description

The respondents were all involved in the selection process of market research agencies. Of the 133 respondents, 67% occupied a marketing research function, 80% of the respondents fulfilled their function within the organization two years or longer, 78.2% were

employed at a firm with a market research department and 64% worked for companies with marketing research budgets exceeding € 250,000. The average age of the respondents was 39 years. The surveyed companies operate in sectors ranging from fast moving consumer goods to financial services. On 7-point scales, respondents rated themselves an average 5.2 and 5.6 for their expertise in market research and in the selection of market research agencies, suggesting that our sample consists of relatively experienced respondents. While the potential respondents were randomly allocated ex ante to the four conditions, 45.9% of the 133 final respondents were in the low objectivity condition versus 54.1% in the high objectivity condition; 38.3% were in the strategic importance condition versus 61.7% in the tactical importance condition.⁵

In Appendix A, we report the averages per attribute level on (i) consideration rating (continuous), (ii) consideration (0/1, 1 if among 4 highest rated), (iii) choice (0/1), and (iv) choice rating (continuous). The results reported below are based on approaches (i) and (iii). Appendix B indicates that there are consistent and significant differences between levels for each attribute (except price) in the consideration stage. In the choice stage, we consistently find significant differences between levels for each attribute, except strong brand name and recommendations. This univariate analysis provides a first indication of the importance of selection criteria and differences between consideration and choice.

We specify the consideration model below. As noted before, consideration (y) is evaluated on an 11-point scale (ranging from absolutely not consider to absolutely consider). As we have 16 observations per respondent, the standard assumption of independence between observations is violated, raising a problem of unobserved heterogeneity among respondents, which we address by specifying a random coefficients regression model. All parameters are randomized ($\beta_i = \beta + U_{1i}$ where $U_{1i} \sim \text{i.i.d. } N(0, \sigma^2)$) except for the main effects of the two between-subject manipulations. Note that this model also controls for eventual differences in interpretation of attribute levels (see Wuyts et al., 2004). Below, we compare the fit of this model with a model in which we only randomize the intercept as well as an OLS regression model. The full specification includes all main effects and the four hypothesized interaction effects. In addition, we also include interaction effects between the other selection criteria (price, expert image, recommendations, strong brand name) and the service-related dimensions (objectivity and importance) in an exploratory fashion.⁶ We use LIMDEP 8.0 using 100 Halton draws to test the consideration model (Greene, 2003).

5. Empirical results

The estimation results are reported in Table 5. This random coefficients model (AIC=3.80; BIC=3.92) outperforms a random effects model that only captures heterogeneity in the constant term (AIC= 3.99; BIC=4.06), an OLS model assuming no heterogeneity at all (AIC=4.17; BIC=4.23), and an OLS model that includes respondent-specific variables such as age, firm size, and attitude towards risk (AIC=4.16; BIC=4.23). We also estimated random coefficient models with these additional respondent-specific variables but found similar effects, suggesting that our random coefficients approach adequately addresses respondent heterogeneity. While the OLS model parameters are similar in magnitude, the model does not fit as well and several parameters are no longer significant. Therefore, we focus on the random coefficient model results.

⁵ The deviations from 50% are due to chance and a result of potential respondents who did not participate in the study or who did participate but did not fulfill the conditions.

⁶ We thank the review team for this suggestion.

Table 5
Estimation results: drivers of consideration probability when selecting a market research agency (n=2128)

Variable	Hypothesis (effect)	Coefficient (standard error)	Scale parameters (standard error)	OLS coefficients (standard error)
<i>Hypothesized interaction effects</i>				
PERS*OBJ	H ₁ (-)	-0.190 (0.034)**	0.171 (0.025)**	-0.167 (0.087)
PERS*STRAT	H ₂ (-)	-0.190 (0.036)**	0.152 (0.032)**	-0.139 (0.087)
ADV*OBJ	H ₃ (-)	-0.112 (0.035)**	0.121 (0.024)**	-0.104 (0.087)
ADV*STRAT	H ₄ (+)	0.296 (0.037)**	0.015 (0.029)	0.201 (0.087)**
<i>Main effects</i>				
Good personal relationships (PERS)		0.805 (0.025)**	0.365 (0.018)**	0.743 (0.068)**
Interpretation and advice (ADV)		0.843 (.026)**	0.623 (0.018)**	0.914 (0.068)**
Price (PRICE)		-0.024 (0.025)	0.041 (0.021)**	-0.019 (0.068)
Expert image (EXPERT)		0.777 (0.029)**	0.625 (0.017)**	0.827 (0.068)**
Recommendations (RECOMM)		0.336 (0.025)**	0.365 (0.018)**	0.350 (0.068)**
Strong brand name (BRAND)		0.211 (0.025)**	0.108 (0.017)**	0.218 (0.068)**
Objective (OBJ)		0.400 (.039)**		0.119 (0.087)
Strategic (STRAT)		0.467 (0.036)**		0.052 (0.085)
<i>Exploratory interaction effects</i>				
PRICE*OBJ		-0.065 (0.036)	0.049 (0.027)*	-0.063 (0.087)
PRICE*STRAT		-0.046 (0.038)	0.022 (0.032)	-0.052 (0.085)
EXPERT*OBJ		0.123 (0.035)**	0.318 (0.022)**	0.123 (0.085)
EXPERT*STRAT		0.172 (0.038)**	0.251 (0.028)**	0.119 (0.087)
RECOMM*OBJ		0.017 (0.037)	0.143 (0.026)**	0.003 (0.085)
RECOMM*STRAT		0.028 (0.037)	0.034 (0.032)	-0.003 (0.087)
BRAND*OBJ		0.111 (0.035)**	0.191 (0.023)**	0.099 (0.085)
BRAND*STRAT		0.073 (0.036)*	0.031 (0.031)	0.078 (0.087)
CONSTANT (means)		5.999 (0.026)**	1.308 (0.008)**	6.398 (0.067)**
LogLikelihood		-4011.72		-4417.31
AIC		3.80		4.17
BIC		3.92		4.23

** p<0.01.
* p<0.05.

5.1. Hypothesized interaction effects

We first turn to the hypothesized interaction effects.⁷ First, the impact of good personal relationships is stronger for subjective services, in line with our arguments (H₁) that they facilitate information transfer and ensure higher trustworthiness (β=-0.190, p<0.01). Second, the influence of good personal relationships on consideration probability is smaller for strategically important services (β=-0.190; p<0.01), consistent with the argument that they can stand in the way of novel and creative service solutions (H₂). Further, we expected the same service-related dimensions to moderate the impact of interpretation and advice. The negative interaction effect with objectivity supports H₃ (β=-0.112; p<0.01), and is in line with the argument that interpretation and advice can make subjective information more actionable. In support of H₄, the impact of interpretation and advice is stronger for strategically important services (β=0.296; p<0.01), in line with the argument that interpretation and advice turns information into knowledge in context and increases the legitimacy of the service solution.

5.2. Other effects

We now turn to the main effects of the 6 selection criteria.⁸ The two criteria that are the focus of this study, good personal relationships

⁷ First, we estimated four separate models per condition. We used a pooling test to assess whether model parameters were significantly different between the conditions. The pooling test was significant (p<0.01), which further supports the need for inclusion of interaction effects between the conditions and the attributes.

⁸ The main effects, as reported in Table 5, correspond with the contingency condition “subjective” and “tactical importance”, which serves as the baseline.

(β=0.805, p<0.01) and interpretation and advice (β=.843, p<0.01), have significant and positive main effects on provider consideration. In addition, expert image (β=0.777, p<0.01), recommendations (β=0.336, p<0.01), and strong brand name (β=0.211, p<0.01) increase provider consideration. Within the boundaries of the study, price has no impact (β=-0.024, p>0.05). Further, the estimation results reveal much heterogeneity in the importance of good personal relationships, interpretation and advice, and expert image.

We also explored whether the service-related dimensions moderate the impact of the four other selection criteria. The results indicate that expert image and strong brand name are more important for objective services (resp. β=0.123; p<0.01; β=0.111; p<0.01), as well as for strategic (resp. β=0.172; p<0.01; β=0.073; p<0.05) services. Table 6 summarizes the impact of the different selection criteria per contingency condition and illustrates, for example, that price is consistently the least influential criterion in the consideration phase, while a strong brand name has a low impact for a subjective and tactical service offering but a substantial impact for an objective and strategic service offering. For each of four selection criteria (excluding price and recommendations), Fig. 1 contrasts the contingency conditions in which the criterion exerts its weakest impact (dashed line) versus its strongest (full line). For example, the impact of interpretation and advice is strongest when the service offering is subjective in nature and strategically important and weakest when it is objective in nature and of tactical importance.

6. Choice results

We also investigate the criteria that impact final choice, given the consideration set. A shortlist of 4 market research agencies was created for each respondent based on his/her consideration probabilities. We estimate a multinomial logit model. The most parsimonious model includes the main effects only:

$$\Pr[W_i = j | X_{ij}] = \frac{\exp(X_{ij}\gamma_j)}{\sum_{l=1}^4 \exp(X_{il}\gamma_l)} \quad \text{for } j = 1, \dots, 4. \quad (1)$$

where X_{ij} is a 1 × (K_x + 1) matrix of explanatory variables including the element l to model the intercept and γ_j is a (K_x + 1) dimensional parameter vector. K_x includes our explanatory variables (good personal relationships, interpretation and advice, price, expert image, recommendations, and strong brand name). We estimated the MNL-model in Limdep 8.0. Note that we cannot compare the exact impact of a given selection

Table 6
Impact of selection criteria across contingency conditions

		Objectivity of service			
		Subjective (qualitative)		Objective (quantitative)	
Importance of service	Strategic	Good personal relationships	0.615	Good personal relationships	0.425
		Interpretation and advice	1.139	Interpretation and advice	1.027
		Price	-0.070 ^a	Price	-0.135
		Expert image	0.949	Expert image	1.072
		Recommendations	0.364	Recommendations	0.381
	Tactical	Strong brand name	0.284	Strong brand name	0.395
		Good personal relationships	0.805	Good personal relationships	0.615
		Interpretation and advice	0.843	Interpretation and advice	0.731
		Price	-0.024	Price	-0.089
		Expert image	0.777	Expert image	0.900
	Recommendations	0.336	Recommendations	0.353	
	Strong brand name	0.211	Strong brand name	0.322	

^aTo illustrate: -0.070 represents the coefficient of the selection criterion price for a subjective (0) and strategically important (1) service offering.

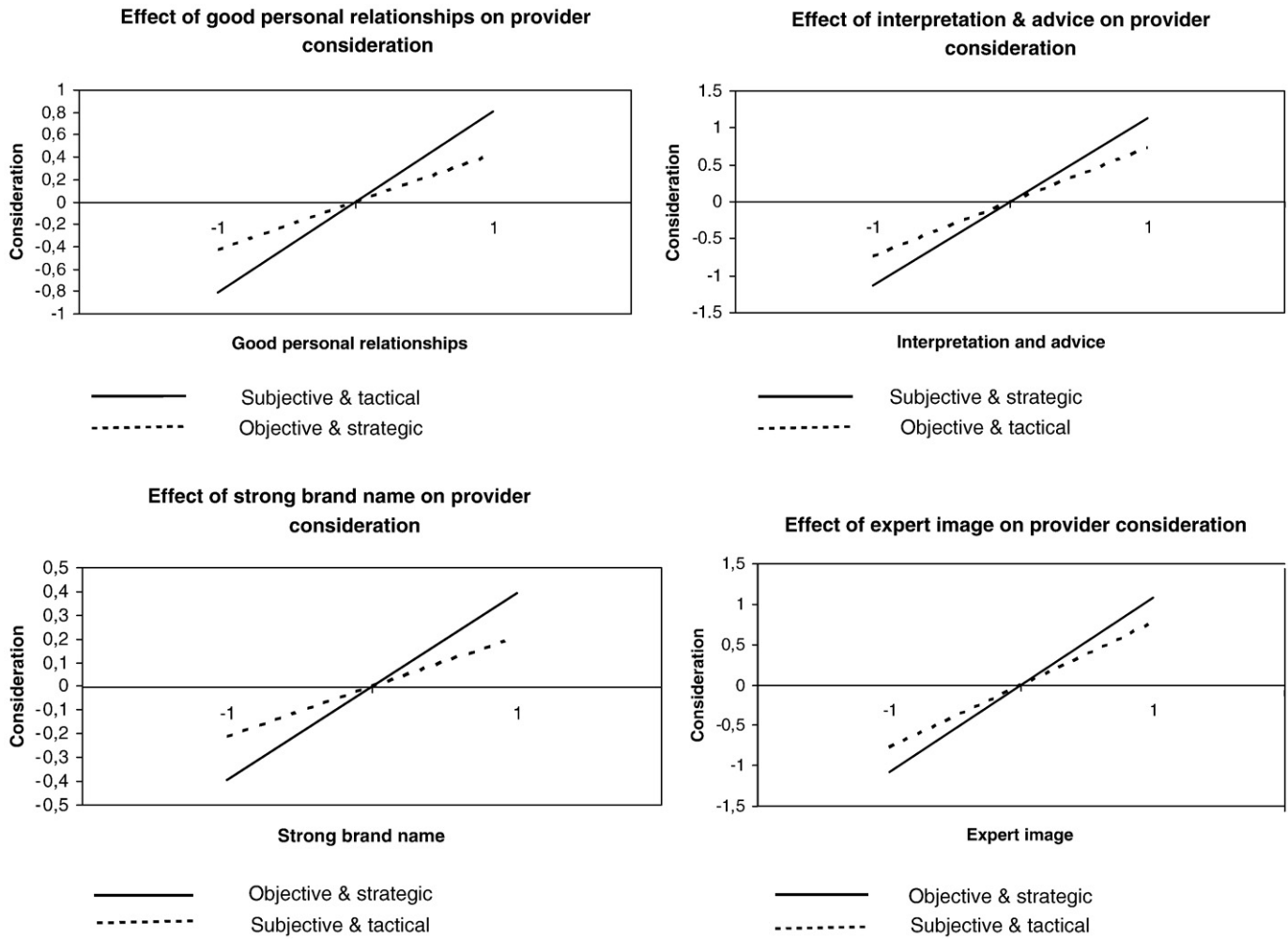


Fig. 1. Contrasting the impact of selection criteria on provider consideration across service offerings (Per criterion, only the two conditions with respectively weakest (dashed) and strongest (full) impact are visualized).

criterion across decisions, as consideration and choice models are estimated on different dependent variables with different underlying samples (Fiebig, Louvier, & Waldman, 2003). However, we are primarily interested in understanding the relative importance of the different selection criteria in the consideration and choice stages (i.e., comparing the ranks of each criterion between the two phases, which is econometrically correct (Fiebig et al., 2003)). Interestingly, as reported in Table 7, we find that price, the least important criterion in the consideration phase, has a strong influence on choice ($\beta = -0.777, p < 0.01$). This is consistent with Levin and Jasper's (1995) observation in the automobile market and in contrast to Dawes et al. (1992) and Dorsch

et al. (1998). Good personal relationships ($\beta = 1.293, p < 0.01$), expert image ($\beta = 1.205, p < 0.01$), and recommendations ($\beta = 0.373, p < 0.05$) increase the likelihood of choice. Although a strong brand name influences consideration, it has little impact on choice ($\beta = 0.160, p > 0.10$), pointing to another difference between consideration and choice. Finally, interpretation and advice—a strong predictor of consideration and potentially influential in choice when looking into the univariate analyses of Appendix A—turns out to have only a weak effect on choice ($\beta = 0.647, p = 0.10$). In sum, interpretation and advice, good personal relationships, and expert image dominate the consideration phase, whereas good personal relationships, expert image, and price dominate the choice stage. Recall that we did not expect contingency effects in the choice phase, which is conditional on a consideration set that (as shown above) is contingent upon the service-related dimensions. Nevertheless, in an exploratory fashion we included interaction effects in the choice model, one by one (given the small number of observations in the choice model), and found all effects to be insignificant.

Table 7
Estimation results: drivers of choice when selecting a market research agency (n = 133)

Variable	Coefficient (standard error)
Good personal relationships	1.293 (0.260)**
Interpretation and advice	0.647 (0.394)
Price	-0.777 (0.240)**
Expert image	1.205 (0.309)**
Recommendations	0.373 (0.188)*
Strong brand name	0.160 (0.335)
Constant Alternative 1	-0.0636 (0.954)
Constant Alternative 2	-0.998 (0.695)
Constant Alternative 3	-0.378 (0.418)

** $p < 0.01$.
* $p < 0.05$.

To alleviate the concern that some of the differences between consideration and choice may be due to differences in estimation approaches, we verified the robustness of the results by also estimating the choice model with a continuous choice rating as alternative dependent variable and by re-estimating the consideration model as a binary model. In both cases, the results did not change substantively (see Appendix B). While price has little influence on consideration, it is far more important in choice (ranked 3 or 4 in importance in terms of coefficient size). Moreover, a strong brand name is relatively important

in consideration (ranked 4 or 5), while it has the lowest importance in choice (ranked last in both choice models).⁹

7. Theoretical insights

In this section, we synthesize our findings and the complementary insights from the qualitative post-study and derive theoretical insights. Broadly, our study extends the body of knowledge along three lines: the role of interpersonal interaction, differences between consideration and choice, and the contingency character of provider selection.

7.1. The role of interpersonal interaction in consideration and choice

The combined findings point to the ambidextrous character of good personal relationships. While the findings are consistent with benefits of good personal relationships (credibility, trustworthiness, information transfer), they also point to a dark side (reduced novelty and effort). One respondent stated that a familiar service provider might provide fewer new surprising solutions, while another pointed to the risk of following familiar paths with no renewal. This is illustrated by the contingency effects. Good personal relationships are more influential for subjective services, consistent with the view that they facilitate the transfer of tacit knowledge and increase perceived trustworthiness. Relationships are valued less, however, for strategically important services, where creativity is more important (respondents in the qualitative post-stage consistently rated creativity more important for strategic than for tactical research, $p < 0.05$).

Further, the findings are in line with our suggestion, that enriching a service offering with interpretation and advice serves as an alternative, more tactical route to ensure interpersonal interaction. While interpretation and advice is valued more for subjective services, it is also valued *more* for strategic services, contrary to good personal relationships. Interpretation and advice conveys similar advantages of intensified communication and, thus, easier transfer of subjective information, without the dark side of reduced novelty and creativity (rather, it contributes to legitimization and implementation of novel and creative ideas).

7.2. Differences between consideration and choice

The two-stage approach revealed that price has little influence on consideration, but a strong influence on choice, in line with Levin and Jasper's (1995) finding in the automobile market. Van Nierop, Paap, Bronnenberg, Franses and Wedel (2005) similarly find that in consumer markets, price is mainly important in the choice stage. Combined, the different studies seem to point to a generalization: (moderate) price differences are mainly effective in the choice stage. Further, a strong brand name has signaling value and enhances visibility, which explains why providers with a strong brand name are more likely to be considered, a decision stage intended to simplify the decision environment. This signaling criterion is less valuable in the choice phase, though, where the remaining alternatives are subject to more detailed comparison. Notably, other criteria, such as expert image and good personal relationships impact both consideration and choice.

7.3. Toward a contingency perspective on partner selection

The effect of other selection criteria on the consideration of an information service provider is also contingent on the objectivity and strategic importance of the service offering. For more subjective research, expert image and strong brand name were less valued, whereas good personal relationships and interpretation and advice were more valued.

One might conclude that, for subjective services, selection criteria that facilitate interpretation and communication gain in strength at the expense of other criteria. For strategically important services, expert image and strong brand name were more influential (as was interpretation and advice, but opposed to good personal relationships). A possible interpretation, in line with arguments developed earlier, is that the client firm is concerned about legitimacy for strategically important service solutions and is hence more likely to prefer reputed agencies that position themselves as domain-specific experts. Though the present study is limited to detecting contingency effects rather than explaining them, it is clear that the importance of selection criteria is strongly context-dependent in information service markets.

8. Managerial implications

Getting on the short-list is one of the major hurdles for B2B service providers. Choice is conditional upon a place in the shortlist, making both decision phases are crucial. Our research has several implications for firms offering information services, including market research agencies, management consultants, firms offering legal assistance, and financial analysts.

Service providers should be aware that, for strategic research, pre-existing ties with a customer may be a double-edged sword: customers perceive that existing providers are less creative and provide fewer new ideas. As service teams frequently work with account teams, one could probably refresh teams on a regular basis. However, customers also heavily value working with known agency representatives familiar with the procedures of the customer firm. The ambidextrous character of good personal relationships implies that incumbent providers should communicate novel ways of thinking and new approaches in order to win more strategic services contracts. Newcomers, as far as they lack good personal relationships, may want to stress the novel and creative insights they can offer to a new client. A (moderately) low price strategy is no panacea, as it only aids firms already on the shortlist. Enriching the service offering with interpretation and advice seems like an alternative relational strategy to create more value, especially for services that are strategically important and subjective in nature.

The variation in importance of selection criteria along service-related dimensions in the consideration stage (see Table 6) has important managerial implications. Even though good personal relationships and advice are important across contingency conditions, the variation in their impact on provider consideration is substantial and significant. A strong brand name has a much lower impact when considering service providers for tactical and subjective services than for strategic and objective services.

Finally, the differences between consideration and choice suggest that service providers may need to switch strategies once in the shortlist. Whereas good personal relationships and expert image help in both stages, moderate price advantages are helpful in the choice stage. Further, building a strong brand name has clear benefits in terms of ending up in the shortlist. In the absence of a social tie (either directly through good personal relationships or indirectly through recommendations), a firm will either have to convincingly position itself as an expert in the specific field of research or provide a financial stimulus.

9. Limitations and future research

This study is not without limitations, some of which may inspire additional research. First, a study of the consequences of partner selection would complement insights from our qualitative research: is the relationship between good personal relationships and creativity linear or curvilinear? What is the influence of certain selection criteria on project and firm performance? Second, as our study uses an experimental approach, it does not fully capture the dynamics and complexity of the selection process from consideration to choice. The traditional survey approaches used in channel

⁹ The MNL model will provide less significant results given that this model is estimated on only 133 observations of 133 individuals, while the choice rating model is estimated using 532 observations of 133 individuals.

research are also unable to capture this (e.g., Ganesan, 1994). For that purpose, in-depth qualitative studies are required, in which the different service offerings are observed as well as the outcomes of the consideration stage and final selection. Third, the reported findings should be interpreted within the restrictions of the conjoint design. For example, the current study does not allow conclusions with regard to the impact of price differences other than 10%. Also, we cannot exclude the possibility that the manipulated variables are related to constructs other than those discussed in this study. For example, while a primary difference between qualitative and quantitative research is the degree of objectivity, there may be other meaningful differences.

A final limitation of the current study that deserves special attention relates to the confounding structure of the experimental design, which does not allow for unambiguous interpretation of interaction effects between selection criteria. The prior literature suggests that such interaction effects may exist. Future studies may provide unambiguous tests for negative two-way interaction effects between good personal relationships, recommendations, and strong brand name, as a test of Granovetter's (1985) assertion that these three serve as substitutes to achieve a common goal (i.e., uncertainty reduction). In addition, it would be interesting to test for a positive interaction effect between good personal relationships and interpretation and advice as a test of the assertion in the literature on advice-seeking behavior (McDonald & Westphal, 2003; Van Knippenberg, 1999) and self-categorization theory (Hogg & Terry, 2000) that advice is more persuasive and valid when coming from an in-group member. While we conducted additional exploratory analyses that revealed significant interaction effects, all in support of these different assertions, the confoundment structure prohibits unequivocal interpretation. An alternative approach could be to randomly assign alternative sets of 16 scenarios to different respondents, so as to cover the entire range of 64 scenarios. Trade-offs, such as that between confoundment and complexity, as well as challenges related to experimental design, deserve further research given their increased importance in both marketing academia and marketing practice (e.g., see Bell, Ledolter, & Swersey, 2006).

To conclude, this study shows that the influence of partner selection criteria is contingent upon the dimensions of the service solution. Contingency analysis allows for a better understanding of the role of selection criteria, such as good personal relationships, a core construct in the social embeddedness perspective on exchange. Another complexity, mainly ignored in prior research, relates to the differences between consideration and choice. Despite its limitations, we hope that this study demonstrates the need to employ a more nuanced perspective to understand partner selection behavior in business markets.

Appendix A. Comparison between levels of selection criteria for alternative operationalizations of consideration and choice

Attribute	Level	Consideration rating (0..10) (N=2127)	Consideration set (0,1) (N=2127)	Choice (0,1) (N=531)	Choice rating (0..10) (N=531)
Good personal relationships	+1	7.07**	0.34**	0.33**	8.53**
	-1	5.87	0.16	0.07	7.75
Interpretation and advice	+1	7.41**	0.40**	0.28**	8.46**
	-1	5.54	0.10	0.11	7.60
Price	+1	6.40	0.23*	0.13**	8.02**
	-1	6.55	0.27	0.35	8.51
Expert image	+1	7.41*	0.40**	0.29**	8.53**
	-1	5.53	0.10	0.08	7.36
Recommendations	+1	6.82**	0.28**	0.32**	8.34
	-1	6.12	0.22	0.16	8.21
Strong brand name	+1	6.77*	0.30**	0.40**	8.42
	-1	6.17	0.20	0.15	8.19

** $p < 0.01$; * $p < 0.05$.

Appendix B. Comparison of rank of selection criteria across models using alternative operationalizations of consideration and choice (only main effects included)

	Random coefficient model consideration rating (N=2127) (Rank order)	Random coefficient logit model consideration (N=2127) (Rank order)	MNL model choice (N=133 [§]) (Rank order)	Random coefficient model choice rating (N=531) (Rank order)
Good personal relationships	0.930** (2)	0.966** (2)	1.293** (1)	0.562** (2)
Interpretation and advice	0.350** (4)	0.225** (5)	0.647 (4)	0.597** (3)
Price	-0.073** (6)	-0.154** (6)	-0.777** (3)	-0.283** (4)
Expert image	0.958** (1)	0.956** (1)	1.205** (2)	0.744* (1)
Recommendations	0.641** (3)	0.621** (3)	0.373* (5)	0.164* (5/6)
Strong brand name	0.304** (5)	0.311** (4)	0.160 (6)	0.165* (5/6)

** $p < 0.01$; * $p < 0.05$.

[§] We only have 133 instead of 531 observations for the MNL model as one provider is selected from among the four considered.

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